Syvecs LTD

V1.2

Yamaha YXZ

This document is intended for use by a technical audience and describes a number of procedures that are potentially hazardous. Installations should be carried out by competent persons only.

Syvecs and the author accept no liability for any damage caused by the incorrect installation or configuration of the equipment.

Please Note that due to frequent firmware changes certain windows might not be the same as the manual illustrates. If so please contact the Syvecs Tech Team for Assistance.

Support@Syvecs.com

Contents:

The kit includes the following:

1 x Syvecs S7Plus

1 x NTK LZA09-E1 Lambda
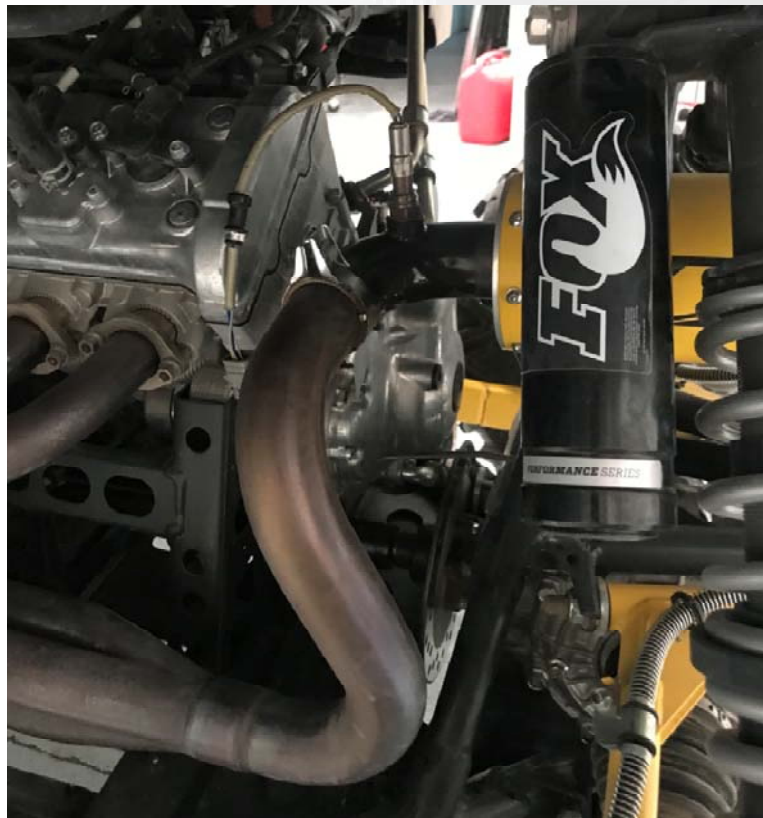
1 x Wiring Adaptor

Installation

1.)   Remove the OEM Engine control module found behind the plastic cover between the seats

2.)   Replace with the Syvecs Wiring Loom

3.)   Fit the L2h2 NTK Lambda in the Exhaust and run the flying harness through the bulkhead

FAQ and Help

Q) Do you control the OEM Rad Fans and Induction Valve

A) Yes, This is set in Output Functions Fan1 (Rad Fan) and Fan (Induction Relay).

Q) Do you control the Parking Brake Buzzer and the OEM Seat Belt Light .

A) Yes, but as default the Seat belt limp is removed, It can be turned back on via Output Functions – Fan7 (Seat Belt)

Q) Do you control the OEM 4WD Diff Control

A) Yes all works as factory as well as the dash symbols

Q) Does the Kit would on the SS Paddle Shift Model

A) Yes it does and also the torque control on shifts is dealt with like OEM

Q) Can I install different in tank pump?

A) Yes, the Syvecs communicates with the OEM Fuel Pump Relay to control the pump. You can easily use a spare output to add additional pump control also

Q) What of the original features will no longer work?

A) All original features will function properly

Q) Can you add DBW Throttles to the ATV

Yes these are lots of spare H Bridge Outputs which can be used to control a Electronic Throttle System. Would need to wire in a Pedal Sensor also

Q) Can you run Flex Fuel and Additional Injectors

Yes , our ecu supports fuel composition sensors which can be fitted to any of the spare inputs and also has lots of spare outputs for adding 3 Secondary injectors

Q) Do you have launch control on the Paddle Shift Version

Yes, this is fully adjustable and triggered off the brake switch, on ATV with Clutch its triggered from clutch switch

Q) Can you have multiple maps

Yes, using a Syvecs Cal Switch you can have up to 12 maps which can change anything on the ECU

Email Support@syvecs.co.uk for a base map to suit your setup.

