MEETING OF THE GOVERNOR AND CABINET
AS HEAD OF THE DEPARTMENT OF HIGHWAY SAFETY
AND MOTOR VEHICLES

March 30, 2004

AGENDA

Agency Contact: David F. Westberry, 850/488-2276

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1. Respectfully submit the following rule amendment for final adoption in Chapter 15 of the Florida Administrative Code (F.A.C.). Upon approval by the Governor and Cabinet, the rule will take effect on April 22, 2004.

   Rule 15B-2, F.A.C., Speed Measuring Devices. The proposed action updates the current rules related to speed measuring devices (radar, laser speedometers and timing devices). Specific actions include updates to operator training requirements, the type of devices accepted, and the standards for testing accuracy. Additionally, the proposed action includes a revision to HSMV forms, clarifies the definition of average speed calculators, and corrects an erroneous reference within the existing rule.

   Attachment #1.
   Recommend Approval.

NOTICE OF PROPOSED RULE AMENDMENT

NAME OF AGENCY: Department of Highway Safety and Motor Vehicles, Division of Florida Highway Patrol.

RULE TITLE:	RULE NUMBER:
Speed Measuring Devices	15B-2

PURPOSE AND EFFECT: The purpose of the proposed rule action is to amend the current rule to revise operator training requirements; revise requirements for type acceptance; re-designate visual average speed devices as Average Speed Calculators (ASC); revise testing accuracy, and operation requirements for ASC, as well as, radar and laser devices; add provisions for distance measurement in using ASC; revise speedometer testing and provide such testing for motorcycles; allow accuracy tests of electronic stop watches to be performed by certified electronics technicians meeting the requirements of paragraph 15B-2.009(1)(a), F.A.C.; revise test speeds for radar bench tests; permit radar daily tests to be performed with tuning forks meeting manufacturer's specifications; update list of approved speed measuring devices; amend minimum design criteria for LSMD and correct a typographical error in paragraph 15B-2.016(2)(b), F.A.C.

SUMMARY: The proposed rule action allows accuracy tests of stop watches used by the department to be performed by certified electronics technicians meeting the requirements of paragraph 15B-2.009(1)(a), F.A.C., as well as, jewelers and watch repair-smiths. This proposed rule action also updates the list of approved speed measuring devices approved by the department for use in this State to include the recently approved radar units and laser speed measuring devices. "VASCAR" is re-designated a "ASC" with attendant changes to testing and operator certifications for such units. Form HSMV 61070 is revised to add higher target speeds.

The daily tuning fork test is revised to permit test of a tuning fork meeting manufacturer's specifications. Revisions are made to clarify sight testing for laser devices. The reference to an erroneous sub-section in paragraph 15B-2.016(2)(b), F.A.C., is corrected. Operator training; type acceptance; accuracy checks, bench tests, minimum design criteria are revised for speed measurement devices (SMD).

SUMMARY OF STATEMENT OF ESTIMATED REGULATORY COSTS: The costs of the rule actions to the agency will be those normally associated with the administrative processing of rulemaking activity. The erection of new Laser test markers will be approximately $200 ($100 each). The proposed rule action will have minimal impact on small entities.

SPECIFIC AUTHORITY: 316.1905, F.S.

LAW IMPLEMENTED: 316.1905, 316.1906, F.S.

THE FULL TEXT OF THE PROPOSED RULE AMENDMENT IS:

RULE TITLE:	RULE NUMBER:
Speed Measuring Devices	15B-2
Rule Titles:	Rule Numbers:
Approval Requirements	15B-2.007
Requirements for Type Acceptance	15B-2.008
Minimum Design Criteria for Radar Units	15B-2.0082
Test to Determine Speed Accuracy of Doppler Radar Devices	15B-2.009
Test to Determine Speed Accuracy of Visual Average Speed Computer Devices	15B-2.010
Tests to Determine Speed Accuracy of ~~Visual~~	15B-2.0101

Average Speed Calculators ~~Computer Devices Which Have a Self Contained Time Base~~	
Certified Operator of Visual Average Speed Computer Device	15B-2.0102
Tests to Determine Accuracy of Speedometer Devices	15B-2.011
Tests to Determine Accuracy of Time Measurement Devices ~~Stop Watches~~	15B-2.012
Approved Speed Measuring Devices	15B-2.013
Minimum Design Criteria for Laser Speed Measurement Devices	15B-2.014
Checks to Determine Speed and Distance Accuracy of Laser Speed Measuring Devices	15B-2.015
Tests to Determine Accuracy of Laser Speed Measuring Devices	15B-2.016

15B-2.007 Approval Requirements.

(1) All speed measuring devices to be used in obtaining evidence of motor vehicle speeds for use in any court in the State of Florida shall be of a type approved by the Department of Highway Safety and Motor Vehicles prior to their use.

(2) In addition, evidence of the speed of a vehicle measured by any radar speed measuring device (RSMD), ~~or~~ laser speed measuring device (LSMD) or Average Speed Calculator (ASC), is inadmissible in any proceeding with respect to an alleged violation of provisions of law regulating the lawful speed of vehicles unless such evidence of speed is obtained by a law enforcement officer who:

(a) 1. Operators of RSMD's must have ~~Has~~ satisfactorily completed the RSMD training course or speed measurement device (SMD) course established by the Criminal Justice Standards and Training Commission pursuant to s. 943.17, F.S. ~~In addition, operators of a LSMD must complete the LSMD operator's course pursuant to s. 943.17, F.S.~~

2. Operators of LSMD's must have satisfactorily completed the LSMD training course or speed measurement device (SMD) course established by the Criminal Justice Standards and Training commission pursuant to s. 943.17, F. S.

