BILL'S HOME TECH
Home & Small Business Tech Solutions

BILL'S COMPLETE MANUALS

Driver-Assist Features Explained

Lane keeping, adaptive cruise, automatic braking, backup cameras and all those beeps — explained in plain English

A plain-English guide for drivers and their families

Take your time — your car is there to help, not to take over

Written for you by Bill — Bill's Home Tech

(330) 200-8042 · BillsHomeTech.com

For cars, SUVs, trucks & minivans of any brand · facts current November 2026

What's Inside

This is your guide to the driver-assist features in a modern car — the beeps, the little dashboard pictures, the steering wheel that nudges you back into your lane, and the cruise control that slows down on its own. Read it in any order and at your own pace. Every feature comes with what it actually does *for you*, what it can't do, and how to find its settings. One thing runs through every chapter: these features **help an attentive driver**. They don't drive the car. And because every make, model and year is a little different, your owner's manual (and your dealer) always has the final word on how *your* car works.

Part 1 — Getting to Know Driver-Assist

1 A Note from Bill
2 Driver-Assist Is Not Self-Driving
3 Cameras, Radar & Sensors: Where They Live
4 Why Every Brand Uses Different Names

Part 2 — Features That Watch the Road Ahead

5 Forward Collision Warning
6 Automatic Emergency Braking
7 Lane Departure Warning & Lane Keeping
8 Adaptive Cruise Control

Part 3 — Features Beside & Behind You

9 Blind-Spot Monitoring
10 Rear Cross-Traffic Alert
11 Backup Cameras
12 Parking Sensors & 360-Degree Views

Part 4 — The Beeps, Buzzes & Dashboard Lights

13 What That Beep Means
14 Driver-Assist Lights on the Dashboard
15 When a Feature Says "Unavailable"

Part 5 — Making the Features Work Your Way

16 Turning Features On & Off
17 Turn Off Lane Keeping (or Make It Gentler)
18 Adjusting Sensitivity, Timing & Alert Volume

Part 6 — Care, Repairs & Recalls

19 Clean the Sensors: Snow, Ice & Road Salt
20 Recalibrate After a New Windshield or Bumper Repair

21 Check for Recalls & Software Updates

Part 7 — Hands-Free Systems & Choosing a Car

22 Hands-Free Systems: Super Cruise, BlueCruise & Others
23 Shopping, Borrowing & Rentals

Part 8 — When to Call Bill & Your Cheat-Sheet

24 When to Call Bill
25 Your Driver-Assist Cheat-Sheet

PART 1

Getting to Know Driver-Assist

What these features are, what they are not, where the cameras and sensors live, and why every car company calls them something different. Start here.

CHAPTER 1

A Note from Bill

Hello, and welcome. If you've bought a car in the last several years — or ridden in a son's or daughter's — you've probably heard it: a sudden beep, a flashing light on the dashboard, or a steering wheel that gently tugs on its own. Maybe the salesperson mentioned "all the safety features" and handed you the keys. Maybe nobody explained anything at all. Either way, this guide is for **you**.

I'm Bill. Helping folks feel at home with their technology is what I do every day, and I wrote this guide the way I'd explain it sitting next to you in the passenger seat — parked in the driveway, engine running, no rush. If I use a word you don't know, I'll stop and explain it right then.

You can't break anything by looking

Reading the settings screen in your car won't change how it drives. Turning a feature on or off is always something you choose on purpose, and almost every car lets you put things back the way they were. The best way to learn is in your own driveway, parked, with the owner's manual on your lap.

STAY SAFE

The one thing to remember

Driver-assist features **help an attentive driver**. They do not drive the car. They can miss things — a person crossing in the dark, a motorcycle, a stopped car, faded lane lines, a snowy road. Your eyes, your hands and your judgment stay in charge every second. This guide will say it more than once, because it's that important.

WHAT THIS DOES FOR YOU

Why this matters

When you know what each beep and light means, they stop being startling and start being useful. You'll know which features are on, how to adjust the ones that bother you, and how to keep the sensors clean through a Northeast Ohio winter so they're ready when they're needed.

What this guide covers

- The difference between **driver-assist** and **self-driving** — and why it matters.
- Features up front: **forward collision warning**, **automatic emergency braking**, **lane keeping** and **adaptive cruise control**.
- Features beside and behind you: **blind-spot monitoring**, **rear cross-traffic alert**, **backup cameras** and **parking sensors**.
- What the **beeps and dashboard lights** are telling you.
- Turning features on and off, and adjusting how early or how loudly they warn you.
- Keeping cameras and sensors clean in snow, ice and road salt.
- Why a new windshield or a bumper repair can mean a **recalibration**.
- Hands-free systems like GM's **Super Cruise** and Ford's **BlueCruise**, explained honestly.

Your owner's manual is the final word

Every car company does these features a little differently, and they change from year to year — even between trim levels of the same model. So I'll explain how these features *generally* work and where the settings *usually* live. For exactly how your car behaves, what each light means and where each switch is, your **owner's manual** is the authority, and your **dealer's service department** is glad to show you. Many manufacturers also put the owner's manual on their website and in their phone app, which makes it easy to search.

And I'm only a phone call away

If you'd like a patient person to sit with you in the driveway and go through your car's settings screen together, call me at **(330) 200-8042**. No question is too small.

So find your keys and your owner's manual, and let's get to know your car's helpers together.

— Bill

CHAPTER 2

Driver-Assist Is Not Self-Driving

This is the most important chapter in the guide. Car advertising uses exciting words — "pilot," "cruise," "autopilot," "self-driving" — and it's easy to come away thinking the car can take care of itself. No car you can buy at a dealer today drives itself. Every driver-assist feature in this guide needs **you** to be watching the road and ready to steer and brake.

What the government safety agency says

The **National Highway Traffic Safety Administration** (NHTSA — the federal agency in charge of car safety) puts it plainly on its driver assistance page: these features are **assistive** and do not operate the vehicle. You still steer, brake and accelerate. NHTSA's page at **nhtsa.gov/driver-assistance-technologies** has short, clear descriptions of each feature.

The "levels" you may hear about

Engineers use a scale from **SAE International** (a standards group for the auto industry) that runs from Level 0 to Level 5. You don't need to memorize it, but it helps to know where today's cars sit.

Level	In plain English	Who is driving?
0	Warnings and brief help only — like a beep or an emergency brake in a split second.	**You**
1	The car helps with *either* speed *or* steering (for example, adaptive cruise).	**You**
2	The car helps with speed *and* steering at the same time. Includes hands-free highway systems.	**You** — always supervising
3 to 5	The system itself does the driving in certain or all conditions.	The system (not what you'll find on a typical new car)

At Levels 0, 1 and 2 — which covers the features in nearly every car on the road — **the person in the driver's seat is the driver**, even when the car is helping with the steering, brakes and gas. That includes hands-free systems such as GM's Super Cruise and Ford's BlueCruise, and Tesla's "Full Self-Driving (Supervised)" — Tesla's own support page says it requires active driver supervision and does not make the vehicle autonomous.

HEADS UP

Feeling too relaxed is the real risk

The **Insurance Institute for Highway Safety** (IIHS — a research group funded by auto insurers) has said there's no evidence that partial automation makes driving safer, and that it can create new risks by making it easier for a driver's attention to wander. If you notice yourself trusting the car more than you should, that's the moment to put both hands back on the wheel.

