

Mazda SMX Data

Shaping the Future of Spec Racing



SMX Data Webinar

How data will shape the future of Spec Racing

spec MX-5 CHALLENGE SERIES
Presented by **TOYO TIRES**

AiM

MAZDA MOTORSPORTS

Joshua Smith

Mazda Motorsports Manager

Roger Caddell

AiM Sports - National Training Manager

Justin Cornelison

Spec MX-5 Series Manager



[aimsports.com](https://www.aimsports.com)

Tuesday June 11th, 2024

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If You Have Questions



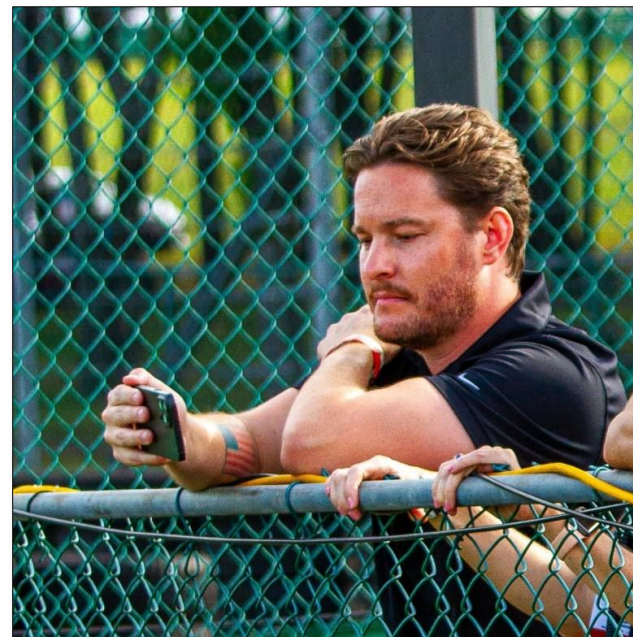
Mazda Spec MX-5

Today's Guests



Joshua Smith

Mgr. Mazda Motorsports
Business Development



Justin Cornelison

Spec MX-5
Series Manager

Mazda SMX Data

Today's Guest's



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Mazda SMX

SMX Class Information

Registered Drivers:

- 2021: 30
- 2022: 38
- 2023: 59
- 2024: Over 80 (including regionals)

Average Cars Per Race:

- 2021: 8
- 2022: 10
- 2023: 13
- 2024 HST: 22.3 (last year at RA we had 20, this year we have 41 (!))

Close Racing:

- 2022 + 2023: 30 races with 21 different race winners, 20 races where 1st/2nd separated by < 1 second, closest ever .006 (twice at Sonoma!)
- 2024 HST only: 18 races so far, 13 different winners, 9 races where 1st/2nd separated by < 1 second, .007 finish at Sebring!

Social Growth:

- Instagram only from 2023-2024, over 1k new followers and over 7% engagement rate
- This offers our teams and drivers a fantastic platform for their partners for sponsorship opportunities, which is really difficult in club racing.



Mazda SMX Data

SMX Class Information

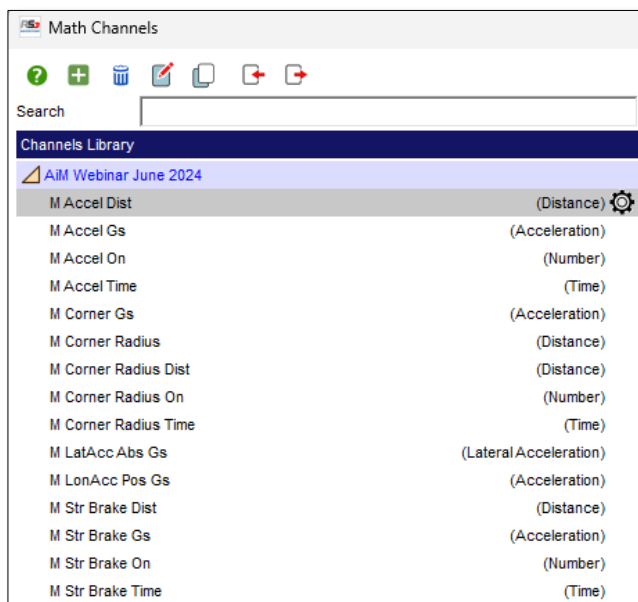
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SMX Data Tools

