

									Possible Controller
msgID	Time Betwee n Msgs	Byte	Bits		Description (unofficial)	Byte Scale/Sign	Discussion		Signal name
002	10ms	0	7 : 0		Steering Angle LSB:MSB				Steering angle sensor signal. Goes to AV unit, Brake, and ABS modules
		1	7 : 0		Left is negative Degrees = value/10 (3600 = 360.0deg)				
		2	7 : 0		Rate of steering angle change, unsigned				
		3	7 : 0				07		
		4	7 : 0				Very active (00-ff)		
02a	100ms	0	7 : 0						
		1	7 : 0						
		2	7 : 0						
					All zeros?				
130	10ms	0	7 : 0						ABS Module
			7 : 6						
			5 : 5				1 = Traction control off???		
		1	4 : 0						
		2	7 : 0						
							TCS operation signal		
174	10ms	0	7 : 0				00		Probably VCM Relay from eshift on EV CAN
		1	7 : 0				00		
		2	7 : 0				00		
		3	7 : 0				AA:Park/Neutral BB:Drive 99:Reverse		
		4	7 : 0				00...0F		
		5	7 : 0				00		
		6	7 : 0				00		
		7	7 : 0				00		
176	10ms	0	7 : 0		speed		scalar of 0.0725 seems to translate roughly to mph; absolute (always positive)		Might be VCM relay of Inverter message of motor RPM?
		1	7 : 0				might be motor volts instead of speed		
		2	7 : 0				scalar of .0091 seems to translate roughly to mph; always positive		
		3	7 : 0		speed		might be motor volts instead of speed		
		4	7 : 0				00		
		5	7 : 0				00		
		6	7 : 0				00...0F		
							Might be motor RPM		

								Possible Controller
msgID	Time Between Msgs	Byte	Bits		Description (unofficial)	Byte Scale/Sign	Discussion	Signal name
180	10ms	0	7 : 0				00	VCM
		1	7 : 0				00	
		2	7 : 0					
		3	7 : 0		Motor Amps		2's compliment; Tracks power when multiplied with 176.23 and divided by ~30 or 176.01 divided by ~3.6	
		4	7 : 0					
		5	7 : 0		Motor Amps?		Very similar to 180:D2,D3 expect is clipped and decays to zero during regen	
		6	7 : 0		throttle position			
		7	7 : 0					
							174,176, and 180 are sent together (one after another)	
1ca	10ms	0	7 : 0		Brake Pressure		Not present on MY2013	Brake Control Module
		1	7 : 0		Brake Pressure			
		2	7 : 0		Brake Pressure			
		3	7 : 0		Brake Pressure			
		4	7 : 0					
		5	7 : 2		Regen Braking			
			1 : 0					
		6	7 : 0					
7	7 : 0							
1cb	10ms	0	7 : 0		Target Regen Braking		Appears to be target regen before getting qualified by charge level, etc.	Brake Control Module
		1	7 : 5					
			4 : 0					
		2	7 : 0				Units track motor amps in m180.23	
		3	7 : 5		Target Braking			
			4 : 0					
		4	7 : 0					
		5	7 : 0					
6	7 : 0							
						1CB then 1CA sent together. Target braking is from Brake control module.		
1d5	10ms	0	7 : 0				Units track motor amps in m180.23; Appears to be target regen qualified by other factors.	
		1	7 : 0		Applied Regen Braking			
		2	7 : 0					
		3	7 : 0					
		4	7 : 0					