3. Beginning July 1, 2004 new operators of ASC devices must complete the ASC training course or speed measurement device (SMD) course established by the Criminal Justice Standards and Training Commission pursuant to s. 943.17, F. S. Operators of ASC devices similar to the VASCAR and Kustom Tracker must complete additional clocks using each of their five basic clocking methods.

4. After July 1, 2004, new operators of RSMD's, LSMD's and ASC's must complete the Speed Measurement Device training course established by the Criminal Justice Standards and Training Commission pursuant to s. 943.17, F. S.

(b) Has made an independent visual determination that the vehicle is operating in excess of the applicable speed limit.

(c) Has written a citation based on evidence obtained from a RSMD or LSMD when conditions permit the clear assignment of speed to a single vehicle.

(d) Is using a RSMD which has no automatic speed locks and no audio alarms, unless disconnected or de-activated. This requirement is not applicable to a LSMD.

(e) Is operating a RSMD with audio Doppler engaged. This requirement is not applicable to a LSMD.

(f) Is using a RSMD, ~~or~~ LSMD, ASC or other SMD that meets the minimum design criteria set forth in these rules.

(g) ~~Who~~ Iis operating a RSMD tested according to Rule 15B-2.009, F.A.C., or a LSMD tested according to Rule 15B-2.016, F.A.C.

Specific Authority 316.1905, 316.1906 FS. Law Implemented 316.1905, 316.1906, 943.17 FS. History--New 9-11-78, Amended 7-12-82, Formerly 15B-2.07, Amended 11-16-92, 10-18-94.

15B-2.008 Requirements for Type Acceptance.

(1) Manufacturers of Doppler radar speed measuring devices (RSMD) shall submit a copy of a Federal Communications Commission (FCC) type acceptance certificate and other supporting documentation and components as requested by the Department, to the Department for each model to be used in Florida. The device must also appear on the current International Association of Chiefs of Police (IACP) consumer products list, which is incorporated by reference. The IACP criteria (Model Minimum Performance Standards identified in subsection 15B-2.0082(1), F.A.C.) and listing may be obtained by contacting that office at 515 North Washington Street, Alexandria, Virginia, 22314, 1-800-843-4227. The absence of an "F" designation on the consumer product list does not disqualify the model for use in Florida. Copies of this material may be obtained by contacting the Department of Highway Safety and Motor Vehicles, Division of Florida Highway Patrol, ~~Telecommunications Administrator,~~ Neil Kirkman Building, Tallahassee, Florida, 32399-0500.

(2) Manufacturers of ~~visual~~ Aaverage Sspeed Calculators (ASC)~~devices~~ shall submit a report by an independent testing laboratory certifying that each model meets the following conditions:

(a) Determines ~~Compute~~ the speed of a ~~checked~~ vehicle ~~after measuring the distance~~ between any two points on a highway traveled by the vehicle regardless of whether the distance is input with an ASC measured distance or the distance is known and input by the ASC operator, and the time required for the vehicle to travel that distance.

~~(b) Use solid state digital techniques for distance and the time storage, and for speed computation.~~

(b)~~(c)~~ Display the speed in digital characters at least 0.4 inch in height.

(c)~~(d)~~ The calculator ~~Computers~~ shall input distance (whether by ASC measurement or by operator entry of a known distance) and measure time ~~and distance~~ in increments for speed computation which shall give an accuracy of plus or minus two (2) miles per hour over an indicated speed range of twenty-five (25) to one hundred ~~ninety~~ (100 ~~90~~) miles per hour with ambient temperatures of twenty (20) to one hundred (100) degrees fahrenheit.

(d)~~(e)~~ Have a distance storage capacity of at least one ~~five~~ (1 ~~5~~) mile~~s~~.

(e)~~(f)~~ Have a time storage capacity of at least five ~~six~~ (5 ~~6~~) minutes.

(f)~~(g)~~ Reuse a single distance measurement with repeated time input measurements.

(g)~~(h)~~ Display an error signal and not operate if either the distance or storage register receives more than one input after being reset to zero.

(h)~~(i)~~ Be suitable for installation or use in a variety of makes and models of vehicles or aircraft normally used by law enforcement agencies.

(3) Motor vehicle speedometers shall have a certificate indicating that the device was tested by a speedometer testing shop according to Rule 15B-2.011, F.A.C.

(4) Stop watches shall have a certificate indicating that the device was tested ~~by a jeweler or watch repair smith~~ according to Rule 15B-2.012, F.A.C.

(5) Laser speed measuring devices (LSMD) that meet the criteria set forth in Rule 15B-2.014, F.A.C., constitute a type of speed measuring device that may be used in this state. Specific Authority 316.1905 FS. Law Implemented 316.1905 FS. History — New 9-11-78, Formerly 15B-2.08, Amended 11-16-92, 10-18-94.

15B-2.0082 Minimum Design Criteria for Radar Units.

(1) Radar speed measuring devices shall meet the design criteria as set forth in Chapter 3, Subpart A (s. 1221.1 — 1221.4 and Subpart B (s. 1221.11 — 1221.24) of the National Highway Traffic Safety Administration Technical Report, January 1994, D.O.T. HS 808-69, entitled, "Model Minimum Performance Specifications for Police Traffic Radar Devices, " which is incorporated by reference. Copies of this material may be obtained by contacting the Department of Highway Safety and Motor Vehicles (DHSMV), Division of Florida Highway Patrol, ~~Telecommunications Administrator,~~ Neil Kirkman Building, Tallahassee, Florida, 32399-0500, or the Office of Law Enforcement Standards, c/o National Institute of Standards and Technology, 100 Bureau Drive, Stop 8102, Gaithersburg, Maryland 20899-08102~~National Technical Information Service, Springfield, Virginia, 22161~~.

(2) All radar units used in this State on or after January 1, 1995, shall be designed to operate in one or both of the following frequency ranges as assigned by the Federal Communication Commission for operation of Doppler radar radiolocation units.

