

PEOPLE OF THE STATE OF MICHIGAN, Plaintiff-Appellee, v.

ZOLTON ANTON FERENCY, Defendant-Appellant

Docket No. 73004

Court of Appeals of Michigan

133 Mich. App. 526; 351 N.W.2d 225; 1984 Mich. App. LEXIS 2576

December 14, 1983, Submitted

April 2, 1984, Decided

*DISPOSITION:* [\*\*\*1]

Reversed.

*COUNSEL:* Frank J. Kelley, Attorney General, Louis J.

Caruso, Solicitor General, Mark A. Gates, Prosecuting

Attorney, and Jeffrey K. Riemersma, Assistant Prosecuting

Attorney, for the people.

Zolton Ferency, in propria persona.

*JUDGES:* J. H. Gillis, P.J., and J. H. Shepherd and J. J. Kelley, \* JJ.

- Circuit judge, sitting on the Court of Appeals by assignment.

*OPINIONBY:* GILLIS

*OPINION:* [\*530] [\*\*226] This is an electronic surveillance case. People v Gilbert, 414 Mich 191, 197; 324 NW2d 834 (1982).

Defendant appeals from a circuit court order affirming a district court judgment of responsibility for a civil infraction: namely, driving 65 mph on a public highway with a speed limit of 55 mph, MCL 257.629b; MSA 9.2329(2). The district court assessed a civil fine of \$ 5.00, a judgment fee of \$ 5.00 and \$ 30.00 costs, for a total of \$ 40.00.

Defendant was issued the citation by Officer Eugene Flore of the Michigan State Police in North Star Township in Gratiot County at approximately 2:50 p.m. on May 31, 1981. Defendant's speed was determined by the use of a radar speed detection unit while the unit was operating in the moving mode. Defendant denied[\*\*\*2] responsibility and requested a formal hearing. At the close of the hearing, a judgment of responsibility was entered by the district court and subsequently affirmed by the circuit court. This Court initially denied leave to appeal. The Supreme Court, however, remanded the case "for consideration as on leave granted". 417 Mich 1071 (1983).

On appeal, defendant raises four issues.

The first issue raised by defendant on appeal is whether a sworn traffic citation filed with the district court constitutes a sworn complaint for purposes of MCL 257.744; MSA 9.2444.

Officer Flore testified that he swore to the original citation later in the afternoon on the day it [\*531] was issued. This original citation was made part of the district court file.

Appearing in propria persona, defendant asked Officer Flore on cross-examination if he had filed any complaint other than the original citation. Upon a negative reply, defendant moved to dismiss the case, citing MCL 257.744; MSA 9.2444:

"If an officer issues a citation under section 742 for a civil infraction or if a citation is issued under section 742 for a parking or standing violation, the court may accept an admission with[\*\*\*3] explanation or an admission or denial of responsibility upon the citation without the necessity of a sworn complaint. If the person denies responsibility for the civil infraction, further proceedings shall not be had until a sworn complaint is filed with the court. A warrant for arrest under section 321a for failure to appear on the civil infraction citation shall not issue until a sworn complaint relative to the civil infraction is filed with the court." (Emphasis supplied.)

The district judge denied the motion, concluding that the sworn citation was itself a "sworn complaint" for purposes of the statute. The circuit court agreed.

[\*\*227] Defendant argues, however, that, where a defendant denies responsibility for a civil infraction, MCL 257.744; MSA 9.2444 requires, in addition to the filing of the sworn citation, the filing of a sworn complaint before further proceedings may be had. Defendant contends that the conclusion of the courts below blurs any distinction between "citation" and "sworn complaint" when the Legislature intended the sworn complaint to be in addition to the citation. Accordingly, defendant argues, since no formal complaint was filed in this[\*\*\*4] matter, the district court lacked jurisdiction to [\*532] proceed and the trial court's decision must be vacated and the cause dismissed with prejudice.

We disagree.

