Automated License Plate Readers

A National Association of Criminal Defense Lawyers (NACDL) Primer*

WHAT IS AN ALPR?

An automated license plate reader (ALPR) combines high-speed cameras with image-processing technology to identify vehicles by their license plates. Through fixed cameras mounted on places like streetlights and highway overpasses or mobile cameras secured to vehicles, ALPRs can capture thousands of images per hour, which can then be stored in databases. The images frequently capture a substantial part of the vehicle, including its occupants and immediate vicinity. The part of the image featuring the license plate is then converted into machine-readable text. The images and license plate text are coupled with information on the time, date, and GPS location of where the vehicle was seen (together, “license plate data”).

HOW ARE ALPRS USED?

Police departments and federal agencies, including U.S. Customs and Border Protection, are increasingly using ALPRs to connect license plates with crimes and infractions. Immediately after capture, images are compared against a “hot list” of vehicles of special interest, generating an instant alert for a law enforcement officer to act upon. However, with knowledge that ALPR hits can be fallible, several law enforcement departments have created internal policies that recommend a certain level of verification before effectuating a stop based on the hit. In addition to single-instance checks, law enforcement may employ ALPRs in other ways. Law enforcement may use ALPRs in real-time for “geofencing,” or use stored license plate data to trace a person’s past movements, verify witness descriptions of vehicles, and plot vehicle trajectories that were present at a particular location.

HOW IS THE DATA STORED?

ALPRs indiscriminately capture license plate data of all vehicles in range, which is often stored in databases accessible by individual law enforcement agencies and may be pooled together into regional sharing systems. Law enforcement agencies may retain the collected data for weeks, months, or even years.

Law enforcement agencies also partner with private companies that have built enormous databases of license plate data from around the country, typically by installing ALPRs on vehicles driven by repossession agents. With over 2.2 billion data points, companies like Vigilant sell access to their databases to local and federal law enforcement agencies. Currently, just twelve states have any regulations regarding public and private ALPR use and the retention of collected data.

LAW ENFORCEMENT’S JUSTIFICATION

To date, there are no reported judicial decisions on the constitutionality of prolonged location tracking using ALPRs. Federal and state courts have held, however, that single-instance database checks of license plate numbers, including by ALPRs, are not searches under the Fourth Amendment. They reason that the license plates are in “plain view” and therefore do not pass the

---

1 American Civil Liberties Union, You are Being Tracked: How License Plate Readers are Being Used to Track Americans’ Movements (2013), https://www.aclu.org/files/assets/071613-aclu-alprreport-opt-v05.pdf (“ACLU”) at 4-6.
2 Id. at 5.
4 A 2011 survey found that 71% of responding agencies reported using ALPR and 85% plan to acquire or increase their use over the next five years. How Are Innovations in Technologies Transforming Policing?, Police Executive Research Forum (2012), available at http://www.policeforum.org/assets/docs/Critical_Issues_Series/how%20are%20innovations%20in%20technology%20transforming%20policing%202012.pdf, at 31.
5 Def.”s Expert Witness Report, Green v. City & Cnty. of San Francisco, 2014 WL 10208823 (9th Cir. 2014) (confirming that the officer using the device was “aware that the ALPR can provide inaccurate hits that needed verification.”).
7 Geofencing refers to a software program that creates a virtual fence around a defined geographical area, which can then be used to identify every vehicle entering that area or to generate an alert when a particular plate enters the area. ACLU, supra note 1, at 6.
8 Id. at 2, 16. However, some law enforcement agencies have policies prohibiting the storage of non-hit data and delete such data immediately.
9 Id. at 16-17.
12 As of Apr. 17, 2016, based on searches conducted on Lexis Advance Research (advance.lexis.com).
13 United States v. Diaz-Castaneda, 494 F.3d 1146, 1150 (9th Cir. 2007) (collecting cases) (“every circuit that has considered the issue in a precedent opinion

*This primer was prepared in partnership with the Samuelson Law, Technology & Public Policy Clinic at UC Berkeley, School of Law with the assistance of Bhairav Acharya, Richa Goyal, and Jaideep Reddy.
“reasonable expectation of privacy” test. Following from this, law enforcement authorities have argued that ALPRs simply automate and facilitate the large-scale capture of license plate data and, as such, similarly do not implicate the Fourth Amendment. Some concede, however, that the extensive collection, retention, and sharing of license plate data, so as to systematically track the movement of vehicles, may raise privacy concerns.

