

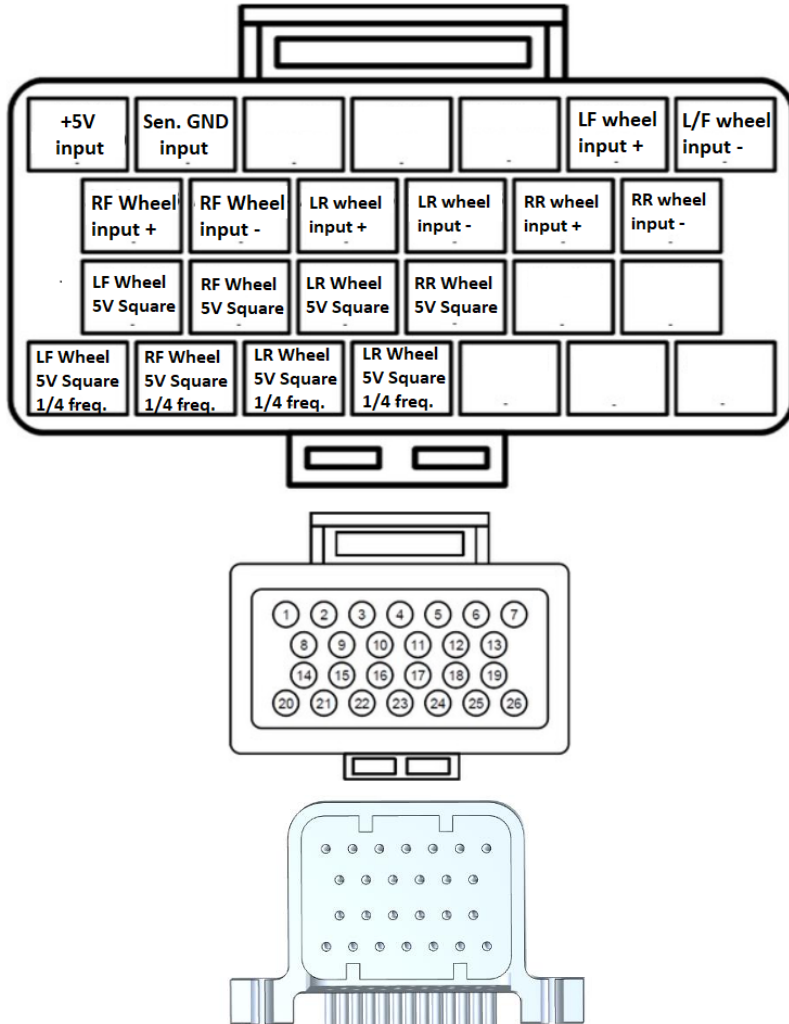
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