Toyota Prius Prime Features Reference

AHB(S) - Automatic High Beam (System)

Part of the Toyota Safety Sense suite of driver assistance features, AHB allows the driver to use high beam more frequently where possible/ideal to increase visibility on dark roads and potentially increase the reaction rate as the driver is able to see the obstacle sooner than if the vehicle was driven with low beams only. It requires that the headlight stalk be in the "high beam" position as well as the AHB button depressed. (A green light on the AHB button will be illuminated when active, as well as the "AUTO high beam" light on the dashboard). AHB uses the monocular camera located in the upper centre of the windshield to detect other vehicles and dip the headlights back to low beam when necessary. However, do note that the system may not react in all situations (either engaging or disengaging high beams) and that the driver may want to manually dip the beams to avoid glare to the other drivers. This system works above 21mph (34km/h) and will be disabled when your speed drops below 17mph (27km/h).

AHS - Adaptive High beam System

As of August 2017, this feature is only available in Europe. In conjunction with AHB, the adaptive high beam system takes advantage of the LED headlight system and monocular camera mounted on the windshield to individually turn off or dim LEDs to reduce glare to other drivers while using the high beam. Using the camera, the system determines where the other cars are and selectively dims or turn off the LEDs that are pointing in that direction, while maintaining high beam in areas where vehicles are not located. This allows the driver to maximise the use of the high beam and the ability to detect objects on a dark road while simultaneously reducing glare to vehicles ahead. It is dynamic so as the oncoming car approaches and passes by, the lights will turn on/off as needed. In addition, the system will also adjust the headlight beam pattern according to vehicle speed. At low speeds, the system will throw a short and wide pattern to cover the sidewalk and crossroads where objects may be present. At high speeds (e.g. highway), the system will throw a long and narrow beam pattern to allow the driver to see further down the road.

	Residential area	Standard	Highway
Area lit			
LED current			
Vehicle speed	15-40km/h	40-80km/h	80km/h or faster

Illumination optimization



*Images taken from Toyota Global Newsroom

BSM - Blind Spot Monitoring System

This system uses two rear-mounted radars to detect vehicles in adjacent lanes and indicate to the driver via amber lights integrated into the glass of the side (wing) mirrors.





BSM can be turned on or off. If the system

is disabled, the system will remain off until manually enabled.

DRCC (full-speed or all-range) – Dynamic Radar Cruise Control

When activated, it uses a forward facing radar to detect metallic objects (e.g. vehicles) ahead of the driver and maintain the preset distance (short, medium or long) that the driver has set. As the car approaches the vehicle ahead or a vehicle merges into your lane, your Prius Prime will adjust its speed to maintain the preset distance between you and the driver ahead. Once the vehicle ahead speeds up or moves out of your lane, your Prius will then accelerate back up to your preset cruising speed. To set the dynamic radar cruise control, turn on the cruise control via the on/off switch on the cruise control stalk. The multi-information display should now read "Radar Ready". Set your cruising speed and the multi-information display should now display a Prius Prime and 3 bars or the "long" distance setting. If a second vehicle ahead and has radar lock. To adjust the distance, press the DRCC distance button located on the right side of the steering wheel. By default, "long" is selected. At 50mph (80km/h), "long" is approximately 160ft (50m), "medium" is 130ft (40m) and "short" is 100ft (30m). The Prime is equipped with full-speed DRCC

which allows the vehicle to follow another vehicle down to a complete stop. When the vehicle has come to a complete stop, the 4.2" MID will display "Waiting..." which means the Prime is waiting for your input and will not automatically move forward. When DRCC is activated at a complete stop, "Waiting..." may also be engaged. This allows the driver to release the brake pedal and allow DRCC to hold the brakes, similar to an "Auto Hold" braking function. Ensure that "Waiting..." is displayed before releasing the brake pedal. When the traffic clears or the vehicle ahead begins to move, either select "RES" by pushing up on the cruise control stalk or tap the accelerator to tell your Prius Prime to begin moving forward. The Prime's DRCC also allows a low-speed follow so the vehicle will maintain the distance as long as there is a vehicle in front of you.