24.050 — 24.250 GHz (K - Band) (Common

33.400 — 36.000 GHz (Ka - Band) Referrals)

The radar must have a doppler audio operating in the range 300 Hz to 4.0 KHz.

(3) Antenna beam width, defined as the total included angle between 3 dB points on the main lobe of the emitted farfield microwave power beam in any axis perpendicular to the

centerline of beam propagation, shall not exceed 12 degrees plus or minus 1.5 degrees for manufacturing tolerance and measurement error. Side lobes, as defined in s. 1221.4 of the Model Minimum Performance Specifications for Police Traffic Radar shall be of relative gain of at least 20 dB less than the main antenna beam.

(4) All radar units furnished for vehicular-mounted use which have antennas designed to permit external mounting, shall be weather resistant.

(5) Each radar unit shall be designed to incorporate no speed lock function, manual or automatic, for patrol or target speeds displayed on the primary readout; a secondary target speed window, capable of manual lock-in target speed only, is permissible providing that lock-in of the secondary target speed window display has no effect on the continuous tracking of target and patrol speeds indicated by the primary readout and provided that the secondary target speed window display, if furnished, is automatically cleared within a period not to exceed fifteen (15) minutes after locking of any speed indication or when reconnected to the primary readout element. The secondary target speed window display, if furnished, must exactly duplicate the target speed on the primary readout at the instant of manual lock-in and must have its own lock-release control for clearing prior readings when the operator does not connect the secondary target speed window display.

(6) Each radar unit~~, excluding hand-held radar,~~ shall be equipped with a control capable of adjusting its nominal range of acquiring and displaying the~~a~~ speed reading of a full-size automobile ~~target~~ between 300 feet minimum and 3,000 feet maximum from the radar antenna. This range control is optional on a handheld radar unit.

(7) Signal Processing Channel Sensitivity

(a) Stationary Mode Target Channel Sensitivity. When the radar unit is operated in the stationary mode, its signal processing channel sensitivity shall not vary more than 10 dB for targets traveling at speeds of 35 to 90 mph (56 to 144 km/h) nor more than 5 dB for targets traveling at speeds of 60 to 90 mph (96 to 144 km/h).

(b) Moving Mode Target Channel Sensitivity. When the radar unit is operated in the moving mode at 25 mph (40 km/h), its signal processing channel sensitivity shall not vary more than 10 dB for targets traveling at speeds of 40 to 90 mph (64 to 144 km/h). When operated at 50 mph (80 km/h), its sensitivity shall not vary more than 5 dB for targets traveling at speeds of 60 to 90 mph (96 to 144 km/h).

(8) Patrol channel dynamic range; for moving mode operation. The patrol channel shall be capable of accurately displaying patrol car speed within plus or minus one (1) mph (1.6 km/h) or less from 15 mph to 70 mph (24 to 112 km/h) or greater and of maintaining proper performance while the patrol car changes speed at a rate of up to 3 mph (4.8 km/h) per second.

(9) The internal circuit test function required by s. 1221.21(d). F.S., of the Model Minimum Performance Specifications for Police Traffic Radar shall operate automatically upon turn-on of the radar unit, and automatically thereafter at intervals not exceeding fifteen minutes~~; the internal test function must be performed using two separate and independent frequency sources, only one of which may be employed in normal target or patrol channel signal-processing operation. The second frequency source need not be excluded from use in computer and microprocessor operations other than signal counting or signal timing~~. Failure of the radar unit to display correctly any reading produced by the internal test function shall inhibit any further target signal processing and shall provide a visible display indicating this condition to the

operator. A control switch or pushbutton shall be provided for operator use to initiate the internal test function at any time between automatic test sequences.

(10) For the purpose of avoiding possible erroneous target speed displays caused by radio frequency interference (RFI) signals in excess of those specified in s. 1221.22(c) and (d), F.S., of the Model Minimum Performance Specifications for Police Traffic Radar Devices, each radar unit will be equipped with a RF sensor capable of detecting the presence of such interfering RF signals and of inhibiting any speed display when such signals are present.

(11) To accommodate digital counting circuits and to assure that no target vehicle driver is penalized, target channel circuits for moving and stationary operation shall be designed to truncate, or round-off, to the next lower digit. In the moving mode operation, the radar counting circuits shall round-off to the next lower digit in all computations.

(12) Power density shall not exceed applicable RF emission standards recognized by the American National Standards Institute C95.1, which is incorporated by reference. The actual reading shall be recorded on form HSMV 61070 (Rev. 3/04~~9/94~~), incorporated by reference. ~~and~~ Blank forms are obtain~~able~~d by contacting the Department at the address described in subsection 15B-2.008~~2~~(1)~~(2)~~, F.A.C.

(13) When an Average Speed Calculator (ASC) is installed and used as a separate feature of a RSMD, the ASC feature must be certified separately and in addition to the RSMD under paragraph 15B-2.008(2)(d), F.A.C.

Specific Authority 316.1906 FS. Law Implemented 316.1906 FS. History — New 7-12-82, Formerly 15B-2.082, Amended 1-1-90, 10-18-94.

15B-2.009 Test to Determine Speed Accuracy of Doppler Radar Devices.