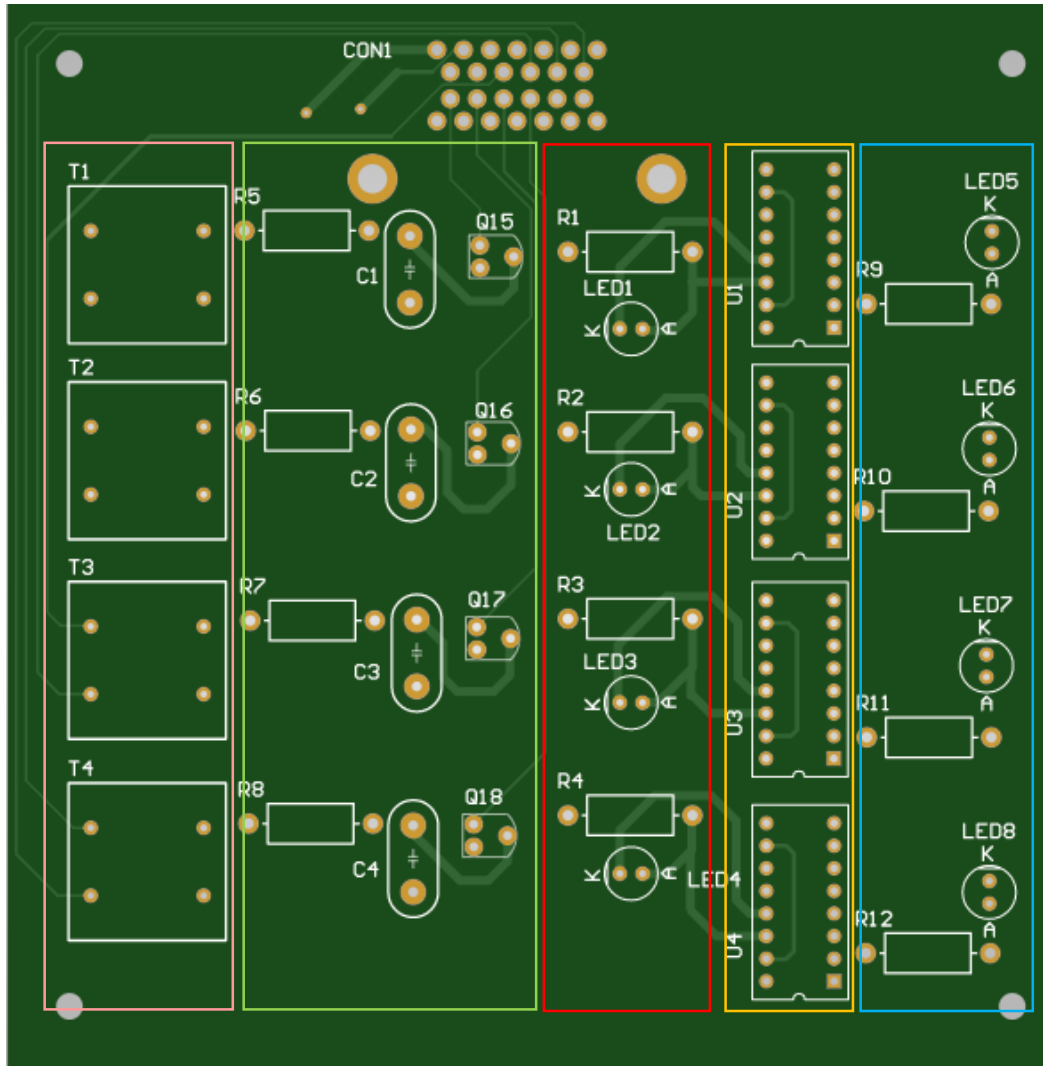
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Connector Pinout



