

DirectWire

2024 Toyota RAV4 Prime Hybrid (Smart Key) - North America - Requested by [ampire.de](https://www.ampire.de)

Wiring Information

Item	Wire Color	Polarity	Wire Location
12 Volts	Black (60A)	+	Dash Fuse Box, white 1 pin plug (4K), pin 1
Second 12 Volts	Pink (7.5A)	+	Certification ECU behind glove box, top white 30 pin plug, pin 6
Ground 2	White/Black	-	Certification ECU behind glove box, top white 30 pin plug, pin 29
Starter	Blue	+	Hybrid Vehicle Control ECU right of steering column, black 54 pin plug, pin 4
Second Starter	Blue (alternate location)	+	Certification ECU behind glove box, bottom white 30 pin plug, pin 2
Ignition	Lt. Blue	+	Left of Dash Fuse Box, black 20 pin plug (AG3), pin 15
Second Ignition	Tan	+	Left of Dash Fuse Box, black 20 pin plug (AG3), pin 5
Accessory	Green	+	Dash Fuse Box, rear, gray 45 pin plug (4B), pin 39
Telematics Interrupt	Black	Cut	Dash Fuse Box, rear, gray 45 pin plug (4B), pin 42
PTS 1	Gray	-	Push Start Switch, black 12 pin plug, pin 12
PTS 2	Blue	-	Push Start Switch, black 12 pin plug, pin 6
PTS 3	Lt. Blue	-	Push Start Switch, black 12 pin plug, pin 11
PTS 4	Gray (PTS 1 alternate)	-	Certification ECU behind glove box, top white 30 pin plug, pin 19

Item	Wire Color	Polarity	Wire Location
PTS 5	Blue (PTS 2 alternate)	-	Certification ECU behind glove box, top white 30 pin plug, pin 27
PTS 6	Lt. Blue (PTS 3 alternate)	-	Certification ECU behind glove box, top white 30 pin plug, pin 23
CAN Bus High	Tan	Data	Body ECU on dash fuse box, bottom black 30 pin plug, pin 2
CAN Bus Low	White	Data	Body ECU on dash fuse box, bottom black 30 pin plug, pin 1
CAN Bus High 2	Black (DIAG CAN)	Data	OBD-Data Link Connector, white 16 pin plug, pin 6
CAN Bus Low 2	Violet (DIAG CAN)	Data	OBD-Data Link Connector, white 16 pin plug, pin 14
CAN Bus High 3	Green	Data	Certification ECU behind glove box, top white 30 pin plug, pin 1
CAN Bus Low 3	White	Data	Certification ECU behind glove box, top white 30 pin plug, pin 2
OBD 12 Volts	Red (7.5A)	+	OBD-Data Link Connector, white 16 pin plug, pin 16
OBD Ground	White/Black	-	OBD-Data Link Connector, white 16 pin plug, pin 4
IMMO Data	Lavender/Lt. Green (IMO)	Data	Hybrid Vehicle Control ECU right of steering column, black 54 pin plug, pin 39
IMMO Data 2	Lavender/Blue (IMI)	Data	Hybrid Vehicle Control ECU right of steering column, black 54 pin plug, pin 25
IMMO Data 3	Lavender/Lt. Green (IMO)	Data	Left of Dash Fuse Box, white 20 pin plug (AG4), pin 3
IMMO Data 4	Lavender/Blue (IMI)	Data	Left of Dash Fuse Box, white 20 pin plug (AG4), pin 14
IMMO Antenna	Pink - Violet	RF	Push Start Switch, black 12 pin plug, pins 1 - 7

Item	Wire Color	Polarity	Wire Location
IMMO Antenna 2	Pink - Violet	RF	Certification ECU behind glove box, top white 30 pin plug, pins 12 - 13
Driver LF Antenna	Green	RF	Driver Kick, black 20 pin plug (JN1), pin 17
Driver LF Antenna 2	Red	RF	Certification ECU behind glove box, top white 30 pin plug, pin 16
Passenger LF Antenna	Gray	RF	Passenger Kick, black 20 pin plug (IM1), pin 3
Passenger LF Antenna 2	Red	RF	Certification ECU behind glove box, top white 30 pin plug, pin 10
Rear LF Antenna	Red	RF	Passenger Kick, harness to rear
Rear LF Antenna 2	Red	RF	Certification ECU behind glove box, middle white 27 pin plug, pin 4
Rear Handle Switch	Black	-	Passenger Kick, harness to rear
Rear Handle Switch 2	Black	-	Certification ECU behind glove box, middle white 27 pin plug, pin 16
Security Light	White	+	Certification ECU behind glove box, top white 30 pin plug, pin 25
RDA	Gray	Data	Certification ECU behind glove box, middle white 27 pin plug, pin 11
Power Lock2	Lt. Green (passenger switch) (if needed)	-	Body ECU on dash fuse box, white 27 pin plug, pin 6
Power Unlock2	Gray (passenger switch) (if needed)	-	Body ECU on dash fuse box, white 27 pin plug, pin 7
Lock Motor	White	Reverse	Driver Kick, black 20 pin plug (JN1), pin 18
Driver Unlock Motor	Gray	Reverse	Driver Kick, white 18 pin plug (JG1), pin 1
Passenger Unlock Motor	Green	Reverse	Dash Fuse Box, white 43 pin plug (4F), pin 36

