

Telemetry Bluetooth Module

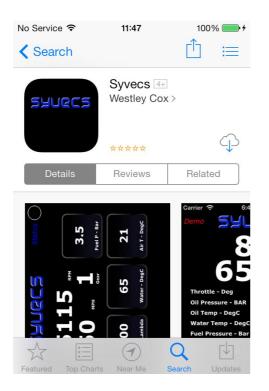
8 Bluetooth



Syvecs Telemetry Bluetooth Module is designed for use with Apple and Android Devices. Enabling users to view custom configurable data on there portable devices. This data can then be viewed in a series of gauges which can be setup based on the customers personal preference all done via the mobile device.

Designed to work with any Syvecs package, the Syvecs App allows users full control of the RS232/Can Stream selection to suit any CAN or RS232 Layout used.

The Applications to work with the Device are free to download from the devices App stores and will only work with the Syvecs Bluetooth Module and a Syvecs Engine Management System.





Installation

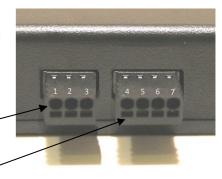
The Bluetooth Module will work with any Syvecs engine management unit, It important to check the pinout's of the Syvecs ECU which you are connecting to before installation which can be found in the below link.

Please Note: For the app to Function, only Pins 4, 5, 6 and 7 need to be connected. For Map switching Pins 2 and 3 need to be connected

http://www.syvecs.co.uk/support/product-manuals-and-pinouts/

Wiring Information:

PIN1 – Available On/Off Switch Output
PIN2 - PWM2 – Traction Sw – Connect to a Spare input on your Ecu
PIN3 - PWM1 – Calibration Sw – Connect to a Spare Input on your Ecu
Pin4 – Ground (MUST connect to Ecu Power Ground)
Pin5 – RS232 TX (connect to ECU RX)
Pin6 – RS232 RX (connect to ECU TX)
Pin7 – 12v (connect to vehicle power or Ecu Power)



Strip 5mm of Insulation back from 20-24awg cable and push firmly into the appropriate circular slot. To release cable inset a small flat blade screw driver to lift the tab found in the rectangular slot shown here.

Status LED Information:

The status LED are located inside the unit and are for installation assistance. LED1 Red – Application Loaded LED2 Blue – Paired and Authenticated LED3 Green – Power LED4 Green – RS232 On / Off

Once wired in you will need to connect to you Syvecs ECU via the Ethernet cable part of your kit and to download the Syvecs Software suite. Link below

http://www.syvecs.com/downloads/SyvecsSetup-Generic-2013-08-23.exe

Install the SSuite package onto your computer and 6 Programs will appear:

- **SCal** Used to adjust the maps in the ECU (Calibrate it)
- SCfg Used to setup the datalogging (Configure which channels and events to log, and how frequently)
- SData Used to read datalogs from the ECU
- **SView** Used to view and interpret datalogs
- **SMon** Used to monitor live ECU parameters
- SMsg Used to monitor ECU status and debug messages

Please note: New releases of software and firmware are often released to apply new features and upgrades, be sure to check the website to ensure you have the latest Ssuite installed



Now that the Syvecs software is installed double click on the program SCAL which will be placed in the Start Menu or via a shortcut which will be placed on your desktop if you selected this option in the installation of SSuite.



In the sub menu for <u>Device</u> you find the option <u>Connect</u>. Select this and Scal should find your Device. Once this device is found it will ask you how you want to access this File. Select **OK**.

The Offline Box shown in the Screenshot above should now change to Connected and a Green light will be present.

You are connected and the Calibration list should be presented as shown in the below screen shot

Cal Pastecal Device Gauge View ID(GENERIC) Dev(S6 #0115) SwVer(1.23.1/1) Cal(october 2011)		
Calbration	syncState	
Calibration Switches	runTime	0:0
Run-Mode Fuelling	rpm	
	tps1	
Run-Mode Ignition	map1	
Wastegate Control	prp1	
Gear Shift	turboSpeed1 ect1	
	acti	
Gear Cut	bap	
Gear Blp	ccp1	
Throttle Jacker Control	eop1	
	fp1 relFp1	
Throttle Bypass Valve Control	rel+p1 eot	
Limp Switch	lam1	
Anti Lag System	egtMax	
Nitrous Control	vbat	
	btMax	
 Traction Control 	calSwitch tcSwitch	
Knock Control	limpMode	EC.
> Starting	engineEnable	
Idle Control	syncDiag	
Idle Stepper Control	fuelPreInj fuelEndAngle	
Limiters	fuelMltBap	
Launch Control	fuelMItAct1	
	fuelMltAct2	
Drive By Wire	FuelMitEct 1	
Variable Valve Timing	fuelMltEct2	
Differential Control	fuelMirRelFp1 fuelMirRelFp2	
	fuelAddVbatPri	
Output Functions	fuelAddVbatSec	
Logging Functions	fuelFinalPri1	
Datastreams	fuelFinalPn2	
	fuelFinalSec1 fuelFinalSec2	
Fuel Consumption	ignFinalPri1	
 Breakpoints and Thresholds 	ignFinalPri2	
> Sensors	ignFinalSec1	
	ignFinalSec2	
Engine Configuration	ignCharge	
	Feat : TK	
	PreRes OK	
	Custom CAN datastream	
	Logging data cleared Logbook cleared	

