



















Haltech Wiring Report - Page 1

Vehicle Name: **Bad Wolf Turbo Mk2**

Product: **Haltech Nexus R3 VCU**

Assigned Resources:



Connections	Assigned Functions
Analogue Voltage Inputs on Nexus R3 VCU:	
 [W], C10	AVI1 Brake Pedal Switch 1 Input, for Brake Pedal Switch
 [W/Y], C11	AVI2 Clutch Switch Input, for Clutch Switch
 [W/GY], C12	AVI3 Coolant Temperature Input, for Coolant Temperature Sensor
 [W/V], C13	AVI4 Oil Pressure Input, for Oil Pressure Sensor
 [W/G], C14	AVI5 Throttle 1 Sensor A, for Drive By Wire
 [W/O], C15	AVI6 Throttle 1 Sensor B, for Drive By Wire
 [W/B], C16	AVI7 Intake Air Temperature Input, for Intake Air Temperature Sensor
 [W/BR], C17	AVI8 Pedal Sensor A, for Drive By Wire
 [W/R], C18	AVI9 Pedal Sensor B, for Drive By Wire
 [LG], C27	AVI10 Oil Temperature Input, for Oil Temperature Sensor
 [LG/B], C28	AVI11 Fuel Pressure Input, for Fuel Pressure Sensor
Digital Pulsed Outputs on Nexus R3 VCU:	
 [V/B], A9	DPO1 Output 1, for Generic Output 4 (Speedometer)
 [V/BR], A12	DPO2 Tacho Output, for Tachometer
 [V/R], A14	DPO3 Boost Control Solenoid, for Boost Control
 [V/O], A15	DPO4 Output 1, for Generic Output 9 (Boost Gauge)
 [V/Y], A16	DPO5 Check Engine Light Output, for Check Engine Light
Sync Pulsed Inputs on Nexus R3 VCU:	
 [GY/BR], C5	SPI1 Vehicle Speed Input, for Vehicle Speed Drive Train Sensor
Knock Inputs on Nexus R3 VCU:	
 [B/L], C23	KNOCK1 Knock Sensor 1

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Vehicle Name: **Bad Wolf Turbo Mk2**

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Injection Outputs on Nexus R3 VCU:

	[L], A1	INJ1	Injector Output 1
	[L/B], A2	INJ2	Injector Output 2





Ignition Outputs on Nexus R3 VCU:

	[Y/B], A27	IGN1	Ignition Output for Cylinders 1 and 4
	[Y/R], A28	IGN2	Ignition Output for Cylinders 3 and 2





Half Bridge Outputs on Nexus R3 VCU:

	[BR/B], A19	HBO1	Throttle 1 Motor A, for Drive By Wire
	[BR/R], A20	HBO2	Throttle 1 Motor B, for Drive By Wire
	[BR/G], A21	HBO3	Output 1, for Generic Output 8 (Oil Pressure Gauge)
	[BR/P], A22	HBO4	Output 1, for Generic Output 7 (Coolant Temp Gauge)
	[P/R], A18	HBO5	CAN Power Output 1, for CAN System
	[P/BR], A25	HBO6	Output 1, for Generic Output 10 (Speed & USB)


25A High Current Outputs on Nexus R3 VCU:

	[R/L], E1	25A-HCO1	Injector Power Output 1, for Injection System
	[R/Y], E2	25A-HCO2	Ignition Coil Power Output 1, for Ignition System
	[R/O], E3	25A-HCO3	Fuel Pump Relay Output, for Primary Fuel Pump
	[R/G], E4	25A-HCO4	Thermofan 1 Output, for Thermofan 1

CAN Ports on Nexus R3 VCU:

	[W], A23, CAN 1 H	CAN1	Haltech CAN Bus Port 1, for CAN System
	[L], A24, CAN 1 L		
	[W], C21, CAN 2 H	CAN2	Haltech CAN Bus Port 2, for CAN System
	[L], C22, CAN 2 L		

Trigger on Nexus R3 VCU:

	[GY], C1	Trigger (+ve)	Trigger System (+)
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Vehicle Name: **Bad Wolf Turbo Mk2**