Terminal	Name	Description	Input / Output
1	+5V input	+5V from ECU	input
2	Sensor Ground input	Sensor Ground from ECU	input
3			
4			
5			input
6	Left front wheel speed sensor input +	Positive side of VR wheel speed sensor left front	input
7	Left front wheel speed sensor input -	Ground side of VR wheel speed sensor left front	input
8	Right front wheel speed sensor input +	Positive side of VR wheel speed Sensor right front	input
9	Right front wheel speed sensor input -	Ground side of VR wheel speed Sensor right front	input
10	Left rear wheel speed sensor input +	Positive side of VR wheel speed sensor left rear	input
11	Left rear wheel speed sensor input -	Ground side of VR wheel speed sensor left rear	input
12	Right rear wheel speed sensor input +	Positive side of VR wheel speed sensor right rear	input
13	Right rear wheel speed sensor input -	Ground side of VR wheel speed sensor right rear	input
14	Left front wheel speed sensor output	Conditioned signal 5V Square wave with same frequency as the input frequency	output
15	Right front wheel speed sensor output	Conditioned signal 5V Square wave with same frequency as the input frequency	output
16	Left rear wheel speed sensor output	Conditioned signal 5V Square wave with same frequency as the input frequency	output
17	Left rear wheel speed sensor output	Conditioned signal 5V Square wave with same frequency as the input frequency	output
18			
19			
20	Left front wheel speed sensor output	Conditioned signal 5V Square wave with 1/4 of the input frequency	output
21	Right front wheel speed sensor output	Conditioned signal 5V Square wave with 1/4 of the input frequency	output
22	Left rear wheel speed sensor output	Conditioned signal 5V Square wave with 1/4 of the input frequency	output
23	Left rear wheel speed sensor output	Conditioned signal 5V Square wave with 1/4 of the input frequency	output
24			
25			
26			