Section 727c of the Michigan Vehicle Code states that: "As used in this act, 'citation' means a complaint or notice upon which a police officer shall record an occurrence involving one or more vehicle law violations by the person cited." (Emphasis supplied.) MCL 257.727c; MSA 9.2427(3). In this case, the police officer swore to the citation, which was thereafter placed in the district court file. Accordingly, a "sworn complaint [was] filed with the court", MCL 257.744; MSA 9.2444, allowing the trial court to proceed with the formal hearing.

This conclusion is reinforced by DCR 2011.1(a)(2)(B), which provides that: "The citation serves as the complaint in a civil infraction action."

Defendant argues that the citation was inadequate notice of the state's civil infraction claim and that the only attestation appearing thereon was of service upon defendant. To the contrary, our reading of the citation reveals that Officer Flore, "being duly sworn", listed the allegations against defendant in a clear and concise[\*\*\*5] manner. Defendant was informed of the nature of the violation (i.e., "speeding") and that the violation was a civil infraction. The citation indicated that defendant was to appear in district court "on or before ten days" following issuance of the citation. Finally, the date, time, and location of the alleged infraction were set forth. In short, the citation contains the facts "as are necessary reasonably to inform the adverse party of the nature of the cause he is called upon to defend". DCR 111.1(1).

Defendant's next argument on appeal is that, in [\*533] a civil infraction case, a defendant may refuse to give any testimony by asserting his rights under the Fifth Amendment of the United States Constitution, US Const, Am V.

At the formal hearing, defendant objected to being called as a witness by the state, citing the Fifth Amendment to the United States Constitution. In effect, he asserted a right not to be called as a witness or to give any testimony whatsoever. The district judge ordered defendant to testify, finding the privilege inapplicable in civil proceedings.

The trial court erred in concluding that the right against self-incrimination does not exist in [\*\*\*6] civil

litigation. "The privilege can be claimed in any proceeding, be it criminal or civil, administrative or judicial, investigatory or adjudicatory." *In re Gault*, 387 U.S. 1, 47; 87 S Ct 1428; 18 L Ed 2d 527 (1967), quoting from *Murphy v Waterfront Comm of New York*, 378 U.S. 52, 94; 84 S Ct 1594; 12 L Ed 2d 678 (1964) (White, J., concurring) (emphasis in *Gault*). "[The] right to remain silent is constant and exists at all times." *People v Cade*, 125 Mich App 196, 198; 335 NW2d 653 (1982).

Nevertheless, merely because witnesses in any proceeding have the Fifth Amendment right does not entitle them to refuse to testify at all. "A civil infraction action is a civil action." MCL 257.741(1); MSA 9.2441(1). As a party to a civil action, defendant must be distinguished from an accused in a criminal proceeding who has the right not to take the stand. Defendant thus "has only the privilege of not giving an incriminating response to any inquiry put to him". *People v Guy*, 121 Mich App 592, 609; 329 NW2d 435 (1982). He "has no occasion to invoke the privilege against self-incrimination until testimony [228] sought to be elicited will in [534] *fact tend*[7] to incriminate". *Brown v United States*, 356 U.S. 148, 155; 78 S Ct 622; 2 L Ed 2d 589 (1958); *Meyer v Walker Land Reclamation, Inc*, 103 Mich App 526, 532; 302 NW2d 906 (1981).

Moreover, the duty of determining the legitimacy of a witness's exercise of the constitutional privilege falls to the trial judge. *Roberts v United States*, 445 U.S. 552, 560, fn 7; 100 S Ct 1358; 63 L Ed 2d 622 (1980). Of course, the judge must be certain that a witness's answer to a question "cannot possibly" have an incriminating tendency before ordering the witness to respond. *Malloy v Hogan*, 378 U.S. 1, 12; 84 S Ct 1489; 12 L Ed 2d 653 (1964). To allow a party/witness in a civil matter to successfully interpose a blanket assertion of the privilege would deprive the questioning party of a fair opportunity of cross-examination. "A witness may not employ the privilege to avoid giving testimony that he simply would prefer not to give." *Roberts*, supra, 445 U.S. 560, fn 7. For example: "His dishonesty or fraud, when not criminal, may as properly be proved by him as by any other witness." *Jennings v Prentice*, 39 Mich 421, 423 (1878). These principles have been codified in MCL 600.2154; [\*\*\*8] MSA 27A.2154:

