

RADAR

5.01 POLICY

Speed enforcement **through** the use of radar will augment the **Department's** patrol function. Radar will be used as a deterrent against speed **limit** violations, thereby assisting in the reduction of **motor vehicle** crashes, **crash-related injuries, and crash-related fatalities throughout the Commonwealth.**

5.02 GENERAL INSTRUCTIONS

- A. Location: Radar may be utilized at any location, consistent with this regulation, where traffic safety would be enhanced.
- B. Time: The hours during which radar is **utilized** should be staggered to provide maximum coverage and promote the selective enforcement concept.
- C. Weather: Radar shall not be used during inclement weather when hazardous conditions exist which make the stopping of vehicles dangerous.
- D. Assignment: Members shall be assigned to radar duties at the discretion of **their** Patrol Section/Station Commander, **or designee**. Assignments should be on a rotational basis.
- E. Operators: Only those members who have received training in the use and care of radar equipment shall be assigned to operate radar. Radar operators shall test and operate radar equipment in accordance with this regulation.

5.03 RESPONSIBILITIES

- A. Operations: Patrol Section/Station Commanders shall review crash records **for their respective Troop Headquarters/ Station** to ensure radar enforcement **is conducted in** those areas where speed is indicated as a contributing factor **in crashes**.
- B. Equipment: Patrol Section/Station Commanders shall ensure **radar equipment used in support of** radar operations **is** in compliance with the following provisions:

1. **Each** radar unit **has** been tested/**calibrated** by an official electronic device (i.e., radar) testing station in accordance with Section 3368(d) of the Vehicle Code.
2. A Certificate of Accuracy, Form MV-471A (refer to Appendage A), **for each radar unit** has been properly completed, with no typographical errors, **and contains** the following information:
 - a. The name and number of the testing station, model and serial number of the **radar** unit, name of **the radar** unit manufacturer, and the date of calibration/accuracy certification.
 - b. The difference between the indicated speed and test speed **for each increment specified on the certificate**. This must be within the limits of plus zero, minus one mile per hour (**MPH**).
 - c. Certification that the tuning fork(s) **for the radar** unit has been tested for accuracy, listing the serial number(s) and verification of rated speed and true speed.
 - d. Signature, in ink, **and printed name** of the person making the test.
 - e. The Federal Communications Commission license number (if applicable) of the person making the test.

NOTE: A new Certificate of Accuracy shall be obtained from the testing station each time the radar unit is tested/**calibrated**. The form shall be filed at the **Troop Headquarters/Station** where the radar unit is assigned.

- C. Inspection: Patrol Section/Station Commanders shall ensure strict adherence to the provisions of this regulation through the periodic inspection of radar operations **and equipment**.
- D. Requests from Local Officials: Troop Commanders shall be personally responsible for evaluating and approving any request(s) from local officials for the use of radar in their respective jurisdiction(s). In cases where approval is granted, Troop Commanders shall decide whether radar is to be used solely as a psychological deterrent or for prosecution.

5.04 CARE OF EQUIPMENT

- A. Handling: Radar units **shall** be handled with care to prevent malfunction due to abuse. Dents or **other** damage to the **radar** antenna **and/or** readout **components** shall be reported to the **appropriate** testing station for corrective action.
- B. Assembly: Multiple-component radar units shall be assembled in accordance with the following **instructions**:
 - 1. The radar set cabling shall be completely connected and ready for operation prior to turning on the radar power switch.
 - 2. The **12-volt auxiliary power outlet shall** be clean to ensure proper operation.
- C. Radar Case: **The original carrying case provided with each radar unit shall be retained for shipment and storage of the corresponding unit.** When placing a multiple-component radar unit in its carrying case, the antenna and power cables **shall be** disconnected. There are soldered connections inside the cables restricting their flexibility; **therefore, personnel shall** repack the cables with care. **Personnel shall** not place extraneous material(s) **inside** the carrying case.
- D. Tuning Fork(s): The tuning fork(s) **shall** never be struck against metal or stone. **The tuning fork(s) shall instead be activated by striking it against** any hard, non-metallic/**non-abrasive** surface (e.g., a wooden block, the heel of a shoe). The tuning fork(s) is a standard for accuracy and must be handled carefully.
- E. **Calibration and Maintenance: Calibration and maintenance of radar equipment shall be performed by an approved official electronic device testing station. All radar equipment shall be tested/calibrated annually in accordance with Section 3368(d) of the Vehicle Code. Each radar unit shall be packaged in its original carrying case for transport/shipment when being sent to a testing station for calibration and/or maintenance.**

NOTE: A list of official electronic device testing stations approved by the Department for the calibration and maintenance of radar equipment will be published/disseminated periodically via Special Order.

- F.** Repairs: Repair of radar units shall be made only by an **approved** official electronic device testing station.
1. Under no circumstances shall field personnel attempt to adjust or repair a radar unit.

EXCEPTION: Troop Communications Specialists may replace fuses and **12-volt power** plugs, as necessary.
 2. Upon return from a testing station, repaired radar units shall be field tested by a member to ensure the malfunction has been corrected/repaired.
 - a. If the problem has not been corrected, the radar unit shall be returned to the testing station with a notation(s) describing the malfunction. Credit shall be requested for **any** charges made for the **previous** repair **attempt**.
 - b. If problems are encountered in obtaining credit for the previous repair **attempt**, the Director, **Bureau of Patrol**, shall be **notified**.
- G.** Damage or Loss: Damage to **or loss of** radar equipment shall be reported in accordance with FR 4-1, Loss of or Damage to Commonwealth Property or Equipment.