Four habits that keep you in charge

1. Keep your eyes on the road and your hands on the wheel unless your car's hands-free system specifically allows otherwise — and even then, stay ready to take over.
2. Drive as if the features weren't there. Think of them as a backup, not a plan.
3. Learn what each warning sounds and looks like in *your* car (Chapter 13 helps).
4. When the weather is bad or lane lines are hard to see, expect the features to do less — or nothing.

WHAT THIS DOES FOR YOU

What this does for you

Knowing the car is a helper — not a chauffeur — lets you enjoy the help without being caught off guard. The features work best for drivers who understand their limits.

CHAPTER 3

Cameras, Radar & Sensors: Where They Live

Driver-assist features see the world through a handful of small parts tucked into the car's body. You don't need to understand how they work inside — but knowing **where** they are helps you keep them clean and understand why a feature might switch off.

The usual places

Where	What's there
Behind the windshield	A forward-facing camera, usually up near the rearview mirror. It reads lane lines and helps spot cars and people ahead. Subaru's EyeSight uses two cameras here.
Front grille or bumper	A **radar** sensor — often behind the car company's emblem or a smooth panel in the grille. It measures the distance and speed of things ahead.
Rear corners of the bumper	Radar sensors for blind-spot monitoring and rear cross-traffic alert. You usually can't see them; they're behind the bumper cover.
Small round dots in the bumpers	**Parking sensors** — little circles that send out sound pulses to judge distance to a wall, post or car.
Above the rear license plate or in the tailgate handle	The **backup camera** lens.
Under the side mirrors and in the grille	Extra cameras on cars with a 360-degree or "bird's-eye" view.
On the steering column or dashboard (some cars)	A **driver-facing camera** that checks whether you're watching the road — used by hands-free systems and some attention monitors.

Exactly where each part sits depends on your make and model. Your owner's manual usually has a drawing showing the camera and sensor locations — look in the driver assistance or safety section.

GOOD TO KNOW

Radar, camera and sonar, in one sentence each

A **camera** sees like an eye, so it struggles in glare, darkness, fog and snow. **Radar** sends out radio waves and measures what bounces back; it judges distance well but can be blocked by ice or slush. **Ultrasonic** parking sensors use sound pulses for very short distances, like the last few feet in a garage.

TIP

Look at your car with fresh eyes

Walk around your car once with the owner's manual open to the sensor drawing and point to each one. It takes five minutes, and afterward you'll know exactly which spots to brush off on a snowy morning.

CHAPTER 4

Why Every Brand Uses Different Names

One of the most confusing things about driver-assist is the names. Every car company gives its package a brand name, and then gives each feature inside it a slightly different name, too. "Pre-Collision System," "Collision Mitigation Braking" and "Forward Collision-Avoidance Assist" are all forms of the same basic idea: automatic emergency braking.

The package names you'll see

Brand	Package name	Examples of features inside
Toyota	Toyota Safety Sense (TSS 2.5, 2.5+, 3.0)	Pre-Collision System, Lane Tracing Assist, Dynamic Radar Cruise Control, Proactive Driving Assist (3.0)
Honda	Honda Sensing	Collision Mitigation Braking System, Road Departure Mitigation, Lane Keeping Assist, Adaptive Cruise Control
Ford	Ford Co-Pilot360	Pre-Collision Assist with automatic emergency braking, BLIS blind-spot system with cross-traffic alert, lane-keeping system
Subaru	EyeSight Driver Assist Technology	Pre-Collision Braking, Lane Keep Assist, Adaptive Cruise Control
Chevrolet	Chevy Safety Assist	Automatic Emergency Braking, Front Pedestrian Braking, Lane Keep Assist with Lane Departure Warning, Forward Collision Alert
Hyundai	Hyundai SmartSense	Forward Collision-Avoidance Assist, Lane Keeping Assist, Blind-Spot Collision-Avoidance Assist
Kia	Kia Drive Wise	Forward Collision-Avoidance Assist, Lane Keeping Assist, Blind-Spot Collision-Avoidance Assist

These lists are examples, not complete inventories. Which features your car has depends on the model, the year and the trim level. Two cars with the same package name can still have different features.

Translating the names

When you're not sure what a feature is, match it to one of these plain descriptions — they're the groups this guide uses:

If it…	It's a kind of…
Warns about a crash ahead	Forward collision warning (Chapter 5)

If it…	It's a kind of…
Brakes by itself to avoid or soften a crash	Automatic emergency braking (Chapter 6)
Beeps or nudges when you drift	Lane departure warning / lane keeping (Chapter 7)
Keeps a distance from the car ahead	Adaptive cruise control (Chapter 8)
Light in the side mirror	Blind-spot monitoring (Chapter 9)
Warns of cars passing behind as you back out	Rear cross-traffic alert (Chapter 10)

TIP

Find your car's list in two places

Your **window sticker** (if you still have it) lists the features your car came with. Your **owner's manual** has a driver assistance section with each feature's exact name. The dealer can also look up your car's features by its VIN — the 17-character vehicle identification number.

WHAT THIS DOES FOR YOU

What this does for you

Once you can translate the names, you can compare cars when shopping, follow along in any owner's manual, and talk with a dealer or a family member without the jargon getting in the way.

PART 2

Features That Watch the Road Ahead

Forward collision warning, automatic emergency braking, lane keeping and adaptive cruise control — what each one does, what it can't do, and how it feels from the driver's seat.

CHAPTER 5

Forward Collision Warning

Forward collision warning watches the road ahead and sounds an alarm if it thinks you're closing in on a car too quickly. It's the car's way of saying "look up — now!"

What it does — and doesn't do

NHTSA describes forward collision warning as a system that detects a possible crash with a vehicle ahead and **warns** the driver. That's all it does: it warns. It does not brake or steer by itself. (The feature that brakes is automatic emergency braking, in Chapter 6. Most newer cars have both, working together.)

What the warning usually looks and sounds like

- A loud, fast beeping — usually more urgent than any other sound the car makes.
- A red or orange picture of two cars, or the word **BRAKE!**, on the dashboard or in the windshield display.
- On some cars, a quick tug of the seat belt or a short pulse of the brakes to get your attention.

Every brand does it a little differently. Your owner's manual shows the exact warning your car gives.

What to do when it goes off

1. Look ahead right away.
2. If traffic has slowed or stopped, brake firmly — don't wait for the car to do it.
3. If it was a false alarm (more on those below), carry on, and consider whether you were following a little closely.

Why it sometimes goes off for no reason

A **false alarm** means the system thought it saw a danger that wasn't there. It can happen when a car ahead turns off the road, on a sharp curve, with a metal plate or sign near the road, or when you're closing in on a car you fully intend to pass. Most cars let you choose how early the warning comes — often **Near**, **Middle** or **Far** — which Chapter 18 explains.

GOOD TO KNOW

"Following distance" displays

Some cars, including many Chevrolets, also show a **following distance indicator** — the gap to the car ahead, shown in seconds. It's a gentle, quiet way to see whether you're following too closely before any alarm is needed.

