



HONDA FL5 / FK8 TYPE R

GEN2 FORMULA LINE RACING STEERING WHEEL SYSTEM

INFORMATION PACKET

SYSTEM ARCHITECTURE / PROGRAMMING / FUNCTION LIBRARY / FITMENT

DOCUMENT SCOPE

This packet documents the Honda FL5 / FK8 Type R Formula Line platform, vehicle integration, MadtraceLAB profile structure, and chassis-specific function libraries. Honda FL5 provides 29 commands; Honda FK8 provides 28. Actual behavior depends on chassis, model year, market, factory steering-wheel and infotainment equipment, Honda Sensing, cruise and lane-assist equipment, drive-mode controls, coding, installed options, and software configuration.



FORMULA LINE WITH STANDARD OLED DID + REVLEDS

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WHERE THE FORMULA LINE FITS

PRODUCT LINE POSITIONING

- Clubsport Line is the streamlined GEN2 entry platform, retaining programmable factory steering-wheel functions, RGB lighting, MadtraceLAB, and multi-profile storage.
- PODIUM Line adds RevLED, center-console commands, advanced race controls, rear profile quick switching, and optional multi-paddle configurations while preserving round-wheel adapter flexibility.
- Formula Line combines the high-level GEN2 electronics with a purpose-designed 290 mm Formula wheel. RevLED, the OLED Driver Information Display, and two programmable magnetic paddles are integrated as standard equipment.
- GEN1 is the legacy fixed-layout platform and does not include MadtraceLAB programming, RGB customization, RevLED, or multi-profile operation.

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, profile switching, and optional paddle expansion.
FORMULA	Dedicated 290 mm GT wheel	RevLED, OLED DID, and two programmable magnetic paddles are standard.
GEN1	Legacy platform	Fixed layout; no MadtraceLAB, RGB customization, multi-profile operation, or RevLED.

FORMULA LINE TAKEAWAY

FORMULA combines Podium-level electronic control with a dedicated 290 mm Formula wheel, standard OLED DID, RevLEDs, and integrated magnetic paddles.

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
Two programmable magnetic paddles	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
Two programmable magnetic paddles	Not equipped	Optional	Standard	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 FORMULA STANDS APART

FORMULA matches PODIUM's advanced control capability in a purpose-built Formula wheel, with the OLED DID, RevLEDs, and magnetic paddles included as standard equipment.

EXECUTIVE SUMMARY

- The JQ Werks Madtrace GEN2 FORMULA Line is a purpose-designed 290 mm racing steering wheel system inspired by GT3 and GT4 endurance-racing ergonomics.
- For supported Honda Civic Type R FL5 and FK8 applications, the control hub integrates compatible CAN bus and LIN bus communication so factory steering-wheel, media, cruise, driver-assistance, drive-mode, lighting, and wiper functions can be operated from the wheel through the matching chassis profile.
- A dedicated harness, CAN integration module, adapter hub, and quick-release base with integrated chassis PCB create a plug-and-play, vehicle-specific installation without wire splicing.
- Front-facing buttons, joystick-style rotary controls, dedicated rotary controls, and two programmable magnetic paddles can be assigned through MadtraceLAB. Honda FL5 provides 29 commands: 19 Steering Wheel, 4 Car Control, and 6 General. Honda FK8 provides 28: 19 Steering Wheel, 3 Car Control, and 6 General.
- Three complete profiles can be stored in the hub, each with an independent button map and lighting configuration, and recalled through an assigned profile quick-switch input.
- The OLED DID, RevLED shift lights, 290 mm Formula wheel, and two programmable magnetic paddle inputs are integrated; MOMO and NARDI adapters are not offered.
- The system removes the factory steering wheel and airbag and is intended exclusively for off-road, track, racing, and competition use.

FUNCTION AVAILABILITY

Slides 15–18 document the complete chassis-specific libraries: 29 commands for Honda FL5 and 28 for Honda FK8. Commands are not interchangeable across profiles. Availability depends on chassis, model year, market, factory equipment, Honda Sensing, cruise / lane-assist configuration, coding, software configuration, and the selected profile.

MECHANICAL CONSTRUCTION

FORMULA LINE HARDWARE

- The purpose-designed 290 mm Formula wheel housing is precision machined from 6061-T6 billet aluminum for accurate geometry, consistent alignment, and a premium finished surface.
- Smooth, high-grip rubber is applied to the handgrip areas to support secure control and endurance-racing ergonomics.
- Black and red anodized finishes define the Formula Line visual treatment and coordinate with the matching adapter hub and quick-release assembly.
- The quick release is manufactured from 7075-T6 billet aluminum for strength, durability, and a precise mechanical fit.
- Front-facing buttons, joystick-style and dedicated rotary controls, RevLED shift lights, the OLED DID, and two programmable paddle inputs keep critical functions within reach.
- The integrated design eliminates the need for a separate round steering-wheel rim, horn-cap adapter, or NARDI/MOMO steering-wheel adapter.