If you are having problems connecting to the Device speak to the Syvecs tech team on <u>Support@Syvecs.co.uk</u> or <u>Tech@syvecs.us</u>

The Area which is required next, is the Datastream section found ¾ of the way down the calibration list



Now in the Datastream section go to the Datasteam Select

Supercharger Bypass Valve Variable Valve Timing Differential Control Torque Estimation And Limitation Cruise Control Output Functions Logging Functions	CUSTOM CAN DC01 CAN - RT SERIAL - CUSTOM CAN - PI SVSTEM2 - STACK - STACK - STACK - ELEMANS PROTO TYPE - DAS4 CAN -	Heilenstöge Faulhtigap F	
LR Lean Sensor dsRym Maximum Value Fuel Consumption Engine Use Restrictions	GEMS CAN - PI WORLD SERIES - NONE -		

Select Custom Can, 95% of our customers will be using this already in our kits. So no change is required here if already on Custom Can... If Set to NONE change to Custom Can

An other stream set please contact <u>support@syvecs.co.uk</u> or <u>Tech@syvecs.us</u> for more help here.

Now please ESC and Double click on the option under Datastreams – Duplicate Output on RS232

Datastrear	ms / Custom Can / Duplicate Output on RS232 ESC Edit Options Select Math Learn	liNearisation syncState	######
		runMode	******
YES		runTime	*****
		rpm	*****
YES -		tps1	*****
		map1	####
		prp1	####
		turboSpeed1	
		ect1	######
		act1	######
		bap	****
		ccp1	####
		eop1	######
		fp1	******
		relFp1	######
		eot	#####
		lam1	*****
		eqtMax	####
		vbat	#####
		btMax	*****
		calSwitch	******
		tcSwitch	######
8		sirStalartSwi	ch assaus
8			
R L		syncDiag	****
8		fuelPreInj	#####
7		fuelEndAngle	######
붕		fuelMltBap	***
ō		fuelMltAct1	####
Duplicate Output on RS22		fuelMltAct2	####
2		fuelMltEct1	****
9		fuelMltEct2	####
		fuelMltMap1	#####
		fuelMltMap2	
		fuelMltRelFp1	#####
		fuelMltRelFp2	#####
		fuelAddVbatPri	
		fuelAddVbatSec	
		fuelFinalPri1	######
		fuelFinalPri2	*****
		fuelFinalSec1	######
		fuelFinalSec2	######
		ignFinalPri1	*****
		ignFinalPri2	######
		ignCharge	####
NO -			

Press Enter then and select Yes



After this press Esc again and then Select the option – RS232 Transmit Frequency Limit Per Frame



Press Enter and Select 5hz

Please choose from:
1Hz
2Hz
5Hz
10Hz
20Hz
OK Cancel

If you do not require the ability to do Map Switching then you need to save all the changed settings onto the Ecu...Click DEVICE at the top of the Screen and then PROGRAM

The ecu will then reset and say calibration flash passed OK

If you do Require Map Switching then you need to press Esc Twice and scroll down to the Pin Assignment Section found at the bottom of the list.

	Cal 2.8.101 : C:\Solaris\Calibrations\Calibrations\0263\Usmann Ready.SC	
jile	Cal Pastecal Device Gauge View ID(GENERIC) Dev(S6 #XXXX) SwVer(1.10.X/1) Cal(Usmann Ready)	OFFLINE
	Throttle Jacker Control	
	Throttle Bypass Valve Control	
	Limp Switch	
	Anti Lag System	
	Nitrous Control	
	Traction Control	
	Knock Control	
	Starting	
	Idle Control	
	Idle Stepper Control	
	Limiters	
	Launch Control	
	Drive By Wire	
	Variable Valve Timing	
	Output Functions	
	Logging Functions	
	Datastreams	
	Fuel Consumption	
	Breakpoints and Thresholds	
	Sensors	
	Engine Configuration	
	IO Configuration	
	Output Testing	

After selecting IO Configuration, Select Pin Assignments the Full Input and output table will be brought up.