WHAT THIS DOES FOR YOU

What this does for you

A forward collision warning is a second set of eyes for the moment your attention slips — a glance at the radio, a sneeze, a bright sunrise. The warning buys you time to react.

CHAPTER 6

Automatic Emergency Braking

Automatic emergency braking — often shortened to **AEB** — goes one step further than a warning. If the car decides a crash is about to happen and you haven't braked (or haven't braked enough), it can apply the brakes itself to help avoid the crash or make it less severe.

How it usually works

Honda's description of its Collision Mitigation Braking System is a good example of how most work: radar spots a vehicle or object ahead, the car warns you, gets the brakes ready, and — if you still don't respond — applies emergency braking to help avoid or reduce the severity of a collision. Many newer systems also look for **pedestrians** and **cyclists**, and some help at intersections when you're turning.

Important limits

AEB is designed to *help* in an emergency. It is not designed to stop the car in every situation, and it may not react at all. Things that can make it less effective include:

- **Darkness.** IIHS research found that pedestrian-detecting AEB helped in daylight but showed no benefit on unlit roads at night.
- **Higher speeds and turns.** The same IIHS research found no reduction in pedestrian crashes on roads with speed limits of 50 mph or more, or while the car was turning.
- **Bad weather** — snow, heavy rain, fog, or a camera or radar covered in slush (Chapter 19).
- **Unusual shapes** — motorcycles, bicycles, animals, a trailer, or a vehicle stopped partly in your lane.
- **Glare** from a low sun or oncoming headlights.

STAY SAFE

Never test it on purpose

Please don't try to "see if it works" by driving toward something. The system isn't built to be tested that way, it may not brake at all, and the results can be serious. Trust your owner's manual to tell you what it does, and keep braking for yourself.

A new federal rule is coming

In 2024, NHTSA finalized a new safety standard — **FMVSS No. 127** — that will require automatic emergency braking, including braking for pedestrians, on new passenger cars and light trucks. The compliance date in the final rule is **September 1, 2029** (small-volume makers get an extra year). As of November 2026, NHTSA had proposed amendments to the rule that were still under review, so the details could change. Many new cars already include AEB as standard equipment.

What it feels like if it happens

If AEB activates, the car can brake very hard, very suddenly — harder than most people ever brake. Loose items may slide forward. Afterward, keep your foot firmly on the brake, check your mirrors and the road, and continue only when it's safe. If the car behaved strangely, mention it to your dealer.

TIP

Keep the floor and seats clear

Because automatic braking can be abrupt, it's a good habit to put purses, bags and groceries on the floor or in the trunk rather than on the front seat.

WHAT THIS DOES FOR YOU

What this does for you

AEB is a safety net for the worst moment of a drive. You'll likely never notice it — and that's the point. It's there in case you need it.

CHAPTER 7

Lane Departure Warning & Lane Keeping

Lane features use the windshield camera to read the painted lines on the road. They come in a few flavors, and car companies mix up the names, so here's how NHTSA sorts them out.

The three kinds

Feature	What it does
Lane departure warning	**Warns** you — with a beep, a buzz in the steering wheel or seat, or a light — if the car starts to drift over a lane line without the turn signal on.
Lane keeping assist	Gently **steers** (or on some cars, brakes one side) to help keep you from drifting out of your lane unintentionally. It acts near the edge of the lane.
Lane centering	Steers continuously to help keep the car in the **middle** of the lane. It usually works only together with adaptive cruise control.

Honda, for example, has **Road Departure Mitigation** (which can steer and brake if you're about to leave the road) and **Lane Keeping Assist** (which helps keep you centered). Toyota's version of lane centering is called **Lane Tracing Assist**; Subaru's is **Lane Keep Assist** within EyeSight.

When lane features can't help

- Faded, missing or snow-covered lane lines — common on Ohio back roads and in winter.
- Construction zones with old lines and new ones crossing each other.
- Sharp curves, hills, narrow lanes and very low speeds.
- A dirty, icy or fogged-up windshield in front of the camera.
- Sun glare, heavy rain, or driving right behind a large truck.

When the camera can't see the lines, the lane symbol on your dashboard usually turns from green to white or gray, or disappears. That's the car telling you it isn't helping right now.

STAY SAFE

Hands on the wheel

Lane keeping assist is not a way to steer the car for you. Honda's own materials say drivers must keep both hands on the wheel, and most cars will warn you — and then switch the feature off — if they sense your hands aren't there.

TIP

The steering nudge feels odd at first

Many people are surprised the first time the wheel moves under their hands. It's a gentle push, and you can always overpower it by steering normally. If it really bothers you, Chapter 17 shows how to switch it to warning-only or off.

WHAT THIS DOES FOR YOU

What this does for you

On a long, tiring drive down I-76 or I-80, a gentle buzz or nudge when you drift is a helpful reminder to refocus — or to pull over for a break.

CHAPTER 8

Adaptive Cruise Control

Regular cruise control holds one speed. **Adaptive cruise control** holds your chosen speed *and* slows down automatically to keep a set distance from the car in front of you. When the road clears, it speeds back up to your setting.

The buttons, in general

The controls are usually on the steering wheel. Names and symbols vary, but most cars have:

Button	What it usually does
On / cruise button	Gets cruise control ready (often shows a speedometer picture).
SET	Sets your current speed.
RES (resume) or + / –	Returns to the last speed, or nudges the speed up or down.
CANCEL	Pauses cruise without forgetting the speed. Pressing the brake also cancels.
Distance button	Often a picture of a car with lines behind it. Each press changes the gap — usually three or four settings from close to far.

Your owner's manual shows the exact buttons and the order to press them.

Stop-and-go

Many newer systems can slow all the way to a stop in traffic and then follow again. Honda calls this **Low-Speed Follow**; others say "stop and go." On some cars, if you're stopped for more than a few seconds, you need to press RES or tap the gas to start moving again.

When not to use it

Honda's guidance is a good general rule: don't use adaptive cruise in heavy traffic, poor weather or on winding roads. Add to that list:

- Snow, ice, slush or heavy rain — on slippery roads you want full control of the gas.
- Exiting the highway, where the car may speed up once the car ahead leaves its view.
- Stopped traffic ahead at highway speed — some systems may not react to a vehicle that's already stopped.
- Construction zones, toll plazas and parking lots.

HEADS UP

It won't stop for everything

Adaptive cruise is built to follow moving traffic. It is not designed to stop for pedestrians, animals, debris, or a red light, and it may not slow down for a car that suddenly cuts in. Keep your foot ready near the brake.

WHAT THIS DOES FOR YOU

What this does for you

On a long highway trip, adaptive cruise takes away the constant on-and-off of the gas pedal, which many drivers find less tiring — as long as you stay alert and in charge.

PART 3

Features Beside & Behind You

Blind-spot monitoring, rear cross-traffic alert, backup cameras and parking sensors — the helpers for changing lanes, backing out and parking.

CHAPTER 9

Blind-Spot Monitoring

Every car has **blind spots** — areas beside and just behind you that your mirrors don't show. **Blind-spot monitoring** uses radar sensors in the rear corners of the car to watch those areas and let you know when a vehicle is there.