(1)(a) All RSMD's used in this state shall be subject to periodic bench tests at intervals not to exceed six months, to be conducted by an electronic technician who has a Federal Communications Commission, General Radiotelephone Operator License or a certification issued by one of the following:

1. Association of Public-Safety Communications Officials-International (APCO);

2. Personal Communications Industries Association (PCIA), formerly known as National Association of Business and Educational Radio (NABER); or

3. National Association of Radio and Telecommunications Engineers (NARTE).

(b) Only the most recent six (6) months test certificate is required in order to establish the presumption available under s. 316.1905(3)(b), F.S. Tests will include transmitter frequency, display response to known antenna input signals for simulated target speeds over a range of speeds from 15 mph to 100 mph and patrol speeds over a range of speeds from 15 mph to 70 mph, the operation of all controls, tests for recertification of the ~~all~~ tuning fork(s) meeting ~~furnished by~~ the manufacturer's specifications, radio frequency interference, low supply voltage, and antenna power density. These revised tests shall become effective after June 30, 2004~~October 18, 1994~~, upon the expiration of each radar unit's prior six-month certification period. Each test shall be recorded on Form HSMV 61070 (Rev. 3/04~~9/94~~) which is incorporated by reference. Blank forms are ~~and, which is~~ available by contacting the Department at the address described in subsection 15B-2.008~~2~~(1)~~(2)~~, F.A.C. As a condition of purchase, manufacturers shall be required to make known to the purchaser the availability and location of manufacturer-supported test facilities to accomplish the required tests.

(2) Prior to an operator using a radar for enforcement activity and subsequent to the last enforcement action taken using an RSMD, but prior to the end of each shift in which the RSMD was used ~~at the end of the operator's shift~~ the following accuracy checks shall be made.

(a) An internal accuracy check shall be performed, and the check is passed only if the proper numbers recommended by the manufacturer appear exactly on the radar readout.

(b) The external tuning fork accuracy check shall be made with certified tuning fork(s) (plus or minus one (1) mile per hour tolerance) meeting ~~furnished by~~ the manufacturer's specifications.

(c) A written log of each internal and external tuning fork accuracy check(s) shall be maintained. Log forms may be of a design suitable to the particular needs of the operator's jurisdiction.

(3) When an Average Speed Calculator (ASC) is installed and used as a separate feature of a RSMD, the ASC feature must be certified separately and in addition to the RSMD under Rule 15B-2.008(2)(d), F.A.C.

Specific Authority 316.1905 FS. Law Implemented 316.1905, 316.1906 FS. History — New 9-11-78, Amended 7-12-82, Formerly 15B-2.09, Amended 6-12-89, 1-1-90, 10-18-94, Amended 10-2-95.

15B-2.010 Tests to Determine Speed Accuracy of Visual Average Speed Computer Devices.

Specific Authority 316.1905 FS. Law Implemented 316.1905 FS. History — New 9-11-78, Formerly 15B-2.10, Amended 10-18-94, repealed _____.

15B-2.0101 Test to Determine Speed Accuracy of ~~Visual~~ Average Speed Calculators ~~Computer Devices Which Have a Self Contained Time Base~~.

Tests to determine the accuracy of ~~visual~~ Aaverage Sspeed Calculators ~~computer devices which have a self contained time base~~ shall be performed as follows:

(1) This subsection only pertains to ground vehicles which are inputting the distance used for speed measurement by use of the ASC distance measuring feature (if so equipped):

(a) A distance of ~~The operator shall measure~~ 1/2 mile (2640 feet) or alternatively 1/4 mile (1320 feet)~~one quarter of a mile,~~ shall be measured ~~using a steel tape~~, and ~~mark~~ each end of the ~~1320 feet~~ distance marked so that it may be clearly identified from a moving vehicle or aircraft in either direction.

(b) ~~(2)~~ Vertical lines may be placed on left and right front door windows of the speed computer equipped vehicle, or the operator may use door lock knobs or other convenient visual reference points on his/her car.

(c)~~(3)~~ The operator will drive through the measured course with both switches turned "on" when lined up with the reference point at the beginning of the course, and turned "off" when similarly lined up at the end of the course. Operator pushes the distance recall button if so equipped, and reads displayed distance in the speed timing unit. If this distance is within the acceptable tolerance of 1/2 of 1%, the unit is in calibration.

Example: On a quarter of a mile course (0.2500) the reading should be between 0.2512 and 0.2488.

(d)~~(4)~~ Should the error be greater than 1/2 of 1% the operator should recalibrate his unit in accordance with the manufacturer's instructions and repeat the procedure as outlined in Paragraph (3).

(2) A distance of 1/2 mile (2640 feet) should be input either by measurement or operator input. The method of input shall be consistent with the method to be used during the speed

measurement. For example, if the distance at the enforcement site will use a distance measured with the ASC, then this calibration should be performed in a similar fashion. The timing device should be allowed to run for 30 seconds. A speed of 60 mph should be displayed. The test should be repeated with a time input of 20 seconds. A speed of 90 mph should be displayed. The speed displayed must be within +/- 2 m.p.h. for the unit to be considered accurate.

(3) As an alternative to (2) above, a distance of 1/4 mile (1320 feet) may be used. The distance should be input either by measurement or operator input. The method of input shall be consistent with the method to be used during the speed measurement. For example, if the distance at the enforcement site will use a distance measured with the ASC, then this calibration should be performed in a similar fashion. The timing device should be allowed to run for 15 seconds. A speed of 60 mph should be displayed. The test should be repeated with a time input of 10 seconds. A speed of 90 mph should be displayed. The speed displayed must be within +/- of 2 m.p.h. for the unit to be considered accurate.

(4)~~(5)~~ Verification of calibration must be checked each day before any enforcement activity ~~arrests are made~~ with the device. The results of the verification test shall be recorded and retained for further reference.

(5)~~(6)~~ If so equipped, an ~~The~~ internal time base will be checked the same as a stop watch under Rule 15B-2.012, F.A.C. ~~every six months by use of a certified stop watch. Satisfactory test results will be within 1/2 of 1%.~~

Specific Authority 316.1905, 321.02 FS. Law Implemented 316.1905(3)(a) FS. History — New 6-15-82, Formerly 15B-2.101, Amended 10-18-94.

15B-2.0102 Certified Operator of Visual Average Speed Computer Device.

