

Guide for Law Enforcement & First Responders for Interacting with a Cruise Autonomous Vehicle

Cruise AV (Chevy Bolt Platform) Version

Updated August 2023



Document Objective

This document provides guidance to law enforcement and first responders regarding Cruise LLC (Cruise) and how to interact safely with our "Cruise AV." Cruise first introduced supervised autonomous driving in 2015 using the Chevrolet Bolt Electric Vehicle (Bolt EVs) with a modified autonomous driving system (ADS). Beginning in 2017, we manufactured the first of several generations of purpose-built, zero-emission, autonomous vehicles - the Cruise AV - which use the Bolt EV platform and are the subject vehicles of this document. Additional information about Cruise's safety program can be found at getcruise.com/safety and in the 2022 Cruise Safety Report.

Cruise Vision

Cruise is an all-electric self-driving technology company with a mission to build the world's most advanced autonomous vehicles to safely connect people to the places, things and experiences they care about. Founded in San Francisco, California in 2013, Cruise is committed to developing a shared, purposeful self-driving service that we believe will bring new safety, accessibility and environmental benefits to more communities.

Cruise's mission is founded on the profound premise that today's transportation status quo is fundamentally broken. In 2022, an estimated 42,795 died on U.S. roads. The toll is astronomical globally: more than 1.3 million people died on roads around the world. The transportation sector is also known to be the single largest contributor to greenhouse gas emissions in the country, accounting for nearly 30% of total emissions. In our home state of California, transportation's portion is an even larger contributor, accounting for more than 40% of emissions. In addition, despite revolutionary changes in transportation, progress has been uneven. Six million people with disabilities do not have access to the transportation they need. A 2014 Harvard study found that commute times and access to employment opportunities proved to be some of the strongest predictors of upward mobility. The bottom line is that transportation today is too dangerous, polluting, inaccessible and expensive, and Cruise believes the root of these failures lie with the 20th century model of the human-driven, internal combustion, single-occupant vehicle. That is why Cruise is designing, developing, testing, and deploying autonomous vehicles that can provide both an alternative and a solution.

To further the objectives of safety, sustainability, accessibility and equity, Cruise has developed the Cruise Autonomous Vehicle (AV) with the future goal of launching a self-driving service. The Chevy Bolt-based Cruise AV

https://www.epa.gov/ahgemissions/sources-greenhouse-gas-emissions.

¹ Early Estimate of Motor Vehicle Traffic Fatalities in 2022, NHTSA (April, 2023), https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813428#:~:text=A%20statistical%20projection%20of%2 Otraffic.as%20shown%20in%20Table%201.

² Global Status Report on Road Safety 2018, WHO (June 17, 2018), https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/.

³ Sources of Greenhouse Gas Emissions, EPA,

⁴ GHG Current California Emission Inventory Data, CARB, https://ww2.arb.ca.gov/ghg-inventory-data.

⁵ Self-Driving Cars: The Impact on People with Disabilities, Ruderman Family Foundation,

https://rudermanfoundation.org/white_papers/self-driving-cars-the-impact-on-people-with-disabilities/.

⁶ Where Is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States, National Bureau of Economic Research (Jan. 2014), https://www.nber.org/papers/w19843.pdf.

is purpose-built as a self-driving vehicle at a dedicated manufacturing plant in Lake Orion, Michigan, employing a safety-by-design approach that provides critical system redundancy. Each Cruise AV is designed with seamless hardware and software integration utilizing automotive grade technologies and processes, and crash tested extensively to ensure passenger safety.

Safety is Cruise's North Star. Cruise is developing, testing, and deploying vehicles with advanced sensors that provide rich information about the world. We leverage the latest machine learning techniques and our powerful cloud-based tools to help our vehicles understand what's happening around them and what might happen in the future. We envision a future where AV technology has a positive overall impact on automotive safety and public health. We work tirelessly toward this goal because we believe deeply in its promise and know its impact will be measured in lives saved.