Two kinds

Type	What it does
Blind-spot warning	Lights up a small symbol — usually in or near the side mirror — when a vehicle is in your blind spot. If you turn on your signal toward that side, it typically flashes and beeps.
Blind-spot intervention	Goes further: if you start to change lanes toward a detected vehicle, it can apply a brake or steer gently to help keep you in your lane.

Ford calls its version **BLIS** (Blind Spot Information System). Hyundai and Kia call the intervention kind **Blind-Spot Collision-Avoidance Assist**, which can brake if the risk rises during a lane change. Other brands use other names — your owner's manual shows yours.

How to use it well

1. Use your turn signal every time. Many systems give their strongest warning only when the signal is on.
2. Treat the light as a **reminder**, not permission. A dark light doesn't guarantee the lane is clear.
3. Still check your mirrors and glance over your shoulder before every lane change.

HEADS UP

Motorcycles and fast cars

Blind-spot systems can miss a motorcycle, a bicycle, or a car coming up very fast from far behind. Snow, slush or a bike rack over the rear bumper can also block the sensors. That's why the shoulder check never goes out of style.

TIP

Towing or carrying a rack?

A trailer or a hitch-mounted bike rack can confuse the rear radar. Some cars have a trailer setting that adjusts for this, and some (like certain Ford trucks) offer blind-spot coverage that includes the trailer. Check your owner's manual before a trip.

WHAT THIS DOES FOR YOU

What this does for you

If turning your head all the way around has gotten harder over the years, a blind-spot light is a genuinely welcome extra check on busy roads like Route 43 or the turnpike.

CHAPTER 10

Rear Cross-Traffic Alert

Backing out of a parking space between two big SUVs is one of the hardest things in everyday driving: you simply can't see what's coming down the aisle. **Rear cross-traffic alert** helps with exactly that moment.

What it does

NHTSA describes rear cross-traffic warning as a feature that alerts the driver to possible collisions **while in reverse** with vehicles that may be outside the view of the backup camera — cars coming from the left or right. It uses the same rear-corner radar as blind-spot monitoring.

- You'll usually hear a beep and see an arrow or flashing light on the backup camera screen or in the side mirror on the side the car is coming from.
- Some cars add **rear automatic braking**, which can apply the brakes while you're backing up if it detects something behind you. NHTSA notes it uses sensors such as the parking sensors and backup camera.

IIHS reports that, among the different kinds of rear crash prevention, rear automatic braking has been associated with the largest reductions in backing crashes.

Backing out, the safe way

1. Before you get in, glance around the car for children, pets, carts and posts.
2. Shift into reverse and look at the backup camera *and* over your shoulder.
3. Back out slowly — a crawl gives the sensors time to see and you time to react.
4. If you hear the alert, stop and look toward the side it's warning about.
5. Continue only when you've seen for yourself that it's clear.

HEADS UP

It doesn't see everything

Rear cross-traffic alert is tuned for moving cars. It may not warn you about a person walking behind you, a child on a bike, or a car approaching very slowly or very fast. Angled parking spaces and a vehicle parked right next to yours can also block its view.

WHAT THIS DOES FOR YOU

What this does for you

Grocery store and church parking lots become a lot less nerve-racking when the car can warn you about traffic you can't see yet.

CHAPTER 11

Backup Cameras

A **backup camera** (also called a rearview camera) shows what's directly behind your car on the center screen whenever you shift into reverse. If your car was built in the last several years, it almost certainly has one.

Required on new vehicles since 2018

NHTSA's rear visibility rule requires new vehicles under 10,000 pounds — cars, SUVs, pickups and vans — built on or after **May 1, 2018**, to have a backup camera system. The rule sets a minimum view of a 10-by-20-foot zone directly behind the vehicle. Many cars had cameras well before that date.

Reading the screen

- **Colored guide lines** show roughly how far away things are. Many cars use green (farther), yellow (closer) and red (very close). Your owner's manual shows what the lines mean in your car.
- On many cars, the lines **bend** as you turn the steering wheel, showing where the car will go.
- The picture is like a mirror image, so things on the left of the screen are on the left of the car.
- The lens is wide-angle, so objects can look farther away than they really are.

When the picture is blurry, dark or missing

1. **Wipe the lens.** It's usually above the rear license plate or near the tailgate handle. Salt spray and road grime are the usual culprits. A soft, damp cloth works well.
2. **Check for ice or snow** on the lens in winter (Chapter 19).
3. **Turn the car off and on again.** Sometimes the screen simply needs a restart.
4. If the screen stays black or shows an error, contact your dealer — and check for a recall at **nhtsa.gov/recalls** (Chapter 21). If a known problem is covered by a safety recall, the repair is free at an authorized dealer.

STAY SAFE

The camera can't see the whole picture

A backup camera shows a slice of the area behind you — not the sides, and not what's above or below its view. Small children and pets can be hard to see. Always look around before and while backing up.

TIP

Make the picture bigger or clearer

Some cars let you change the camera view (normal, wide, top-down) or adjust brightness while it's showing. Look for small buttons on the camera screen itself, and check your owner's manual.

WHAT THIS DOES FOR YOU

What this does for you

Backing into the garage or up to the curb becomes calmer and more precise — especially helpful if turning your neck all the way around isn't as easy as it used to be.

CHAPTER 12

Parking Sensors & 360-Degree Views

Parking sensors are the small round dots in your bumpers. They send out sound pulses — too high for people to hear — and listen for echoes to judge how close you are to a wall, a post or another car.

Understanding the beeps

On most cars, the beeping gets **faster** as you get closer, and turns into a **steady tone** when you're very close — that's your cue to stop. Many cars also show a picture of the car on the screen with colored bars at the corners to show where the object is.

360-degree and "bird's-eye" cameras

Some cars combine several cameras — front, back and under each side mirror — into a view that looks like you're seeing the car from above. Brands call it a surround view, a 360-degree camera, or a bird's-eye view. It's especially handy for tight garages and parallel parking.

Turning the beeps down or off

Parking sensors often have their own button (a picture of a car with sound waves, or a "P" with waves) to switch them off temporarily — useful in a car wash or a tight drive-through. On many cars the volume can be adjusted in the touchscreen's settings, usually under **Vehicle** or **Driver Assistance**. Your owner's manual shows the exact path.

HEADS UP

Things the sensors may miss

Thin poles, chains, low curbs, trailer hitches and objects very close to the bumper can be missed. Snow, ice and mud on the sensors can cause constant beeping — or no beeping at all.

TIP

Constant beeping in winter?

If the parking sensors beep nonstop on a snowy day, the usual cause is snow, ice or slush covering one of the little dots. Gently clear it (Chapter 19) and the beeping typically stops.

WHAT THIS DOES FOR YOU

What this does for you

Parking sensors take the guesswork out of "how much room do I have left?" — saving bumpers, garage walls and nerves.

PART 4

The Beeps, Buzzes & Dashboard Lights

What the car is trying to tell you — and what to do about it, calmly and in order.

CHAPTER 13

What That Beep Means

A modern car can make a dozen different sounds. The trick is to sort them by **urgency**. Here's a general guide to the beeps, chimes and buzzes that come from driver-assist features. Exact sounds differ by brand — your owner's manual has a list of the warnings in your car.