CONFIGURATION SHOWN

Official Formula configuration shown with the integrated OLED DID, RevLED shift lights, and two programmable magnetic paddle inputs.

VEHICLE INTEGRATION: CAN + LIN

- Honda FL5 and FK8 steering-wheel, media, cruise, driver-assistance, drive-mode, lighting, and wiper commands are distributed across the vehicles' electronic networks. The FORMULA Line interfaces through vehicle-specific CAN + LIN integration hardware.
- CAN communication supports compatible factory data and commands, including RevLED RPM input, steering-wheel controls, cruise, ESP, MODE + / MODE -, lane assist, lane distance, and the vehicle functions exposed by the selected chassis profile.
- FL5 profiles can additionally expose R+, track selection, and left/right scroll controls. FK8 profiles can expose OK, back, phone, iButton, and directional menu controls.
- LIN communication supports compatible factory steering-wheel electronics where required by the configured application.
- Dedicated Honda FL5 and FK8 harnesses and CAN integration modules connect the system without cutting or splicing factory wiring.
- The libraries contain 29 FL5 commands and 28 FK8 commands. Availability requires the matching vehicle, equipment, market configuration, coding, software configuration, and selected profile.
- See pages 14–18 for the Formula paddle architecture and complete Honda FL5 / FK8 function tables.

MADTRACELAB 2.0

MadtraceLAB is the configuration and update platform for the GEN2 Formula control hub.

The Function workspace displays the steering wheel graphic, available input locations, selected vehicle vendor, function categories, and active profile.

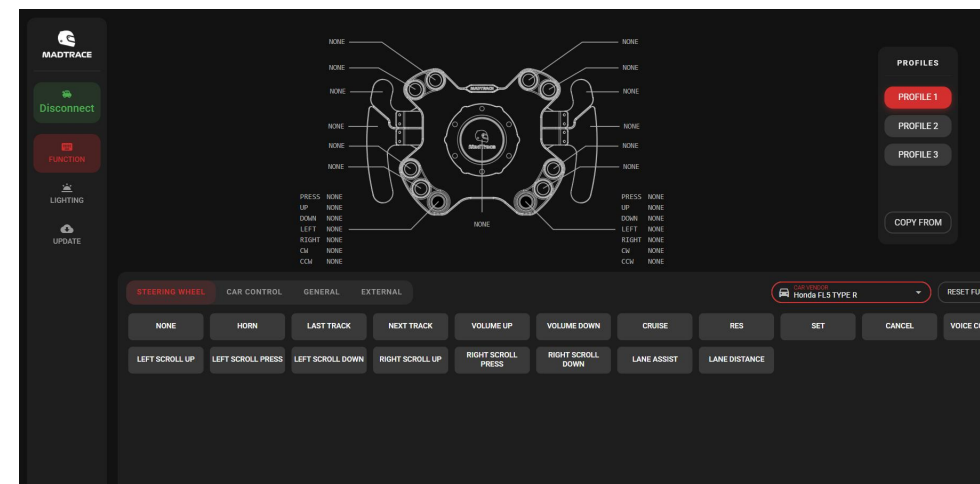
A user can select an input and assign a supported command from the Steering Wheel, Car Control, General, or available External category.

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

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

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

MADTRACELAB FUNCTION WORKSPACE



PROFILE SETUP

For Honda FL5 / FK8 Type R profiles, confirm the exact chassis, model year, market, steering-wheel and infotainment equipment, Honda Sensing, cruise and lane-assist equipment, drive-mode controls, coding, installed options, and software profile before mapping or copying a layout.

MULTI-PROFILE SETTINGS + QUICK SWITCH

- Up to three complete profiles can be stored directly in the Formula hub's internal memory.
- Each profile can contain independent button assignments, paddle assignments, and illumination settings.
- A race profile can prioritize R+ on FL5, ESP, MODE + / MODE -, signals, windshield commands, and frequently used media or menu controls.
- A road or media profile can group track selection or phone, volume, voice command, FL5 scroll controls, FK8 menu controls, cruise, and stationary checks.
- A third profile can support lane-assist controls, a second driver, endurance use, or another verified Honda FL5 or FK8 configuration.
- Assign a profile quick-switch input for rapid access, and use the standard OLED DID or MadtraceLAB to review and manage the active mapping.