Additionally, because Cruise is committed to a clean, sustainable future for transportation, we utilize an all-electric AV fleet everywhere we operate and were the first self-driving company to power its vehicles with 100% renewable energy. As a purpose-built fleet, we view our self-driving service as a way to expedite the electrification of transportation, which studies show will yield improved health outcomes. Cruise customers need not worry about purchasing an electric vehicle nor about when or how to charge. In this way, Cruise AVs can dramatically increase access to clean, electric miles for those who may not be able to afford an EV, may not be in the market for a new vehicle, or like the millions of Americans that rent in our cities, not have access to chargers or the ability to install them.

Cruise believes AV technology has an historic opportunity to bridge gaps in transportation accessibility and equity that have existed for far too long. Cruise recognizes the significant benefits a self-driving service could have for seniors and people with disabilities, empowering greater independence and connection to community. Cruise actively partners with stakeholders within the accessibility community to understand the challenges faced within current transportation options and to co-design potential solutions with Cruise specialists. Cruise also recognizes that advances in transportation have not been inclusive in their beneficiaries, especially in lower socioeconomic and minority communities. Cruise is proud to be a part of Pledge 1%, utilizing at least one percent of our fleet for social good in perpetuity.⁹ AVs developed by Cruise provide the opportunity to bridge the gap for individuals and organizations who otherwise would not have access to such advances in technology.

Cruise is committed to designing a shared, all-electric, self-driving service to strengthen and connect communities and experiences. After years of careful testing, thoughtful development, and robust validation, Cruise is deploying fully driverless vehicles on public roads. As with our enduring commitment to safety in drivered testing and deployment, Cruise will conduct driverless deployment with the same level of care. We believe that our incremental

⁷ Cruise Becomes First Self-Driving Company to Power Vehicles With 100% Renewable Energy, Cruise Blog (Apr. 22, 2020),

https://medium.com/cruise/cruise-becomes-first-self-driving-company-to-power-vehicles-with-100-renewable-energ <u>Y-3c7a7974590c</u>.

⁸ Zeroing in on Healthy Air, American Lung Association (Apr. 2022)

https://www.lung.org/clean-air/electric-vehicle-report.

⁹ Cruise Joins the Pledge 1% Movement, Introducing Cruise for Good, Pledge 1% (April 23, 2021), https://pledgeitforward.today/cruise-joins-the-pledge-1-movement-introducing-cruise-for-good/

approach will ensure that we are able to bring the benefits of this technology to the public as safely and efficiently as possible.



Guide for Law Enforcement & First Responder Safe Interaction with Cruise AVs (Chevy Bolt-based vehicles)

Introduction:

Cruise's mission is to build the world's most advanced autonomous vehicles to safely connect people to the places, things, and experiences they care about.

At scale, self-driving technology holds the potential to save millions of lives, reshape our cities, reduce emissions, give back millions of hours of time and restore freedom of movement. At Cruise, we believe that the right way to build that future is to do it side-by-side with the community, especially with our partners in law enforcement and public safety.

We regularly work with state and municipal public safety officers where we operate and beyond, and have conducted multiple training sessions with law enforcement and first responders across the country in the localities where we operate. Through these training sessions and ongoing engagement, we provide law enforcement and first responders with the information they need to safely identify and interact with our Cruise AV fleet.

This instructional guide builds on those engagements and is designed to equip public safety officials with the information they need to safely interact with our Cruise AVs in multiple scenarios.



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Cruise's goal is to develop an autonomous vehicle that improves road safety, and we are committed to doing so in a way that supports the crucial work of public safety officials wherever we operate. If you have additional non-urgent questions regarding the Cruise AV not provided by this guide, please contact firstresponders@getcruise.com. For all time sensitive inquiries, please call **888-662-7103**.

Cruise key contacts

Non-urgent: email firstresponders@getcruise.com
Time sensitive inquiries: call 888-662-7103

Section One: The Cruise AV (Chevy Bolt-based vehicle)



Image of a Cruise self-driving, all-electric vehicle

The Cruise AV is a fully integrated self-driving system based on the award-winning all-electric Chevrolet Bolt platform. While many law enforcement officers and first responders are familiar with the Chevrolet Bolt EV platform, the Cruise AV is engineered to operate safely on its own - with no driver - within a defined operating environment and under a specific set of conditions.