Sorting the sounds

What you hear or feel	Usually means	What to do
Rapid, loud beeping with a red picture or **BRAKE!**	Forward collision warning — a possible crash ahead	Look ahead and brake now
Beep or buzz when drifting; steering wheel or seat vibrates	Lane departure warning	Steer back to the center of your lane
Single beep with a flashing light in the side mirror	Blind-spot warning while your signal is on	Stay in your lane; look again
Beeping while in reverse, with an arrow on the screen	Rear cross-traffic alert	Stop and look to that side
Beeps getting faster, then a steady tone, while parking	Parking sensors — object close by	Stop and check
Chime with "Keep hands on wheel" or a steering wheel picture	Lane system can't sense your hands	Hold the wheel normally
Chime with a coffee cup or "Take a break"	Driver attention monitor thinks you're tired	Pull over safely and rest
Chime with "unavailable" or a crossed-out symbol	A feature has paused itself (often dirt or weather)	See Chapter 15

Some cars use a **vibrating seat** instead of a sound — a buzz on the left side of the seat for a drift to the left, for example. Some let you choose sound or vibration in the settings.

When a sound startles you

1. Don't panic or swerve. Take your foot off the gas and look ahead first.
2. Check the dashboard for a picture or message — it usually tells you which feature is speaking.
3. If the road is clear and it seems like a false alarm, carry on and think about it later.
4. Once you're parked, look up the message in the owner's manual or the manufacturer's app.

TIP

Make a "sound list" in the driveway

Sit in the parked car with the owner's manual and read through its list of warning sounds and messages. Knowing ahead of time which chime is which takes the surprise out of it.

HEADS UP

Two sounds you should never ignore

The urgent forward collision alarm, and any warning that says a system has a **malfunction** or "see dealer." The first needs action right now. The second means a safety feature may not be working until it's checked.

WHAT THIS DOES FOR YOU

What this does for you

When you know what each sound means, the car stops feeling like it's nagging you and starts feeling like a helpful passenger who speaks up only when it matters.

CHAPTER 14

Driver-Assist Lights on the Dashboard

Driver-assist features have their own little pictures on the instrument panel. The same picture can mean different things depending on its **color**, so the color is the first thing to notice.

What the colors generally mean

Color	Usually means
Green	The feature is on and actively working — for example, lane lines detected, or adaptive cruise following a car.
White or gray	The feature is on but standing by — waiting for lane lines, or for you to set a speed.
Amber, orange or yellow	Something needs attention: the feature is off, unavailable, or has a fault. Often comes with a message.
Red	An urgent warning — like a forward collision alert. Act now.
Blue	On some cars, a hands-free system is active (Ford's BlueCruise uses blue lighting).

Common symbols

- **A car between two lane lines** — a lane departure or lane keeping feature.
- **A steering wheel with lane lines** — lane centering or a steering assist.
- **A car with a speedometer or a car with lines behind it** — adaptive cruise and its following distance.
- **Two cars with a star or exclamation point between them** — forward collision warning or AEB, often shown in amber when the feature is off or unavailable.
- **A car with lines at its corners** — blind-spot or parking sensors.
- **A coffee cup** — a driver attention or drowsiness alert.

These are typical pictures, not a promise of what your car shows. The owner's manual has a page of every warning and indicator light in your car — it's worth bookmarking.

HEADS UP

"OFF" lights that stay on

If you see a feature's symbol with the word **OFF** or a slash through it every time you start the car, someone may have turned that feature off. Chapter 16 shows how to check and turn it back on.

TIP

Take a photo of a light you don't know

When a new light comes on, it's fine to take a picture once you're parked. It makes looking it up — or asking the dealer or a family member — much easier.

WHAT THIS DOES FOR YOU

What this does for you

Reading the colors at a glance lets you tell "all is well" from "something needs a look" without taking your attention off the road for long.

CHAPTER 15

When a Feature Says "Unavailable"

Sooner or later you'll see a message like **"Pre-collision system unavailable," "Front camera blocked," "Radar obstructed — clean sensor"** or **"Lane keeping temporarily unavailable."** The good news: most of the time it's the car being honest that it can't see well right now — not a breakdown.

The usual causes

- Snow, ice, slush, salt film or mud on the windshield, grille emblem or bumper.
- Heavy rain, fog, or spray from trucks.
- Bright, low sun shining straight into the windshield camera.
- A very hot or very cold camera area — some systems pause until things warm up or cool down.
- A bike rack, plate frame or trailer blocking a sensor.
- Faded or missing lane lines (for lane features).

Toyota's owner material, for example, warns that radar sensors may not work correctly when covered with snow, ice or dirt, and Hyundai notes that snow, rain or a carrier on the rear bumper can temporarily limit or disable some rear-radar features.

What to do, in order

1. Keep driving carefully — the car still drives normally; only the assist feature is paused.
2. When it's safe to stop, clean the windshield in front of the camera and the sensors (Chapter 19).
3. Turn the car off and back on. Many messages clear by themselves once the sensor can see again, sometimes after a few minutes of driving.
4. If the message stays after cleaning and good weather, or says **malfunction** or **see dealer**, make an appointment with your dealer's service department.
5. Check for open recalls at **nhtsa.gov/recalls** while you're at it (Chapter 21).

GOOD TO KNOW

"Unavailable" versus "malfunction"

Unavailable or **temporarily** usually means a condition outside the car — dirt, weather, glare — and it should come back by itself. **Malfunction**, **fault** or **service** usually means the car found a problem with the system itself, and it needs a technician. Your owner's manual lists the messages for your car.

HEADS UP

After a fender bender or new glass

If a message appears soon after a windshield replacement, a bumper repair or even a minor bump, the camera or radar may be out of alignment. Read Chapter 20 and call the shop that did the work.

WHAT THIS DOES FOR YOU

What this does for you

Knowing that most "unavailable" messages are about dirt or weather saves you a worried trip to the dealer — and knowing when it isn't saves you from driving around without a safety feature.

PART 5

Making the Features Work Your Way

Finding the settings, turning features on and off, and adjusting how early and how loudly they warn you — always parked, always with the owner's manual handy.

CHAPTER 16

Turning Features On & Off

Most driver-assist features can be adjusted, and many can be switched off. My honest advice is to leave the safety features **on** — and to adjust the ones that bother you rather than turning them off completely. But it's your car, and it helps to know where the switches are.

Where the settings usually live

Settings are usually in one of three places, and many cars use more than one:

Place	What to look for
The touchscreen	Usually **Settings** > **Vehicle** > **Driver Assistance** (or "Driver Assist," "Safety," or the package name like Honda Sensing). Your owner's manual shows the exact path.
The instrument panel	Many cars use buttons or a thumbwheel on the steering wheel to scroll through menus on the screen behind the steering wheel — often under a gear or car-shaped icon.
Physical buttons	Some features have a button on the dashboard, steering wheel or lower console — for lane keeping, parking sensors or traction control, for example.

Two real examples, to show how much the wording varies:

- On recent Hyundai models, the owner's manual describes turning on Safe Exit Assist under **Setup** > **Vehicle** > **Driver assistance** > **Driving Safety**.
- On a Honda CR-V, Honda describes the Driver Attention Monitor setting under **Settings** > **Vehicle** > **Driver Assist System Setup**.