"Any competent witness in a cause shall not be excused from answering a question relevant to the matter in issue, on the ground merely that the answer to such question may establish, or tend to establish, that such a witness owes a debt, or is otherwise subject to a civil suit; but this provision shall not be construed to require a witness to give any answer which will have a tendency to accuse himself of any crime or misdemeanor, or to expose him to any penalty or forfeiture, nor in any respect to vary or alter any other rule respecting the examination of witnesses."

In this case, the state did not seek to elicit any [\*535] criminally incriminating responses from defendant. The state's attorney asked questions relating solely to defendant's responsibility for the civil infraction. His rights under the Fifth Amendment were not infringed.

Defendant next argues that due process requires that the state prove each element of the offense by clear and convincing evidence and not, as in the instant case, by a preponderance of the evidence. Defendant contends that any other standard deprives citizens of the last shred of fundamental fairness and militates against the[\*\*\*9] transfer of traffic offenses from criminal to civil proceedings: it is one thing to deny the citizen a trial by jury, but it is still another to denigrate the standard of proof from beyond a reasonable doubt to the level of mere balancing of speculation and conjecture.

We, again, disagree.

Under MCL 257.747(5); MSA 9.2447(5): "If the judge determines by a preponderance of the evidence that the person cited is responsible for a civil infraction, the judge shall enter an order against the person." (Emphasis supplied.) Defendant cites no authority for the proposition that application of this standard of proof in a civil infraction case violates the Due Process Clause.

The state may establish the burden of persuasion and burden of proof in civil actions unless "it offends some principle of justice so rooted in the traditions and conscience of our people as to be ranked as

fundamental". *Patterson v New York*, 432 U.S. 197, 201-202; 97 S Ct 2319; 53 L Ed 2d 281 (1977) quoting *Speiser v Randall*, 357 U.S. 513, 523; 78 S Ct 1332; 2 L Ed 2d 1460 (1958). A standard of proof "serves to allocate the risk of error between the litigants and to indicate the relative importance attached[10] to the ultimate decision". *Addington* [536] v Texas, 441 U.S. 418, 423; 99 S Ct 1804; 60 L Ed 2d 323 (1979). The United States Supreme Court has weighed the extent of the individual's interest against the state's interest in a particular burden of proof in order to decide what standard is appropriate. *Addington*, supra, 441 U.S. 425. [229] Only where a fundamental liberty interest was at stake has the Court held application of the "clear and convincing" standard constitutionally required. See *Santosky v Kramer*, 455 U.S. 745; 102 S Ct 1388; 71 L Ed 2d 599 (1982) (parental rights termination proceeding); *Addington*, supra (involuntary commitment of the mentally ill); *Woodby v Immigration & Naturalization Service*, 385 U.S. 276, 285; 87 S Ct 483; 17 L Ed 2d 362 (1966) (deportation proceeding).

In this case, defendant was held responsible for a civil infraction and ordered to pay a small fine and court costs. The deprivation suffered pales in comparison to the "particularly important individual interests" which the Supreme Court has deemed entitled to enhanced protection. *Addington*, supra, 441 U.S. 424. Given the weight of the private and public interests[\*\*\*11] involved, it cannot be said that the traditional "preponderance of the evidence" test is violative of due process.

Defendant's final argument on appeal is that the issuing officer's failure to adhere strictly to the "Interim Guidelines for the Use of Radar Speed Measuring Devices" constitutes a violation of the due process guarantees contained in both the federal and state constitutions, US Const, Am V; Const 1963, art 1, § 17. Defendant contends that less than strict compliance with these minimum guidelines is a violation of due process because use of the guidelines has been occasioned by the need to be fair and accurate in the application of radar. The need to have minimum standards has been [\*537] emphasized by courts in other jurisdictions. Defendant urges this Court to follow their lead and adopt the Interim Guidelines or a substantial equivalent.