STORED PROFILE	SUGGESTED USE	WHAT IS RETAINED
Profile 1	Race baseline	Verified essential commands + lighting
Profile 2	Road / media / menu	Independent functions + lighting
Profile 3	Assist / secondary driver	Independent functions + lighting

CONTROL INPUT ARCHITECTURE

FRONT-FACING CONTROLS

- Front-facing push buttons provide direct access to frequently used mapped functions.
- Two joystick-style rotary controls expand the input count with Press, Up, Down, Left, Right, Clockwise, and Counterclockwise actions when enabled.
- Dedicated rotary controls can support Clockwise and Counterclockwise assignments where enabled.
- Two magnetic paddle inputs are integrated and can be assigned to signals, flash, wiper, R+, mode, scroll, menu, media, or other supported commands.
- A profile-selection input can switch among the three saved maps and their independent lighting configurations.
- Cruise, lane-assist, scroll, menu, media, R+, ESP, and mode assignments must match the actual Honda FL5 or FK8 equipment, market configuration, coding, software configuration, and selected profile.

INPUT GROUP	AVAILABLE ACTIONS	HONDA FL5 / FK8 EXAMPLE
Front buttons	Push inputs	Horn, media, cruise, voice, menu, R+, or mode
Left joystick	Press / U / D / L / R / CW / CCW	FL5 scroll or FK8 menu navigation
Right joystick	Press / U / D / L / R / CW / CCW	FL5 scroll or FK8 menu / lane assist
Dedicated rotary controls	CW / CCW	Media or driver preference
Magnetic paddles	4 programmable inputs	Signals, flash, wiper, menu, R+, or mode
Profile selection	Assigned quick-switch input	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 FORMULA 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.

The standard OLED DID provides direct adjustment of display brightness, RGB button colors and mapping functions of the hub, while complete programming remains available through MadtraceLAB.

Review redline and illumination settings whenever the hub is moved to another compatible 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.

OLED DRIVER INFORMATION DISPLAY

Every FORMULA Line racing steering wheel includes an OLED Driver Information Display positioned directly beneath the RevLED shift lights.

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

STANDARD EQUIPMENT

The OLED DID is integrated into every Formula Line wheel and is included as standard equipment.

MAGNETIC PADDLE SHIFTERS

- The FORMULA Line includes two motorsport-grade magnetic paddles made from 6061-T6 billet aluminum.
- All two paddle inputs are integrated into the purpose-built wheel architecture and included as standard equipment.
- Every paddle is programmable, allowing each input to control any supported function in the selected Honda FL5 or FK8 profile.
- A chassis-specific layout can use the paddles for turn signals, flash, wiper, mode changes, FL5 R+ / scroll controls, FK8 menu controls, media, or other verified commands.
- Assignments can be adapted for road, track, endurance, or secondary-driver profiles without changing hardware.
- Paddle assignments can be stored independently in each of the three profiles.
- Verify every assignment with the vehicle stationary before track use.

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 FUNCTIONS: CORE + MEDIA + MENU

MADTRACELAB FUNCTION	COMMAND PURPOSE + CHASSIS AVAILABILITY
NONE	Leaves the selected input unassigned. Honda FL5 / FK8.
HORN	Activates the supported horn command. Honda FL5 / FK8; verify stationary.
LAST TRACK	Selects the previous supported audio track. Honda FL5 only.
NEXT TRACK	Selects the next supported audio track. Honda FL5 only.
OK	Confirms the supported selection. Honda FK8 only.
BACK	Returns to the previous supported menu. Honda FK8 only.
PHONE	Activates the supported phone command. Honda FK8 only.
IBUTTON	Activates the supported iButton / information command. Honda FK8 only.
VOLUME UP	Raises supported factory audio volume. Honda FL5 / FK8.
VOLUME DOWN	Lowers supported factory audio volume. Honda FL5 / FK8.
VOICE COMMAND	Activates the supported voice-command input. Honda FL5 / FK8.

CHASSIS AVAILABILITY

Use the selected Honda FL5 or Honda FK8 profile. Chassis-specific commands are not interchangeable; test every assignment with the vehicle stationary.

