

WIRING BUNDLES	9/24/21					
Speeduino						
Inside of Speeduino Box Wires						
Bluetooth 1				shielded twisted		
Bluetooth 2				shielded twisted		
Bluetooth 3				shielded twisted		
Bluetooth 4				20 ga		
Reset to GND				20 ga		
USB connector 4				pre-made cable		
Spare 1				20 ga pink		
Spare 2				20 ga brown		
Spare 3				20 ga pink		
TEMP1				20 ga extra long to engine yellow		
TEMP2				20 ga extra long to engine orange		
Speeduino bundle through grommit	29 - 20ga, 2 - 16ga					
Connection # - Function	Destination Bundle	Wire Color	Gauge			
S44-1 - INJ1 - Pin 1/2 Injectors 1 & 3	Right & left Intake Bundles		20 ga	purple & orange		
S44-5 - INJ2 - Pin 1/2 Injectors 2 & 4	Right & left Intake Bundles		20 ga	white & pink		
S44-6 - INJ2 - Pin 2/2 Injectors 2 & 4	Right & left Intake Bundles		20 ga	white & pink		
S44-7 - Ignition 1	Central Engine Bundle		20 ga	gray		
S44-9 - Star Engine Ground	Central Engine Bundle		20 ga	black		
S44-10 - Star Engine Ground	Central Engine Bundle		20 ga	black		
S44-12 - Star Engine Ground	Central Engine Bundle		20 ga	black		
S44-13 - 5v to TPS	Central Engine Bundle		20 ga	blue		
S44-14 - Tach output to dash	Front of car Bundle		20 ga	gray		
S44-19 - Coolant (CLT)	Idle Air/CLT Bundle		20 ga	orange		
S44-20 - Inlet Air Temp (IAT).	Right Intake Bundle		20 ga	brown		
S44-21 - O2 Sensor Signal input	Right side of car Bundle		20 ga	green		
S44-22 - TPS Signal input.	Right Intake Bundle		20 ga	yellow		
S44-23 - Sensor Signal Ground all sensors	Right Intake Bundle		20 ga	shielded blacks and bare shield wires		
S44-25 - Crank Sensor Input Hall sensor	Right Intake Bundle	2 shielded cables	20 ga	shield-1 red to Hall white (shield-1 black to Hall black)		
S44-28 - 5v supply to Hall sensor	Right Intake Bundle		20 ga	shield-2 red to Hall red (sheld-2 black unconnected at Hall)		
S44-34 - Ignition 2	Central Engine Bundle		20 ga	red		
S44-35 - Fuel Pump relay ground (remaining)	Front of car Bundle	white spare to front relay	20 ga	white		
S44-36 - PWM Idle 2	Idle Air/CLT Bundle		20 ga	red		
S44-37 - PWM Idle 1	Idle Air/CLT Bundle		20 ga	green		
S44-40 - INJ1 - Pin 2/2 Injectors 1 & 3	Right & left Intake Bundles		20 ga	purple & orange		
S44-41 - +12V - Battery voltage relay 16	Relay Box Bundle	panel terminal red	16 ga	red 16		
S44-42 - GND - Star Engine Ground 16	Central Engine Bundle	panel terminal black	16 ga	black 16		
S44-43 - Reset to GND						
S44-44 - 5V supply to Bluetooth						

	Speeduino Box - Spare 1	Central Engine Bundle	unconnected	20 ga	pink		
	Speeduino Box - Spare 2	Relay Box Bundle	unconnected	20 ga	brown		
	Speeduino Box - Spare 3	Front of car Bundle	unconnected	20 ga	pink		
	Speeduino Box - TEMP1	Engine	unconnected	20 ga	yellow		
	Speeduino Box - TEMP2	Engine	unconnected	20 ga	orange		
	Left Side of Car Bundle						
	1 From Front of Car Bundle						
	Fuel Pump Relay GND	Speeduino to Front	spliced	18 ga white			
	Dash Tachometer Signal	Speeduino to Front	spliced	20 ga gray			
	Spare 3 from Speedy	unconnected	open at axle	20 ga pink			
	Security GND to Relay Box Bundle	Front to Relay Box	D12	20 ga green			