Defendant argues that, in the instant case, the guidelines were clearly violated in several critical instances: the patrol vehicle speedometer was not tested independently of the radar unit, and defendant was in a cluster of traffic and, under the guidelines, the officer should take no enforcement action if there is any doubt[\*\*\*12] as to target identification. In addition, defendant points out that the evidence indicates the mathematical and physical impossibility of defendant's automobile's being inside the radar beam at the time the speed reading was taken. Finally, defendant challenges the issuing officer's competency to testify on the basis that the officer had no classroom training in the use of radar.

We agree with defendant that due process requires adherence to some standards before radar speed evidence can be admitted against a defendant at trial.

"For the average law abiding American citizen, minor traffic offenses constitute the only contact such a person will have with the law enforcement and judicial systems. Public confidence rests upon the fairness of such proceedings. Until a radar device is invented that is accurate under any conditions, fairness dictates that contested prosecutions are conducted according to meaningful standards which insure the instrument's accuracy." *State v Hanson*, 85 Wis 2d 233, 246; 270 NW2d 212 (1978).

The formation of these standards, however, is a more difficult question which has not previously been addressed by the courts of this state.[\*538] [\*\*\*13] The Supreme Court has discussed radar speed detection in the context of a criminal prosecution for possession of a radar speed detection device.

In *People v Gilbert*, 414 Mich 191, 207-208; 324 NW2d 834 (1982), the Supreme Court discussed electronic surveillance of automobiles for purposes other than speed control:

"It appears that the technology may have already advanced to the point where a radio beam can be directed to hear conversations within an automobile. Or the police might surreptitiously install a radio

device on an automobile to monitor conversations within the automobile. The police might install an electronic device at a gate or field to identify automobiles entering the area.

"Persons who wish, by installing electronic detection devices, to protect themselves [\*\*230] against such police intrusion and surveillance may not be violating any law but merely fearful that their activities, political and not criminal, have come to the attention of the authorities.

"Electronic surveillance by the police is serious business and an intrusion into the privacy of anyone who is subjected to it.

"While the constitution may protect against use in a criminal prosecution of [\*\*\*14] evidence obtained by warrantless electronic surveillance, it is a matter of public policy to be decided in the first instance by the Legislature whether the police are authorized to conduct such operations. The police derive their authority from the Legislature, not the constitution. The police are not empowered to do whatever is not proscribed in the constitution. The Legislature alone can empower the police to engage in electronic surveillance. The Legislature did not, in 1929, address this issue of public policy in enacting the statute prohibiting the equipping of a vehicle with a radio receiving set."

Because defendant does not challenge the actual use of the radar speedmeter but the manner in which it was used, we do not address this issue.[\*539] We begin our discussion by limiting our topic to what standards should be applied in "moving radar" cases: that is, where the vehicle in which the radar speed detection unit (unit) is moving, i.e., being driven down the road as opposed to remaining in one spot (stationary mode).

Radar speedmeters operate on a principle known as the "Doppler effect". This Doppler effect is defined by Webster's Seventh New Collegiate[\*\*15] Dictionary as: *"a change in the frequency with which waves (as of sound or light) from a given source reach an observer when the source and the observer are in rapid motion with respect to each other by which the frequency increases or decreases according to the speed at which the distance is decreasing or increasing"*. n1 Because the [540] Doppler effect is a scientifically recognized method for determining the speed of a moving vehicle, its reliability is not at issue here nor do we question it. The use of radar speedmeters has been criticized for other reasons, specifically:

1. The units themselves have not been subject to any performance standards.
2. The operators of the units have not been properly trained. n2

o Footnotes - - - - -

n1 "Radar speed-measuring devices operate on the well-known Doppler principle, which relates the frequency shifts in reflected radiation to the relative velocity between the reflecting object and the observer. Existing radar devices transmit a continuous signal at either 10.525 GHz in the X band or 24.15 GHz in the K band, and they analyze the reflected signal for frequency shifts that indicate the speed of vehicles in the path of the beam. Each mile per hour of target speed produces a frequency shift of 31.4 Hz with the X-band frequency or 72.0 Hz with the K-band frequency.