At Cruise, it's every employee's job to make our product safe. Our first rule, always and everywhere, is safety first.

Cruise AVs are built at a General Motors (GM) assembly plant in Orion Township, Michigan, which builds thousands of production vehicles every year. In concert with our partner GM, we engineered safety into the vehicle from the ground-up, at every step of design, development, manufacturing, testing and validation. The Cruise AV is designed with seamless hardware and software integration, built to automotive grade standards, and crash tested as other production vehicles. All suppliers who manufacture components for the Cruise AV are required to make sure their quality meets high standards.

Our self-driving system is integrated into the vehicle from the beginning. Through close coordination between the hardware and software teams at both GM and Cruise, we have evaluated potential failure modes for all systems, addressed them throughout development to ensure a safe and reliable product and built redundancy into every element of critical system functioning.

Identifying the Cruise AV

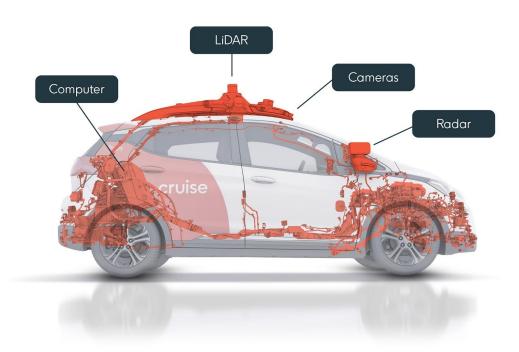
Each Cruise AV can be distinguished by orange branding on the exterior, and each vehicle has a unique identifier or vehicle name that can be found at the front hood, rear hatch, and right and left rear quarter panels.



Location of the name on each Cruise AV (Chevy Bolt-based platform). Some Cruise vehicles have the unique name below the license plate, in lieu of "Self-driver in training" language.

A hallmark of the Cruise AV is its hardware sensor suite that is visible on the exterior. This array of sensors enables the Cruise AV to gather information about its environment and inform the system's driving decisions. Inside the trunk of the AV is the computer that comprises the "brain" of the system and that rapidly synthesizes information collected by the hardware suite to inform driving behavior through perception (understanding the environment), prediction (evaluating possible safe paths or trajectories for the vehicle given the environment), and controls (the driving maneuver). More information about how the Cruise autonomous system works and is designed to be a safe driver is available in the **Cruise Safety Report** here.





Location of the Cruise hardware sensor suite and computer



Inside the Cruise AV

While the Cruise AV is designed to be fully autonomous, public safety officials might encounter the vehicle with Autonomous Vehicle Test Operators (AVTOs) inside. This guide includes information that is relevant whether there are AVTOs inside the vehicle or not.

Vehicle Identification Information

Each Cruise AV is equipped with documentation that includes the vehicle registration, owner information, proof of insurance and any required permit information and can be found inside the charge port door. Location of the charge port door and instructions for how to open it are included below.



Push the rearward edge of charge port door and release to open the door



Location of charge port door on a Cruise AV

Section Two: Communicating with the Cruise Team

The Cruise team brings comprehensive experience from relevant industries, such as transportation, technology, aerospace, defense and public safety. Our response procedures were designed, tested and vetted by former members of highway patrol and military firefighting divisions who applied best practices to ensure we can properly support and interact with law enforcement and first responders.

Contacting Cruise

To reach the appropriate Cruise contact, law enforcement officers and first responders should call Cruise's critical response line **888-662-7103**. Cruise's critical response line is staffed by an escalation team that is ready to respond to emergency and non-emergency events and inquiries. To ensure the high availability and resiliency of this phone number, Cruise hosts the critical response line on a verified third party platform that also serves other safety-critical services.

Once connected with Cruise, first responders will be asked to provide the following information:

- Reason for your call
- Vehicle identification information (vehicle name located at the front hood, rear hatch, or right and left rear quarter panels)
- Geographic location information

In addition to Cruise's critical response line, each Cruise AV is equipped with a two-way communications link inside the vehicle that can be used to directly connect with the appropriate remote team member depending on the situation. The communications link appears as two buttons (red SOS for emergency and blue for general inquiries) above the front and rear seats inside the vehicles.



