



CIVIL

India's Legal Metrology Framework: Ensuring Accuracy in Radar-Based Traffic Enforcement

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PUBLISHED 24 April 2025

The Government of India has notified new rules for radar equipment used in measuring the speed of vehicles. These rules, the Legal Metrology (General) Amendment Rules, 2025, issued by the Department of Consumer Affairs, aim to strengthen road safety and ensure fairness in traffic enforcement. They will come into effect from 1st July 2025, providing sufficient time for industries and enforcement agencies to comply with the provisions.

The new rules make it mandatory for all radar-based speed measurement equipment to be verified and stamped by Legal Metrology authorities. This ensures that such devices are accurate, calibrated, and legally compliant, thereby enhancing transparency, public trust, and enforcement integrity. Verified radar systems are vital for traffic speed monitoring, accident prevention, and minimizing wear and tear on road infrastructure.

The rules were drafted by a committee with technical inputs based on the international standard OIML R 91. Stakeholders, including State Legal Metrology Departments, Regional Reference Standard Laboratories (RRSLs), manufacturers, and consumer organizations, were consulted through presentations and public feedback before finalizing the rules.

The implementation of these rules provides significant benefits to all stakeholders. For the common citizen, the mandatory verification and stamping of radar-based speed measurement equipment will ensure the accurate enforcement of speed limits, preventing unfair penalties and enhancing road safety. Citizens can drive with greater confidence knowing that enforcement is based on scientifically validated and legally certified instruments.

For industries, particularly those involved in manufacturing radar-based speed measuring devices, the new rules establish a clear technical and regulatory framework aligned with international standards such as OIML R 91. This encourages domestic innovation and compliance and enhances the export competitiveness of Indian manufacturers in global markets by ensuring consistency in quality and performance.

For law enforcement agencies, the introduction of verified and stamped devices ensures a higher degree of operational effectiveness and credibility. These devices allow for reliable, evidence-based enforcement, which is critical for maintaining public trust and improving compliance with speed regulations. The availability of certified and calibrated instruments enables officers to act with confidence and precision.

At the national level, this initiative is a key step towards data-driven governance in traffic management. It helps reduce road fatalities, enhances discipline on highways, and supports sustainable economic development by minimizing the social and economic costs associated with road accidents, vehicle wear and tear, and damage to infrastructure. The rules contribute to building a safer and more technologically advanced transport ecosystem in the country.

Radar devices operate using technologies like Doppler radar, measuring vehicle speed with high precision. These rules specify detailed technical and safety requirements, ensuring proper calibration, stable operation under various environmental conditions, and protection against tampering. Such measures will encourage a culture of technological reliability and legal accountability.

The notification of rules for radar equipment marks a significant step forward in India's ongoing reforms to modernize legal metrology infrastructure. It ensures that measuring instruments in public enforcement are scientifically strong and legally verifiable. By enhancing road safety, ensuring fairness in traffic enforcement, and promoting technological reliability, these rules contribute to a safer and more efficient transport ecosystem in the country.

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