The general steps

1. Park somewhere safe, put the car in **Park**, and leave it running (most settings need the car on).
2. Open your owner's manual to the driver assistance section, or search it in the manufacturer's app.
3. On the touchscreen, open **Settings**, then look for **Vehicle**, then **Driver Assistance** or a similar name.
4. Choose the feature. You'll usually see choices like **On**, **Off**, **Warning only**, or a timing setting.

5. Make one change at a time, and write down what you changed (the cheat-sheet in Chapter 25 has room).

Will it stay off?

This surprises a lot of people: **it depends on the car**. Owner's manuals differ even within the same brand. Some Hyundai and Kia manuals say Lane Keeping Assist always turns back on when the car is restarted. Other Kia manuals say it keeps your last setting. A Toyota manual says its settings stay the same until you change them. Some older cars turned lane keeping off every time the engine was stopped. Your owner's manual says which way your car works.

TIP

If a setting "won't stick"

If you switch something off and it's back the next morning, that's usually not a fault — your car is designed to reset that feature for safety. Your owner's manual will say so. Some cars let you save preferences to a **driver profile** tied to your key fob.

STAY SAFE

Change settings only while parked

Digging through menus while driving is distracting — and on many cars the menus are locked while moving anyway. Make changes in the driveway, then go for a test drive.

WHAT THIS DOES FOR YOU

What this does for you

A car whose features are set the way you like is a car you'll enjoy driving — and you'll be far less tempted to switch off the safety features entirely.

CHAPTER 17

Turn Off Lane Keeping (or Make It Gentler)

Lane keeping is the feature people most often ask to turn off. The steering nudge can feel strange, it can tug when you move over for a cyclist or a parked car, and on narrow country roads it can seem to argue with you. Before turning it off, try making it gentler.

Gentler options most cars offer

- **Warning only** — keep the beep or vibration, but no steering.
- **Assist only** or **steering assist** — keep the nudge, drop the sound.
- **Vibration instead of sound** — a quiet buzz in the steering wheel or seat.
- **Earlier or later** timing, or lower **sensitivity**.

Names vary: Honda splits it into Road Departure Mitigation and Lane Keeping Assist; Hyundai and Kia may offer Lane Keeping Assist and Lane Following Assist; Toyota has a lane departure alert and Lane Tracing Assist. Your owner's manual lists your choices.

Turning it off, in general

1. Park, with the car on.
2. Look for a **lane button** on the steering wheel or dashboard (often a car between two lines). On many cars a press — or a press and hold — switches lane keeping on or off.
3. If there's no button, go to the touchscreen: **Settings** > **Vehicle** > **Driver Assistance** and look for the lane feature by name.
4. Choose **Off** or **Warning only**.
5. Watch the dashboard: the lane symbol usually goes out, or shows **OFF**.
6. Check your owner's manual for whether it will turn itself back on at the next start (Chapter 16).

Turning it back on

Follow the same steps and choose **On**. If a family member turned it off and you'd like it back, this is a good thing to do together in the driveway.

HEADS UP

Before you switch it off for good

Lane departure features are designed for exactly the moment you don't expect — a drowsy stretch of highway, a glance at the mirror. If the only problem is the nudge, try **warning only** first.

TIP

Using the turn signal stops most nudges

Lane keeping usually stays quiet when your turn signal is on, because the car knows you're changing lanes on purpose. Signaling for every move — even moving over for a cyclist — avoids many unwanted tugs.

WHAT THIS DOES FOR YOU

What this does for you

Setting lane keeping to suit your driving lets you keep a useful safety net without the feeling that the car is fighting you.

CHAPTER 18

Adjusting Sensitivity, Timing & Alert Volume

If a warning comes too early, too late or too loudly, there's often a setting for it. Adjusting these is usually better than switching a feature off.

Settings you may find

Setting	What it changes
Forward collision warning timing	Often **Near**, **Middle/Normal** or **Far/Early**. Early gives you more warning but more false alarms.
Lane warning type	Sound, steering wheel vibration, seat vibration, or a combination.
Lane sensitivity	How close to the line before it warns or nudges.
Adaptive cruise distance	Usually set with a button on the steering wheel, three or four steps.
Warning volume	Some cars let you set driver-assist warning volume separately from the radio.
Parking sensor volume	Often in the same driver assistance menu, or under Sound.
Driver attention alerts	On some Hondas, for example, you can choose tactile and audible, tactile only, or off.

A sensible way to adjust

1. Start with the factory settings for a week or two of normal driving.
2. Notice which warning bothers you and when.
3. Park, and change only that one setting by one step.
4. Drive another week. Adjust again only if needed.

TIP

Hard of hearing?

If you have trouble hearing the chimes, look for a setting that adds **vibration** to the steering wheel or seat, or raises the warning volume. And remember that hearing aids that connect to your phone may also take calls through the car — my guide "Your Car's Touchscreen & Bluetooth" covers that side.

GOOD TO KNOW

Settings can differ between keys

Some cars remember different settings for each key fob or driver profile. If the car seems to "forget" your preferences, check whether someone else drove it with a different key.

WHAT THIS DOES FOR YOU

What this does for you

A few small adjustments can turn an annoying car into a pleasant one — while keeping every safety feature on and ready.

PART 6

Care, Repairs & Recalls

Keeping cameras and sensors clean through snow and salt, why a new windshield or bumper can mean a recalibration, and how to check for recalls.

CHAPTER 19

Clean the Sensors: Snow, Ice & Road Salt

Here in Northeast Ohio, winter is the hardest season on driver-assist features. Lake-effect snow, freezing slush and that white film of road salt can cover a camera or radar sensor in a few miles. When they can't see, the features switch themselves off — or, worse, may not work as well as you expect.

What NHTSA recommends before you drive

NHTSA's winter driving tips tell drivers to clear snow, ice and dirt from the windows, the **forward sensors**, headlights, taillights and the **backup camera** before heading out.

Your winter checklist

1. **Windshield, top center.** Clear the area in front of the camera behind the rearview mirror — inside and out. Run the defroster until that area is clear of fog and frost.
2. **Front grille and emblem.** Brush off snow and gently wipe away ice or slush over the radar sensor (often behind the emblem or a smooth panel).
3. **Front and rear bumpers.** Brush off the small round parking sensors and the bumper corners where the blind-spot radar sits.
4. **Backup camera.** Wipe the lens above the license plate or near the tailgate handle.
5. **Side mirrors.** On cars with 360-degree cameras, the cameras are underneath the mirrors.
6. **Headlights and taillights.** Not sensors, but they help you see and be seen.

How to clean them without harm

- Use a soft snow brush for snow, and a soft cloth with plain water or windshield washer fluid for salt film and grime.
- Let the defroster and the car's warmth loosen ice rather than chipping at sensors with a scraper.
- Avoid scraping, metal tools and harsh scrubbing on the camera lens, emblem and sensors.
- Your owner's manual has specific care instructions — for example, how close a pressure washer can safely be used at a car wash. Follow your car's guidance.

HEADS UP

Sensors outside the wiper path

Wipers clear only part of the windshield, and nothing wipes the grille or bumpers. On long drives in heavy snow or slush, it's worth stopping somewhere safe now and then to clear the sensors again.