A

	DESCRIPTION	CONNECTOR A	
	PART NUMBER	4-1437290-0	
	NOTES:	34 Way - Key1	
Syvecs Description	*Syvecs Pinout*	*Function*	*Notes*
PWR CTR OUT	A1	MAIN RELAY OUTPUT	
H-Bridge1 / SlaveOut1	A2	H-Bridge1	
H-Bridge2 / SlaveOut2	A3	H-Bridge2	
H-Bridge3 / SlaveOut3	A4	H-Bridge3	Air Induction Relay/evap
H-Bridge4 / SlaveOut4	A5	H-Bridge4	
H-Bridge5 / SlaveOut5	A6	H-Bridge5	
H-Bridge6 / SlaveOut6	A7	H-Bridge6	
H-Bridge7 / SlaveOut7	A8	H-Bridge7	
H-Bridge8 / SlaveOut8	A9	H-Bridge8	
FUEL1	A10	INJECTOR or PWM OUTPUT	Primary Injector 1
FUEL2	A11	INJECTOR or PWM OUTPUT	Primary Injector 2
FUEL3	A12	INJECTOR or PWM OUTPUT	Primary Injector 3
FUEL4	A13	INJECTOR or PWM OUTPUT	Start Output
FUEL5	A14	INJECTOR or PWM OUTPUT	Stepper motor 1
FUEL6	A15	INJECTOR or PWM OUTPUT	Stepper motor 2
FUEL7	A16	INJECTOR or PWM OUTPUT	Stepper motor 3
FUEL8	A17	INJECTOR or PWM OUTPUT	Stepper motor 4
PWM1 /*FUEL9	A18	PWM OUTPUT	Tacho
PWM2 / *FUEL10	A19	PWM OUTPUT	
PWM3 / *FUEL11	A20	PWM OUTPUT	Rad Fan Relay - CanAm
PWM4 / *FUEL12	A21	PWM OUTPUT	Seat Belt Light
PWM5	A22	PWM OUTPUT	Parking Brake Buzzer
PWM6	A23	PWM OUTPUT	Diff Relay Down
PWM7	A24	PWM OUTPUT	Diff Relay Up
PWM8	A25	PWM OUTPUT	Main Relay
IGN1	A26	CYL 1 IGNITION OUTPUT	Ignition 1
IGN2	A27	CYL 2 IGNITION OUTPUT	Ignition 2
IGN3	A28	CYL 3 IGNITION OUTPUT	Ignition 3
IGN4	A29	CYL 4 IGNITION OUTPUT	
IGN5	A30	CYL 5 IGNITION OUTPUT	
IGN6	A31	CYL 6 IGNITION OUTPUT	
PWRGND	A32	POWER GROUND	Ground
PWRGND	A33	POWER GROUND	Ground
PWRGND	A34	POWER GROUND	Ground

B

	DESCRIPTION	CONNECTOR B	
	PART NUMBER	3-1437290-7	
	NOTES:	26 Way - Key1	
PWRGND	B1	POWER GROUND	Ground
CAN2L	B2		
CAN2H	B3		

KNOCK	B4	KNOCK	
KNOCK 2	B5	KNOCK 2	
PVBAT	B6	CONSTANT 12V	
IVBAT	B7	12v	12v Switch
LAM1A	B8	Lamv / LamD1+/ LamLun1	Grey NTK
LAM1B	B9	Lami / LamD1- /LamIP1	White NTK
LAM1C	B10	LamLIA1	
LAM1D	B11	LamGND / LamLVM1	Black NTK
LAM1HEATER	B12	LAMBDA HEATER	Blue NTK
IVBAT	B13	12V	Yellow NTK
LAM2A	B14	Lamv / LamD1+/ LamLun1	2.2v
LAM2B	B15	Lami / LamD1- /LamIP1	1.8v
LAM2C	B16	LamLIA1	
LAM2D	B17	LamGND / LamLVM1	
LAM2HEATER	B18	LAMBDA HEATER	
IVBAT	B19	12V	
KLINE	B20	Kline	
RS232RX	B21	RS232RX	
RS232TX	B22	RS232TX	
LANRX-	B23	Cat5 Pin2	
LANRX+	B24	Cat5 Pin1	
LANTX-	B25	Cat5 Pin6	
LANTX+	B26	Cat5 Pin3	

C			
	DESCRIPTION	CONNECTOR C	
	PART NUMBER	4-1437290-1	
	NOTES:	34 Way - Key2	

KNOCKGND	C1	KNOCKGND	
ANGND	C2	SENSOR GND	
ANGND	C3	SENSOR GND	
ANGND	C4	SENSOR GND	
5V OUT	C5	5V OUT	TPS, Map
5V OUT	C6	5V OUT	
5V OUT	C7	5V OUT	Gear Pot 5v - CanAm
CAN L	C8	Can Low	Can Low
CAN H	C9	Can High	Can High
AN01	C10	BI-POLAR INPUTS	Crank
AN02	C11	BI-POLAR INPUTS	Diff Switch
AN03	C12	BI-POLAR INPUTS	Diff Servo
AN04	C13	BI-POLAR INPUTS	Intake pressure - CAM PHASE
AN05	C14	UNI-POLAR INPUTS	Neutral
AN06	C15	UNI-POLAR INPUTS	Gear Position
AN07	C16	UNI-POLAR INPUTS	Diff Lock Rotary 2
AN08	C17	UNI-POLAR INPUTS	Speed
AN09	C18	VOLT-INPUTS	
AN10	C19	VOLT-INPUTS	TPS
AN11	C20	VOLT-INPUTS	Intake pressure 1

AN12	C21	VOLT-INPUTS	
AN13	C22	RESISTIVE INPUTS	Coolant Temp
AN14	C23	RESISTIVE INPUTS	Intake Temp
AN15	C24	RESISTIVE INPUTS	Seat Belt
AN16	C25	RESISTIVE INPUTS	Lean Angle
EGT1-	C26	EGT1 -	
EGT1+	C27	EGT1 +	
PWR CTR IN	C28	MAIN RELAY INPUT SW	
AN S1 / Slave An01	C29	UNI-POLAR INPUTS	Diff Servo 2 Position
AN S2 / Slave An02	C30	UNI-POLAR INPUTS	Brake Sw
AN S3 / Slave An03	C31	UNI-POLAR INPUTS	Clutch Sw
AN S4 / Slave An04	C32	UNI-POLAR INPUTS	Diff Position 3 - 4WD Active
AN S5 / Slave An05	C33	UNI-POLAR INPUTS	Diff Switch - 2wd = 12v
AN S6 / Slave An06	C34	UNI-POLAR INPUTS	Diff Lock Switch = Ground when active