Specific Authority 316.1905, 321.02 FS. Law Implemented 316.1905(3)(a) FS. History — New 6-15-82, Formerly 15B-2.102, Amended 10-18-94, repealed _____.

15B-2.011 Tests to Determine Accuracy of Speedometer Devices.

Motor vehicle speedometer devices shall be tested by a speedometer testing shop or a motor vehicle repair shop prior to being put into use for speed enforcement and it shall be retested by a speedometer testing shop or a motor vehicle repair shop not less than once each six (6) months thereafter. All speedometer certifications shall be performed using a calibrated wheel dynamometer on which the wheels driving the speedometer are placed. Certain motorcycles which have the speedometer driven by the front wheel may require the use of a powered dynamometer. The calibration of a speedometer head alone, without the head being driven by the wheel from which it measures speed, will not be acceptable for the purposes of this rule. After September 1, 1994, all tested speedometers shall read within plus or minus three (3) mph of the actual reading and be tested by a speedometer shop or motor vehicle repair shop registered with the Florida Department of Agriculture and Consumer Services as a motor vehicle repair shop according to ss. 559.901 — 559.9221, F.S. The person making the tests shall issue a certificate dated, signed and witnessed showing the degree of accuracy. Only the most recent six (6) month test certificate is required in order to establish the presumption available under s. 316.1905(3)(b), F.S.

Specific Authority 316.1905, 321.02 FS. Law Implemented 316.1905(3)(a) FS. History--New 9-11-78, Formerly 15B-2.11, Amended 11-16-92, 10-18-94.

15B-2.012 Tests to Determine Accuracy of Time Measurement Devices ~~Stop Watches~~.

(1) Stop watches and analog measurement devices used in calculating speeds of motor vehicles shall be tested by a jeweler or watch repair-smith prior to being put into use and it shall

be retested by a jeweler or watch repair-smith not less than once each six (6) months thereafter. The jeweler or watch repair-smith shall issue after each test, a certificate dated, signed and witnessed by the jeweler or watch repair-smith showing the degree of accuracy. Only the most recent six (6) month test certificate is required in order to establish the presumption available under s. 316.1905(3)(b), F.S.

(2) Electronic stop watches or electronic time based average speed calculators may be tested by a certified electronics technician meeting the requirements of paragraph 15B-2.009(1)(a), F.A.C, in the manner and within the time period described in sub-section (1).

Specific Authority 316.1905 FS. Law Implemented 316.1905 FS. History--New 9-11-78, Formerly 15B-2.12, Amended 11-16-92, 10-18-94.

15B-2.013 Approved Speed Measuring Devices.

The following speed measuring devices have been approved for use in this State by the Department pursuant to this rule Chapter.

(1) Radar units acquired for use in this State after August 1, 1982, are listed below. Additional radar units will be approved by the Department based on conformance to these rules. Evidence of approval of additional units shall be by a Certificate of Approval Form HSMV 60013 (Rev. 7/03), which is available by contacting the Florida Highway Patrol ~~Telecommunications Administrator~~, Neil Kirkman Building, Tallahassee, Florida 32399-0500, or by disseminating the listing of ~~the~~ additional units on the Florida Crime Information Center (FCIC) computer system, or by listing on the Division of Florida Highway Patrol website.

(a) Applied Concepts, Inc., formerly known as Applied Concepts Marketing -- Model STALKER;

(b) Applied Concepts, Inc., formerly known as Applied Concepts Marketing -- Model STALKER DUAL;

(c) Applied Concepts, Inc., formerly known as Applied Concepts Marketing -- Model STALKER DUAL SL;

(d) Applied Concepts, Inc., formerly known as Applied Concepts Marketing -- Model STALKER DUAL DSR;

(e) Applied Concepts, Inc., formerly known as Applied Concepts Marketing -- Model STALKER BASIC – stationary and moving;

(f)~~(d)~~ Broderick Enforcement Electronic -- Model BEE-36;

(g)~~(e)~~ CMI/MPH Industries, Inc., -- Model Python;

(h)~~(f)~~ Decatur Electronics, Inc., -- Model MVF 724;

(i)~~(g)~~ Decatur Electronics, Inc., -- Model KF-1;

(j)~~(h)~~ Decatur Electronics, Inc. -- Model Genesis-I;

(k) Decatur Electronics, Inc. -- Model Genesis - II;

(l)~~(i)~~ Decatur Electronics, Inc., -- Genesis Handheld;

(m) Decatur Electronics, Inc., -- Model Genesis VP

(n) Decatur Electronics, Inc., -- Model Genesis VP - Directional

(o)~~(j)~~ Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model KR-10SP-F, Model KR-10SP;

(p)~~(k)~~ Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model FALCON-F, Model FALCON;

(q)~~(l)~~ Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model TROOPER-F, Model TROOPER;

(r)~~(m)~~ Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model HAWK;

(s)~~(n)~~ Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model PRO-1000, Model PRO-1000DS;

(t)~~(o)~~ Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model Eagle K-Band;

(u)~~(p)~~ Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model Eagle KA-Band;

(v)~~(q)~~ Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model Eagle Plus K-Band;

(w)~~(r)~~ Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model Eagle Plus KA-Band;

(x)~~(s)~~ Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model Silver Eagle K-Band;

(y)~~(t)~~ Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model Silver Eagle KA-Band;

(z)~~(u)~~ Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model Golden Eagle K-Band;

(aa)~~(v)~~ Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model Golden Eagle KA-Band;

(bb) Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model Golden Eagle Plus KA-Band;

(cc)~~(w)~~ Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model HR-12;

(dd) Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model Talon;

(ee) Kustom Electronics, Inc., or Kustoms Signals, Inc., -- Directional Golden Eagle KA-Band;

(ff) McCoy's LAWLINE Speed Trak Elite K, Ka and Elite KD (directional);

(gg)~~(x)~~ M.P.H. Industries, Inc., or CMI/MPH -- Model K-15K "1986 Model", Model K-15, Model K-15 II;

(hh) M.P.H. Industries, Inc., or CMI/MPH -- Model MPH Speedgun (K-BAND);

(ii)~~(y)~~ M.P.H. Industries, Inc., or CMI/MPH -- Model K-55K; Model BEE-36;

(jj) M.P.H. Industries, Inc, or CMI/MPH – Model Bee III;

(kk) M.P.H. Industries, Inc., or CMI/MPH – Model Enforcer;

(ll)~~(z)~~ Tribar Industries, Inc., -- Model MDR-2;

(mm)~~(aa)~~ Tribar Industries, Inc., -- Model K-GP.