TIP

Keep a small kit in the car

A snow brush, an ice scraper for the glass, a soft microfiber cloth, and a jug of winter-rated washer fluid cover nearly every sensor problem from November to March.

GOOD TO KNOW

After the car wash

Water spots or wax film on the windshield camera area can sometimes cause a brief "unavailable" message. It usually clears as things dry, or after a quick wipe.

WHAT THIS DOES FOR YOU

What this does for you

Two extra minutes with the snow brush keep your safety features ready on exactly the days you're most likely to need them — slick roads, low visibility and early darkness.

CHAPTER 20

Recalibrate After a New Windshield or Bumper Repair

This is one of the least-known facts about modern cars, and one of the most important. Driver-assist cameras and radar are aimed very precisely. When a **windshield is replaced**, a **bumper is repaired or replaced**, or a sensor is removed, the system may need to be **recalibrated** — re-aimed and tested — so it sees the road correctly again.

What the car companies say

- **Subaru** says calibration is required after the windshield is replaced on EyeSight-equipped cars, and recommends genuine Subaru glass, because other glass may affect whether EyeSight can be properly calibrated.
- **Honda** has warned that a non-original replacement windshield can keep the camera from aiming properly, which can cause driver-assist features to malfunction.
- **GM** calls it critical to perform a calibration whenever a front camera or sensor is removed or replaced, or the windshield is replaced.
- **Chrysler's parent company** (FCA, now part of Stellantis) has said a forward-facing camera in the mirror area must be recalibrated after a windshield is installed.

Industry training group I-CAR has reported that a camera bracket off by as little as one degree can cause driver-assist problems. A small error at the windshield becomes a big error down the road.

How recalibration is done

Type	What happens
Static	Done in the shop. A technician sets up special targets at exact distances and heights in front of the car and runs the manufacturer's calibration procedure.
Dynamic	Done on the road. The technician drives the car on well-marked roads while the system relearns. It depends on good weather and clear lane lines.
Both	Some cars need a static calibration followed by a dynamic one.

Which method your car needs depends on the make, model and year — the manufacturer's service information decides.

Questions to ask before glass or body work

1. "Does my car need a driver-assist calibration after this repair?"
2. "Will you do it, or will you send the car to the dealer for it?"
3. "Do you follow the manufacturer's calibration procedure?"
4. "What kind of replacement windshield are you installing?" (Some manufacturers recommend original glass.)
5. "Will I get a printout or record showing the calibration was completed?"
6. "Is the calibration included in the price, and will my insurance cover it?"

HEADS UP

Don't skip it to save time

A camera that's slightly out of alignment may not show any warning light — it may simply see the lane or the car ahead in the wrong place. If you notice odd lane-keeping behavior, false alarms, or new warning messages after glass or body work, go back to the shop right away.

TIP

Even small jobs can count

A wheel alignment, a suspension repair, or a minor bump to the front grille or rear corner can also affect sensor aim on some cars. When in doubt, ask the shop or the dealer.

WHAT THIS DOES FOR YOU

What this does for you

Asking six simple questions up front makes sure the safety features you paid for still work properly after a repair — and that you aren't charged twice to fix it later.

CHAPTER 21

Check for Recalls & Software Updates

Car makers sometimes find problems after cars are sold — including problems with cameras, sensors and driver-assist software. When a problem affects safety, the manufacturer issues a **recall** and fixes it. The key is knowing about it.

Check your car for open recalls

1. Find your car's 17-character **VIN** (vehicle identification number). It's on the lower left of the windshield, viewed from outside, and on your registration and insurance card.
2. Go to **nhtsa.gov/recalls** on a computer or phone.
3. Type in the VIN and search. (The site can also look up a license plate.)
4. Read the result. If it says **0 unrepaired recalls**, you're up to date. If a recall is listed, call your dealer's service department to schedule the repair.

- The lookup is free, and recall repairs are **free** at an authorized dealer.
- It covers open safety recalls from the past 15 calendar years from major manufacturers.
- NHTSA's free **SaferCar** app (iPhone and Android) can alert you if a new recall is issued for a vehicle you've added. NHTSA also offers email alerts.

Software updates

Driver-assist features are controlled by software, and many newer cars receive **over-the-air** updates through their own cellular connection, the way a phone does. Others are updated at the dealer during service. An update can fix problems or change how a feature behaves. My guide "Your Car's Touchscreen & Bluetooth" walks through how car software updates work.

SCAM ALERT

Recall and warranty calls that want money

Genuine recall notices come from the manufacturer by mail (and through apps like SaferCar), and the repair is free at the dealer. If someone calls, texts or emails about a "recall" or your car's "expiring warranty" and asks for a payment, a card number or personal details, hang up or delete it. Check for yourself at **nhtsa.gov/recalls** or call your dealer using a number you already trust.

TIP

Check twice a year

A good habit: check for recalls when the clocks change in spring and fall. It takes two minutes.

WHAT THIS DOES FOR YOU

What this does for you

A quick VIN check means a known safety problem with your car gets fixed — at no cost — before it can cause trouble.

PART 7

Hands-Free Systems & Choosing a Car

Super Cruise, BlueCruise and similar systems explained honestly — plus what to ask when you shop, borrow a family car or pick up a rental.

CHAPTER 22

Hands-Free Systems: Super Cruise, BlueCruise & Others

A few cars offer **hands-free** highway driving assistance. On approved highways, the car steers, brakes and accelerates while you take your hands off the wheel. It sounds like self-driving — but it isn't. These are **Level 2** systems (Chapter 2): **you are still the driver**, and you must watch the road the entire time and be ready to take over instantly.

GM Super Cruise

Super Cruise is offered on certain Chevrolet, GMC, Buick and Cadillac models. It works hands-free only on compatible roads that GM has mapped — GM says more than 600,000 miles of compatible roads, including both divided and non-divided highways.

- A **driver attention camera** near the steering wheel watches your head and eyes to make sure you're paying attention to the road.
- A **light bar** on the steering wheel tells you what's happening:

Light bar	What it means
Solid green	Super Cruise is active and steering. You may take your hands off the wheel — eyes stay on the road.
Flashing green	The system thinks you need to pay attention to the road.
Pulsing blue	Super Cruise is active, but it senses you're steering yourself.
Flashing red	Take control of the steering **immediately**. The car begins to coast until you do.
Flashing red with a voice prompt	If you still don't respond, the car will steer and brake to a stop in its lane, turn on the hazard flashers and call an OnStar Emergency Advisor.

Chevrolet's instructions: turn on adaptive cruise control first, then press the Super Cruise button when it's safe. To turn it off, take the wheel and press the brake or press the Super Cruise button again. Availability and details vary by model and year.

Ford BlueCruise

BlueCruise is Ford's hands-free system. It works on prequalified sections of divided highways that Ford calls **Hands-Free Blue Zones**. The instrument cluster uses **blue** lighting to show when you're in hands-free mode. A driver-facing infrared camera watches your eye gaze and head position — Ford says even with sunglasses — and you'll see a "Watch the road" warning if your attention wanders. Ford also says the camera works only while BlueCruise or lane centering is in use, and that no images are sent off the vehicle.

BlueCruise requires Ford's connected services and, after any included trial period, is generally a paid plan. Prices and plan options have changed over time, so ask your Ford dealer for current pricing.