Product: **Haltech Nexus R3 VCU**

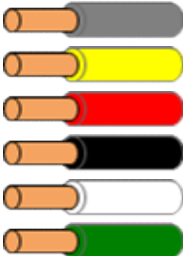
Pressure Inputs on Nexus R3 VCU:



OBPS 1

Manifold Pressure Input, for Manifold Pressure Sensor

Wideband Inputs on Nexus R3 VCU:



[GY], C29, WBI 1 HEATER+

[Y], C30, WBI 1 INPUT

[R], C31, WBI 1 PUMP

[B], C32, WBI 1 NERNST

[W], C33, WBI 1 HEATER-

[G], C34, WBI 1 CAL

Internal Wideband

Wideband O2 1 Input, for Wideband O2 1 Sensor

System References on Nexus R3 VCU:



[O], C25

+5V Sensor Supply

5V Sensors



[B/W], C26

Sensor GND

Sensor ground



[O/W], C9

+8V Sensor Supply

8V Sensors



+12V ECU Power

Battery (+ve)



Battery Ground

Battery (-ve)



[B], A10, POWER GROUND

[B], A11, POWER GROUND

Power GND Out

Power Ground Out

Do not directly connect any other devices to the ignition switch



[P], A13

Ign SW Input

Ignition Switch

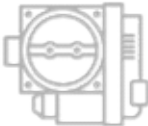


[R/L], A26

Ign SW Power

Ignition Switch Power

Other Connections on Drive By Wire:



Idle

Main Output, for Idle Control

Channels:



Override Switch (GenCond1 Out)





Override Switch, for Generic Output 1 (Secondary Circuits)

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Vehicle Name: **Bad Wolf Turbo Mk2**

Product: **Haltech Nexus R3 VCU**

Analogue Voltage Inputs on PD16 Box A (Boot Power Distro) :

	[W], A20	PD16A AVI 1	Park Light Input, for Headlight Control
	[W/Y], A21	PD16A AVI 2	Head Light Input, for Headlight Control
	[W/GY], A27	PD16A AVI 3	Left Indicator Input, for Indicator Control
	[W/V], A28	PD16A AVI 4	Right Indicator Input, for Indicator Control


Sync Pulsed Inputs on PD16 Box A (Boot Power Distro) :

	[GY/BR], A14	PD16A SPI1	Override Switch, for Generic Output 5 (Heater)
	[GY/R], A15	PD16A SPI2	Start Button Input, for Engine Starter Control Function
	[GY/O], A16	PD16A SPI3	Override Switch, for Generic Output 2 (Wipers)
	[GY/Y], A19	PD16A SPI4	Override Switch, for Generic Output 3 (Fog Lamps)

Half Bridge Outputs on PD16 Box A (Boot Power Distro) :

	[BR/Y], A1	PD16A HBO1	Oil Pressure Light, for Oil Pressure Light
	[BR/L], A2	PD16A HBO2	Battery Light Output, for Battery Voltage Light

8A High Current Outputs on PD16 Box A (Boot Power Distro) :





	[P/R], A3	PD16A 8A-HCO1	Left Indicator Output, for Indicator Control
	[P/BR], A4	PD16A 8A-HCO2	Output 2, for Generic Output 10 (Speed & USB)
	[P/B], A5	PD16A 8A-HCO3	Output 1, for Generic Output 1 (Secondary Circuits)
	[P/O], A6	PD16A 8A-HCO4	Output 1, for Generic Output 5 (Heater)
	[P/Y], A7	PD16A 8A-HCO5	Output 2, for Generic Output 1 (Secondary Circuits)
	[P/G], A8	PD16A 8A-HCO6	Alternator Control Output, for Alternator Control
	[P/V], A9	PD16A 8A-HCO7	Starter Motor Relay Output, for Engine Starter Control Function
	[P/L], A10	PD16A 8A-HCO8	Right Indicator Output, for Indicator Control
	[P/GY], A17	PD16A 8A-HCO9	Brake Light Output, for Brake light Control
	[P/W], A18	PD16A 8A-HCO10	Park Lights Output, for Headlight Control

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Vehicle Name: **Bad Wolf Turbo Mk2**