										Possible Controller
msgID	Time Between n Msgs	Byte	Bits		Description (unofficial)	Byte Scale/Sign	Discussion	Signal name		
1f9	10ms	0	7	:	0			00	In 370Z, this has engine RPM. May just be a vestigial message from the VCM	
		1	7	:	0			00		
		2	7	:	0			00		
		3	7	:	0			00		
		4	7	:	0			00		
		5	7	:	0			00		
		6	7	:	0			00		
		7	7	:	0			00		
215	20ms	0	7	:	0			FF		
		1	7	:	0			FF		
		2	7	:	0			FF		
		3	7	:	0			FF		
		4	7	:	0			FF		
		5	7	:	0			FF		
216	20ms	0	7	:	0				Related to proximity key? I saw these messages on CAR can when there shouldn't be activity but I was walking near the car	
		1	7	:	0					
245	20ms	0	7	:	0					
		1	7	:	0					
		2	7	:	0					
		3	7	:	0					
		4	7	:	0	Just ramps and wraps				
		5	7	:	0					
		6	7	:	0					
260	20ms	0	7	:	0	Available power		50-5A observed in normal driving, decays to 31 (51kW) around turtle	My guess is this goes to the cluster display since the regen bubbles are on here. Bytes 2-3 probably drives the inner "power" bubbles.	
		1	7	:	0	Available regen		Used to generate regen bubbles with hysteresis. Bubbles turn at @ 6,C,12,&18 and turn off at 0,6,C, & 12 respectively		
		2	7	:	0			accessory- It is probably the dash power display "inner" bubbles. Observe byte 2 at 0x19 and byte 3 at 00 when at idle.		
		3	7	:	0	Motor Amps				

										Possible Controller
msgID	Time Between n Msgs	Byte	Bits		Description (unofficial)	Byte Scale/Sign	Discussion	Signal name		
280	20ms	0	7	:	0			Some activity here even when car is off, might be related to other dash lights (like the red key light)	Might be cluster? or "eyebrow"	
		1	7	:	0					
		2	7	:	0					
		3	7	:	0					
		4	7	:	0			.0062 scalar seems to match mph		
		5	7	:	0	Motor Speed				
		6	7	:	0					
		7	7	:	0					
							370Z had seatbelt status as byte 0 bit 0. Need to verify. Could probably sync video of startup and CAN log to get the various lights and bytes used			
284	20ms	0	7	:	0	Front Right Wheel Speed		.0118 scalar	Looking at "370Z" info, these match the same as the 'Z CAN bus. This is probably a common ABS module from Nissan	
		1	7	:	0					
		2	7	:	0			.0118		
		3	7	:	0	Front Left Wheel Speed				
		4	7	:	0			.0245		
		5	7	:	0	Vehicle Speed				
		6	7	:	0					
		7	7	:	0					
285	20ms	0	7	:	0			.0118		
		1	7	:	0	Rear Right Wheel Speed				
		2	7	:	0			.0118		
		3	7	:	0	Rear Left Wheel Speed				
		4	7	:	0					
		5	7	:	0	all zero				
		6	7	:	0					
		7	7	:	0					
292	20ms	0	7	:	0				This also looks similar to 370Z info	
		1	7	:	0					
		2	7	:	0					
		3	7	:	0	12V battery Voltage as seen by the brake computer 0.1V/bit		7F= 12.7 Volts		
		4	7	:	0					
		5	7	:	0					
		6	7	:	0					
		7	7	:	0	Friction brake pressure (all model years)		measured to provide the same braking force as 5 regen motor amps (cc180.23) per tick		

										Possible Controller
msgID	Time Between n Msgs	Byte	Bits	Description (unofficial)						Signal name
2de	10ms	0	7 : 0							
		1	7 : 0							
		2	7 : 0							
		3	7 : 0							
		4	7 : 0							
		5	7 : 0							
		6	7 : 0					03		
		7	7 : 0					CA		
300	20ms	0	7 : 0					Steering force applied to wheel (from turbo2ltr's notes)		Steering Angle Sensor
342		0	7 : 0					Only saw once in a log about the time I left to go inside. Maybe related to the "key is leaving the car while on" chirp?		370Z notes this is related to key fob info
		1	7 : 0							
		2	7 : 0							
		3	7 : 0							
		4	7 : 0							
		5	7 : 0							
		6	7 : 0							
		7	7 : 0							
351	100ms	0	7 : 0							
		1	7 : 0							
		2	7 : 0							
		3	7 : 0							
		4	7 : 0							
		5	7 : 0							
		6	7 : 0							
		7	7 : 0							
354	40ms	0	7 : 0	Vehicle Speed						Comes from ABS unit, similar to 370Z
		1	7 : 0							
		2	7 : 0							
		3	7 : 0							
		4	7 : 0							
		5	7 : 0							
		6	7 : 0							
		7	7 : 0					0x40 when traction control is off		

