CITY OF FERGUSON
OFFICE OF THE CHIEF OF POLICE

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SPEED ENFORCEMENT AND SPEED MEASURING DEVICES

487.00 PURPOSE

The purpose of this General Order is to establish policy and procedure for the methods used to enforce the speed laws within the City of Ferguson, standardize the deployment of radar equipment, and provide for regular testing and maintenance of radar equipment.

487.01 POLICY

It is the policy of this Department to enforce, with impartiality and accuracy, the speed limits throughout the area patrolled by this Department.

487.02 EQUIPMENT

The Department utilizes the following speed detection and ranging devices:

1. Stalker Vehicle Mounted Stationary/Mobile Patrol Radar
2. Hand Held LIDAR Laser
3. Mobile Radar Trailer

All three devices measure and display the speed of a moving vehicle and the LIDAR additionally displays the range at which the speed was measured. All units are equipped from the manufacturer with software designed to perform a complete self-test including verification of accuracy; and detected malfunctions resulting in a "fail" indication. Each unit must provide a minimum range of five hundred (500) feet of a straight, open two-lane roadway with an average size vehicle, displaying the target's speed on an LCD display. Each vehicle mounted radar unit shall have a minimum of two (2) tuning forks, certified by the manufacturer, for field-testing the unit by its operator. The Mobile Radar Trailer is to be used ONLY for public information and education and NOT for enforcement.

487.03 ENFORCEMENT OPERATIONS

A. All patrol vehicles are equipped with mobile radar and therefore enforcement action can be taken anytime during routine patrol. Heavy enforcement and/or targeted stationary or LIDAR enforcement actions should be directed at the following locations:

1. **Serious Accident Locations** – Sites of automobile accidents involving injury/death where speed was a contributing factor will be the primary locations for radar use.

2. **High Volume Violation Locations** – Locations where there is a high frequency of speeding violations.

3. **Valid Citizen Complaint** – Citizen complaints of speeding motorists may be authorized radar locations.

B. Unacceptable Radar/LIDAR Locations

1. Where the speed limit changes (except school zones).

2. At the bottom of hills.

3. Any location where the operation of speed measuring devices may cause a traffic safety hazard.

487.04 EQUIPMENT OPERATIONS

A. Vehicle mounted stationary/moving radar

1. To ensure the radar readings are admissible in court, commissioned employees will perform two (2) tuning fork tests before and after a patrol vehicle with mobile radar is used. These tests should include both front and rear facing radar antennas.

a. Tuning Forks are a very durable basic, yet accurate means of testing traffic radar devices. Other than periodic checks for frequency, they provide years of service provided they are not abused by being struck too severely against hard surfaces.

b. The fork is made of cast aluminum and the type of metal, temperature of the metal and the shape and length of the tine determines its vibrating frequency. The shape and length of the tine are the major factors in determining frequency; the longer the tines, the higher the frequency.

c. Temperature has a slight effect on tuning forks; between 0 and 140 degrees Fahrenheit, the speed of the fork will vary approximately one mile per hour. For the most accurate test, the fork should be checked at or near room temperature (approximately 70 degrees).

2. Visually identify a specific target vehicle and then utilize the radar unit to confirm your opinion that the vehicle was exceeding the posted speed limit before taking an enforcement action.

3. Verify the ground speed of the police vehicle with the radar unit when using the radar unit in the moving mode of operation.

4. Should there be a unit malfunction, cease operations and notify the on-duty supervisor of the malfunction. A vehicle/equipment repair order will be sent to the Commander of the Division of Administration for repairs.

5. The Officer will record the police vehicle number on the traffic citation. The Commander of the Division of Administration has an updated list of all radar units and tuning forks, the vehicles in which they are installed, and the corresponding certificates of calibration. A copy of the radar units and corresponding tuning forks will be given to the Municipal Court in preparation for trials.

B. Handheld LIDAR Laser

1. LIDAR Laser is a hand held speed measuring device. The measurement accuracy of a LIDAR instrument can be verified by several methods. Verifying it directly, however – by measuring the velocity of an object traveling at a known speed-is seldom practical. And, the nature of LIDAR is such that it cannot be tricked by a vibrating object, such as a tuning fork, into displaying a velocity. For those reasons, LIDAR has two passive test procedures. These tests are the *fixed distance check* and the *delta distance check*. For further details on the operation of these checks, qualified and trained officers should refer to the operations manual for each specific unit to be used. These operations manual should be kept with the units in their assigned cases.