"The radar device mixes the incoming signal with a portion of the unshifted signal to obtain the frequency shift as a beat frequency, or a series of frequencies if a number of targets are within the beam. A processor then selects a target from among the various return signals. How this is done varies somewhat from device to device but, most typically, the processor will select either the strongest or the fastest return signal, depending on the relative strengths of the two. A phase-locked loop then 'locks onto' this target and feeds its frequency shift into a digital display that is calibrated in miles per hour. Simultaneously, the amplified frequency shift of the signal, or a synthesized signal of the same frequency, is fed into a speaker. The shifts are in the audio range -- for example, 1884 Hz for a 60-mi/h-vehicle when the X band is used.

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"If the radar device is operated in the moving mode -- that is when the police car is itself moving -- an additional circuit function acts to determine and subtract out the speed of the police vehicle. The device takes the strong ground-return signal bouncing off objects close to the highway as a measure of the Doppler shift created by the police vehicle's own motion, subtracts the resulting velocity from that of the target vehicle, and feeds the result into the digital display as target velocity. Typically, in the moving mode, the officer is searching for violators in the opposite lanes. Those in his own direction can be just as easily detected by pacing them." Fisher, Shortcomings of Radar Speed Measuring Devices, IEEE Spectrum, Dec 1980, p 29 [hereinafter Fisher].<sup>[\*\*16]</sup>

n2 "The accuracy of radar devices as they have been used to enforce speed laws on roads in the United States is being questioned. Well-publicized court rulings -- such as last year's State of Florida v Aquilera ruling -- have found radar speed readings inadmissible as legal evidence, because the radars were operated in such a way as to cast doubt on the accuracy of the readings.

"Yet existing devices are, in fact, quite accurate if used within their limitations by trained operators. The current problems can be overcome through better training and tighter equipment standards, while some relatively simple technical improvements in the radars can significantly reduce present limitations." Fisher, *supra*, p 29. See also Trichter & Patterson, Police Radar 1980: Has the Black Box Lost Its Magic?, 11 St Mary's L J 829, 831 (1980) [hereinafter Trichter] and the sources cited therein.

▪ End Footnotes- - - - -

[\*\*231] Criticism of radar inaccuracies peaked in Florida in 1979. After hearing the testimony and arguments of experts in the fields of mathematics, electrical engineering and the design, construction<sup>[\*\*17]</sup> and testing of radar devices which ran to over two thousand pages of transcript and the receipt of 33 exhibits, the Dade County Court concluded that: "the reliability of the radar speed measuring devices as used in their present modes \* \* \* has not been established beyond and to the exclusion of every reasonable doubt nor has it met the test of reasonable scientific certainty." State v Aquilera, 48 Fla Supp 207 (Dade County Ct, 1979). The court <sup>[\*541]</sup> then excluded or suppressed the radar speed measuring device evidence in each of the 80 speeding violation cases consolidated before it.

n3

◦ Footnotes- - - - -

n3 See Comment, Radar Speed Detection: Homing in on New Evidentiary Problems, 48 Fordham L Rev 1138 (1980).

▪ End Footnotes- - - - -

In State v Hanson, 85 Wis 2d 233; 270 NW2d 212 (1978), the Supreme Court of Wisconsin established the following guidelines for the prosecution of speeding citations issued on the basis of speed measurements made by a moving speed radar device. In Wisconsin, a prima facie presumption of accuracy sufficient<sup>[\*\*18]</sup> to support a speeding conviction is accorded to moving radar upon testimony by a competent, operating officer that:

"1. The officer operating the device has adequate training and experience in its operation.

"2. That the radar device was in proper working condition at the time of the arrest. This will be established by proof that suggested methods of testing the proper functioning of the device were followed.

