



BMW G CHASSIS PLATFORM

GEN2 PODIUM LINE RACING STEERING WHEEL SYSTEM

INFORMATION PACKET

SYSTEM ARCHITECTURE / PROGRAMMING / FUNCTION LIBRARY / FITMENT

DOCUMENT SCOPE

This editable packet summarizes system capabilities and the supplied MadtraceLAB function library. Actual functionality depends on vehicle chassis, market, factory equipment, installed options, and software configuration.



EXAMPLE CONFIGURATION SHOWN WITH OPTIONAL OLED DID

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WHERE THE PODIUM LINE FITS

PRODUCT LINE POSITIONING

Clubsport Line is the streamlined GEN2 entry point. It retains factory steering-wheel functions, plug-and-play installation, programmable buttons, RGB lighting, MadtraceLAB, and multi-profile storage, but it does not include RevLED, center-console commands, advanced race controls, dual paddles, or the rear profile quick switch.

PODIUM Line adds the deeper control layer while preserving the freedom to use compatible round racing wheels. RevLED, center-console functions, advanced race controls, rear profile quick switching, and optional dual paddles distinguish it from Clubsport.

Formula Line carries the same high-level electronic capability into a purpose-designed GT/formula wheel. Its OLED DID and single magnetic paddles are standard, while traditional MOMO and NARDI adapters are not offered.

GEN1 is the legacy fixed-layout platform. It retains factory functions and plug-and-play installation, but it does not include programmable layouts, RGB customization, MadtraceLAB, RevLED, multi-profile operation, or advanced vehicle controls.

LINE	PRIMARY POSITION	KEY DIFFERENCE
Clubsport	GEN2 entry platform	Core factory functions and programmable controls; no RevLED or advanced race controls.
PODIUM	Expanded GEN2 platform	RevLED, center-console and race controls, quick profile switching, and optional dual paddles.
Formula	Dedicated GT wheel	Formula-specific wheel architecture; OLED DID and single paddles are standard.
GEN1	Legacy platform	Fixed layout; no MadtraceLAB, RGB customization, multi-profile operation, or RevLED.

PODIUM LINE TAKEAWAY

PODIUM combines Formula-level electronic control with greater steering-wheel and accessory flexibility.

PRODUCT LINE COMPARISON: CORE PLATFORM

FEATURE	CLUBSPORT	PODIUM	FORMULA	GEN1
Factory steering-wheel functions	Standard	Standard	Standard	Standard
Completely plug and play	Standard	Standard	Standard	Standard
Programmable button layout	Standard	Standard	Standard	Fixed layout
RGB customizable button colors	Standard	Standard	Standard	Not equipped
MadtraceLAB	Standard	Standard	Standard	Not equipped
OLED Driver Information Display (DID)	Optional	Optional	Standard	Not equipped
Single magnetic paddle shifter	Optional for AT	Optional for AT	Standard	Optional for AT

HOW TO READ THE TABLE

Standard = included in the line architecture. Optional items depend on vehicle, transmission, and ordered configuration. AT = automatic transmission.

PRODUCT LINE COMPARISON: RACE CONTROLS + ADAPTERS

FEATURE	CLUBSPORT	PODIUM	FORMULA	GEN1
Dual magnetic paddle shifters	Not equipped	Optional for AT	Not offered as an option	Not equipped
RevLED CAN bus shift lights	Not equipped	Standard	Standard	Not equipped
Center-console functions	Not equipped	Standard	Standard	Not equipped
Advanced race controls	Not equipped	Standard	Standard	Not equipped
Multi-profile settings	Standard	Standard	Standard	Not equipped
Rear button profile quick switch	Not equipped	Standard	Standard	Not equipped
6×70 mm MOMO original horn-cap adapter	Optional	Optional	Not equipped	Optional
6×74 mm NARDI-type steering-wheel adapter	Optional	Optional	Not equipped	Optional

WHY PODIUM STANDS APART

PODIUM adds the major race-control functions missing from Clubsport and GEN1 while retaining optional MOMO/NARDI adapter compatibility that Formula does not offer.

EXECUTIVE SUMMARY

The JQ Werks Madtrace GEN2 PODIUM Line is a quick-release racing steering wheel control system engineered for BMW G Chassis vehicles.

The control hub integrates CAN bus and LIN bus communication so supported factory and expanded vehicle functions can be operated from the racing steering wheel system.

A dedicated harness, CAN integration module, adapter hub, and quick-release base with integrated chassis PCB create a vehicle-specific installation without wire splicing.