Cal Pastecal Device Gauge View ID(GENER	IC) Dev(S6 #XXXX) SwVer(1.10.X/1) Cal(Usmann Ready)	OF
onfiguration / Pin Assignments	ESC Edit Options Select Math Learn liNearisation	syncState ##
Pin	For Sharp Speece Forth Forth Weapered	runMode ##
nputs : ALS Switch NOT CONNECTED		runTime ########
A) Inputs : ALS Switch	NOT CONNECTED	tps1 #
A) Inputs : Air Charge Temperature Sensor 1	AN 14 (TH) : CTL-53	map1
A) Inputs : Air Charge Temperature Sensor 2	NOT CONNECTED	prp1 .
		turboSpeed1 ### ect1 ###
A) Inputs : Air Inlet Temperature Sensor 1	NOT CONNECTED	ect1 ###
A) Inputs : Air Inlet Temperature Sensor 2	NOT CONNECTED	bap
A) Inputs : Ambient Air Temperature Sensor	NOT CONNECTED	ccp1 ···································
A) Inputs : Barometric Pressure Sensor	NOT CONNECTED	eop1 #
A) Inputs : Beacon	NOT CONNECTED	fp1 #
A) Inputs : Calibration Switch	AN 16 (TH) : CTL-57	eot #
A) Inputs : Cam (Exhaust 1 Variable Valve Timing) Senso		v lam1 #
A) Inputs : Cam (Exhaust 2 Variable Valve Timing) Senso	r NOT CONNECTED	btPwr1 #
A) Inputs : Cam (Inlet 1 Variable Valve Timing) Sensor	AN 1 (5V/BI) ; CTL-35	astPeak ##
A) Inputs : Cam (Inlet 2 Variable Valve Timing) Sensor	NOT CONNECTED	astPeakIdx
A) Inputs : Cam (Phase) Sensor	AN 1 (5V/BI) ; CTL-35	astAvg ##
A) Inputs : Clutch Depressed Switch	NOT CONNECTED	an01V #* an02V #*
		an02V #
A) Inputs : Crank Case Pressure Sensor 1	NOT CONNECTED	an04V #h
A) Inputs : Crank Case Pressure Sensor 2	NOT CONNECTED	an05V #
A) Inputs : Crank Case Pressure Sensor 3	NOT CONNECTED	an06V #* an07V #*
A) Inputs : Crank Case Pressure Sensor 4	NOT CONNECTED	an02V #
A) Inputs : Crank Position Sensor A	AN 2 (5V/BI) : CTL-37	an09V #
A) Inputs : Crank Position Sensor B	NOT CONNECTED	an10V #
A) Inputs : Damper Position Sensor (Front Left Wheel)	NOT CONNECTED	an11V #* an12V #*
A) Inputs : Damper Position Sensor (Front Bight)A(beel)		an12V #

Assigning Calibration and Traction Switch

When viewing the IO Configuration table you are presented firstly with all the input availabilities. You firstly need to select the appropriate item which you want to use, in this case it is the Calibration Switch and Traction Switch. Double Click on the Item and then Select the Analogue (AN) input you used when wiring in the Cal and Traction signals from the Bluetooth adaptor to the Syvecs Ecu Connector.



If the desired input pinout is currently allocated then it will be displayed in RED. The WHITE items show free spaces

You Must Program the ECU again at this point to save the changes made! If you encounter any problems in this stage please contact your calibrator or nearest Syvecs Branch

Making a Connection on Mobile Device

●••••• O2-UK
15:23
63%

Settings

Airplane Mode

◇

Wi-Fi
BTHub3-XZTK >

⑧
Bluetooth

Off >

◇

Cellular

>

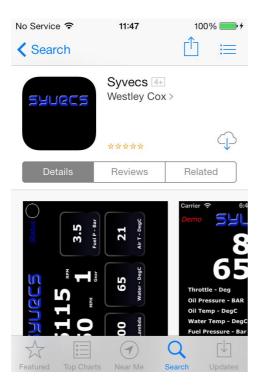
Personal Hotspot

\$ 9% 🖸 Setting Bluetooth Airplane Mode Bluetooth Wi-Fi DEVICES Samsung Home Audio ecs-BT-48FF id (j) Control Center C Do Not Disturb Ø Ø -Sounds Wallpapers & Brightness ۳ Privacy Mail, Con Notes FaceTime 5 Maps

The mobile device will then find the Syvecs Bluetooth Module which will appear as "Syvecs-BT – XXXX" XXXX is the Serial number of the device.... Connect to the unit

Proceed then to the App store for your device

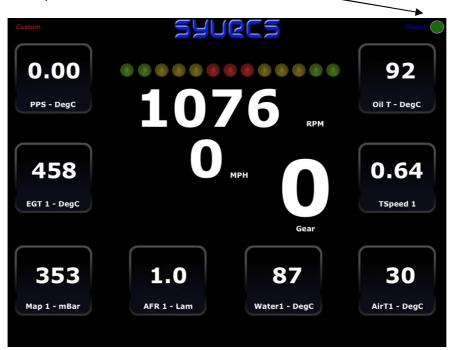
Search for Syvecs and install it once found.