However, to ensure the best support possible, we advise that public safety officials call the Cruise critical response line at **888-662-7103** rather than using in-car buttons designed for occupants.



Cruise Remote Team

When police officers and first responders call the Cruise critical response line, they have the option to connect with Cruise team members who are specially trained to actively monitor signals from the AV that indicate it may need assistance and can assist with technical issues related to the vehicle in non-emergency and emergency situations. For example, this team can facilitate unlocking the vehicle, confirm operating status, disengage the Cruise AV from autonomous driving mode and ensure that it remains in a safe, stationary position. Specialized experts are also trained to communicate with passengers and third parties during emergency situations.

Law enforcement and first responders can contact the Cruise Remote Team by calling Cruise's critical response line: **888-662-7103**.

OnStar Emergency Assistance

Every Cruise AV is also equipped with OnStar functionality. For more than 20 years, OnStar has offered peace of mind with the push of a button, and inside the Cruise AV, there is a red SOS button that enables a two-way communication link that connects to an OnStar Emergency Advisor.

OnStar Emergency Advisors are available 24/7 to respond to medical emergency scenarios and can provide information to first responders before they arrive on the scene of an emergency. In addition, the Automatic Crash Response service can connect a trained Emergency Advisor to the Cruise AV even in the event of an incident where an occupant may be unable to press the physical OnStar button.

Section Three: Incidents & Emergency Scenarios

The Cruise AV is designed to be capable of identifying and responding to emergency and law enforcement vehicles, including having the capacity to safely yield to an emergency vehicle with lights and sirens activated. The Cruise AV is designed to and can identify emergency vehicles and their multitude of lights and sirens even in situations with limited visibility, such as through fog or over hills, or in situations that do not follow traditional protocol, such as when an emergency vehicle travels the wrong way down a one-way road.

In this section, we provide guidance for first responders on how to safely interact with the Cruise AV on the scene of an incident or emergency scenario. As a precaution and when circumstances allow, we ask responders to call Cruise's critical response line **888-662-7103** to reach Cruise teams before interacting with the vehicle and for additional information and support.

Responding to Non-Emergency Incidents

For a non-emergency event or incident, please call Cruise's critical response line **888-662-7103** where you will have the option to connect with a Cruise team member. Cruise monitors the AV fleet at all times, and Cruise team



members are available for relevant questions during driverless operation and can escalate in emergency situations. Please contact them before approaching and interacting with the Cruise AV.

As mentioned above, the Cruise AV is designed to be capable of identifying and responding to law enforcement vehicles. In the event of a law enforcement traffic stop, the Cruise AV is designed to detect law enforcement lights and sirens. If the Cruise AV detects the lights and sirens while it is moving, the Cruise AV may continue motion in order to search for a safe stopping location and perform an out of lane pullover maneuver. If the Cruise AV detects the lights and sirens while it is not moving, the Cruise AV will attempt to move out of lane, to the extent possible due to traffic conditions, and will stop. In both situations, once the Cruise AV has stopped, a Cruise team member will be connected and the Cruise AV can disengage from autonomous mode. The Cruise team member will remain connected to further assist, or the law enforcement officer can call Cruise's critical response line at 888-662-7103 in the event that the Cruise team is not already connected. Once the Cruise AV has been disengaged from autonomous mode, the Cruise AV will not move until Cruise is on scene to retrieve the vehicle. For more information on moving the Cruise AV, please refer to the Safety Moving the AV, Towing, and Pushing sections below.

Responding to an Emergency

OnStar Emergency Advisors are available 24/7 to receive emergency calls from the Cruise AV - either by pressing the emergency red SOS button two way communications link inside the AV or automatically through the Automatic Crash Response system. In addition, Cruise team members monitor the fleet in real time and will immediately identify an emergency scenario should one occur.