"3. That the device was used in an area where road conditions are such that there is a minimum possibility of distortion.

"4. That the input speed of the patrol car must be verified, this being especially important where there is a reasonable dispute that road conditions may have distorted the accuracy of the reading, (i.e., presence of large trucks, congested traffic and the roadside being heavily covered with trees and signs.)

"5. That the speed meter should be expertly tested within a reasonable proximity following the arrest and that such testing be done by means which do not rely on the radar device's own internal calibrations." Hanson, supra, p 245.

Although defendant had directed this Court's attention to the standards set forth in Hanson, defendant urges *[\*\*19] this Court to recognize, as a minimum [542]* standard, the Interim Guidelines for the Use of Radar Speed Measuring Devices promulgated by the Office of Highway Safety Planning of the Michigan Department of State Police.

These guidelines, first distributed throughout the criminal justice system in December, 1979, are the work of a task force which included members from the Michigan Association of Chiefs of Police, Michigan Sheriffs' Association, Michigan State Police, Michigan Law Enforcement Officers' Training Council, Michigan State University, State Prosecuting Attorneys' Coordinating Council, District Judges' Association, and the Office of Highway Safety Planning. Although not mandatory on any law enforcement unit, the guidelines were distributed to enhance the use of radar in Michigan as a tool for law enforcement. We do not quote these guidelines here because we decline defendant's invitation *[\*\*232]* to adopt them as the minimum standard. Instead, we have devised a hybrid set of standards based on those set out in Hanson and the Interim Guidelines.

Hereafter, in Michigan, in order to avoid any violation of the due process rights of a defendant in a speeding case *[\*\*\*20]* involving "moving" radar, the following seven guidelines must be met in order to allow into evidence speed readings from a radar speedmeter:

1. The officer operating the device has adequate training and experience in its operation.
2. That the radar device was in proper working condition and properly installed in the patrol vehicle at the time of the issuance of the citation.
3. That the device was used in an area where road conditions are such that there is a minimum possibility of distortion. n4
4. That the input speed of the patrol vehicle was *[\*543]* verified. This also means that the speedometer of the patrol vehicle was independently calibrated. n5

*[\*544]* 5. That the speedmeter be retested at the end of the shift in the same manner that it was tested prior to the shift and that the speedmeter be serviced by the manufacturer or other professional as recommended.

*[\*\*233]* 6. That the radar operator be able to establish that the target vehicle was within the operational area of the beam at the time the reading was displayed.

1. That the particular unit has been certified for use by an agency with some demonstrable expertise in the area.

o Footnotes - - - - -

n4 As explained in Section IV of the Interim Guidelines, radar readings can be affected by a number of factors. The following list is not meant to be exclusive.

a. Cosine Error:

"The lateral or horizontal alignment of the antenna is critical. A deviation of 8 degrees or more will result in what is referred to as a cosine error (angle error). This factor will cause a deviation in the target vehicle's true speed. On stationary mode, the deviation will result in a reduced display reading of

the target vehicle's true speed. In the stationary mode, the angle error will always be in favor of the target vehicle and is not a valid defense. In the moving mode, a deviation of 8 degrees or more from the patrol vehicle's direction of travel may result in a false increase in the target vehicle's true speed. A deviation of 7 degrees or less laterally is required to negate this factor."

b. Batching Error:

"This is the result, in some units, of the computer's inability to maintain a current patrol car tracking speed when subjected to sudden extreme changes in velocity. The batching error may result in a speed displayed higher or lower than the actual target vehicle speed. The radar operator should avoid any sudden changes in patrol vehicle speed to eliminate this effect."

c. Shadow Error:

"This may result when the radar, in moving mode, fixes onto a large moving object in front of it rather than on to the stationary terrain. This will result in the difference between the patrol vehicle speed and the large moving object's speed being erroneously perceived by the computer as the patrol vehicle's speed. The remainder of the patrol vehicle's actual speed will be added to the target vehicle's speed, causing a spurious reading. The operator must be conscious that his patrol vehicle radar verification reading correlates with the speedometer reading at the time of a target display. In most cases, the target reading displayed will be so exaggerated that it will be ignored by the experienced operator."