DRCC can be used when the vehicle speed is approximately above 30 mph (50km/h) although owners have been able to set the speed as low as 28mph (45km/h). Full-speed DRCC will follow a vehicle down to 0 mph. If your speed is below 25mph (40km/h) and the vehicle loses radar lock (e.g. the vehicle you're following changes lane), DRCC will cancel itself. In addition, if the vehicle has been stopped for more than 3 minutes or the seatbelt is unbuckled or the driver's door is opened, DRCC will cancel.

Hill Start Assist Control

The hill start assist is designed to help prevent the vehicle from rolling backwards when starting on an incline or slippery slope. To activate the hill start assist, come to a complete stop. HSA is automatically engaged when the vehicle is at a complete stop. The brakes will continue to be held and the brake lights left on until the accelerator is touched or two seconds have elapsed after the driver has released the brake pedal. The parking brake must not be applied otherwise hill start assist will not activate.

ICS - Intelligent Clearance Sonar

Intelligent Clearance Sonar uses eight (8) sensors located around the vehicle and takes "parking sensors" to the next level. With the ability to detect objects 6-13 ft (2-4m) ahead, the system can determine whether to restrict throttle output or apply the brakes to avoid a collision with an obstacle. For example, if you're backed against a wall and you are intending to drive forward but instead shifted into reverse and pressed the accelerator, the system can restrict power output to reduce the increase in speed to allow for a reaction from the driver. If the accelerator continues to be depressed, it can apply the brakes so that the vehicle does not collide with the obstacle. It will also activate if you're driving slowly towards an object that it detects and do not apply the brakes or apply the brakes too late. Lastly, if you shift from D to R or R to D with the accelerator depressed, it will restrict output to reduce wheel spin and sudden acceleration. (Note that it may not detect objects such as people or thin wire or thin fencing). You may want to turn off ICS if you're driving in an area with tall grass or a narrow tunnel. Owners suggest that ICS be disabled if a tow hitch is installed and an accessory is mounted (e.g. Bike or ski attachment). The system operates if the vehicle speed is below ~10mph (15km/h). Once you disable ICS, it will remain off until you manually enable it.

IPA – Intelligent Parking Assist

See S-APGS.

IPA - Intuitive Parking Assist

This system provides onscreen and audible feedback of obstacles around the vehicle as detected by one or more of the 12 ultrasonic sensors.

When the sensors detect an obstacle, the following displays inform the driver of the position and distance to the obstacle.

Multi-information display

- Front center sensor operation
- Front corner sensor operation
- ③ Front side sensor operation
- ④ Rear side sensor operation
- Rear corner sensor operation
- 6 Rear center sensor operation
 - The operation display is gray when the sensors are operating.
 - The front side sensor operation displays and rear side sensor operation displays are not shown until a scan of the side areas is completed.

When an obstacle is detected by more than one sensor simultaneously, the buzzer will sound according to the distance that is closest to the vehicle.

When obstacles are simultaneously detected in the front and rear of the vehicle, separate buzzers with different sound patterns according to the distance to each obstacle.

The volume and timing of the buzzers can be changed. See Chapter 9, Section 2 (09-02) - Customization in your owner's manual for more details. The system can be turned on or off. If the system is disabled, it will remain off until manually enabled.

LDW w/ SA - Lane Departure Warning w/ Steering Assist

This feature uses a forward-facing camera to scan for road lines to assist the driver in keeping inside the lane. It will sound a beep as well as flash on the MID (or HUD*) when it detects that the driver is straying from the lane. If the lane edge is approaching or has been crossed, "steering assist" may lightly nudge the wheel in the opposite direction to put the vehicle back in the lane. Note that this is <u>not</u> an active system such as Lane Keep Assist. This is a semi-passive system that will only react if you leave your lane.