In the event of an emergency, the OnStar Emergency Advisor will assess the situation and then inform the appropriate public-safety access point (PSAP) that the situation involves an AV, identify whether the car is or isn't parked and provide the case and callback number. The OnStar Emergency Advisor then informs 911 call takers and first responders about the AV incident including an analysis of the crash severity and if there is an AVTO present in the vehicle.

Upon arriving at the scene, we recommend that first responders contact Cruise's critical response line by calling **888-662-7103** when possible before approaching or interacting with the Cruise AV.

Approaching the AV - When a Cruise Representative is Present

It is a priority in our training program to educate our team how they should respond to a range of potential incidents, from a flat tire, to another vehicle bumping into the Cruise AV or more severe potential situations. They are instructed on how to interact with first responders. If an emergency arises and Cruise representatives are present, the representative may be able to assist with the following:

- 1. Disable self-driving mode and, if possible and needed, relocate the vehicle to a safe location
- 2. Ensure the vehicle remains immobilized
- 3. Provide vehicle registration, insurance, and his/her driver's license upon request
- 4. Give instructions for towing, if required



Approaching the AV - When a Cruise Representative is Not Present

If an incident or emergency arises and a Cruise team member is not present or not able to serve as a resource, first responders should:

- 1. Call the number **888-662-7103** to be connected to the Cruise Remote Team and follow the verbal instructions from the Advisor on how to approach the Cruise AV from the rear or side, rather than the front
- 2. Receive information from the Cruise Remote Team pertaining to current status of AV
- 3. Continue to follow instruction from the Cruise Remote Team on how to safely interact with the Cruise AV as necessary

Determining Autonomous Mode

After being connected with the Cruise team and approaching the Cruise AV from the rear or side, the law enforcement official or first responder can also determine whether the vehicle is in autonomous mode or manual mode by looking at the tablet in the center of the car's front panel. The tablet in the front center console should be displaying an information screen, showing that the vehicle is not in autonomous mode and directing first responders to contact Cruise. Cruise can confirm this information.





Images of the types of information shown on Cruise AV (Chevy Bolt-based vehicle) display screens in first responder situations. Specific language and design aspects are subject to change.

Disengaging to Manual Mode

Our Remote Teams are always available during operation to support first responders and safely guide them through the disengagement process. Please contact them before attempting to move the vehicle.

Confirming Manual Mode

The Cruise team will confirm that the vehicle is in manual mode. In addition, the tablet in the center of the car's front panel should depict a white circle icon of the AV if operational in manual mode.



Safely Moving the AV

In exigent circumstances, on-duty Law Enforcement Officers and First Responders can manually drive an AV to a safe location if necessary to facilitate safety operations. This can be facilitated by first responders engaging with the Cruise Remote Team. Cruise offers onsite training to first responders on how to interact with Cruise AVs, and in these rare circumstances, manually drive the AV to a safe location.

For non-exigent circumstances, Cruise will initiate vehicle retrieval when required and if a Cruise team member is on-site, they will provide specific towing instructions. Additionally, first responders can use the following information to move the vehicle, if necessary.

Towing

First responders should call Cruise's critical response line **888-662-7103** and Cruise will initiate vehicle retrieval. Cruise representatives will be dispatched in the event of a disabled AV and will facilitate AV retrieval, including towing if required. If needed, via contact information provided in the Law Enforcement Interaction Plan, Cruise can remotely instruct emergency responders on interaction with the AV. In exigent circumstances, the Cruise AV can be towed on a flatbed using standard wheel dollies on rear wheels via the same process that would be used to tow an immobilized Chevy Bolt.

Pushing

First responders should call Cruise's critical response line **888-662-7103** and Cruise will initiate vehicle retrieval. In exigent circumstances, the Cruise team can facilitate unlocking of doors, disengage the Cruise AV, and confirm that the vehicle is in manual mode. Once in manual, the Cruise AV can be shifted into neutral and pushed like any other vehicle.