Math Channels and User Profiles

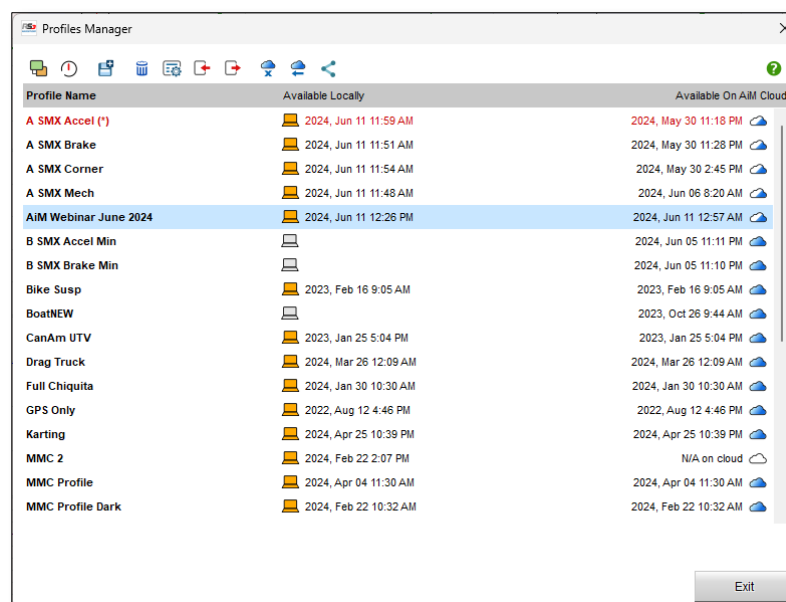
Some of the tools used to generate the valuable information you will be seeing in this webinar are available for download and importing into your Race Studio 3 software.

These are designed to use the AiM GPS channels exclusively so they will work with virtually anybody's AiM Sports data!



Math Channels:

https://www.aimsports.com/webinars//mathchannels/Jun112024_SMXData_MathChannels.zip



User Profile:

https://www.aimsports.com/webinars//UserProfiles/Jun112024_SMXData_RS3UserProfile.zip

Mazda SMX Data

Downloadable SMX Data Tools

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SMX Compliance Data

A Few Important Things



Nearly everyone is correctly doing these things correctly but they continue to be very important:

Use the latest **Mazda => MX5_NC_SPEC** ECU Protocol (currently vers.02.00.03)
There will be an updated ECU Protocol coming soon.
Full update directions will be provided when it is released. This update will be mandatory.

There are currently 2 additional analog channels that are required by the class rules. They are:

Fuel Pressure and **Oil Pressure**

It is critical that these channels be named exactly as above including spelling, spaces, and capitalization. RS3 is very literal and for the automation, this is necessary.

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Data Consistency



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SMX Compliance Data

A Few Important Things



It is very, very helpful if the race team uses standardized values in the download properties. Here is an example:

Name as on the Entry List

Number as on the Entry List

Exactly: 'Spec MX-5'

From the Default RS3 List

- Qualifying 1
- Qualifying 2 (if needed)
- 1st Race
- 2nd Race

Race Mode = Speed (always)

Mazda SMX Data

Download Properties



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SMX Compliance Data

A Few Important Things



If you are not shown the Session Types you want, you can enable them from a list at the 'Data Download Preferences':

Data Download Preferences

Download Data | Download Movies | **Download Session Types** | Advanced

Enable the fields that will appear in download window

☒	Generic testing	Generic testing
☐	Qualifying testing	
☐	Warm-up	
☐	Race	
☐	Heat Race	
☒	1st Race	1st Race
☒	2nd Race	2nd Race
☐	Superpole	
☐	Pre-final	
☐	Final	
☐	1st Final	
☐	2nd Final	
☐	Practice 1	
☐	Practice 2	
☒	Qualifying 1	Qualifying 1
☒	Qualifying 2	Qualifying 2