Open the settings tab of you mobile device and select Bluetooth options

If you are then connected to the Bluetooth unit and the Syvecs Ecu is powered up, open up the App on your mobile device... The following screen should appear if you are holding the device in a landscape position.



The Important bit to note is that the Status is Green here-

Changing Calibration and Traction positions

Select to the outputs Section at the bottom of the Screen of the app. Use this Area to Change positions of the calibration switch and traction switch by touching Each box. You will see the numbers count up which will alter the voltage sent out of the Bluetooth module to the Syvecs and change the Calibration position.

Offline			Status 🧰
	Calibration	Traction Control	
	Cal Label 01	Trc Label 01	

Customizing the App

Data should be now present in the gauges on the Screen

To change the gauge layout around and Setup the Calibration switch and Traction Switch turn the Device back to a portrait position and select the Settings tab at the bottom.

2.1.1	Syvecs Settings	X 68% (11 1)
Main Settings		
Demo Mode		\bigcirc
Custom Stream		
Clear Peak Values		Clear
Reset Defaults		Reset
Output Settings		
Calibration Switch		>
Traction Switch		>
Display Configuration		
Vehical Speed		>
Engine RPM		>
Gear		>
Shiftlights		>
Gauge 01		>
Gauge 02		>
Gauge 03		>
Gauge 04		>
Gauge 05		>
Gauge 06		>
Gauge 07		>
	Dash Outputs Settings	
	oun oupus ceungs	

First of all head to the Output Settings area to label all your Calibration and Traction Switch Positions

iPad 🗟	21:00	* 68% 📼
	Calibration Switch	
high boost 70% throttle		
Cal Label 03		
Cal Label 04		
Cal Label 05		
Cal Label 06		
Cal Label 07		
Cal Label 08		
Cal Label 09		
Cal Label 10		

Select the Cal position you wish to Edit and then using the Keyboard remove the previous text and replace it as you wish.

When you have done this select Save in the top right hand corner

Assigning Parameters to Gauges

Setting the parameters assigned to each gauge could not be easier! Select the gauge you wish to change under the Settings area – Display Configuration

2.1.1	Syvecs Settings	1.88% 💷 🔿
Main Settings		
Demo Mode		\bigcirc
Custom Stream		
Clear Peak Values		Clear
Reset Defaults		Reset
Output Settings		
Calibration Switch		>
Traction Switch		>
Display Configuration		
Vehical Speed		>
Engine RPM		>
Gear		>
Shiftlights		>
Gauge 01		>
Gauge 02		>
Gauge 03		>
Gauge 04		>
Gauge 05		>
Gauge 06		>
Gauge 07		>
	Dash Outputs Settings	
	outputs outputs	

A long list of Parameters which are available to view are then presented for you to choose.



Scroll down the list by pressing the screen and Dragging your finger up the Screen. Select the parameter you wish to use

If the desired parameter is not available in the list then you need to make sure it is being sent out of the Syvecs Custom Can Stream. To do this reconnect to the Syvecs unit as explained in the first part of this manual and head back to DataStream – Custom Can – Frame Content

Take a screenshot of this table and speak to your Calibrator or Nearest Syvecs branch about where you are able to add the item required.



In the unlikely event that the Gauges are displaying the wrong values on the App. Head to the Custom Stream Config under the Settings tab. Here you are able to change the Stream Config to match your Syvecs output stream.

2.1.1	Syvecs Settings	8. ea% (====)
Custom Stream Config		
Custom Frame 01		>
Custom Frame 02		>
Custom Frame 03		>
Custom Frame 04		>
Custom Frame 05		>
Custom Frame 06		>
Custom Frame 07		>
Custom Frame 08		>
Custom Frame 09		>

Select each Frame and adjust the item in each slot to match your screenshot taken from Scal.

21:00	* 68% 💷
Custom Frame 01	
	×
	>
	>
	>

For Further help or Support please contact Support@Syvecs.co.uk or Tech@Syvecs.us