Providing Emergency Assistance for Electric Vehicles

Cruise is proud that all of our AVs are all-electric and operate on the Chevrolet Bolt EV platform. GM has conducted nationwide safety tours that included talking to the National Fire Protection Agency, the International Association of Fire Fighters, the International Association of Fire Chiefs, the Association of Public-Safety Communications Officials, fire chiefs, police chiefs and 911 call centers. GM also trained over 15,000 people across the nation on safety protocols related to the base vehicle.

There are a few specific safety instructions that first responders should know when responding to a situation involving an EV; however, all standard operating procedures (size-up, approach, immobilize, extinguish) for first responders still apply. There are no increased risks if the vehicle is on fire or immersed in water.

More information can be found at <u>GM First Responder Guides</u> and the <u>Electric Vehicle Safety for Emergency Responders Online Training</u>.

High Voltage and Airbag Disconnect Procedures

To disconnect the high voltage battery and airbags, open the hood and follow the <u>Cruise AV First Responder</u> Quick Reference Guide.

First Responder (FR) High Voltage & Airbag Disconnect Procedure Do not cut any orange high voltage cables

FR standard operating procedure
Size-up, approach, immobilize, extinguish



Field scenario There is NO increased risk to first responder if vehicle is:

- On fire
- Immersed in water

Turn vehicle off
Push Start/Stop button - gauges turn off





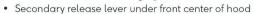


Preferred disconnect procedure-

3

Open hood to access labeled 12V cut location













Backup disconnect procedure -

Open hood to access 12V ground wire, cut, and remove section of ground wire Driver side of engine compartment





Open rear hatch to access 12V ground wire, cut, and remove section of ground wire
Passenger side of rear compartment





Emergency extrication cut points

Note: Removal of articulating radars (in location of side-view mirrors) may be required to improve A-pillar access.

Caution: Use caution with removal of roof, center of gravity, and weight are impacted by autonomous vehicle-specific sensors.





Section Four: Frequently Asked Questions - one-page PDF version

Will contact information be available in each vehicle?

Each Cruise AV is equipped with the vehicle registration, owner information, proof of insurance and other documents such as the AV testing permit, accident guide and additional towing information.

Will there be a 24-hour policy contact line?

Yes. Law enforcement officers and first responders can reach Cruise by calling our critical response line: **888-662-7103**. This line is staffed by Cruise team members to handle general inquiries, incidents, and emergencies. It is also the best line of communication to reach Cruise's remote team before interacting with the AV.

If there is an emergency on-board the vehicle, can the vehicle notify the police or medical rescue remotely?

Yes. Each Cruise AV is equipped with OnStar emergency services. Through its Automatic Crash Response service, OnStar can connect a trained Emergency Advisor to the AV.

Does the vehicle have additional safety shutdown procedures to make sure the vehicle doesn't drive itself away while first responders are on the scene?

If the Cruise AV detects an incident, it will achieve a minimal risk condition and come to a stop. In addition, Cruise monitors the AV fleet at all times during driverless operation and can confirm the mode of the Cruise AV and disengage it into manual mode. Please call Cruise's critical response line to speak to the Cruise team before approaching or interacting with the AV.

How can first responders gain access to the interior if it is locked?

The Cruise team can facilitate first responders gaining access to the interior of the Cruise AV. Please call them at **888-662-7103**.

What is the stolen vehicle protocol?

Cruise's team is specially trained to monitor the AV fleet in real time, at all times and can work with OnStar to resolve any situation of unauthorized use.

If officials have questions about any Cruise AV, please contact Cruise's critical response line: 888-662-7103.

How do you confirm that the vehicle is in manual mode?

Our team can confirm the mode of the vehicle and can disengage the vehicle from autonomous mode to manual mode remotely.

To determine whether a Cruise AV is in autonomous mode or manual mode, public safety officials can look at the tablet in the center of the car's front panel. If autonomous mode is engaged, the icon in the upper left will be filled as green or blue. If autonomous mode is disengaged and the vehicle is in manual mode, the icon in the upper left will appear as red.

The Cruise AV also does not operate outside of set environments and conditions - our operational design domain (ODD), which means that the Cruise AV will not drive in weather that falls outside of the ODD. Our Remote Assistance Advisors monitor the fleet at all times to help ensure each Cruise AV remains within our ODD.