										Possible Controller
msgID	Time Between n Msgs	Byte	Bits		Description (unofficial)	Byte Scale/Sign	Discussion	Signal name		
355	40ms	0	7 : 0		Vehicle Speed			Instrument cluster to VCM		
		1	7 : 0							
		2	7 : 0		Vehicle Speed					
		3	7 : 0							
		4	7 : 0		Selected dash miles/eff units		0x00=km;0x20=mi			
		5	7 : 0							
		6	7 : 0		Dash odometer units		0x60=miles;0x40=km			
					On my 2012 this is a 7 byte message (2011 8 byte?)					
358	100ms	0	7 : 0					Body Control Module		
			7 : 7		headlights (1=on)		changes with manual control or auto			
		1	6 : 0							
			7 : 4							
			3 : 3		Right turn signal					
			2 : 2		Left turn signal					
			2	1 : 0						
		3	4 : 0							
		4	7 : 0							
		5	7 : 0							
		6	7 : 0							
		7	7 : 0							
35d	100ms	0	7 : 0					Body Control Module Possibly Similar to 370z, there's wiper data here		
		1	7 : 0							
		2	7 : 0							
		3	7 : 0							
		4	7 : 0							
		5	7 : 0							
		6	7 : 0							
		7	7 : 0							
385	100ms	0	7 : 0					Tire Pressure Monitoring System		
		1	7 : 0							
		2	7 : 0		Tire Pressure 1 (X4)					
		3	7 : 0		Tire Pressure 2 (X4)					
		4	7 : 0		Tire Pressure 3 (X4)					
		5	7 : 0		Tire Pressure 4 (X4)					
		6	7 : 4		valid bits for D2:D5					
		7	3 : 0							

									Possible Controller
msgID	Time Betwee n Msgs	Byte	Bits		Description (unofficial)	Byte Scale/Sign	Discussion		Signal name
421	60ms	0	7 : 0		Controls PRNDL display on dash 0x18 = Neutral 0x08 = Park 0x20 = Drive 0x10 = Reverse 0x38 = ECO		VSP sound follows		VCM relay from shifter on EV bus to Instrument panel and VSP
509		0	7 : 0				MY2013 only		
		1	7 : 0						
		2	7 : 2		time:seconds (0-59)				
			1 : 0						
		3	7 : 0						
		4	7 : 0						
		5	7 : 0						
		6	7 : 0						
		7	7 : 0						
50a	100ms	0	7 : 0				rises with AC on; slow decay when off		VCM relay from A/C Auto Amp and AC Pressor Sensor (which is measured directly from VCM) Message is identical on EV CAN and CAR CAN
		1	7 : 0						
		2	7 : 0						
		3	7 : 0		AC compressor pressure?				
		4	7 : 2						
			1 : 1		Rear defrost on/off				
			0 : 0						
		5	7 : 0						
50d	100ms	0	7 : 0						
		1	7 : 0						
		2	7 : 0						
		3	7 : 0						
		4	7 : 0						
		5	7 : 0						
		6	7 : 0						
		7	7 : 0						

										Possible Controller
msgID	Time Between n Msgs	Byte	Bits		Description (unofficial)	Byte Scale/Sign	Discussion	Signal name		
510	100ms	0	7 : 0		Climate change alert		0 when no change, 1 when climate control/power changes	VCM relay from A/C Auto Amp, to eyebrow display and A/V unit		
		1	7 : 0							
		2	7 : 0							
			7 : 7		Climate control on		Power must be non-zero to have effect			
		3	6 : 1		Climate control power		0.25kW per lsb			
			0 : 0							
		4	7 : 0							
		5	7 : 0							
		6	7 : 0							
		7	7 : 0		Appears to track outside ambient +56 (F)		0x92=90F;0x86=79F (90F & 79F read from dash), identical to EV CAN msg 54C byte 6			
54a	100ms	0	7 : 0					VCM relay from A/C Auto Amp to A/V unit for climate display		
		1	7 : 0							
		2	7 : 0							
		3	7 : 0							
		4	7 : 0		climate control temperature setpoint					
		5	7 : 0							
		6	7 : 0							
		7	7 : 0		Appears to track ambient (+41)		0x83=90F;0x79=79F (90F & 79F read from dash); also some low reads at poweron			
54b	100ms	0	7 : 0		Climate display turn on alert		used to alert A/V unit that CC being toggled on or off by the user so the A/V can display the fan and CC settings on the display 00 no change, 01 change.	VCM relay from A/C Auto Amp to A/V unit for climate display		
		1	7 : 0		Climate on or off status?		08 off, 78 on			
		2	7 : 0		Climate on or off status?		80 off, 88 on			
		3	7 : 0				00,08,09,10,12 observed, mostly 09 while CC on			
		4	7 : 0		User requested fan speed					
		5	7 : 0				00			
		6	7 : 0				00			
		7	7 : 0				used to alert A/V unit that fan speed is being changed by the user so the A/V can display the fan and CC settings on the display 00 no change, 01 change			
					Fan Speed change alert		Message ignored if climate control is off.			