Eight front-facing buttons and two joystick-style rotary controls can be assigned through MadtraceLAB to supported steering-wheel, car-control, and general vehicle commands.

Three complete profiles can be stored in the hub, each with an independent button map and lighting configuration.

RevLED CAN bus shift lights are standard; an OLED Driver Information Display and programmable magnetic paddle configurations are optional upgrades.

The system removes the factory steering wheel and airbag and is intended exclusively for off-road, track, racing, and competition use.

FUNCTION AVAILABILITY

Slides 15 through 18 reproduce every function shown in the supplied BMW G Chassis MadtraceLAB Steering Wheel, Car Control, and General reference screens. Exact availability depends on model, market, factory equipment, coding, and software configuration.

MECHANICAL CONSTRUCTION

PODIUM LINE HARDWARE

The control housing is machined from 6061-T6 billet aluminum using 5-axis CNC processes for accurate geometry, consistent alignment, and a premium finished surface.

Black anodizing provides the final exterior finish and complements the matching adapter hub and quick-release assembly.

The motorsport-grade adapter hub and quick-release base are machined from 7075-T6 billet aluminum and designed as a matched mechanical and electrical interface.

The quick-release base contains an integrated chassis PCB, reducing exposed components and keeping the vehicle-side interface compact.

Front button pods and dual joystick controls keep frequently used commands within reach while the driver's hands remain on the wheel.

The standard horn cap can be replaced by the optional OLED DID without redesigning the rest of the steering wheel system.



CONFIGURATION SHOWN

Steering wheel, paddle configuration, horn-cap adapter, and OLED DID selection may change the appearance of the completed system.

VEHICLE INTEGRATION: CAN + LIN

Modern BMW vehicle controls are distributed across multiple electronic networks. The PODIUM Line combines CAN bus and LIN bus integration within the steering-wheel control system.

CAN communication provides access to supported factory data and commands, including shift-light RPM data, center-console functions, driver-assistance controls, and selected race-control functions.

LIN communication supports compatible factory steering-wheel electronics and helps preserve expected behavior within the original control environment.

A dedicated BMW G Chassis vehicle harness and CAN integration module connect the system without cutting or splicing factory wiring. Supported general controls may include high-beam flash, windshield functions, and turn signals; supported vehicle controls may include iDrive commands, M Mode, Setup, ESP, drive modes, and Drivelogic functions.

Command availability is determined by the exact G Chassis model, market coding, factory options, transmission, and software configuration. See pages 14 through 18 for paddle and function-library information.

MADTRACELAB 2.0

MadtraceLAB is the configuration and update platform for the GEN2 control hub. The Function workspace displays the steering wheel graphic, available input locations, selected vehicle vendor, function categories, and active profile.

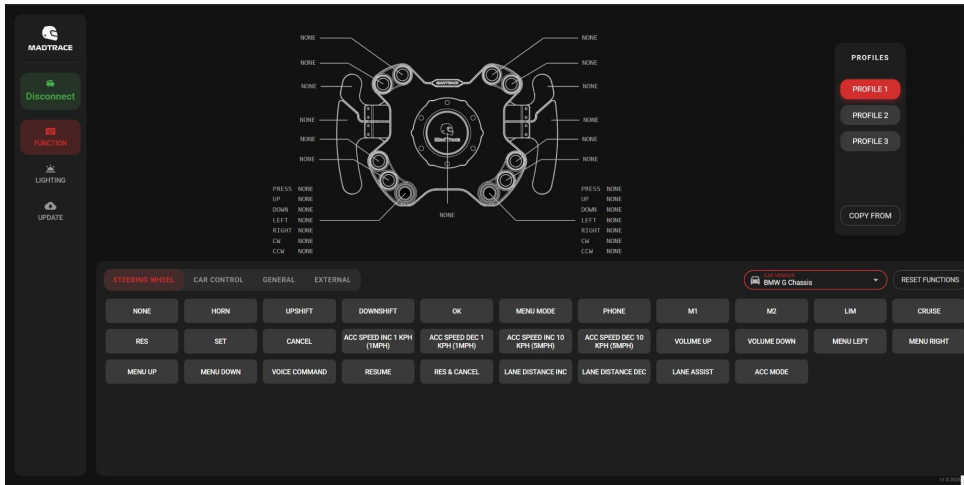
A user can select an input and assign a supported command from the Steering Wheel, Car Control, General, or available External category.

Lighting settings control button illumination and RevLED behavior for visibility, recognition, and driver preference.

