GR Yaris Startup Controller V2.0

Overview & Installation Guide

I TAKE NO RESPONSIBILITY FOR ANY DAMAGE CAUSED DURING THE INSTALLATION OR OPERATION OF THE DEVICE.

INSTALL AT YOUR OWN RISK



2. Overview - Operation

Every time the car ignition powers on, the "GR Yaris Startup Controller" turns on and automatically:

- Switches off the lane departure alert
- Switches off auto stop/start
- Switches on iMT
- Selects the driving mode (sport/track)
- Turns ESC to expert mode or fully off

It does this by mimicking button presses electronically (no CAN bus sophistication, just button presses). Original button press functionality remains unaffected.

Link to forum post where idea initially shared by MagnusT

If you don't want all the buttons pressed, wire only the ones you desire and leave the rest unpopulated.

If you don't feel comfortable splicing into the factory wiring (like me), you can buy short extension harnesses that can be spliced into. See links on subsequent slides for where to purchase these extensions.

3. Overview - Design

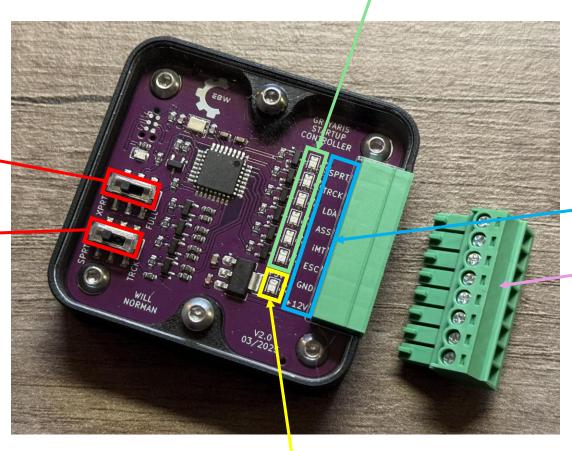
ESC Select Switch

Expert mode (XPRT) – short button press ESC fully off (FULL) – long button press

Drive Mode Select Switch

Sport (SPRT) Track (TRCK)



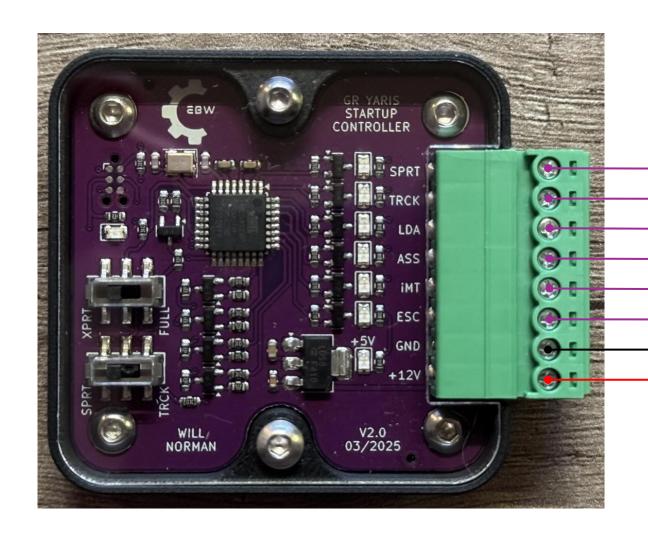


Pinout Text

Pluggable Screw Terminal

Power Indicator LED

4. Controller Wiring



- 8. SPRT Sport Mode (page 8)
- 7. TRCK Track Mode (page 8)
- 6. LDA Lane Departure Alert (page 6)
- 5. ASS Auto Stop/Start (page 7)
- 4. iMT (page 7)
- 3. ESC Stability/Traction Control (page 7)
- 2. GND (page 5)
- 1. +12V (page 5)