PCB Layout



T1-4

These 1:1 Transformers isolate the VR sensor signals for this board .This is to not interfere with the signals for ABS Control unit , when splicing into the ABS harness

R5-8 , C1-4, Q15-18

These components are used to condition the VR sensors analog signal

R1-4 & LED1-4 (optional)

Are not necessary for operation

They just blink at the same rate as the input frequency and are a visual aid (helpful when turning the wheel by hand to see if everything works)

U1-4 (optional)

These 4017 IC's are only necessary if you need to reduce the output frequency to $\frac{1}{4}$ of the input frequency . Useful for ECU's like the Link G4 Fury for example as this ecu can handle only 500 Hz on the Digital Inputs

R9-12 & LED5-6 (optional)

Are not necessary for operation

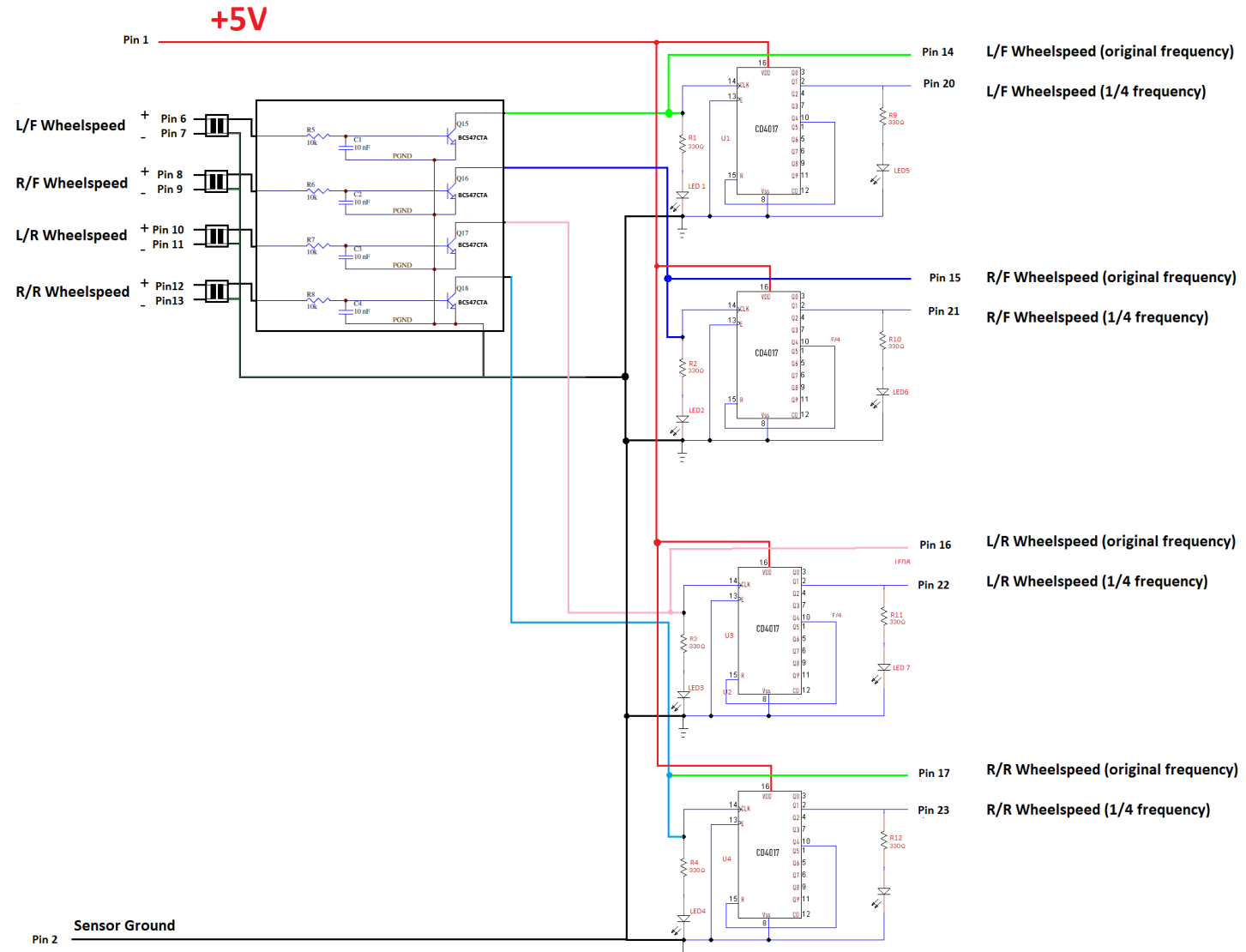
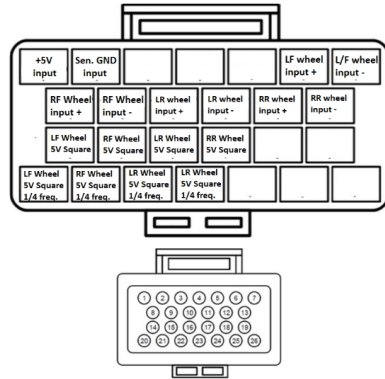
They just blink at $\frac{1}{4}$ of the input frequency and are a visual aid