(2) ~~Visual~~ Aaverage Sspeed Calculators (ASC)~~devices~~:

(a) Federal Sign and Signal Corp., -- VASCAR II;

(b) Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model Tracker;

(c) Traffic Safety Systems, Inc., -- VASCAR-Plus.

(3) Speedometers -- All mechanical or electronic motor vehicle speedometers having certified calibration pursuant to these rules.

(4) Stopwatches -- All stopwatches certified pursuant to subsection 15B-2.008(4) and Rule 15B-2.012, F.A.C.~~Florida Administrative Code.~~ The following stopwatches are approved for use in this State when they have been tested according to this rule c~~C~~hapter. The absence on this list of other stopwatches used by other law enforcement agencies or the Florida Highway Patrol does not preclude their use when they have been properly tested.

Brand Name	Model Number
(a) Casio	HS-10W
(b) Timex Quartz Timer	None
(c) Heuer	1000
(d) Heuer	1010
(e) Seiko	S022-5009
(f) Accusplit	620-CT
(g) Minerva Manual Timer	None
(h) Seiko	87-0019G
(i) Aristo	Apollo
(j) Lorus	W903
(k) Marshall Browning International Corp.	Robic Acutrak SC-800

(5) Laser speed measuring devices (LSMD) -- Evidence of approved LSMD shall be by a certificate or listing on the FCIC computer, or by a listing on the Division of Florida Highway

Patrol website, as set forth in subsection (1) of this rule. In addition, the following LSMDs are approved for use in this State:

(a) Kustom Electronics, Inc., or Kustom Signals, Inc., -- Model Prolaser II, Model ProLaser III;

(b) Laser Technology, Inc., -- Model Marksman/LTI 20-20, Model Ultralyte LTI 20/20 Lidar, Model Ultralyte 100LR and 200LR, Model Ultralyte LR B;

(c) Applied Concepts, Inc., -- Model Stalker Lidar;

(d) Laser Atlanta Optics, Inc., -- Model Speed Laser.

Specific Authority 316.1905 FS. Law Implemented 316.1905, 316.1906 FS. History--New 1-1-90, Amended 11-16-92, 10-18-94, 10-2-95.

15B-2.014 Minimum Design Criteria for Laser Speed Measurement Devices.

(1) Manufacturers of laser speed measurement devices (LSMD) shall submit a report to the Department by an independent testing laboratory certifying that each model meets the following minimum design criteria:

(a) The device shall measure transmitted and received light amplified by stimulated emission of radiation, otherwise known as LASER.

(b) The device determines the speed of vehicles by the pulse - echo method using the time of flight of a series of pulses of ~~infrared~~ laser light.

(c) The device shall use solid state digital techniques for distance and speed calculations.

(d) The device shall comply with the limits for a class A digital device as defined in 47 C.F.R. 15.3(h), which is incorporated by reference.

(e) The device is certified as a Class I (one) eye safe device according to the criteria established by the U.S. Department of Health and Human Services, Center for Devices and Radiological Health, Food and Drug Administration, Rockville, Maryland, 20582, (21 C.F.R. 1040) which is incorporated by reference.

~~(f) Electromagnetic energy emitted from the device for purposes of measuring either target vehicle speed or range, shall be in the infrared portion of the electromagnetic spectrum.~~

(f ~~g~~) The device shall only transmit ~~infrared~~ light pulses when a finger operated trigger is pressed. When this trigger is released the device shall cease to transmit. The devices shall not have any method to lock the trigger in the transmit mode.

(g ~~h~~) The device shall be capable of measuring target vehicle speeds over the speed range of 5 mph to 100 ~~90~~ mph, with an accuracy of plus or minus 1 mph over this range.

(h ~~i~~) The device shall measure distances with an accuracy of plus or minus 1 foot, between 50 and 1000 feet, and display distances in feet.

(i ~~j~~) The device shall be capable of being converted to metric units for distance and speed by the manufacturer.

(j ~~k~~) The device shall be weather resistant.

(k ~~l~~) The device shall have a self test mode, which will operate automatically when the device is turned on, and when the self test is initiated by the operator. Self test shall verify that the computing and timing circuits are operating correctly, and shall illuminate~~ing~~ all light emitting indicators so that the condition can be verified by the operator.

(l)~~(m)~~ The device shall truncate decimal values of the target speed display to produce whole number values.

(m)~~(n)~~ The device shall be capable of measuring both approaching and receding vehicles, and display a visual indication that differentiates direction.

(n)~~(o)~~ The device shall provide an audio tone indicating when a target vehicle has been acquired.

(o)~~(p)~~ The device shall meet all the minimum performance specifications over the manufacturers specified~~power supply~~ voltage range~~ of 10.8 volts to 16.3 volts, with a nominal power supply voltage being 13.6 volts~~. The device shall contain the following features related to the power supply circuitry:

1. A power supply on/off switch.

2. A visual indicator to allow the operator to determine that electrical energy is being supplied to the device.

3. A low voltage indicator that alerts the operator either visually or audibly of low voltage conditions, and automatically prevents operation.

4. Internal circuitry that protects against accidental reversal of power supply polarity.

5. An in-line fuse or equivalent mounted between the power supply and the device to prevent power surges in excess of 16.3 volts.

