"Switches" Channel Name	Description	Needed Data Channels	Needed Pre Calc Channels	Needed Constants	Math Channel	AiM Channel Parameters	
BRK On (Brakes On)	Creates the BRK On channel when the Brake pressure is greater than 100 and may be required by other math channels. The outputs are: 0 = Brakes are off 1 = Brakes are on	Brake (pressure)	None	None	IF(GT(Brake,100),1,0)	Unit of measure	on/off
						Full scale	2
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
TPS On (Throttle On)	Creates the TPS On channel when the Throttle percent is greater than 15% and may be required by other math channels. The outputs are: 0 = Throttle is off 1 = Throttle is on	Throttle (%)	None	None	IF(GT(Throttle,15),1,0)	Unit of measure	on/off
						Full scale	2
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
TPS Part On (Partial Throttle On)	Creates the TPS Part On channel when the Throttle percent greater than 15% and less than 85% and may be required by other math channels. The outputs are: 0 = Throttle is off or full 1 = Throttle is partial	Throttle (%)	None	None	bit_and(GE(Throttle,15), LE(Throttle,85))	Unit of measure	on/off
						Full scale	2
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
TPS Full On (Full Throttle On)	Creates the TPS Full On channel when the Throttle percent greater than 85% and may be required by other math channels. The outputs are: 0 = Throttle is not full 1 = Throttle is full	Throttle (%)	None	None	IF(GT(Throttle,85),1,0)	Unit of measure	on/off
						Full scale	2
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
CRN On (Corner On)	Creates the CRN On channel when the Lateral Acceleration is greater than 0.2g's and may be required by other math channels. The outputs are: 0 = On a straight 1 = In a corner	Lateral Acceleration (g)	None	None	IF(GT(abs(Lateral Acceleration),0.20),1,0)	Unit of measure	on/off
						Full scale	2
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
CST On (Coast On)	Creates the CST On channel when the driver is not on the brakes (BRK On), on the throttle (TPS On), or in a corner (CRN On) and may be required by other math channels. The outputs are: 0 = Not coasting 1 = Coasting	None	BRK On TPS On CRN On	None	IF(GT(BRK On,0.5),0,IF(GT(TPS On,0.5),0,IF(GT(CRN On,0.5),0,1)))	Unit of measure	on/off
						Full scale	2
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No