	Switched +12V from Dash to Relay B	Front to Relay Box	D12	16 ga purple			
	AC on from dryer	Front to Relay Box	D12	18 ga green			
	Dash Oil Temp to sensor	Front to Central Engine Bunc	BH26	18 or 20 ga white			
	Dash Oil Pressure Signal	Front to Central Engine Bunc	BH26	18 ga white w/black marker			
	Dash Oil Pressure Warning Signal	Front to Central Engine Bunc	BH26	18 or 20 ga green			
	Dash Alternator D+	Front to Central Engine Bunc	BH26	16 ga blue			
	Dash Alternator GND	Front to Engine Block GND	Engine Block GND	16 ga black			
	2 Idle Air/WBO2/Oil Fan & Temp Switch/CLT Bundle						
	Speeduino CLT/Head Signal - Exhaust	Speeduino	spade	shielded input red			
	Speeduino CLT shield	Speeduino	unconnected	shield signal ground			
	Idle Air 1 - PWM Idle 1 green	Speeduino	mini-timer	16 ga green	swapped green and red at connector		
	Idle Air +12V from Relay	Relay Box	mini-timer	16 ga blue			
	Idle Air 2 - PWM Idle 2 red	Speeduino	mini-timer	16 ga red	swapped green and red at connector		
	WBO2 Signal to Speeduino	Speeduino	WBO2 cable	20 ga green			
	WBO2 - Speeduino Signal GND	Speeduino	WBO2 cable	20 ga black to Speedy signal GND (check to make sure not looped to white wire GND)			
	WBO2 +12V from Relay 3 Oil Fan/WI	Relay Box	WBO2 cable	red 16 ga			
	WBO2 - Engine Block GND for Heater	Front to Engine Block GND	WBO2 cable	16 ga white			
	3 Relay Box Bundle						
			local connector	Speedy/Rear color	Engine color	Pin	
30 power feed	Unswitched 12V from Starter B+		D12 pin 1	10 ga split to 2x16 ga r	NA	13a/pin max	
30 power feed	Unswitched 12V from Starter B+		D12 pin 2	(see above)	NA	Direct	
engine gnd	Engine GND		D12 pin 3	16 ga black to block	NA	Direct	
- trigger gnd	Master GND From Dash Security Switch		D12 pin 4	20 ga green	NA	Direct	
+ trigger	Switched +12V from Dash		D12 pin 5	16 ga purple	NA	Direct	
+ trigger	Trigger Air Conditioner from Dryer		D12 pin 6	20 ga green	NA	Direct	
swt trig-sec gnd	12V Power to Speeduino	5a	D12 pin 7	16 ga red	NA	Direct	
Spdy trig-sec gnd	12V Power to Ignition Module	6a split	D12 pin 8	16 ga blue		BH26	
Spdy trig-sec gnd	12V Power to Ignition Module	6a split	D12 pin 9	16 ga blue		BH26	
Spdy trig-sec gnd	12V Power to WBO2 & Injectors	5a + 6a	D12 pin 10	3x16 ga red	NA	Direct & BH26	

Spdy trig-sec gnd	12V Power to Oil Fan & idle air	5a + 5a	D12 pin 11	2x16 ga red	NA	Direct	
AC trig-sec gnd	12V Power to AC Clutch & Fan	5a + 5.3a	D12 pin 12	2x16 ga red to fan, AC grn		BH26 (Clutch+Fan)	
	Spare 2 from Speedy unconnected at D12		unconnected	20 ga brown			
Main Engine Bundle Through Firewall Using BH26 and Splitting Off Afterwards			BH26	Local Plug		5a/pin max	
1 Central Engine Bundle - High Interference or Dash Gauges Wires							
a	AC Compressor Clutch green		Yes	spade	BH26-1	16 ga green	relay
b	Dash Oil Temp to sensor	white	Yes	spade	BH26-3	20 ga white	harness
	Dash Oil Pressure Signal	white w/black marker	Yes	spade	BH26-4	20 ga white w/black	harness
	Dash Oil Pressure Warning Signal		Yes	spade	BH26-5	20 ga green	harness
c	Dash Alternator D+	blue	Yes	spade	BH26-6	16 ga blue	harness