(p)~~(q)~~ The device shall detect spurious readings due to radio frequency interference and inhibit any speed display.

(q)~~(r)~~ The device shall be permanently marked with the functions and setting of all switches, controls and displays. It shall not be possible to set the controls to a functional mode of operation that is not marked or identified.

(r)~~(s)~~ The manufacturer shall permanently mark each device with the name of the LSMD model and the serial number for the specific LSMD.

(s)~~(t)~~ The manufacturer shall provide the procedures that verify the accurate alignment of the sighting element.

(t) When an Average Speed Calculator (ASC) is installed and used as a separate feature of a LSMD, the ASC feature must be certified separately and in addition to the LSMD under paragraph 15B-2.008(2)(d), F.A.C.

(2) Beginning June 30, 2004, all new LSMD's sold in the state of Florida must meet all requirements of this chapter and:

(a) The Model Minimum Performance Specifications for Lidar Speed Measurement Devices, July 1, 2001, NHTSA document #DOT HS 809 239, which is incorporated by reference. This document is available by contacting the Office of Law Enforcement Standards, c/o National Institute of Standards and Technology, 100 Bureau Drive, Stop 8102, Gaithersburg, Maryland 20899-08102.

(b) Shall be restricted to reading vehicle speeds at a distance not greater than 3000 feet.

Specific Authority 316.1905 FS. Law Implemented 316.1905, 316.1906 FS. History — New 10-18-94.

15B-2.015 Checks to Determine Speed and Distance Accuracy of Laser Speed Measuring Devices.

(1) Prior to an operator using a LSMD~~,~~ for enforcement activity and subsequent to the last enforcement action taken using a LSMD, but prior to the end of each ~~at the completion of an operator's~~ shift in which an LSMD was used,~~.~~ t~~T~~he following accuracy checks shall be performed and recorded into a written log. The log forms may be of a design that meets the needs of the particular law enforcement agency:

(a) Display Check — Activate the display test procedure to verify that all segments and other light indicators are functioning properly.

(b) Internal Accuracy Check — The internal accuracy check shall be made in accordance with the manufacturers specifications.

(c) Laser Distance/Alignment Check —

1. In a convenient location, establish two permanent known distances using a steel measuring tape or surveyor's instrument to check targets set at a distance of at least 100 feet and separated by at least 100 feet ~~50 and 100 feet~~. The targets shall be ~~not more than three (3) feet square nor less than~~ one (1) foot square, the center of which shall be mounted not less than three (3) feet nor more than nine (9) feet from ground level. Both targets must be clear of all obstructions from the measurement starting point.

2. ~~The operator shall check the alignment both vertically and horizontally.~~

~~3.~~ The operator shall align the device at the established starting point and take a measurement of ~~both~~ the two ~~50 foot and 100 foot check~~ targets, to verify it's accuracy of plus or minus one (1) foot.

(d) Sight alignment check – Using a suitable target at least 200 feet away, check the site alignment according to the manufacturer's specifications both vertically and horizontally.

(2) Average Speed Calculators (ASC) installed as part of a LSMD shall be checked and operated as outlined in Rule 15B-2.0101. ~~A written log shall be maintained. The log shall contain an entry for the accuracy checks (date and result of the check) performed at the beginning and end of each shift in which the LSMD is used. The written log forms may be of a design that meets the needs of particular jurisdictions.~~

Specific Authority 316.1905 FS. Law Implemented 316.1905, 316.1906 FS. History — New 10-18-94.

15B-2.016 Tests to Determine Accuracy of Laser Speed Measuring Devices.

(1) All LSMD used in this state shall be subject to periodic tests at intervals not to exceed six (6) months, to be conducted by a Florida registered professional engineer or by an electronic Technician who has a Federal Communication Commission, General Radiotelephone Operator License, or a certification issued by one of the following:

(a) Association of Public-Safety Communications Officials-International (APCO);

(b) Personal Communications Industries Association (PCIA), formerly known as National Association of Business and Education Radio (NABER); or

(c) National Association of Radio and Telecommunications Engineers (NARTE).

(2) Only the most recent six (6) month test certificate is required in order to establish the presumption available under 316.1905(3)(b), F.S. Tests will include:

(a) Bench Tests -- Wavelength verification, optical power output, pulse repetition rate, pulse width, and verify that the pulse train is free of any double laser pulses or intermittent laser pulses. The results of these tests shall conform with the safety report from the U.S. Department of Health and Human Services, Center for Devices and Radiological Health (CDRH), Food and Drug Administration (21 C.F.R. part 1040), which is incorporated by reference, and the manufacturer's specifications, both of which will be supplied by the manufacturer.

(b) Distance/Velocity -- A complete verification test as described in paragraph 15B-2.015(1)~~(2)~~(a) through (c), F.A.C., and a Velocity Verification test certifying that the Laser Speed Output was compared to Actual Speed as verified by a certified radar device. The results

of these tests will not be greater than plus or minus one (1) foot for the distance tests, and plus or minus one (1) mph for the speed test.

(c) Sight Alignment/Beam Pattern Test. The sighting device will be checked for accuracy to determine that it remains within the laser beam at all distances from 500-3000 feet. This may be determined from calculation based on an initial beam pattern/sight alignment analysis. The beam will be analyzed to determine that it is within the pattern/size tolerances specified by the manufacturer.

(d)~~(c)~~ Each test shall be recorded on form HSMV 61071 (3/04~~9~~/94) which is~~n~~ incorporated by reference. Blank forms are ~~and is~~ available by contacting the Department at the address described in subsection 15B-2.0082(1)~~(2)~~, F.A.C.

(e) When an Average Speed Calculator (ASC) is installed and used as a separate feature of a LSMD, the ASC feature must be certified separately and in addition to the LSMD under paragraph 15B-2.008(2)(d), F.A.C.