Item	Wire Color	Polarity	Wire Location
Factory Alarm Arm	Lt. Green (key lock)	-	Body ECU on dash fuse box, bottom black 30 pin plug, pin 28
Factory Alarm Disarm	Tan (key unlock)	Double -	Body ECU on dash fuse box, bottom black 30 pin plug, pin 4
Factory Alarm Arm2	Lt. Green (alternate location)	-	Driver Kick, white 18 pin plug (JG1), pin 15
Factory Alarm Disarm2	Gray (alternate location)	Double -	Driver Kick, white 18 pin plug (JG1), pin 16
Parking Lights	Pink (rear only on models with auto-leveling headlight)	+	Dash Fuse Box, white 43 pin plug (4F), pin 30
Parking Lights -	Green	-	Headlight Switch, white 40 pin plug, pin 3
Hazards	Pink	-	Hazard Switch, blue 6 pin plug, pin 5
Turn Signal (Left)	Lt. Green (LF); Green (LR)	+	Dash Fuse Box, white 23 pin plug (4E), pin 19 (LF); Driver Kick, blue 18 pin plug (GN3), pin 15 (LR)
Turn Signal (Right)	White or Green (RF); Lt. Blue (RR)	+	Dash Fuse Box, white 23 pin plug (4E), pin 20 (RF); Passenger Kick, black 18 pin plug (GM5), pin 16 (RR)
Headlight	Red	-	Headlight Switch, white 40 pin plug, pin 4
Headlight 2	Lt. Green (alternate)	-	Body ECU on dash fuse box, bottom black 30 pin plug, pin 26
AutoLights	Yellow	Cut	Headlight Switch, white 40 pin plug, pin 5
Reverse Light	Blue	+	Dash Fuse Box, white 43 pin plug (4F), pin 38
Reverse Light 2	Blue (alternate location)	+	Radio, gray 28 pin plug, pin 28
Left Front Door Trigger	Violet	-	Dash Fuse Box, white 43 pin plug (4F), pin 3
Right Front Door Trigger	Tan	-	Dash Fuse Box, rear, white 43 pin plug (4C), pin 9

Item	Wire Color	Polarity	Wire Location
Left Rear Door Trigger	Green	-	Dash Fuse Box, white 43 pin plug (4F), pin 26
Right Rear Door Trigger	Lavender/Pink	-	Dash Fuse Box, white 43 pin plug (4F), pin 1
Dome Light	Blue	-	Body ECU on dash fuse box, bottom black 30 pin plug, pin 5
Trunk/Hatch Pin	Black	-	Dash Fuse Box, white 43 pin plug (4F), pin 2
Hood Pin	Gray	- N.C.	Body ECU on dash fuse box, bottom black 30 pin plug, pin 27
Power Liftgate	Green	-	Body ECU on dash fuse box, white 27 pin plug, pin 21
Power Liftgate 2	Green (alternate location)	-	Power Back Door Switch, black 6 pin plug, pin 5
Trunk/Hatch Release	Black (rear handle switch)	-	Certification ECU behind glove box, middle white 27 pin plug, pin 16
Trunk Release Motor	Lavender/Black (w/o power liftgate)	Reverse	Dash Fuse Box, white 43 pin plug (4F), pin 39
Fuel Door Release	Blue	-	Fuel Lid Opener Switch, blue 6 pin plug, pin 5
Tachometer 2	Black (if needed)	AC	Camshaft Position Sensor, engine top driver side, black 3 pin plug, pin 1
Fuel Pump	Gray	+	Near Driver Firewall Grommet, white 18 pin plug (AN1), pin 1
Rear Defroster	Blue	+ Latched	Dash Fuse Box, white 43 pin plug (4F), pin 43
Mirror Defroster	Black	+ Latched	Dash Fuse Box, rear, gray 45 pin plug (4B), pin 2
Wiper Deicer	Lt. Blue	- Latched	Left of Dash Fuse Box, black 20 pin plug (AG3), pin 11
Left Front Heated Seat	Blue (w/o climate control)	Reverse	Left Seat Heater Switch, gray 6 pin plug, pin 4