d. Ghost Readings:

"Ghost readings are readings displayed by the computer module when no vehicle is in the operational beam area. These readings may be caused by electric fan interference, radio transmissions, neon lights, and other extraneous factors both inside and outside the patrol vehicle. The radar unit, however, is designed so that these readings will be eliminated when a target vehicle comes into the operational beam area. As none of the criteria necessary for a valid traffic citation are present when these readings may be displayed, the experienced radar operator shall ignore them." [\*\*\*21]

n5 Verification by means of the radar unit is not sufficient. Conversely, the verification of the radar unit using a speedometer not independently calibrated is also not sufficient. Both amount to "bootstrapping" the accuracy of the unit. The Interim Guidelines require independent calibration.

"In testing a moving radar unit the patrol car's speedometer is measured against the digital display of the 'low radar'. When this low radar reading and the patrol vehicle's speedometer are the same, the radar is said to be operating accurately.

"Criticism: Automobile speedometers are not inherently error free. Authorities estimate the margin of error at about seven percent. When a vehicle's tires have been changed to either a smaller or a larger size the speedometer must be recalibrated, otherwise the vehicle speedometer fails to measure the true speed of the vehicle. When the speedometer of the pace vehicle is malfunctioning or there has been a tire size change without subsequent recalibration, an error in the radar unit may go undetected if the radar's error is identical to the speedometer error." [Footnotes omitted.] Trichter & Patterson, supra, pp 845-846.

▪ End Footnotes- - - - - [\*\*\*22]

These guidelines can be met by a showing that the issuing officer followed the recommendations contained in the Interim Guidelines and other recommendations issued by the Office of Highway Safety Planning. We recognize, also, that there may exist other agencies or organizations with a demonstrable expertise in this area which promulgate similar guidelines which may be used to show that the above guidelines have been met.



Addressing the substance of defendant's challenges to his speeding citation, we hold that the radar speedmeter evidence was inadmissible for the following reasons:

1. The patrol vehicle speedometer had not been [\*545] calibrated independently of the radar unit, in violation of guideline number 4.
2. The evidence indicates the mathematical and physical impossibility of the target vehicle being inside the radar beam, in violation of guideline number 6. We feel this point requires further explanation.

At trial, Officer Flore testified that US 27 is a four lane highway with a center median. The lanes are each 12 feet wide and the median is approximately 35 to 40 feet wide. Officer Flore was travelling in the northbound passing lane when he first observed [\*\*\*23] defendant travelling in the southbound passing lane at what appeared to him, by visible observation, a speed in excess of the speed limit. Using the Decatur MV-715A unit installed in his patrol car, the officer determined that defendant was travelling at 67 mph and the patrol vehicle was travelling at 53 mph. The officer's initial observation of defendant was at a distance of 750 to 900 feet. The officer observed defendant's vehicle for 4 or 5 seconds before operating the radar unit.

In his defense, defendant called Dr. Dennis Bryde, a law enforcement specialist with Michigan State University. The trial judge allowed Dr. Bryde to testify as an expert on the use of radar. Dr. Bryde testified that the width of the radar beam is approximately 18 degrees. Using the figures supplied by Officer Flore, Dr. Bryde computed the closing speed between the two vehicles to be 120 mph or 176 feet per second. After four seconds, the vehicles would have been 196 feet apart (900 feet less 704 feet); after five seconds, they would have been only 40 feet apart. At neither of these distances would defendant's vehicle have fallen within the radar beam from Officer Flore's unit.

[\*546] Defendant[\*\*\*24] also contends that Officer Flore was not properly trained. With this we cannot agree. Although Officer Flore did not receive the type of training recommended by Dr. Bryde, Officer Flore consistently passed a certifying exam adapted from an examination prepared by Dr. Bryde.

The finding of responsibility against defendant is reversed.

Reversed. No costs, a public question being involved.