STEERING: CRUISE + SCROLL + ASSIST

MADTRACELAB FUNCTION	COMMAND PURPOSE + CHASSIS AVAILABILITY
CRUISE	Activates the supported cruise-control command. Honda FL5 / FK8.
RES	Resumes the supported stored cruise setting. Honda FL5 / FK8.
SET	Sets the supported cruise-control target. Honda FL5 / FK8.
CANCEL	Cancels the active supported cruise command. Honda FL5 / FK8.
LEFT SCROLL UP	Moves the supported left scroll control upward. Honda FL5 only.
LEFT SCROLL PRESS	Presses the supported left scroll control. Honda FL5 only.
LEFT SCROLL DOWN	Moves the supported left scroll control downward. Honda FL5 only.
RIGHT SCROLL UP	Moves the supported right scroll control upward. Honda FL5 only.
RIGHT SCROLL PRESS	Presses the supported right scroll control. Honda FL5 only.
RIGHT SCROLL DOWN	Moves the supported right scroll control downward. Honda FL5 only.
MENU UP	Moves upward through the supported menu. Honda FK8 only.
MENU DOWN	Moves downward through the supported menu. Honda FK8 only.
MENU LEFT	Moves left through the supported menu. Honda FK8 only.
MENU RIGHT	Moves right through the supported menu. Honda FK8 only.
LANE ASSIST	Activates the supported lane-assist command. Honda FL5 / FK8.
LANE DISTANCE	Adjusts the supported following-distance command. Honda FL5 / FK8.

REGIONAL + EQUIPMENT DEPENDENCY

Cruise, scroll, menu, lane-assist, and lane-distance commands require the matching Honda FL5 or FK8 factory equipment, Honda Sensing configuration, market support, coding, software configuration, and selected profile.

CAR CONTROL FUNCTIONS: HONDA FL5 + FK8

MADTRACELAB FUNCTION	COMMAND PURPOSE + CHASSIS AVAILABILITY
R +	Activates the supported +R drive-mode command. Honda FL5 only.
ESP	Activates the supported stability-control command. Honda FL5 / FK8.
MODE +	Moves upward through supported drive-mode selections. Honda FL5 / FK8.
MODE -	Moves downward through supported drive-mode selections. Honda FL5 / FK8.

CHASSIS AVAILABILITY

R+ is available only in the Honda FL5 library. ESP and MODE commands require the corresponding factory equipment, market configuration, coding, software configuration, and selected chassis profile.

GENERAL VEHICLE FUNCTIONS

MADTRACELAB FUNCTION	COMMAND PURPOSE + CHASSIS AVAILABILITY
NONE	Leaves the selected input unassigned. Honda FL5 / FK8.
FLASH	Activates the supported high-beam flash command. Honda FL5 / FK8.
LEFT TURN SIGNAL	Activates the supported left turn signal. Honda FL5 / FK8.
RIGHT TURN SIGNAL	Activates the supported right turn signal. Honda FL5 / FK8.
SINGLE WIPE	Requests one supported windshield-wiper cycle. Honda FL5 / FK8.
WINDSHIELD WASHER	Activates the supported windshield-washer command. Honda FL5 / FK8.

CONFIGURATION DEPENDENCY

Signal, high-beam, and windshield commands require the correct Honda FL5 or FK8 profile and must be verified on the actual vehicle; do not assume maps behave identically across model years or configurations.

VEHICLE FITMENT + INCLUDED EQUIPMENT

APPLICABLE HONDA MODELS

CHASSIS VERSION	MODEL	MODEL YEARS
FL5 CHASSIS	HONDA CIVIC TYPE R	2023–PRESENT
FK8 CHASSIS	HONDA CIVIC TYPE R	2017–2021

EACH FORMULA LINE HUB KIT INCLUDES

- 1x FORMULA 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 (Boss Kit)
- 1x Adapter hub locking wrench
 - 1x Trim-removal tool
 - 1x Hardware kit
 - 1x Allen key
 - 1x Button-sticker set
 - 1x JQ Werks / Madtrace sticker set
 - 1x USB cable

FORMULA STANDARD EQUIPMENT

The OLED DID, RevLED shift lights, 290 mm Formula wheel, and two programmable magnetic paddle inputs are integrated; MOMO and NARDI adapters are not offered.

CONFIGURATION WORKFLOW

- 1 Confirm the exact Honda Civic Type R FL5 or FK8 chassis, model year, market, steering-wheel and infotainment equipment, Honda Sensing, cruise and lane-assist equipment, drive-mode controls, coding, installed options, and software configuration.
- 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 matching Honda FL5 or FK8 Type R profile and map only commands supported by the actual chassis, model year, factory equipment, market, coding, and software configuration.
- 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, all two paddles, profile selection, RevLED sequence, OLED DID command, and every mapped chassis-specific function—including FL5 track / scroll / R+ or FK8 menu / phone / iButton commands.
- 7 Repeat verification after any software update, vehicle change, transmission change, coding change, equipment change, calibration update, hardware 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

For supported Honda Civic Type R FL5 / FK8 applications, the GEN2 FORMULA Line combines a purpose-designed 290 mm Formula wheel, CAN + LIN vehicle integration, 29 FL5 or 28 FK8 configurable commands, three stored profiles, RevLEDs, OLED telemetry, and two programmable magnetic paddles in one removable driver-control platform.