(helpful when turning the wheel by hand to see if everything works)

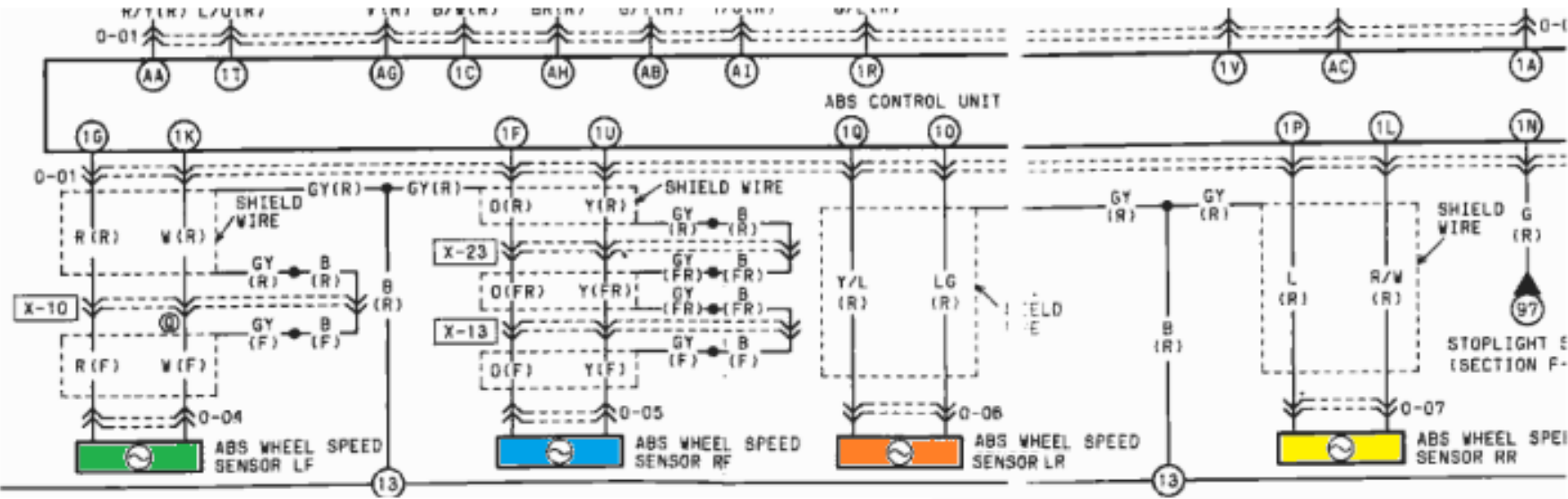
Bill of Materials

Designator	MPN/Seed SKU	Qty	Link	Description
CON1	6437288-4	1	https://au.rs-online.com/web/p/automotive-connectors/7267011/	TE Connectivity Superseal Series, 4 Row 26 Way Through Hole Plug Header, with Solder Termination Method
Q15,Q16,Q17,Q18	BC547CTA	4	https://au.rs-online.com/web/p/bjt-bipolar-transistors/7619822/	ON Semi BC547CTA NPN Transistor, 100 mA, 45 V, 3-Pin TO-92
R5,R6,R7,R8	CFR16J10K	4	https://au.rs-online.com/web/p/through-hole-fixed-resistors/0135910/	RES 10K OHM 1/4W 5% AXIAL
C1,C2,C3,C4	FA28X7R1H103KNU06	4	https://www.digikey.com.au/product-detail/en/tdk-corporation/FA28X7R1H103KNU06/445-174278-1-ND/5865036	CAP CER 10000PF 50V X7R RADIAL
R1,R2,R3,R4,R9,R10,R11,R12	LR1F330R	8	https://au.rs-online.com/web/p/through-hole-fixed-resistors/1251157/	TE Connectivity LR1 Series Axial Metal Film Resistor 330Ω ±1% 0.6W ±50ppm/°C
LED1,LED2,LED3,LED4	L-53HD	4	https://au.rs-online.com/web/p/products/2285988/?tpr=3	Kingbright L-53HD, Solid State Lamp 660 nm Red LED, 5mm (T-1 3/4) Round Through Hole package
LED5,LED6,LED7,LED8	L-53GD	4	https://au.rs-online.com/web/p/leds/2286004/	Kingbright L-53GD, Solid State Lamp 568 nm Green LED, 5mm (T-1 3/4) Round Through Hole package
U1,U2,U3,U4	CD4017BEE4	4	https://au.rs-online.com/web/p/counter-ics/9215166/	Texas Instruments CD4017BEE4 5-stage Decade Counter, Up Counter, 3 → 18 V, 16-Pin PDIP
T1,T2,T3,T4	LM-NP-1001-B1L	4	https://au.rs-online.com/web/p/audio-transformers/1728110/	Bourns Inc. LM-NP-1001-B1L Line Matching transformer
Mating connector for CON1	3-1437290-8	1	https://au.rs-online.com/web/p/automotive-connectors/1642934/	TE Connectivity Superseal Series, 4 Row 26 Way Plug Housing
Terminals for mating connector	3-1447221-3	18	https://au.rs-online.com/web/p/automotive-connector-accessories/7122075/	TE Connectivity Superseal 1.0 Series Female Contact for use with SuperSeal 1.0 Connector Housing

Circuit schematic



RX7 FD3S ABS ECU pinout



ABS Connector

AI	AG	AE	AC	AA	1Y	1W	1U	1S	1Q	1O	1M	1K	1I	1G	1E	1C	1A
Y/G	V	*	W/B	R/Y	*	*	Y	B	Y/L	L/G	*	W	*	R	*	B/W	L/G
BR	B	*	G/Y	*	*	G/O	L/O	B/L	L	G	R/W	*	*	O	S	*	
AH	AF	AO	AB	1Z	1X	1V	1T	1R	1P	1N	1L	1J	1H	1F	1D	1B	