

AAMVA Recommendations for Uniform License Plate Design & Manufacture



Best Practices Guide for Improving Automated License Plate Reader Effectiveness through Uniform License Plate Design and Manufacture



AAMVA Region I Conference – Dover, Delaware

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July 16, 2013





- AAMVA ALPR Working Group (2011 – 2012)
- Funded by Department of Homeland Security, Customs and Border Protection (CBP)
- Completed July 2012

Available on the AAMVA at ...

<http://www.aamva.org/law-enforcement/>

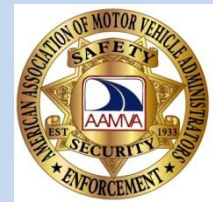


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July, 2012

Revised October 30, 2012





Best Practices Guide – Overview of Sections:

Section 1: Problem Statement

Section 2: License Plate History & Background

Section 3: Fundamentals of ALPRs

Section 4: Law Enforcement & Public Safety Benefits

Section 5: Mobility & Revenue Loss

Section 6: Best Practices for License Plate Design and
Manufacture

Appendices:

A: ALPR Working Group Member List

B: AAMVA Recommendations for Uniform License Plates

C: ALPR Case Law

D: IACP 2012 Resolution (supporting two license plates
AND the AAMVA Best Practices Guide)

E: Texas Traffic Institute Front Plate Research Paper (2012)

F: North Carolina State University Study (2012)

G: License Plate Design Booklet (current design information
compiled from survey of AAMVA Jurisdictions)



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1.0 Problem Statement

Inconsistent license plate business rules between jurisdictions result in “misreads” that diminish law enforcement’s ability to identify and apprehend suspected criminals or terrorists, recover stolen vehicles, or assist people in need of assistance. In addition, these inconsistencies hamper Customs and Border Protection’s (CBP) ability to correctly identify vehicles crossing international borders using ALPR technology.

These inconsistencies include, but are not limited to:

- use of stacked characters and whether they are part of the official license plate number
- use of non-alpha/numeric characters
- license plate design and manufacture standards
- license plate covers, frames and lighting
- one vs. two plate policy



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2.0 License Plate History & Background

Since their inception more than a century ago, the license plate has primarily been used to display information for fast and accurate identification of a motor vehicle and to demonstrate compliance with motor vehicle registration laws.

Specialty and vanity plates have since emerged and become a source of revenue for highway funding, toll authorities and sponsoring organizations. They also promote the issuing jurisdiction and many worthy causes.



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3.0 Fundamentals of ALPRs

This section provides an overview of automated license plate readers (ALPR), the license plate reading process, and key challenges in license plate reader systems as they relate to license plate design.

- A tool to identify vehicles
 - Operates at up to 160 mph (closing speed)
 - 1,000's of license plate checks per shift versus 50 – 100 manual checks

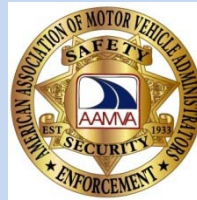


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4.0 Law Enforcement and Public Safety Benefits

License plates in the U.S. have exploded from only one per jurisdiction to upwards of more than 5,000 license plate designs making instant recognition by even trained law enforcement all but impossible.

This section provides an overview of benefits to law enforcement from improved efficiency to improved officer safety and to the public in terms of improved traffic and public safety.

The merits of a two license plate policy are also discussed in this section.

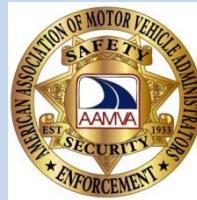


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5.0 Mobility and Revenue Loss

This section discusses how Automated License Plate Reader (ALPR) systems benefit public mobility in ways that continue to expand as ALPR technology is deployed in support of wide-ranging public and private projects.

For example, ALPR systems benefit toll collection on roads and bridges, mitigate the impact toll collection has on transportation efficiency and the environment, and help provide revenue assurance for highway lane management, maintenance and improvement.



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6.0 Best Practices for License Plate Design and Manufacture

License plates serve a common purpose across jurisdictions. They should also share common design characteristics that allow readability, usability, and connections to vehicle registration records.

This section outlines best practices in license plate design and manufacture to aid jurisdictions in creating and issuing license plates best suited to vehicle identification. The lack of national standards regarding the design and manufacturing of license plates limits the effectiveness of ALPR technology meant to assist in improving highway and public safety as well as homeland security. Following these recommendations will improve the readability, usability and connections to vehicle registration and other records queried by federal, state and local law enforcement.



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6.0 Best Practices for License Plate Design and Manufacture (continued)

Motor vehicle agencies should consult with jurisdictional law enforcement prior to adopting new license plate standards or designs.



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Appendix B: AAMVA License Plate Policy (Update pending approval at 2013 AIC Membership Meeting)

The AAMVA License Plate Policy was recently revised by the Vehicle Standing Committee with review and concurrence by the Enforcement Standing Committee. This policy is scheduled for approval during the 2013 Annual International Conference membership meeting.

The License Plate Policy was cross-referenced to ensure not in conflict with the recommendations in this Best Practices Guide, but it should be noted that each document has some detail that the other doesn't.



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Appendix D: International Association of Chiefs of Police – Resolution

A Resolution was drafted by the Highway Safety Committee of the International Association of Chiefs of Police (IACP) validating the public safety and homeland security needs for front and rear retro reflective license plates.

This resolution was passed in October 2012 during the annual IACP conference.

further supports the use of this AAMVA Best Practices Guide. Before being included in this Appendix, the Resolution must be passed at the IACP Annual Meeting in October 2012. The Resolution will be amended to this document upon passage.



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Appendix E: Texas A&M Transportation Institute – Front License Plate Research

The conclusions drawn in this study were based on literature review and field studies. The research team collected license plate data in four states: Pennsylvania and Arizona were the one plate states and Maryland and Texas were the two plate states. Findings included:

- Lack of front plates has significant impact on the generation of photographic evidence related to fining toll violators. With respect to Virginia's toll violations, 23% could not be pursued due to the lack of license plate data (rear plates were unreadable)
- The United States Customs and Border Protection (CBP) reports that the number of plates not read (excluded) on vehicle without two plates made a significant impact in their border processing.



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Appendix F: NCSU Study:



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Appendix F: NCSU Study (Continued):

SUMMARY:

- Most readable: blue ink license plate
- Personalization resulted in a read rate ½ of the read rate of the standard issue syntax
- Red ink performed significantly worse
- Specialty plates without the stacked character were more easily captured and read
- Specialty license plates with the full background were generally captured, but difficulty accurately reading the plates



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QUESTIONS???

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