Product: **Haltech Nexus R3 VCU**







25A High Current Outputs on PD16 Box A (Boot Power Distro) :

	[R/L], E1	PD16A 25A-HCO1	Head Lights Output, for Headlight Control
	[R/Y], E2	PD16A 25A-HCO2	Output 1, for Generic Output 2 (Wipers)
	[R/O], E3	PD16A 25A-HCO3	Output 1, for Generic Output 3 (Fog Lamps)
	[R/G], E4	PD16A 25A-HCO4	Output 1, for Generic Output 6 (Stereo system)

System References on PD16 Box A (Boot Power Distro) :

		PD16A +12V Power	Battery (+ve)
	[O], A12	PD16A Sensor 5V	Sensor 5V
	[B/W], A11	PD16A Sensor GND	Sensor ground
	[B], A31, POWER GROUND	PD16A Power GND In	Power ground
	[B], A32, POWER GROUND		
	[B], A33, POWER GROUND		
	[B], A34, POWER GROUND		

Do not directly connect any other devices to the ignition switch

	[P], A13	PD16A Ign SW Input	Ignition Switch Input
	[R/L], A26	PD16A Ign SW Power	Ignition Switch Power
	[W], A23	PD16A CAN High	CAN High
	[L], A24	PD16A CAN Low	CAN Low
	[P], A25	PD16A CAN Power	CAN Power
	[B], A22	PD16A CAN Ground	CAN Ground

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Vehicle Name: **Bad Wolf Turbo Mk2**

Product: **Haltech Nexus R3 VCU**

Available Resources:

Connections

Digital Pulsed Outputs on Nexus R3 VCU:



[V/G], A17

DPO6

Sync Pulsed Inputs on Nexus R3 VCU:



[GY/R], C6

SPI2



[GY/O], C7

SPI3



[GY/Y], C8

SPI4



[GY/P], C19

SPI5



[GY/LG], C20

SPI6

Knock Inputs on Nexus R3 VCU:



[B/G], C24

KNOCK2

Injection Outputs on Nexus R3 VCU:



[L/BR], A3

INJ3



[L/R], A4

INJ4



[L/O], A5

INJ5



[L/Y], A6

INJ6



[L/G], A7

INJ7



[L/V], A8

INJ8

Ignition Outputs on Nexus R3 VCU:



[Y/O], A29

IGN3



[Y/G], A30

IGN4



[Y/BR], A31

IGN5



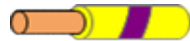
[Y/L], A32

IGN6

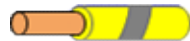
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Vehicle Name: **Bad Wolf Turbo Mk2**
Product: **Haltech Nexus R3 VCU**

Ignition Outputs on Nexus R3 VCU:



[Y/V], A33 IGN7



[Y/GY], A34 IGN8

Trigger on Nexus R3 VCU:



[GY], C2 Trigger (-ve)



[GY/B], C3 Home (+ve)



[GY/B], C4 Home (-ve)

Virtual Outputs on Nexus R3 VCU:

~~Virtual Output~~
~~No Physical~~
~~Connection~~

Virtual Output 1

~~Virtual Output~~
~~No Physical~~
~~Connection~~

Virtual Output 2

~~Virtual Output~~
~~No Physical~~
~~Connection~~

Virtual Output 3

~~Virtual Output~~
~~No Physical~~
~~Connection~~

Virtual Output 4

~~Virtual Output~~
~~No Physical~~
~~Connection~~

Virtual Output 5

~~Virtual Output~~
~~No Physical~~
~~Connection~~

Virtual Output 6

~~Virtual Output~~
~~No Physical~~
~~Connection~~

Virtual Output 7

~~Virtual Output~~
~~No Physical~~
~~Connection~~

Virtual Output 8

~~Virtual Output~~
~~No Physical~~
~~Connection~~

Virtual Output 9


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Vehicle Name: **Bad Wolf Turbo Mk2**
Product: **Haltech Nexus R3 VCU**

Virtual Outputs on Nexus R3 VCU:

Virtual Output No Physical Connection	Virtual Output 10
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Inertial Measurement Unit (IMU) on Nexus R3 VCU:

	Internal IMU
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