The Update section manages compatible software and feature OTA updates through the hub's USB-C service connection.

Copy From can transfer an existing layout into another profile before profile-specific changes are made.

MADTRACELAB FUNCTION WORKSPACE



SCREENSHOT CONTEXT

The screenshot shows the BMW G Chassis vehicle configuration. Confirm this selection before programming and verify every assigned command on the actual vehicle.

MULTI-PROFILE SETTINGS + QUICK SWITCH

Up to three complete profiles can be stored directly in the hub's internal memory.
Each profile can contain independent button assignments and illumination settings.
A RACE profile may prioritize shift, DSC, Sport Mode, and Chassis controls while a Clubsport profile emphasizes OEM functions.
A third profile can be reserved for endurance use, another driver, or a second compatible competition vehicle after verification.
A rear profile-switch button on the PODIUM hub lets the driver move among saved profiles without rebuilding the map in MadtraceLAB.
With the optional DID installed, profiles and button mapping can be managed directly from the wheel without reconnecting to a computer.

STORED PROFILE	SUGGESTED USE	WHAT IS RETAINED
Profile 1	Primary race layout	Driver-selected functions + lighting
Profile 2	Clubsport / secondary driver	Independent functions + lighting
Profile 3	Endurance / secondary vehicle	Independent functions + lighting

CONTROL INPUT ARCHITECTURE

FRONT-FACING CONTROLS

Eight front-facing push buttons provide direct access to frequently used mapped functions.

Two joystick-style rotary controls expand the input count without adding more button pods.

Each joystick can support Press, Up, Down, Left, Right, Clockwise, and Counterclockwise assignments when enabled.

Paddle inputs are displayed separately and can be assigned to shifting or other supported commands.

An input may be left as None to prevent accidental activation or reserve the position for a future profile revision.

INPUT GROUP	AVAILABLE ACTIONS	TYPICAL ASSIGNMENT
Front buttons	8 push inputs	Horn, menu, phone, cruise, flash
Left joystick	Press / U / D / L / R / CW / CCW	Volume, menu, driver assistance
Right joystick	Press / U / D / L / R / CW / CCW	iDrive, menu, driver assistance
Paddles	2 or 4 programmable inputs	Shift, signals, high beam flashes
Rear profile switch	Profile selection	Profile 1 / 2 / 3

HUMAN-FACTORS NOTE

Place functions where they can be identified and operated without the driver looking away from the track. Keep critical commands consistent across profiles.

REVLED SHIFT LIGHT + ILLUMINATION

RevLED CAN bus shift lights are standard equipment on the PODIUM Line control hub.

In MadtraceLAB 2.0, the user can set the RPM threshold at which the shift-light sequence begins and the redline alert flashes.

Engine-speed data is received through the vehicle communication system so the sequence can respond to the supported RPM signal.

The LEDs progress through the configured sequence, and all lights flash at the programmed redline condition.

Button illumination colors can be customized so groups of controls are easier to recognize during a driving session.

Different profiles may use different lighting schemes, providing visual confirmation of the active button map.

Without the optional DID, lighting behavior is configured through MadtraceLAB. With the DID installed, brightness and RGB button colors can be adjusted directly.

Review redline and illumination settings whenever the hub is moved to another vehicle or the engine calibration changes.

CONFIGURATION RESPONSIBILITY

Shift lights are a driver aid, not a substitute for the vehicle's engine-protection strategy. Match the visual redline to the verified engine setup.

OPTIONAL OLED DRIVER INFORMATION DISPLAY

The optional OLED Driver Information Display replaces the standard center horn cap on the PODIUM Line system.

Through the integrated CAN bus connection, the DID can display supported real-time telemetry such as vehicle speed.

The display provides direct access to button-layout mapping and profile selection without reconnecting the hub to a computer.

Display brightness and RGB button illumination can be adjusted from the DID interface.

Available telemetry channels depend on the selected vehicle and software configuration.

Test the vehicle after any on-wheel mapping change, even when the DID confirms that the assignment was saved.

DID CAPABILITIES

CAPABILITY	STATUS
Real-time speed	Supported telemetry
Button mapping	Direct control
Profile switching	Direct control
Display brightness	Adjustable
RGB button colors	Adjustable
Computer connection	Not required for DID changes

ORDER CONFIGURATION

The OLED DID is optional and is not included in the standard hub kit unless selected with the order.