5.05 OPERATIONS

- A.** Selection of Site and Positioning/**Operation** of Patrol Vehicle **and Radar Equipment:** Care and good judgment must be exercised when selecting a location for the operation of radar **equipment**; this is the responsibility of the radar operator or ranking officer **overseeing** the operation.
1. When the **patrol** vehicle is parked on the medial strip **of the highway** or parallel to the lane or lanes of traffic to be observed and checked, the medial strip or berm must be of sufficient width to park **the patrol** vehicle safely off the paved portion of the highway. Parking shall conform to the requirements of the Vehicle Code.
 2. **Permanently mounted dual-antenna radar units shall be operated with the radar antennas mounted inside the patrol vehicle.** All **other** radar units, except

handheld radar, shall be operated with the **radar** antenna mounted on the outside of the **patrol** vehicle. **A handheld** radar unit may be operated from inside the **patrol** vehicle, **provided** it is aimed through an open window. Under no circumstances **shall a handheld** radar unit be aimed through the front or rear window **or a closed side window** to determine the speed of a vehicle.

3. Operation of the **patrol** vehicle with the **radar** antenna mounted outside the vehicle is restricted to periods of radar operation only. Pursuit driving is permitted with the radar antenna mounted on the outside of the **patrol** vehicle. Extreme care shall be taken to ensure the **radar** antenna is properly and securely mounted **to the patrol vehicle**.
 4. During periods of operation, neither the radar unit nor the antenna shall be placed directly against any metal portion of the **patrol** vehicle while the vehicle is running.
 5. All radar units shall be operated only from a stationary position, and so located that the **radar unit and the radar operator have** a clear and unobstructed view of **each** vehicle being checked.
 6. When **handheld** radar is used with the battery pack, the radar operator and the **patrol** vehicle shall be positioned so as not to present a safety hazard.
 7. When operating radar on a highway where the posted speed limit decreases (e.g., 55 MPH speed limit reduces to a 35 MPH speed limit), radar shall not be set-up/**utilized** within one mile from the first sign indicating the beginning of the reduced speed zone. In areas where a high volume of crashes or incidents would **merit the use of radar in such locations**, Troop Commanders may make an exception to the one-mile limit. Such limitations shall not apply when radar is utilized within work zones, school zones, or when the speed of commercial vehicles has been limited on descending grades by the posting of official signs.
- B. **Field Testing Requirements:** Each radar operator shall adhere to the following procedures for **field** testing radar equipment when it will be used for enforcement purposes:

1. The radar unit shall be **field** tested at the beginning and end of each period of radar operation. **Field** testing is not required when merely changing locations.
 2. The radar operator shall **field** test the radar unit for accuracy by utilizing the tuning fork(s) supplied with the unit and performing the internal calibration **field** test. IF THE **RADAR** UNIT INDICATES ANY SPEED OTHER THAN THE SPEED MARKED ON THE TUNING FORK(S) (TUNING FORK **FIELD** TEST), OR ANY SPEED OTHER THAN THE SPEED INDICATED BY THE MANUFACTURER'S INSTRUCTIONS FOR THE INTERNAL CALIBRATION **FIELD** TEST, THE UNIT SHALL IMMEDIATELY BE TURNED OFF AND TAKEN OUT OF SERVICE.
 3. When any doubt arises concerning the accuracy of the radar unit, the operator shall immediately perform the tuning fork and internal calibration **field** tests. If any inaccuracy is disclosed, arrest action shall not be taken against any driver checked subsequent to the previous **field** test for accuracy. Whenever any prescribed **field** test indicates a malfunction of the radar unit, **radar** operations shall cease, and the **appropriate** Patrol Section/Station Commander, **or designee**, shall be advised of the condition. UNDER NO CIRCUMSTANCES **SHALL** FIELD PERSONNEL ATTEMPT TO REPAIR THE RADAR UNIT.
- C. **Battery Pack:** In the event the portable radar battery pack fails to function, or if the battery pack is being recharged, the **radar** set may be operated from the **patrol** vehicle by plugging it into the **12-volt auxiliary power outlet**. The radar operator shall report any malfunction of the battery pack to his/her immediate supervisor prior to the end of their **assigned** shift.
- D. **Speed Check Requests:** At no time shall a radar operator honor a driver's request for a speedometer check via a radar unit.

5.06

PROSECUTION

- A. **Excess of Legal Speed Limit:** Prosecution should be instituted when the recorded speed **of a vehicle** is in excess of the legal speed limit, subject to the limitations provided by statute.

- B. Identification: Prosecution shall not be initiated in those cases where the violator's vehicle cannot be positively determined.
- C. Detaining Violators: In no event **shall** a violator be detained until additional violators are apprehended in order to convey a group to the office of a **Magisterial District Judge**.
- D. Court Preparation and Testimony: The **prosecuting member** is responsible for the preparation of radar cases to be introduced in court and shall ensure the Certificate(s) of Accuracy **for the radar unit(s) used to initiate prosecution** is presented during testimony. **Speed-timing devices** and testing stations may be cited as being approved by the Pennsylvania Department of Transportation pursuant to publication in the Pennsylvania Bulletin.

NOTE: The most recent **Pennsylvania Bulletin** cite for **approved speed-timing devices and testing stations** is available via the **PSPiNet homepage** under the “Approved Testing Stations/Labs/Equipment” link, and can also be accessed by selecting the following hyperlink: [Pennsylvania Bulletin](#).