**POTENTIAL LEGAL ARGUMENTS**

1. **Discovery:** If it is unclear how law enforcement dedicated the location of a vehicle in your case, consider making detailed requests in discovery for information on the use of ALPRs. If insufficient information is provided in the first instance, consider filing a motion to compel.
2. **Exclusion:** Consider the following arguments to exclude evidence collected by an ALPR as they apply to your case:
   a. **Suppression:** A motion to suppress ALPR evidence may be supported by the following arguments:
      i. An ALPR hit alone is insufficient to support an investigatory detention. Officers must take additional steps to verify these hits; otherwise, the stop is improper and the fruits of the stop are eligible for suppression.
      ii. The use of ALPRs violated state statutory requirements (e.g., location records were maintained longer than allowed, prior to an investigation).
      iii. The use of ALPRs for a prolonged period to track a person’s location implicates the Fourth Amendment, and needs to be supported by a warrant based on probable cause.
   b. **Admissibility:** A Daubert/Frye hearing is required to ascertain the qualifications of expert witnesses and the reliability of their testimony on the use of the ALPR. Courts and law enforcement policies have explicitly acknowledged that ALPRs and license plate databases are fallible.

**SELECTED RESOURCES**

1. American Civil Liberties Union Foundation of Southern California v. County of Los Angeles, Case No. S227106 (Cal. Sup. Ct. 2016), (concerning a public records request about ALPRs with constitutional arguments for and against their use).
2. American Civil Liberties Union, You are Being Tracked: How License Plate Readers are Being Used to Track Americans’ Movements (2013), https://www.aclu.org/files/assets/071613-aclu-alpreport-opt-v05.pdf
3. Green v. City & County of San Francisco, 751 F.3d 1039, 1046 (9th Cir. 2014) (denying summary judgment because a rational jury could conclude that it was unreasonable for a sergeant to fail to independently verify an ALPR hit).

has held that license plate checks do not count as searches under the Fourth Amendment.”; but see United States v. Ellison, 462 F.3d 557, 564-74 (6th Cir. 2006) (Moore, J., dissenting) (stating as dicta, but in detail and on various grounds, that the Fourth Amendment would be implicated if law enforcement used license plate numbers to look up further information in their databases).

Diaz-Castaneda, 494 F.3d at 1151; Ellison, 462 F.3d at 561-62; United States v. Walraven, 892 F.2d 972, 974 (10th Cir. 1989).


E.g., Roberts & Casanova, supra note 6, at 31; Washington Ass’n of Sheriffs and Police Chiefs, supra note 15 at 10.

Green v. City & County of San Francisco, 751 F.3d 1039, 1046 (9th Cir. 2014) (“it is disputable whether an officer conducting a stop could reasonably rely on a lack of qualifying information from the [ALPR reading] as a justification for making the stop without making an independent verification.”); see also United States v. Esquivel-Rios, 725 F.3d 1231, 1237-38 (10th Cir. 2015) (emphasizing the importance of the reliability of computer databases in the context of reasonable suspicion for a traffic stop); but see United States v. Lurry, 2010 WL 4628178, at *15 (W.D. Tenn. 2010) (“the court finds the alert by the ALPR system to be a sufficient basis for the reasonable suspicion necessary to support a Terry stop”), aff’d on other grounds, 483 Fed. Appx. 252 (6th Cir. 2012), and Hernandez-Lopez v. State, 319 Ga. App. 662, 663 (Ga. Ct. App. 2013) (“based on the alert and information he received from the LPR system, the officer had reason to believe the male driver of the relevant vehicle was wanted for failure to appear in court, which provided reasonable, articulable suspicion to conduct a traffic stop.”)

See supra note 6: A motion to suppress ALPR evidence may be supported by the following arguments:

See National Conference of State Legislatures, supra note 11 (listing state statutes regulating ALPR use). State suppression remedies for statutory violations vary. Compare Ark. Code Ann. §§ 12-18-105(b)(4)(B), 12-18-1806 (excluding ALPR data captured in violation of Arkansas’ ALPR statute and mandatory policies) and People v. Strauss, 180 P.3d 1027, 1029 (Colo. 2008) (“when...the statutory violation was not willful or recurrent, we have found that the violation was only a ministerial error and did not rise to the level of a constitutional violation; therefore, the exclusionary rule did not apply.”).


See, e.g., Hassan v. City of New York, 804 F.3d 277, 294-307 (3rd Cir. 2015) (finding that a city program targeting persons of a particular religious affiliation for location tracking implicates the Equal Protection Clause).


See Green, 751 F.3d at 1046 (denying summary judgment because a rational jury could conclude that it was unreasonable for a sergeant to fail to independently verify an ALPR hit).