OPTIONAL MAGNETIC PADDLE CONFIGURATIONS

The PODIUM Line can be configured with optional magnetic paddle controls for supported vehicle and transmission applications. The dual-paddle option adds a second paddle on each side, creating four individually programmable paddle inputs. Paddle mechanisms are machined from 6061-T6 billet aluminum and designed to provide a motorsport-style interface. Paddles are not restricted to upshift and downshift; any supported function available to that input may be assigned. A common automatic-transmission layout uses the lower pair for shifting and the upper pair for turn signals or other commands. Manual-transmission vehicles can use programmable paddle inputs for non-shifting functions when supported. Paddle availability, quantity, and vehicle compatibility must be confirmed when ordering; the standard hub kit does not include every option.

MAPPING SAFETY

Program only functions that can be safely operated from a paddle. Avoid assignments that could cause an unintended vehicle-state change during steering input.

STEERING WHEEL FUNCTIONS: CORE + MEDIA

MADTRACELAB FUNCTION	COMMAND PURPOSE
NONE	Leaves the selected input unassigned.
HORN	Activates the supported factory horn command.
UPSHIFT	Requests a supported transmission upshift.
DOWNSHIFT	Requests a supported transmission downshift.
OK	Confirms the highlighted supported cluster or menu item.
MENU MODE	Opens or changes the supported cluster/menu mode.
PHONE	Activates the supported factory phone function.
M1	Recalls the supported BMW M1 vehicle preset.
M2	Recalls the supported BMW M2 vehicle preset.
VOLUME UP	Raises the factory audio volume.
VOLUME DOWN	Lowers the factory audio volume.
MENU LEFT	Moves left through the supported cluster or menu.
MENU RIGHT	Moves right through the supported cluster or menu.
MENU UP	Moves upward through the supported cluster or menu.
MENU DOWN	Moves downward through the supported cluster or menu.
VOICE COMMAND	Activates the supported factory voice-command function.

SOURCE + VERIFICATION

Labels match the supplied BMW G Chassis Steering Wheel screen. M1/M2, transmission, phone, cluster, and audio commands require corresponding factory equipment and coding.

STEERING WHEEL FUNCTIONS: CRUISE + ASSISTANCE

MADTRACELAB FUNCTION	COMMAND PURPOSE
LIM	Selects the supported speed-limiter command.
CRUISE	Selects or activates the supported cruise-control function.
RES	Sends the supported RES command for cruise control or ACC.
SET	Stores the supported cruise-control or ACC target speed.
CANCEL	Cancels the active supported cruise-control or ACC request.
ACC SPEED INC 1 KPH (1MPH)	Raises the ACC target by the small displayed increment.
ACC SPEED DEC 1 KPH (1MPH)	Lowers the ACC target by the small displayed increment.
ACC SPEED INC 10 KPH (5MPH)	Raises the ACC target by the large displayed increment.
ACC SPEED DEC 10 KPH (5MPH)	Lowers the ACC target by the large displayed increment.
RESUME	Requests resumption of the supported saved cruise or ACC state.
RES & CANCEL	Provides the supported combined resume/cancel command.
LANE DISTANCE INC	Increases the supported following-distance setting.
LANE DISTANCE DEC	Decreases the supported following-distance setting.
LANE ASSIST	Selects or toggles the supported lane-assistance function.
ACC MODE	Selects the supported adaptive-cruise operating mode.

BMW G CHASSIS EQUIPMENT DEPENDENCY

Cruise, ACC, following-distance, and lane-assistance commands require corresponding factory equipment and may vary by model, market, and coding. Verify each assignment with the vehicle stationary.

CAR CONTROL FUNCTIONS

FUNCTION	COMMAND PURPOSE	FUNCTION	COMMAND PURPOSE
M MODE	Activates the supported BMW M Mode.	IDRIVE.OPTION	Opens the supported iDrive option menu.
SETUP	Opens the supported BMW M Setup interface.	IDRIVE.UP	Moves the iDrive selection upward.
ESP	Accesses the supported stability-control command.	IDRIVE.DOWN	Moves the iDrive selection downward.
EXHAUST VALVE	Controls the supported active-exhaust-valve command.	IDRIVE.LEFT	Moves the iDrive selection left.
SPORT MODE	Selects the supported Sport drive mode.	IDRIVE.RIGHT	Moves the iDrive selection right.
COMFORT MODE	Selects the supported Comfort drive mode.	IDRIVE.CW	Rotates the supported iDrive input clockwise.
ECO PRO	Selects the supported ECO PRO drive mode.	IDRIVE.CCW	Rotates the supported iDrive input counterclockwise.
DRIVE LOGIC UP	Raises the supported transmission Drivelogic level.	IDRIVE.OK	Confirms the highlighted iDrive selection.
DRIVE LOGIC DOWN	Lowers the supported transmission Drivelogic level.	IDRIVE.BACK	Returns to the previous supported iDrive screen.
IDRIVE.HOME	Returns to the supported iDrive home screen.		