										Possible Controller
msgID	Time Betwee n Msgs	Byte	Bits		Description (unofficial)	Byte Scale/Sign	Discussion	Signal name		
551	100ms	0	7 : 0					In 370Z this has engine coolant and cruse control		
		1	7 : 0							
		2	7 : 0					80 with CC on , 00 off		
		3	7 : 0							
		4	7 : 0							
		5	7 : 0							
		6	7 : 0							
		7	7 : 0							
55a		0	7 : 0					Not seen in MY 2012???		
		1	7 : 0		Cabin Temperature (F)?					
		2	7 : 0							
		3	7 : 0							
		4	7 : 0							
		5	7 : 0		Raw Temperature?					
		6	7 : 0							
		7	7 : 0		Raw Temperature?					
58A		0	4 : 4		Parking brake set	0:No 1:Set		Parking Brake Controller (2011-2012 only)		
		0	1 : 1		Parking brake set request	0:No 1:Req				
		1	7 : 0				00			
		2	7 : 0				FD			
5b3	500ms	0	7 : 0		Looks like pack temperature at 0.25c/bit		Probably used to drive temp bars on cluster	VCM Relay and processed data to Dash (cluster) Display		
		1	7 : 0		SOH		Confirmed to match State of Health value reported on DV-R test equipment			
		2	7 : 0							
		3	7 : 0							
		4	7 : 0							
		5	7 : 0							
		6	7 : 3	AFB	Active Fuel Bars					
			2 : 0							
		7	7 : 0				Possibly capacity bargraph when D0=FE; SOH otherwise			

										Possible Controller
msgID	Time Between n Msgs	Byte	Bits		Description (unofficial)	Byte Scale/Sign	Discussion	Signal name		
5c0	500ms	0	7	:	0				VCM relay of LBC (BMS) from EV CAN	
		1	7	:	0					
		2	7	:	0					
		3	7	:	0	Ramps up during charge, negative during drive, resets after every start or charge	2's comp			
		4	7	:	0					
		5	7	:	0					
		6	7	:	0					
		7	7	:	0					
							This message appears to be active whenever EVCAN or CARCAN is active??			
5c5	100ms	0	7	:	0				Odo is handled by the cluster display and is transmitted to body control module, AV, and VCM	
		1	7	:	0					
		2	7	:	0					
		3	7	:	0	odometer				
		4	7	:	0			00		
		5	7	:	0			0C		
		6	7	:	0			00		
		7	7	:	0			00		
5e3	500ms	0	7	:	0					
		1	7	:	0					
		2	7	:	0					
		3	7	:	0					
5e4	100ms	0	7	:	0					
		1	7	:	0					
		2	7	:	0					
5eb	500ms	0	7	:	0				Looks like it's active only when starting a drive. Might be various bit flags to turn on warning lights in the dash cluster	
		1	7	:	0					
		2	7	:	0					
		3	7	:	0					
		4	7	:	0					
		5	7	:	0					
		6	7	:	0					
		7	7	:	0					

										Possible Controller
msgID	Time Between n Msgs	Byte	Bits		Description (unofficial)	Byte Scale/Sign	Discussion	Signal name		
5f8		0	7	:	0					
		1	7	:	0					
		2	7	:	0					
		3	7	:	0					
		4	7	:	0					
		5	7	:	0					
		6	7	:	0					
		7	7	:	0					
5f9		0	7	:	0					
		1	7	:	0					
		2	7	:	0					
		3	7	:	0					
		4	7	:	6					
			5	:	0	time:minute (0-59)		MY2013 only		
		5	7	:	3	time:hour (0-23)		MY2013 only		
			2	:	0					
5fa	500ms	0	7	:	0			MY2011,2012 only		
		1	7	:	0					
		2	7	:	0	day of month (1-31)				
		3	7	:	0					
		4	7	:	0					
		5	7	:	0	month (1-12)				
		6	7	:	0					
		7	7	:	0					
5fb	500ms	0	7	:	0			MY2011,2012 only		
		1	7	:	0					
		2	7	:	0					
		3	7	:	0					
		4	7	:	0					
		5	7	:	0					
		6	7	:	0					
		7	7	:	0					