	Alternator Engine block GND 14 ga black		No	ring to ring	NA	14 ga blk diode & capacitor GND	
d	Ignition Pin 1 = grey Ign Input 1 - A & D Speeduino pin 7		Yes	Ignition C4	BH26-7	20 ga gray	speeduino
	Ignition Pin 2 = yellow Switched Pwr +12v from Relay (match plug)		Yes, 5a use 2 pins	Ignition C4	BH26-10 & BH26-16	2 pins to 16ga blue to yellc	relay
	Ignition Pin 3 = red Ign Input 2 - B & C Speeduino pin 34		Yes	Ignition C4	BH26-8	20 ga red	speeduino
	Ignition Pin 4 = black 14 ga to engine block GND		No	Ignition C4 to ring	NA	14 ga blk diode & capacitor GND	
e	Spare 1		Yes		BH26-9	20 ga pink	speeduino
2 Left Intake Bundle-3 wires in bundle splitting to 4 wires at 2 connectors							
a	+12V from relay to Left Injectors 16 ga		Yes	shared on mini-timers	BH26-21	16 ga red split at each inje	relay
	Injector 3 ground from Speeduino pin 3, 4		Yes	2 conductor mini-timer	BH26-25	16 ga orange	speeduino
	Injector 4 ground from Speeduino pin 39, 2		Yes	2 conductor mini-timer	BH26-26	16 ga pink	speeduino
Right Side of Car Bundle							
1 Right Intake Bundle-6 cables/wires in bundle splitting into 12 wires at 5 connectors							
a	+12V from relay to Right Injectors red 16 ga		Yes	shared on mini-timers	BH26-17	16 ga red split at each inje	relay
	Injector 1 ground from Speeduino pin 1, 40		Yes	2 conductor mini-timer	BH26-11	16 ga purple	speeduino
	Injector 2 ground from Speeduino pin 5, 6		Yes	2 conductor mini-timer	BH26-2	16 ga white	speeduino
b	Throttle Position Sensor Signal yellow		Yes	3 conductor mini-timer	BH26-12	shield-3 red to TPS yellow	speeduino
	Throttle Position Sensor GND white		Yes	3 conductor mini-timer	BH26-13	shield-3 black to TPS white	speeduino
	Throttle Position +5V blue		Yes	3 conductor mini-timer	BH26-14	shield-4 black to TPS blue	speeduino
	TPS shields		Yes	shields unconnected	BH26-15	shield-3&4 shields merged	speeduino
c	Intake Air Temp Signal brown		Yes	D2	BH26-18	20 ga brown	speeduino
	Intake Air Temp Sensor GND black		Yes	D2	BH26-19	20 ga black	speeduino
Under Engine Bundle (Crankshaft Position Sensor)							
	Crank Sensor Signal white		Yes	D4	BH26-20	shield-1 red to Hall white	speeduino
	Crank Sensor +5V red		Yes	D4	BH26-22	shield-2 red to Hall red	speeduino
	Crank Sensor - Sensor GND black		Yes	D4	BH26-23	shield-1 black to Hall black	speeduino
	Crank Sensor shields		Yes	D4	BH26-24	shield-1&2 shields merged	speeduino

GROUND CONNECTIONS	Star terminal block at engine				
G1-AC Condensor Fan GND & diode/capacitor					
G2-Speeduino Engine GND					
G3-Speeduino Engine GND					
G4-Speeduino Engine GND					
G5-Speeduino Engine GND					
G6-WBO2 Heater GND					
G7-Oil Fan GND & diode/capacitor					
G8-Alternator GND & diode/capacitor					
G9-Ignition Module GND & diode/capacitor					
G10-Relay Triggers GND					
G11-AC Clutch GND					
SENSOR GROUND SPEEDUINO PIN 23					
Crank Position Sensor GND	BH26 pin to crimped 20ga at Speeduino				
Throttle Position Sensor GND	BH26 pin to crimped 20ga at Speeduino				
Intake Air Temp Sensor GND	BH26 pin to crimped 20ga at Speeduino				
WBO2 black sensor GND (not engine bundle)	Direct to crimped 20ga at Speeduino				