Item	Wire Color	Polarity	Wire Location
Right Front Heated Seat	Red (w/o climate control)	Reverse	Right Seat Heater Switch, white 6 pin plug, pin 4
Heated Steering Wheel	Black	+	Steering Heater Switch, blue 6 pin plug, pin 2
Speed Sense	Lt. Green	AC	Radio, gray 28 pin plug, pin 27
Speed Sense 2	Red (alternate)	AC	Certification ECU behind glove box, bottom white 30 pin plug, pin 13
Brake Wire	White	+	Brake Switch, white 7 pin plug, pin 3
Brake Wire 2	Violet (alternate location)	+	Certification ECU behind glove box, bottom white 30 pin plug, pin 21
Parking Brake	Black (electric parking brake)	-	Passenger Kick, white 20 pin plug (GA3), pin 7
Parking Brake 2	Black (alternate location)	-	Radio, white 30 pin plug, pin 20
Horn Trigger	White	-	Dash Fuse Box, white 23 pin plug (4E), pin 11
Horn Trigger 2	Blue (alternate location)	-	Horn Switch-Clock Spring, black 14 pin plug, pin 7
Horn - Factory Alarm	Blue	-	Dash Fuse Box, rear, white 43 pin plug (4C), pin 8
Wipers	Green (LO); Red (HI)	-	Headlight Switch, white 40 pin plug, pin 26 (LO); pin 27 (HI)
Wipers Protection	Black (ground)	Cut	Headlight Switch, white 40 pin plug, pin 33
Memory Seat 1	Gray	-	Body ECU on dash fuse box, top black 30 pin plug, pin 11
Memory Seat 2	Red	-	Body ECU on dash fuse box, top black 30 pin plug, pin 10
Radio 12V	Lt. Green	+	Radio, gray 28 pin plug, pin 4
Radio Ground	White/Black	-	Radio, gray 28 pin plug, pin 1

Item	Wire Color	Polarity	Wire Location
Radio Ignition	Gray	+	Radio, gray 28 pin plug, pin 15
Radio Illumination	Green (parking lights); Gray (dimmer)	+,-	Radio, white 30 pin plug, pin 15 (parking lights); pin 16 (dimmer)
Left Front Speaker (+/-)	Tan - Lt. Green or Black - Green	+,-	Radio, black 10 pin plug, pins 2 - 7
Right Front Speaker (+/-)	Lavender/Lt. Green - Lavender/Blue or White - Red	+,-	Radio, black 10 pin plug, pins 1 - 6
Left Rear Speaker (+/-)	White - Lt. Green or Yellow - Brown	+,-	Radio, black 10 pin plug, pins 3 - 8
Right Rear Speaker (+/-)	Red - Lt. Green	+,-	Radio, black 10 pin plug, pins 4 - 9
Left Front Speaker - With Amp	White - Lt. Green (woofer/midrange)	+,-	Amplifier in left rear quarter panel, white 30 pin plug, pins 14 - 29
Right Front Speaker - With Amp	Gray - Blue (woofer/midrange)	+,-	Amplifier in left rear quarter panel, white 30 pin plug, pins 9 - 24
Left Front Tweeter - With Amp	Black - Lt. Green	+,-	Amplifier in left rear quarter panel, white 30 pin plug, pins 10 - 25
Right Front Tweeter - With Amp	Tan - Gray	+,-	Amplifier in left rear quarter panel, white 30 pin plug, pins 13 - 28
Left Rear Speaker - With Amp	Green - Lt. Green	+,-	Amplifier in left rear quarter panel, white 30 pin plug, pins 11 - 26
Right Rear Speaker - With Amp	Red - Black	+,-	Amplifier in left rear quarter panel, white 30 pin plug, pins 12 - 27
Subwoofer - With Amp	Yellow - Blue (coil 1); Red - Blue (coil 2)	+,-	Amplifier in left rear quarter panel, white 30 pin plug, pins 8 - 23 (coil 1); pins 15 - 30 (coil 2)
Rearview Camera Video	Black - White (rear); Violet - Lt. Blue (panoramic)	+,-	Radio, white 30 pin plug, pins 28 - 29

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Additional Wiring Notes

Item	Note
Ignition	Also found at the Certification ECU behind glove box, bottom white 30 pin plug, pin 24.
Second Ignition	Also found at the Certification ECU behind glove box, bottom white 30 pin plug, pin 11.