"Driver" Channel Name	Description	Needed Data Channels	Needed Pre Calc Channels	Needed Constants	Math Channel	AiM Channel Parameters	
CST LapT (Coast Lap Time)	Outputs the time that the driver is coasting as shown by not being on the brakes (BRK On), the throttle (TPS On), or in a corner (CRN On). The output resets to zero at the start of each lap.	None	CST On	None	lap_integ(CST On)	Unit of measure	secs
						Full scale	5
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
CST LapD (Coast Lap Distance)	Outputs the distance that the driver is coasting as shown by not being on the brakes (BRK On), the throttle (TPS On), or in a corner (CRN On). The output resets to zero at the start of each lap.	Speed	CST On	MPH2FTS	lap_integ(CST On*Speed*MPH2FTS),0	Unit of measure	feet
						Full scale	400
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
CST LapP (Coast Lap Percent)	Outputs the percent of time that the driver is coasting as shown by not being on the brakes (BRK On), the throttle (TPS On), or in a corner (CRN On). The output resets to zero at the start of each lap.	None	CST LapT	None	(CST LapT*100)/time()	Unit of measure	%
						Full scale	10
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
CRN LapT (Corner Lap Time)	Outputs the time that the driver is in a corner. The output resets to zero at the start of each lap.	None	CRN On	None	lap_integ(CRN On)	Unit of measure	secs
						Full scale	120
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
CRN LapD (Corner Lap Distance)	Outputs the distance that the driver is in a corner. The output resets to zero at the start of each lap.	Speed	CRN On	MPH2FTS	lap_integ(CRN On*Speed*MPH2FTS),0	Unit of measure	feet
						Full scale	10000
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
CRN LapP (Corner Lap Percent)	Outputs the percent of time that the driver is in a corner. The output resets to zero at the start of each lap.	None	CRN LapT	None	(CRN LapT*100)/time()	Unit of measure	%
						Full scale	100
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
TPS Part LapT (Partial Throttle Lap Time)	Outputs the time that the driver was at partial throttle in seconds. The output resets to zero at the start of each lap.	None	TPS Part On	None	lap_integ(TPS Part On)	Unit of measure	secs
						Full scale	30
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
TPS Part LapD (Partial Throttle Lap Distance)	Outputs the distance that the driver was at partial throttle in feet. The output resets to zero at the start of each lap.	Speed	TPS Part On	MPH2FTS	lap_integ(TPS Part On*Speed*MPH2FTS),0	Unit of measure	feet
						Full scale	5000
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
TPS Part LapP (Partial Throttle Lap Percent)	Outputs the percent of time that the driver was at partial throttle. The output resets to zero at the start of each lap.	None	TPS Part LapT	None	(TPS Part LapT*100)/time()	Unit of measure	%
						Full scale	100
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
TPS Full LapT (Full Throttle Lap Time)	Outputs the time that the driver was at full throttle in seconds. The output resets to zero at the start of each lap.	None	TPS Full On	None	lap_integ(TPS Full On)	Unit of measure	secs
						Full scale	100
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
TPS Full LapD (Full Throttle Lap Distance)	Outputs the distance that the driver was at full throttle in feet. The output resets to zero at the start of each lap.	None	TPS Full On	MPH2FTS	lap_integ(TPS Full On*Speed*MPH2FTS),0	Unit of measure	feet
						Full scale	5000
						Zero scale	0

Lap Distance)						Sampling rate	50
						Filter	0
						Use as speed channel?	No
TPS Full LapP (Full Throttle Lap Percent)	Outputs the percent of time that the driver was at full throttle. The output resets to zero at the start of each lap.	None	Full_TPS LapT	None	(Full_TPS LapT*100)/time()	Unit of measure	%
						Full scale	100
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
G Sum (Lat and Long g Sum)	Outputs the abs value of the sum of the Lateral Acceleration and Longitudinal Acceleration values.	LatAcc (g) LonAcc (g)	None	None	sqrt((LatAcc^2)+(LonAcc^2))	Unit of measure	g
						Full scale	2.5
						Zero scale	0
						Sampling rate	20
						Filter	0
						Use as speed channel?	No

"Braking" Channel Name	Description	Needed Data Channels	Needed Pre Calc Channels	Needed Constants	Math Channel	AiM Channel Parameters	
BRK LapT (Braking Lap Time)	Outputs the time that the driver was on the brakes in seconds. Starts each lap from zero and counts up for each lap.	None	BRK On	None	lap_integ(BRK On)	Unit of measure	secs
						Full scale	60
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
BRK LapD (Braking Lap Distance)	Outputs the number of feet that the driver was on the brakes in feet. Starts each lap from zero and counts up for each lap.	Speed (mph)	BRK On	MPH2FTS (1.46667)	lap_integ(BRK On*Speed*MPH2FTS),0	Unit of measure	ft
						Full scale	5000
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
BRK LapP (Braking Lap Percent)	Outputs the percent of time that the driver was on the brakes. Starts each lap from zero and displays the percentage for each lap.	None	BRK LapT	None	(BRK LapT*100)/time()	Unit of measure	%
						Full scale	50
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
BRK SessT (Braking Session Time)	Outputs the time that the driver was on the brakes in seconds. Starts each session from zero and counts up for the entire session.	None	BRK On	None	integ(BRK On)	Unit of measure	secs
						Full scale	1000
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
BRK SessF (Braking Session Feet)	Outputs the number of feet that the driver was on the brakes in feet. Starts each session from zero and counts up for the entire session.	Speed (mph)	BRK On	MPH2FTS (1.46667)	integ(BRK On*Speed*MPH2FTS)	Unit of measure	ft
						Full scale	100000
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
BRK Press (Brake Pressure)	Outputs zero brake pressure until the brake sensor pressure exceeds 50psi.	Brake Pressure	None	None	IF(LT(Brake Pressure,50),0,Brake Pressure)	Unit of measure	psi
						Full scale	2000
						Zero scale	0
						Sampling rate	20
						Filter	0
						Use as speed channel?	No
BRK BiasR (Brake Bias Rear)	Outputs rear brake pressure bias in % of the total and shows 50% until the pressure exceeds 80psi.	Front Brake Pressure Rear Brake Pressure	None	None	IF(GT(Rear Brake Pressure,80),Rear Brake Pressure/(Rear Brake Pressure+Front Brake Pressure)*100,50)	Unit of measure	%
						Full scale	100
						Zero scale	0
						Sampling rate	20
						Filter	0
						Use as speed channel?	No