OK Cancel

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Session Types

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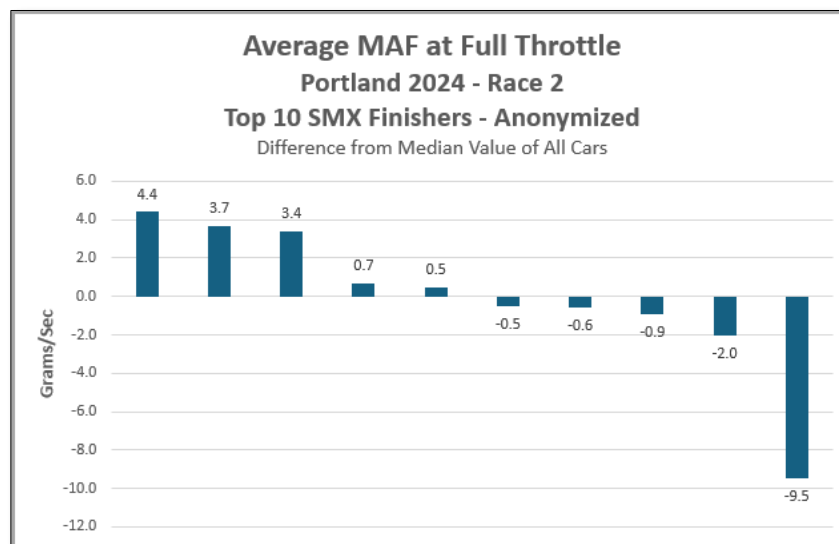
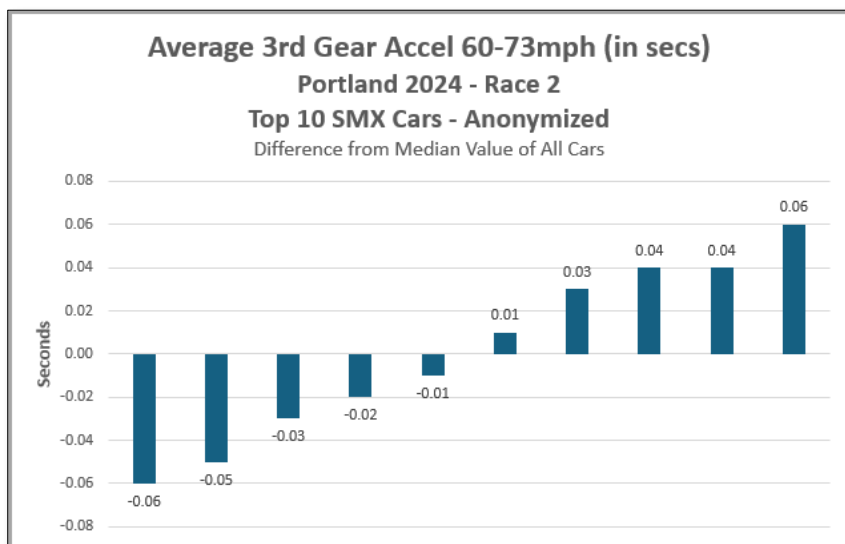
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SMX Data Shared Graphs

Graphs Provided for Email Newsletters



From the data submitted, we provide several graphs for everyone to see to provide a good understanding the equality of the cars.



Mazda SMX Data

SMX Data Shared Graphs



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SMX Data Shared Graphs

Available by Request for SMX Teams



Also, from the data submitted (if requested) we can provide graphs of both Technical and Performance information of the Individual SMX car vs the SMX class median value for a session.

5/12/24 - Portland - Race 2														
PositionDriverCar #			Avg Water Temp	Avg Int Air Temp	Avg MAF Full TPS	Avg Lamb Full TPS	Avg AFR Full TPS	Avg Fuel Pressure	Avg Oil Pressure	Avg Oil Temp	Avg Batt Volts	Max RPM Full TPS	Max RPM	Max MAF
			F°	F°	g/s	Lambda	AFR	psi	psi	F°	Volts	Revs	Revs	Revs
3Davies, Jon67			189.9	77.8	153.3	0.857	12.60	55.3	89.1	0.0	13.1	7380	7663	163.7
AIM SMX Class Median Values			191.5	80.5	148.9	0.858	12.61	55.3	86.2	218.3	13.2	7384	7695	163.0

5/12/24 - Portland - Race 2							
Position	Driver	Car #	Max Speed	Avg Max Speed Over 6 Best Laps	Straight Line Acceleration 60 - 73mph (3rd Gear) Averages From 6 Best Segments	Straight Line Acceleration 82 - 102mph (4th Gear) Averages From 6 Best Segments	
			MPH	MPH	Time in Secs	Time in Secs	
3	Davies, Jon	67	119.6	119.4	2.18	5.53	
 SMX Class Median Values			119.9	119.4	2.23	5.61	