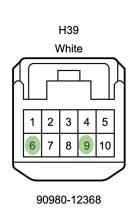
OEM wiring

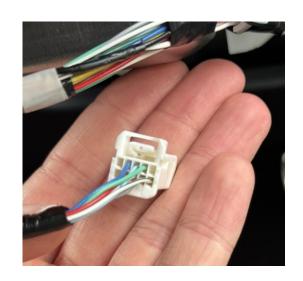
5. Ignition Power + Ground

The wiring for +12V & GND is found under the steering wheel cowling on the 10-pin plug. The cowling is removed by undoing 3x screws (rotate the steering wheel to reveal 2 hidden screws)

Pin number 9 (Red) = +12V Pin number 6 (White & black stripe) = GND



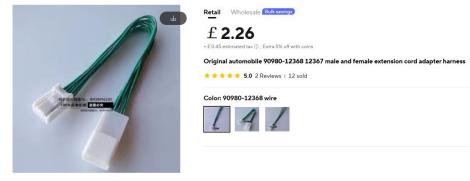




If you don't want to splice into the factory wiring, short extension harnesses can be purchased here that you can modify:

10-pin extension harness

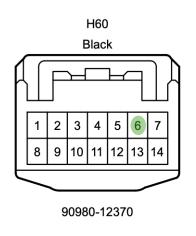
Another option that should work



6. Lane Departure Alert

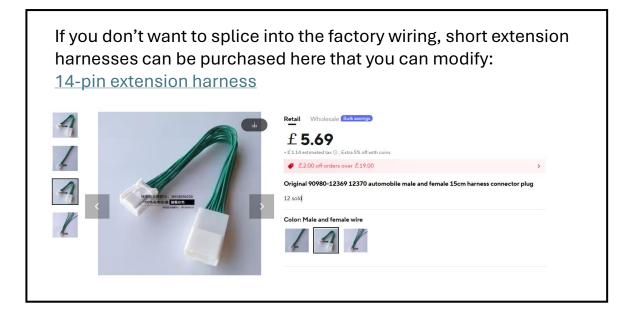
The wiring for LDA is also found under the steering wheel cowling, but on the 14-pin connector

Pin number 6 (White) = Lane Departure Alert (LDA)









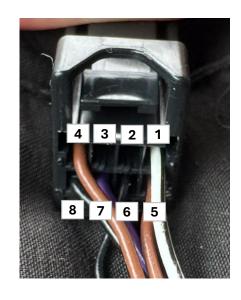
7. iMT, ESC, Auto Stop/Start

The wiring loom needed for iMT, ESC, and Auto Stop/Start is found under the centre console (plugged into the iMT/ESC/Auto stop start button)

Pin number 8 (Black) = iMT

Pin number 7 (Purple) = Stability/Traction Control (ESC)

Pin number 6 (Black) = Auto stop/start (ASS)





This 8-pin connector is:

Plug: Tokai Rika 4A1330-000 (Toyota 90980-12910)

Socket: Tokai Rika 4B1160-000

8. Sport / Track Mode

The wiring loom needed for Sport/Track mode select is found under the centre console (plugged into the drive mode rotary button)

Pin number 4 (Green) = Sport (SPRT)
Pin number 6 (Red) = Track (TRCK)

(Note pins 1 and 8 are unpopulated in the plug but still counted here)

You can wire both sport and track into the controller and use the slide switch on the PCB to choose between them. The slide switch must be in the appropriate position if you decide to wire only Sport *or* Track.







9. Helpful Links

Demo video
Project files and information on GitHub
Link to forum post where idea initially discussed by MagnusT
How to pull apart the centre console
22 AWG wire



I've chosen to wire mine to the rear of the centre console (for easy access during development)

10. Extension Harnesses

- 1) Power & Ground
 - A. <u>10-pin extension harness</u>
 - B. Another 10-pin option that should work
- 2) Lane Departure Alert: 14-pin extension harness
- 3) Sport/Track Mode: 8-pin plug + socket + crimp pins (upper slot female version)