If there are two solid white lines shown on the cruise control screen on the multi-information display, lane departure warning system is active. When you approach or cross the lane markings, LDW will flash the lines in orange on the side where the offence is occurring. (e.g. if



you're drifting to the right side, the right line on the MID will flash orange). Three beeps will also accompany the visual warning. If "steering assist" was activated, an amber steering wheel will also illuminate on the dashboard.

The sensitivity of LDW can be adjusted in the Settings menu on the 4.2" MID.

*if equipped

PED - Predictive Efficient Drive

This system learns where you typically stop at intersections and marks them with a green leaf on the navigation system. As you approach an intersection, the leaf will grow larger, indicating that that is the intersection at which the system is determining you are approaching and will activate PED. As you get closer the Eco Accelerator Guide will decrease and if you lift off the accelerator, PED will increase regenerative braking in anticipation of coming to a full stop at the intersection. The system is dynamic and will adjust the strength of the regenerative braking depending on your speed and distance to the intersection. It's meant as a feature to assist the driver in using regenerative braking more often rather than the friction brakes and coach the driver into approaching that intersection more gently. See Chapter 8, section 3 - Map Screen Information, page 213 & 214 of your navigation system owner's manual for 11.6" screens for more information.

PCS – Pre-Collision System w/ Pedestrian Detection

This system uses a forward-facing radar and monocular camera to detect rapidly approaching objects such as vehicles and pedestrians. If the computer senses that you are approaching an object at a rapid pace, it will warn you with a "BRAKE!" message on the multi-information display or HUD*. It can also tighten the front seatbelts in anticipation and it will prime the brake pads and Brake Assist for action. If the driver fails to take action, the car will apply the brakes up to a certain threshold (as determined by Toyota) to bring the Prius down to a stop or a slower speed. It may not completely avoid the collision but it will minimise the impact speed, and thus hopefully minimise the amount of damage. The likelihood of avoiding a collision is higher if the vehicle speed is below 18mph (30km/h) for pedestrians and 25mph (40km/h) for vehicles. Above those speeds, a collision may not be avoidable. See Chapter 5, Section 5 (5-5) page 369 for more information. From the manual:

- **Pre-collision warning** If the pre-collision sensor detects that the possibility of a frontal collision is high, a buzzer will sound and a warning message will appear on the MID to urge the driver to take evasive action.
- **Pre-collision brake assist** When there is a high possibility of a frontal collision, the system applies greater braking force in relation to how strongly the brake pedal is depressed.
- **Pre-collision braking** When there is a high possibility of a frontal collision, the system warns the driver using a warning light, warning display and buzzer. If the system

determines that a collision is unavoidable, the brakes are automatically applied to avoid the collision or reduce the collision speed.

The pre-collision system is operational when:

- Pre-collision warning
 - Vehicle speed is between 7 and 110mph (10 and 180 km/h). [For detecting pedestrians, the vehicle speed is between 18 and 50 mph (30 and 80 km/h)].
 - The relative speed between your vehicle and the vehicle or pedestrian that is ahead of your vehicle is greater than 7 mph (10 km/h).
- Pre-collision brake assist:
 - Vehicle speed is between 18 and 110mph (30 and 180 km/h). [For detecting pedestrians, the vehicle speed is between 18 and 50 mph (30 and 80 km/h)].
 - The relative speed between your vehicle and the vehicle or pedestrian that is ahead of your vehicle is greater than 18 mph (30 km/h).
 - The brake pedal is depressed.
- Pre-collision braking:
- Vehicle speed is between 7 and 110mph (10 and 180 km/h). [For detecting pedestrians, the vehicle speed is between 18 and 50 mph (30 and 80 km/h)].
- The relative speed between your vehicle and the vehicle or pedestrian that is ahead of your vehicle is greater than 7 mph (10 km/h).

The Pre-Collision System may be turned off (e.g. if you're towing the car or if the car is driven in a sporty manner). The Pre-Collision Warning sensitivity is also adjustable. Both are available via the Settings menu on the 4.2" MID.