Specific Authority: 316.1905 FS. Law Implemented: 316.1905, 316.1906 FS. History--New 10-18-94.

NAME OF PERSON ORIGINATING PROPOSED RULE: Lt. James D. Wells, Jr., Bureau of Law Enforcement Support Services, Division of Florida Highway Patrol, Department of Highway Safety and Motor Vehicles, Room A315, Neil Kirkman Building, Tallahassee, Florida 32399-0500, 850 488-5799.

NAME OF SUPERVISOR OR PERSON WHO APPROVED PROPOSED RULE:

Colonel Christopher A. Knight, Director, Division of Florida Highway Patrol.

DATE PROPOSED RULE APPROVED: December 5, 2003

DATE NOTICE OF PROPOSED RULE DEVELOPMENT PUBLISHED IN FAW:

January 16, 2004.

DATE NOTICE OF PROPOSED RULE AMENDMENT PUBLISHED IN FAW:

January 30, 2004.

DEPARTMENT OF HIGHWAY SAFETY AND MOTOR VEHICLES

DIVISION OF FLORIDA HIGHWAY PATROL

LASER SPEED MEASURING DEVICE CERTIFICATION

THIS IS TO CERTIFY THAT THE UNIT USED TO MEASURE MOTOR VEHICLE SPEEDS, DESCRIBED AS:

MANUFACTURER: _____ SERIAL NUMBER: _____

MODEL NUMBER: _____

HAS THIS DATE _____ BEEN TESTED AS DESCRIBED IN THE FLORIDA ADMINISTRATIVE CODE, CHAPTER 15B-2, SPEED MEASURING DEVICES, RULE 15B-2.016 AND IS FOUND TO BE WORKING PROPERLY.

ACTUAL DISTANCE MEASUREMENT TEST

DISTANCE	READS

AVERAGE SPEED CALCULATOR INSTALLED? Y or N

TIME BASE WAS: CHECKED / NOT CHECKED (circle one)

± _____ MINUTES _____ SECONDS

DEVIATION FROM STANDARD IN 24 HOURS.

WAVELENGTH SPECIFICATION TEST

SPECIFIED WAVELENGTH	ACTUAL WAVELENGTH

POWER OUTPUT TEST (TRANS) _____ MICROWATTS (MAX. LIMIT 300 uW)

PULSE WIDTH _____ Ns SPECIFIED ^{7} 100 Ns

PULSE REPETITION RATE _____ Hz

MANUFACTURERS SPECIFICATIONS RANGE _____ TO _____ Hz

DOUBLE PULSE TEST / PASS _____ FAIL _____

RADAR / LIDAR VERIFICATION TEST (± 1 MPH) PASS _____ FAIL _____

LOW VOLTAGE SUPPLY ALERT PASS _____ FAIL _____

RADIO FREQUENCY INTERFERENCE PASS _____ FAIL _____

SIGHT ALIGNMENT TEST PASS _____ FAIL _____

BEAM WIDTH TEST PASS _____ FAIL _____

PROFESSIONAL ENGINEER, P.E. / ELECTRONIC TECHNICIAN

NAME: _____

SIGNATURE: _____

CERTIFICATION ISSUED BY:

_____

LICENSE #: _____

ADDRESS: _____

_____

_____

WITNESS SIGNATURE _____

WITNESS'S NAME: _____

WITNESS'S TITLE OR RANK _____

DEPARTMENT OF HIGHWAY SAFETY AND MOTOR VEHICLES

DIVISION OF FLORIDA HIGHWAY PATROL

RADAR SPEED MEASURING DEVICE CERTIFICATION

THIS IS TO CERTIFY THAT THE UNIT USED TO MEASURE MOTOR VEHICLE SPEEDS, DESCRIBED AS:

MANUFACTURER: _____

MODEL NUMBER: _____

COMPUTING UNIT S/N: _____

ANTENNA #1 S/N: _____

ANTENNA #2 S/N: (only if applicable) _____

HAS THIS DATE _____ BEEN TESTED AS DESCRIBED IN THE FLORIDA ADMINISTRATIVE CODE, CHAPTER 15B-2, SPEED MEASURING DEVICES, RULE 15B-2.009(1) AND IS FOUND TO BE WORKING PROPERLY.

SIMULATED TARGET SPEED	
15 MPH	MPH
30 MPH	MPH
40 MPH	MPH
50 MPH	MPH
60 MPH	MPH
70 MPH	MPH
80 MPH	MPH
90 MPH	MPH

SIMULATED PATROL SPEED	
15 MPH	MPH
30 MPH	MPH
40 MPH	MPH
50 MPH	MPH
60 MPH	MPH
70 MPH	MPH

TUNING FORKS SERIAL #	STATED	TESTED

FREQUENCY (GHz)

24.050 – 24.250	
33.400 – 36.000	

CONTROLS (OPERATIONAL)

YES		NO	

AVERAGE SPEED CALCULATOR INSTALLED? Y or N

TIME BASE WAS CHECKED / NOT CHECKED (circle one)

± _____ MINUTES _____ SECONDS DEVIATION FROM STANDARD IN 24 HOURS.

LOW SUPPLY VOLTAGE ALERT			
PASS		FAIL	

RADIO FREQUENCY INTERFERENCE			
PASS		FAIL	

ANTENNA NEAR FIELD POWER DENSITY

	(mW / cm^2)

ELECTRONIC TECHNICIAN

NAME: _____

SIGNATURE: _____

TECHNICIAN CERTIFICATION ISSUED BY:

_____

LICENSE #: _____

ADDRESS: _____

_____

_____

WITNESS SIGNATURE: _____

WITNESS'S NAME: _____

WITNESS'S TITLE OR RANK: _____

HSMV 61070 (3/04)