										Possible Controller
msgID	Time Betwee n Msgs	Byte	Bits		Description (unofficial)	Byte Scale/Sign	Discussion	Signal name		
5fc	500ms	0	7	:	0		time:hour (0-23)		MY2011,2012 only; tracks nav unit - GPS based?	NAV to VCM
		1	7	:	0		time:seconds (0-59)			
		2	7	:	0		time:minutes (0-59)			
		3	7	:	0					
		4	7	:	0					
		5	7	:	0					
		6	7	:	0					
		7	7	:	0					
603	wk up	0	7	:	0			0	rare - doesn't show up in all logs	Noticing this shows up on CARcan right after 68c shows up on EVCan. Probably VCM relay from TCU.
		1	7	:	0			0		
		2	7	:	0			0		
		3	7	:	0			0		
		4	7	:	0			0		
		5	7	:	0			0		
		6	7	:	0			0		
		7	7	:	0			0		
604		0	7	:	0					
		1	7	:	0					
		2	7	:	0					
		3	7	:	0					
		4	7	:	0					
		5	7	:	0					
		6	7	:	0					
		7	7	:	0					

												Possible Controller
msgID	Time Between n Msgs	Byte	Bits	Description (unofficial)		Byte Scale/Sign	Discussion	Signal name				
60d	100ms	0	7 : 7	1 - trunk is opened				In the 370z there are lock, door, and headlight statuses				
			6 : 6	1 - rear right door is opened								
			5 : 5	1 - rear left door is opened								
			4 : 4	1 - Driver door is opened, 0 - closed								
			3 : 3	1 - passenger's door is opened								
			1 : 2	3 - dim lights								
			0 : 0	2 - parking lights (first mode on the control)								
			7 : 7	1 - high beam lights (together with 1-2 bits of the byte #0)								
			6 : 6	1 - right turn signal is active (not the control, but the actual light)								
			5 : 5	1 - left turn signal is active (not the control, but the actual light)								
			4 : 4									
			3 : 3									
		1		State of the car: 0 - OFF, 1 - power button is pressed once without brakes. 2 - is sent during the startup sequence before 1 and 3 for 2 seconds 3 - either car is in Ready On mode or the power button is pressed the second time after the mode '1'								
			2 : 1									
			0 : 0	1 - fog lights (together with 1-2 bits of the byte #0)								
			7 : 0									
			7 : 0									
			7 : 0									
			7 : 0									
			7 : 0									
			7 : 0									
			7 : 0									
625	100ms	0	7 : 0					00: Lights off 60: Headlights on 40: Parking Lights on 68:Headlights and fog lights		In 370z there are climate related statuses here		
		1	7 : 0									
		2	7 : 0									
		3	7 : 0									
		4	7 : 0									
		5	7 : 0									

									Possible Controller
msgID	Time Between n Msgs	Byte	Bits		Description (unofficial)	Byte Scale/Sign	Discussion		Signal name
682		0	7 : 0			0	rare - doesn't show up in all logs		In 370z this "Sleep wakeup" perhaps modules on the car can use this to wake up VCM
		1	7 : 0			0			
		2	7 : 0			0			
		3	7 : 0			0			
		4	7 : 0			0			
		5	7 : 0			0			
		6	7 : 0			0			
		7	7 : 0						
68c	wk up	0	7 : 0			0	rare - doesn't show up in all logs but shows up along with 603		68C on EVcan is TCU (Carwings) so it might be a relay from VCM or a log mixup
		1	7 : 0			0			
		2	7 : 0			0			
		3	7 : 0			0			
		4	7 : 0			0			
		5	7 : 0			0			
		6	7 : 0			0			
		7	7 : 0			0			
6f6	100ms	0	7 : 0						
		1	7 : 0						
		2	7 : 0						