*if equipped

RCTA - Rear Cross Traffic Alert

This system detects vehicles approaching perpendicular to your vehicle as you reverse. It uses two radars mounted on the rear bumper, facing 90° to the direction of travel.



When a vehicle is approaching your vehicle from the rear left or rear right, the outside mirror indicators will flash. A buzzer will also sound. Owners have found that it can also detect pedestrians, cyclists and motorcyclists.

The system will work only if the vehicle is in

reverse, the vehicle is travelling less than 5mph (8km/h) and the approaching vehicle speed is between 5 and 18mph (8 and 28km/h).

RCTA can be disabled. If the system is disabled, it will remain off until manually enabled. See Chapter 5, Section 5 (5-5) page 415 of your owner's manual for more information.

Remote Air Conditioning System

The remote air conditioning system allows the owner to pre-heat or pre-cool the cabin prior to entering. To activate the remote air conditioning system, press and hold the A/C button on the key fob for at least 0.8 seconds. This action is configurable by the dealer. See Chapter 6, Section 1 (06-01), page 509 of your owner's manual for more details. The car will lock the door, flash the indicators and beep to indicate that the system has been turned on. The air conditioning system in the Prius is powered electrically by the high voltage hybrid battery (also known as traction battery) and thus using the remote air conditioning system allows the interior to heat or cool without turning on the engine. The system will run for a maximum of ten (10) minutes or until the battery is low (whichever is first). You may cancel the system by pressing the A/C button on the key fob twice. The Remote A/C system will operate with your last climate control settings. Vehicles with the 11.6" MFD can use Entune and a smartphone to operate Remote A/C. Those owners can choose from Max Heat, Max Cool or "last setting" for the climate control system as well as turn on the front and rear defrosters.

S-APGS – Simple Advanced Parking Guidance System

This system assists the driver when parking the vehicle by using 12 ultrasonic sensors around the vehicle. It will do perpendicular and parallel parking on both sides of the vehicle as well as assist the driver in exiting a parallel parking spot. It will not work in all conditions and is only an assist system. S-APGS will work in conjunction with ICS and if it detects an obstacle that could result in a collision, it will apply the brakes (whether ICS is on or off). Intuitive Parking Assist will also operate if an obstacle is detected when using APGS (whether Intuitive Parking Assist is on or off). See Chapter 5, Section 5 (5-5), page 442 of the owner's manual for a detailed explanation as well as tips and tricks.

Smart Key System with Touch Sensor Lock

Your Prius is equipped with a proximity entry and keyless start system called the Smart Key System. It is designed to assist in entry and start/stop by allowing the driver to enter the car simply by having the key in their pocket. Depending on your model, you may have 1-dr or 3-dr SKS. 1-dr SKS refers to the SKS sensor on the driver's door only. 3-dr SKS refers to the sensors present on the driver's door, front passenger door and the rear hatch. As you approach the vehicle, the interior lights will illuminate to welcome the driver. To open the door, simply grab the handle as you normally do to open the door. The car will sense that the SKS fob is within range and will unlock the vehicle. The sensor has a range of approximately 2.3ft (0.7m). Once inside the vehicle, simply depress the brake pedal and push the POWER button to start the vehicle. Once the READY light is illuminated, you may drive off. To lock the car, simply locate

indent on the side of the door handle. Touching that after all the doors are closed will lock the vehicle.

Vehicles equipped with 3-dr SKS will have a sensor on the front passenger door and rear hatch. Note that the default setting will have the driver's door unlock only the driver's door, while unlocking the car from the front passenger door or rear hatch will unlock all doors. This is configurable. See Chapter 9, Section 2 – Customization in your owner's manual for more detail.

To unlock via the rear hatch, locate the broad rubber sensor vicinity of the Toyota logo. Press and hold until the hatch releases. To lock, locate the smaller round sensor adjacent to the unlock sensor.