2. Visually identify a specific target vehicle and then utilize the LIDAR unit to confirm your opinion that the vehicle was exceeding the posted speed limit before taking an enforcement action.

3. Should there be a unit malfunction, cease operations and notify the on-duty supervisor of the malfunction. A vehicle/equipment repair order will be sent to the Commander of the Division of Administration for repairs.

4. The Officer will record the LIDAR number on the traffic citation. The Commander of the Division of Administration has an updated list of all LIDAR units and the corresponding certificates of calibration. A copy of the list shall be given to Municipal Courts in preparation for trials.

C. Mobile Deployable Radar Trailer

The department utilizes one Radar Trailer for public education and deterrence. The Radar Trailer is deployed and administered by the Traffic Safety Officer. Weather permitting, the radar trailer should be deployed in response to citizen complaints, high traffic areas in neighborhoods, and areas where speeding is a problem. Officers should take care in deploying the trailer so that it is not a traffic hazard. The trailer cannot be deployed on the interstate or state highway. The radar trailer is not certified in the same manner as radar in police vehicles and therefore NO ENFORCEMENT ACTION can be taken using the displayed results of the radar trailer.

D. Pacing

1. When pacing a vehicle to determine its speed, an officer should ensure the police vehicle is not overtaking the suspect vehicle, but maintaining a constant and safe following distance. An officer needs only verify, for certain, that the suspect vehicle was traveling at the same, or faster speed than the known speed of the patrol vehicle.

2. The accuracy of the police vehicle's speedometer can be verified by using a properly tested and calibrated radar unit operated by a qualified operator.

3. The speedometers on police vehicles having had maintenance which could affect the accuracy of the speedometer (i.e., change in tire size, transmission repair, etc.) should be tested against a properly tested and calibrated radar unit operated by a qualified operator prior to being utilized as a pace vehicle in speed enforcement.

487.05 ADMINISTRATIVE PROCEDURES

A. Radar/LIDAR Frequency Verification/Calibration/Certification

The Division of Administration Commander will ensure the Verification/Calibration/Certification of the Department radar and LIDAR units. The radar units will be checked by an independent contractor certified in the calibration of such equipment annually. The Division of Administration Commander will be the coordinating officer. The LIDAR units will be check according to the equipment manufacturers recommended schedule by an independent contractor certified to perform the evaluation check. The original certificates of calibration will be forwarded to the Administrative Office for permanent file and a copy will be sent to the Municipal Court for use in trial proceedings.

B. Tuning Fork Certification

The tuning forks will be checked and certified by an independent contractor certified in the calibration of such equipment annually. The Division of Administration Commander will be the coordinating officer. The original certificates will be forwarded to the Administrative Office for permanent file and a copy will be sent to the Municipal Court for use in trial proceedings.

C. Radar/LIDAR Unit Care and Maintenance

Radar/LIDAR units, though durable, should not be subjected to extremes of temperature, humidity or vibration. While utilizing radar/LIDAR equipment, operators must ensure the units will not be exposed to liquids. All LIDAR units should be stored and/or transported in their original carrying cases. Damaged or inoperative units, including carrying cases, will be taken to a contract repair facility or original equipment supplier for repair or replacement. The Division of Administration Commander will advise if the work is to be done by a contract vendor or the original supplier.

487.06 TRAINING

No officer will operate a radar/LIDAR unit in an enforcement capacity without first attending training on the operation of traffic radar that is equivalent to that provided by the St. Louis County and Municipal Police Academy or Law Enforcement Academy Basic Police Training Curriculum. Officers must demonstrate to a Field Training Officer or Radar Instructor, their ability to properly use and test the speed measuring equipment. In addition, LIDAR laser operations require additional specific training from a certified instructor. Training certificates will be maintained in the officer's personnel file and indicated in the department training database.

By order of:

COLONEL THOMAS JACKSON
Chief of Police

Distribution
All Department Personnel