

HEADLAMP MODULATORS FOR MOTORCYCLES:

The law that permits use of headlight modulators for motorcycles may be found in Title 49 of the Code of Federal Regulations, which is typically abbreviated 49CFR. The CFR is a set of books containing laws, broken down in volumes by "title". Each title deals with subject matter about a specific topic.

The CFR can usually be found in the "references" section of any public library. It can also be found on-line using your browser and searching for "Code of Federal Regulations" although it takes significant "drilling" to find what you're looking for. For that reason, I have posted the entire relevant text here, at the bottom of this page.

The specific regulation needed is 49CFR Section 571.108, paragraph S7.9.4, entitled "Motorcycle headlamp modulation system." I copied the entire section from the CFR, which amounts to a little less than a full page, and keep copies as backup data for the excerpts printed on the literature that came from Kisan Technologies, Inc., the manufacturer of my modulator. I also keep copies of Kisan's literature with me on my bike. I make sure I have sufficient copies with me such that when I am stopped (and it happened again yesterday - April 28, 2000 - by a NJ State Trooper) that I can provide a tear-away copy to give the LEO for his benefit and those at the police station. I turn the traffic stop into an educational experience for the police officer, and give him something to inform his fellow officers with.

WHAT IS NOTEWORTHY AND DESERVES MENTION IS THAT **NO STATE** MAY USURP (OVERRIDE) THE AUTHORITY OF THE UNITED STATES GOVERNMENT AND FEDERAL LAW.

THAT SAID, PLEASE BELIEVE THAT **NO STATE IS ABLE TO "OUTLAW" THE USE OF HEADLIGHT MODULATORS ON MOTORCYCLES**. NONE! ZERO! ZIP! CAN'T DO IT!

The text of paragraph S7.9.4 reads as follows:

S7.9.4 Motorcycle headlamp modulation system

S7.9.4.1 A headlamp on a motorcycle may be wired to modulate either the upper beam or the lower beam from its maximum intensity to a lesser intensity provided that:

- (a) The rate of modulation shall be 240 plus-or-minus 40 cycles per minute.
- (b) The headlamp shall be operated at maximum power for 50 to 70 percent of each cycle.
- (c) The lowest intensity at any test point shall not be less than 17 percent of the maximum intensity measured at the same point.
- (d) The modulator switch shall be wired in the power lead of the beam filament being modulated and not in the ground side of the circuit.
- (e) Means shall be provided so that both the lower beam and upper beam remain operable in the event of a modulator failure.
- (f) The system shall include a sensor mounted with the axis of its sensing element perpendicular to a horizontal plane. Headlamp modulation shall cease whenever the level of light emitted by a tungsten filament light operating at 3000 degrees Kelvin is either less than 270 lux (25 foot-candles) of direct

light for upward pointing sensors or less than 60 lux (5.6 foot-candles) of reflected light for downward pointing sensors. This light is measured by a silicon cell type light meter that is located at the sensor and pointing in the same direction as the sensor. A Kodak Gray Card (Kodak R-27) is placed at ground level to simulate the road surface in testing downward pointing sensors.

(g) When tested in accordance with the test profile shown in Figure 9, the voltage drop across the modulator when the lamp is on at all test conditions for 12 volt systems and 6 volt systems shall not be greater than .45 volt. The modulator shall meet all of the provisions of the standard after completion of the test profile shown in Figure 9.

(h) Means shall be provided so that both the lower and upper beam function at design voltage when the headlamp control switch is in either the lower or upper beam position when the modulator is off.

S7.9.4.2

(a) Each motorcycle headlamp modulator not intended as original equipment, or its container, shall be labeled with the maximum wattage, and the minimum wattage appropriate for its use. Additionally, each such modulator shall comply with S7.9.4.1 (a) through (g) when connected to a headlamp of the maximum rated power and a headlamp of the minimum rated power, and shall provide means so that the modulated beam functions at design voltage when the modulator is off.

(b) Instructions, with a diagram, shall be provided for mounting the light sensor including location on the motorcycle, distance above the road surface, and orientation with respect to the light.