Mazda SMX Data

SMX Data Available Graphs



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Live RS3A Demonstration



Mazda SMX Data

Live RS3A Demonstration

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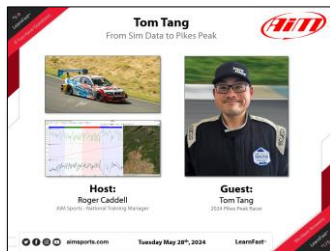
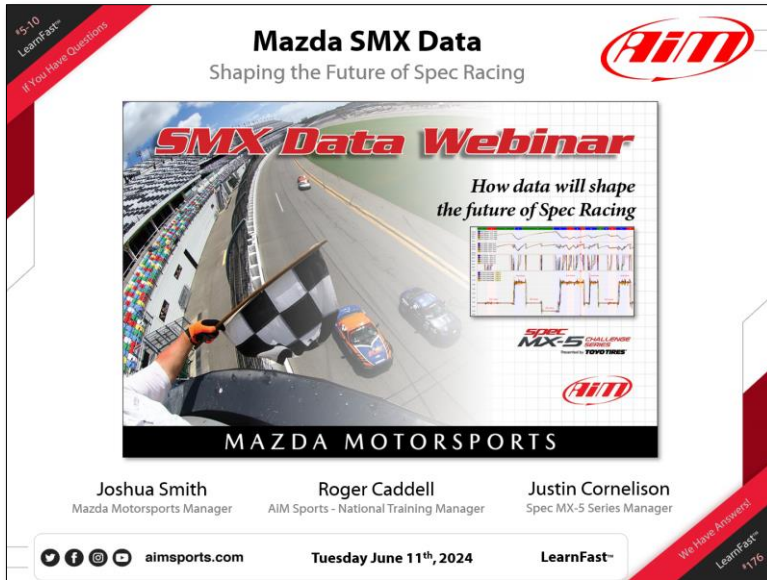
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LearnFast™ E-Training Videos



Currently **241** Videos and Growing

YouTube www.youtube.com/aimdata



- All New 2020 - 24 Live Webinar Videos
 - Software Updates with Race Studio 3
 - Pre-Calculated Gear Position Function
 - Configuring WiFi Communication
 - Customizing AiM Device Logos
 - Race Studio 3 Basic Configuration - Part 1
 - Race Studio 3 Basic Configuration - Part 2
 - *I Have Downloaded my Data, Now What - Part 1
 - *I Have Downloaded my Data, Now What - Part 2
 - GPS Lap Insert
 - Selection Criteria
 - Data Views
 - Sensor Calibration
 - Measure Units
 - Conditional Alarms
 - Sort Channels
 - Gear Position
 - Test Properties
 - Firmware Update
 - Per Lap Color
 - Solo Configuration
 - Export Tests
 - Transmit Tracks
 - Channel Reports
 - Gps Manager Overview
 - Setting Time
 - New GPS Track
 - Track Mapping
 - Webinars
- * Most Popular and Recommended

Additional Materials

LearnFast™ E-Training Videos

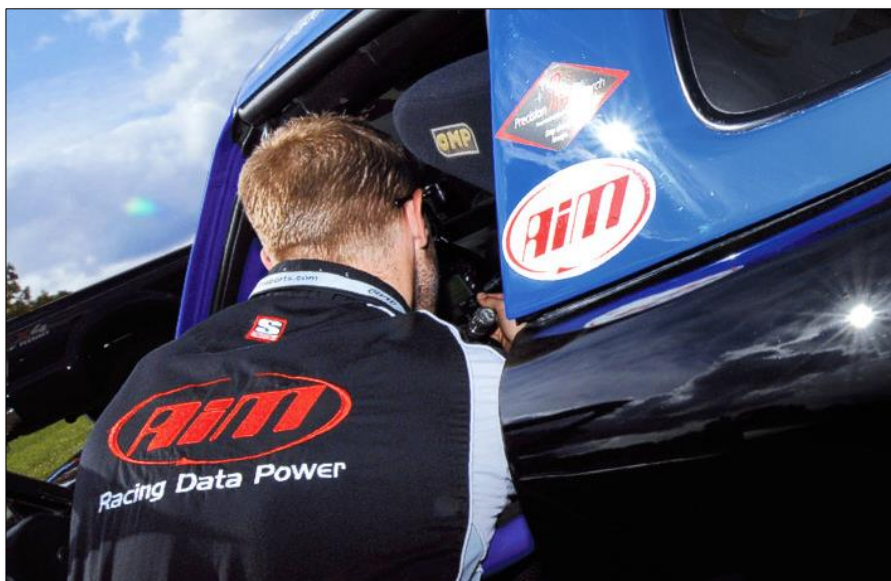
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Customer Support



AiM Sports Technical Support Staff Regularly
Attend Races and Other Events

Look For Us At An Event Near You
Or Call Us At **800.718.9090**



Customer Support

At An Event Near You!

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Next AiM Sports Webinar

Tuesday, June 25th, 2024 – 10am Pac / 1pm East



NEW ACC2 OPEN

The new compact Analog CAN Converter, compatible with all AiM or not AiM systems.



NEW GPS09C OPEN

GPS09c Open is developed to be compatible with all AiM or not AiM systems.



NEW K8 OPEN KEYPAD

K8 is a new compact keypad based on CAN-Bus protocol.

Robbie Yeoman
AiM Sports Chief Tech Officer

Roger Caddell
AiM Sports - National Training Manager

Bryc Talley
AiM Sports Technician

Next Webinar

2nd & Last Tuesday of Each Month



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