Other names you may hear

- **Tesla Autopilot** and **Full Self-Driving (Supervised)** — despite the names, Tesla says FSD (Supervised) requires active driver supervision and does not make the car autonomous.
- **Toyota Safety Sense 3.0** includes Lane Tracing Assist and Proactive Driving Assist — helpful, but still features you supervise with your hands on the wheel.
- Other brands have their own systems. Whatever the name, if you can buy it at a dealer today, you must supervise it.

STAY SAFE

Hands-free is not attention-free

Hands-free systems can disengage with little warning — at a construction zone, a faded lane line, bad weather or the end of a mapped road. IIHS tested the safeguards on 14 partial-automation systems in 2024 and rated only one as acceptable, finding that most did too little to keep drivers watching the road. Treat any hands-free system as something you supervise every second.

WHAT THIS DOES FOR YOU

What this does for you

Used as designed, a hands-free system can make a long highway drive less tiring — but its real value depends on you staying alert. Knowing the lights and the limits keeps you in charge.

CHAPTER 23

Shopping, Borrowing & Rentals

Whether you're buying a new car, driving a son's or daughter's for the weekend, or picking up a rental at the airport, a few minutes of questions makes a big difference.

When you're shopping for a car

1. Ask the salesperson to list which driver-assist features are **standard** on the exact trim you're considering — not just "available." Get it in writing or check the window sticker.
2. Ask whether any feature needs a **subscription** or trial that ends later.
3. Ask for a parked walk-through: where the settings are, what the warnings sound like, and how to adjust them.
4. On the test drive, notice whether the beeps and nudges feel helpful or startling to you.
5. Check safety ratings at **nhtsa.gov** and **iihs.org**. NHTSA has been adding driver-assist features such as blind-spot warning, lane keeping and pedestrian automatic emergency braking to its New Car Assessment Program.

When you borrow a family member's car

- Ask which features are on, and whether anything has been switched off.
- Ask what the lane-keeping nudge and the collision warning sound like in that car.
- Find the adaptive cruise buttons before you get on the highway — or simply use regular cruise, or none.
- Adjust the seat and mirrors first; the features don't replace a good view.

When you pick up a rental

- Take a minute in the parking spot to look at the dashboard symbols and the steering wheel buttons.
- Don't assume the rental has the same features as your own car — or that they're turned on.
- If a warning startles you on the road, slow down and keep driving normally; look it up when you stop.

TIP

Ask the dealer for a delivery session

Many dealerships have a product specialist whose job is to walk new owners through the technology. It's fine to ask for that appointment after you've driven the car a week and have real questions.

GOOD TO KNOW

Older cars can have these features too

Many features — backup cameras, blind-spot lights, forward collision warning — have been around for years on used cars. If you're buying used, ask for the owner's manual for that exact year.

WHAT THIS DOES FOR YOU

What this does for you

A few good questions mean you'll buy or borrow a car whose helpers you understand and actually want — rather than discovering them by surprise at 60 mph.

PART 8

When to Call Bill & Your Cheat-Sheet

An honest word about when a hand is worth it, and a one-page summary of the essentials.

CHAPTER 24

When to Call Bill

I wrote this guide so you can understand your car's helpers on your own. But part of being helpful is being honest about when a patient hand saves time and worry — and about what's a job for your dealer or a repair shop instead.

Times it's well worth a call

- **You'd like a driveway lesson.** We sit in your parked car together, open the settings screen and the owner's manual, and go through each feature at your pace — what it does, what it sounds like, and how it's set.
- **Something got switched off** and you can't find where to turn it back on.
- **The warnings are driving you crazy** and you'd like help finding gentler settings rather than turning safety features off.
- **Finding and searching your owner's manual** online or in the manufacturer's app on your phone.
- **Setting up the manufacturer's app**, checking for recalls at nhtsa.gov/recalls, or adding your car to the SaferCar app.
- **Connecting your phone to the car** — the touchscreen, Bluetooth, CarPlay and Android Auto.
- **A suspicious call or text** about a recall or a car warranty.

What's a job for the dealer or a shop

I'm a technology helper, not a mechanic. **Recalibrating cameras or radar**, diagnosing a **malfunction** message, repairing a sensor, and doing **recall work** belong with your dealer's service department or a qualified repair shop that follows the manufacturer's procedures. I'm glad to help you figure out the right questions to ask them (Chapter 20 has a list).

What working with me is like

I work at your pace — no rushing, no talking down, and no jargon. I explain what I'm doing in plain words, and I'll always tell you honestly when something is better handled by someone else. I bring 30+ years of professional experience to every visit, and Bill's Home Tech serves Portage County, Ohio. For car settings I'll usually meet you at home, in the driveway, with the car safely parked.

FROM BILL

How to reach me

Call or text **(330) 200-8042**, or book a time at **billshometech.com/book**. My help is **$49 remote · $99 in your home**. This guide is free to keep and share.

GOOD TO KNOW

You may meet Sophie first

When you call or visit billshometech.com, you may be greeted by **Sophie**, my AI receptionist. She can answer quick questions and help you book a time with me. A real person — me — does the actual help.

Thank you for taking the time to understand your car's helpers. Drive safely — and remember, you're the driver.

— Bill

CHAPTER 25

Your Driver-Assist Cheat-Sheet

Keep this summary handy — in the glove box next to the owner's manual is a fine spot. The whole guide, boiled down.

The essentials

Situation	What to do
Most important rule	Driver-assist **helps** an attentive driver. It does not drive the car.
Urgent fast beeping / BRAKE!	Look ahead and brake now.
Light in the side mirror	Vehicle in your blind spot — look before changing lanes.
Beeping in reverse with an arrow	Cross traffic — stop and look that way.
"Unavailable" message	Usually dirt, snow or weather. Clean sensors, restart the car.
"Malfunction" or "see dealer"	Book a service appointment.
Settings	Usually **Settings** > **Vehicle** > **Driver Assistance**. Owner's manual has the exact path.
New windshield or bumper work	Ask: "Does it need a driver-assist calibration?"
Recalls	**nhtsa.gov/recalls** with your 17-character VIN. Repairs are free at the dealer.

Write it down once

Keep handy	
Year, make, model and trim	_____
VIN (from the windshield or registration)	_____
Driver-assist package name	_____
Settings I changed, and how	_____
Where the owner's manual is (glove box, app, website)	_____
Dealer service department phone	_____
Glass shop / body shop I trust	_____
Last recall check (date)	_____

When something's wrong, in order

1. Keep driving carefully — you're in charge, and the car still drives normally.
2. When safely stopped, read the message and clean the windshield camera area and sensors.
3. Turn the car off and on again.
4. Look up the message in the owner's manual or the manufacturer's app.
5. If it says malfunction, or it keeps coming back, call your dealer's service department.
6. Check nhtsa.gov/recalls for open recalls.
7. For help with settings, the manual or the app, call Bill at (330) 200-8042.

Winter habits for Northeast Ohio

- Brush off the grille emblem, bumpers and backup camera — not just the windows.
- Defrost the windshield area in front of the camera before you drive.
- On long snowy drives, stop safely now and then to clear the sensors again.
- Expect lane and cruise features to do less on snowy or slushy roads — and drive accordingly.