"Mechanical" Channel Name	Description	Needed Data Channels	Needed Pre Calc Channels	Needed Constants	Math Channel	AiM Channel Parameters	
Gear RatioT (Gear Ratio Trans)	Creates a channel that outputs the transmission gear ratio.	Engine (rpm) Speed (mph)	None	Tire Circ (in.) (i.e. 75.25) Final Drive (ratio) (i.e. 4.860)	((Engine*Tire Circ)/(Speed*Final Drive*1056))	Unit of measure	ratio
						Full scale	4
						Zero scale	0
						Sampling rate	10
						Filter	2
						Use as speed channel?	No
Over BstT (Over Boost Time)	Creates a channel that counts # of seconds per lap the boost is over a user defined limit.	Boost	None	Max Boost (i.e. 20.0)	lap_integ(IF(GT(Boost,Max Boost),1,0))	Unit of measure	secs
						Full scale	5
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
Over RevT (Over Revs Time)	Creates a channel that counts # of seconds per lap a engine is over a user defined limit.	Engine (rpm)	None	Max RPM (i.e. 7000)	lap_integ(IF(GT(Engine,Max RPM),1,0))	Unit of measure	secs
						Full scale	5
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
Over RevFltd (Over Revs Filtered)	Creates a channel that counts # of seconds per lap a engine is over a user defined limit with braking/deceleration over revs removed (in this example <50% of throttle position).	Engine (rpm) Throttle (%)	None	Max RPM (i.e. 7000)	lap_integ(IF(LE(Engine,Max RPM),0,IF(LT(Throttle,50),0,1)))	Unit of measure	secs
						Full scale	5
						Zero scale	0
						Sampling rate	50
						Filter	0
						Use as speed channel?	No
LambdaFltd (Lambda Filtered)	Creates a channel that filters Lambda values to only view when near full throttle (in this example <90% of throttle position).	Throttle (%) Lambda	None	None	IF(GT(Throttle,90),Lambda,0)	Unit of measure	lambda
						Full scale	2
						Zero scale	0
						Sampling rate	20
						Filter	0
						Use as speed channel?	No

"Misc" Channel Name	Description	Needed Data Channels	Needed Pre Calc Channels	Needed Constants	Math Channel	AiM Channel Parameters	
RadF (Radius Feet)	Creates a channel that outputs the driven radius of the vehicle in feet. Additionally, any radius value over 2000ft is displayed as zero values, this is to 'un-clutter' the result.	Lat Acc (g) Speed (mph)	None	MPH2FTS (1.46667)	band_pass((Speed*MPH2FTS)^2/(LatAcc*32.2),-2000,2000)	Unit of measure	feet
						Full scale	2000
						Zero scale	-2000
						Sampling rate	20
						Filter	0
						Use as speed channel?	No