BMW G CHASSIS DEPENDENCY

M Mode, Setup, exhaust, drive-mode, Drivelogic, ESP, and iDrive response depend on the exact BMW G Chassis model, transmission, factory equipment, coding, and software configuration.

GENERAL VEHICLE FUNCTIONS

MADTRACELAB FUNCTION	COMMAND PURPOSE
NONE	Leaves the selected input unassigned.
BC	Activates the supported on-board-computer command.
FLASH	Activates the supported high-beam flash command.
LEFT TURN SIGNAL	Activates the supported left-turn-signal command.
RIGHT TURN SIGNAL	Activates the supported right-turn-signal command.
SINGLE WIPE	Requests one supported windshield-wiper cycle.
WINDSHIELD WASHER	Activates the supported windshield-washer command.

These functions match the supplied BMW G Chassis General screen.
Turn-signal and windshield commands depend on the exact vehicle, market coding, and installed equipment.
Verify every assignment with the vehicle stationary before competition use.

VEHICLE FITMENT + INCLUDED EQUIPMENT

APPLICABLE BMW G CHASSIS MODELS

FACTORY BUTTON CONFIGURATION	MODELS	APPLICATION NOTE
WITH M1 AND M2 BUTTONS	G80 / G81 / G82 / G83 / G87	M2 / M3 / M4 applications
WITHOUT M1 AND M2 BUTTONS	G20 / G21 / G22 / G23 / G42 and more	Non-M 2/3/4 Series applications

EACH PODIUM LINE HUB KIT INCLUDES

- 1x PODIUM Line control hub unit
- 1x Quick-release base with integrated chassis PCB
- 1x CAN bus integration module
- 1x Vehicle harness kit
- 1x Resistor
- 1x Adapter hub

- 1x Adapter hub locking wrench
- 1x Trim-removal tool
- 1x Hardware kit
- 1x USB Cable
- 1x Allen key
- 1x Button-sticker set
- 1x JQ Werks / Madtrace sticker set

OPTIONAL EQUIPMENT

OLED DID, paddle shifters, MOMO horn-cap adapter, NARDI steering-wheel adapter, and steering-wheel rim selection are optional unless included in the purchased configuration.

CONFIGURATION WORKFLOW

- 1 Confirm the exact BMW G Chassis model, market/region, transmission, factory steering-wheel buttons, and installed driver-assistance equipment.
- 2 Install the vehicle-specific adapter hub, harness, CAN integration module, and quick-release base according to the applicable guide. Do not splice factory wiring.
- 3 Connect the control hub through USB-C and confirm compatible MadtraceLAB software and system updates.
- 4 Select the correct vehicle configuration and map only commands supported by the actual vehicle and required by the driver.
- 5 Create Profile 1 as the verified baseline. Copy that layout to Profiles 2 and 3 before condition- or driver-specific changes.
- 6 With the vehicle stationary, test every button, joystick direction, rotary action, paddle, profile switch, RevLED sequence, and optional DID command.
- 7 Repeat verification after any software update, vehicle change, engine calibration change, or profile revision, then record the final map.

IMPORTANT

This is a high-level configuration workflow, not an installation manual. Follow application-specific instructions and use a qualified professional where required.

SAFETY, USE RESTRICTIONS + SUMMARY

IMPORTANT SAFETY INFORMATION

The JQ Werks Madtrace Racing Steering Wheel System is designed only for off-road, track, racing, and competition purposes. It is not intended for street use.

Installation removes the factory steering wheel and airbag. A solid racing steering wheel can increase the risk of bodily injury in a collision.

Do not use the system with the factory three-point seat belt. JQ Werks requires a six-point racing harness with a racing roll bar for off-road use.

Do not install the system on a vehicle subject to state safety inspection.

Laws and required safety equipment vary by country, state, and region. Consult qualified legal and motorsport-safety professionals.

Professional installation, complete stationary function testing, and driver familiarization are recommended before track use.

CONTROL WITH PURPOSE.

JQ WERKS x MADTRACE

SUMMARY

The GEN2 PODIUM Line combines precision-machined hardware, vehicle-network integration, configurable controls, stored profiles, and track-focused information systems in one removable driver-control platform.