

[Cite as *State v. Cleavenger*, 2018-Ohio-446.]

STATE OF OHIO, BELMONT COUNTY

IN THE COURT OF APPEALS

SEVENTH DISTRICT

STATE OF OHIO,)	CASE NO. 17 BE 0003
)	
PLAINTIFF-APPELLEE,)	
)	
VS.)	OPINION
)	
TODD M. CLEAVENGER,)	
)	
DEFENDANT-APPELLANT.)	

CHARACTER OF PROCEEDINGS: Criminal Appeal from the Western Division Court of Belmont County, Ohio Case No. 14 TRD 01925

JUDGMENT: Affirmed.

APPEARANCES:

For Plaintiff-Appellee: Atty. Daniel P. Fry
Belmont County Prosecutor
Atty. Helen Yonak
Assistant Prosecuting Attorney
147 West Main Street
St. Clairsville, Ohio 43950

For Defendant-Appellant: Atty. Robert Campbell
2800 West Market Street
Akron, Ohio 44333

JUDGES:

Hon. Carol Ann Robb
Hon. Cheryl L. Waite
Hon. Mary DeGenaro

Dated: January 25, 2018

[Cite as *State v. Cleavenger*, 2018-Ohio-446.]
ROBB, P.J.

{¶1} Defendant-Appellant Todd Cleavenger appeals the decision of the Belmont County Court, Western Division, finding him guilty of speeding. Appellant contends the court erred in taking judicial notice and admitting the speed measurement obtained by the trooper from the radar device installed in his cruiser as there was an inadequate foundation on the scientific reliability of the device. Appellant also argues the state failed to show the device was operated by a properly certified user and claims his conviction was contrary to the manifest weight of the evidence. For the following reasons, the trial court’s judgment is affirmed.

STATEMENT OF THE CASE

{¶2} On May 24, 2014 at 3:20 p.m., Appellant was issued a speeding citation by a trooper with the Ohio State Highway Patrol while traveling on State Route 800 in Belmont County. Appellant did not appear in court on the date listed on the citation. Instead, he faxed a request to set the matter for trial. The court set the matter for trial, but entries sent to Appellant at the Texas address he provided to the trooper were returned by the postal service. The court issued a non-resident violator compact notice of suspension in August 2014. In July 2016, Appellant contacted the court seeking a trial.

{¶3} Trial to the court proceeded on October 18, 2016. The trooper testified he was travelling in the opposite direction of Appellant whose vehicle was approaching him on State Route 800. The speed limit was 55 miles per hour. The trooper visually estimated Appellant’s vehicle to be travelling in excess of the speed limit and activated his radar device, which measured Appellant’s speed at 67 miles per hour. (Tr. 23, 33, 40). The trooper testified his cruiser had a BEE III radar device installed, which operated on Doppler principles. (Tr. 25, 38). He testified about his training, certification, and experience with radar devices and with this type of device. He also explained how the device takes the “closing speed” and subtracts the cruiser’s speed to obtain the target’s speed; he checks his cruiser’s speedometer to ensure it matches the speed the device provides as the cruiser’s speed. (Tr. 38, 45, 67). The court took judicial notice of a past finding by the court that a radar device

using this Doppler effect was a scientifically accepted method of determining the speed of a motor vehicle, citing its *Cuiksa* case. (Tr. 31-33).

{¶4} As for accuracy of the specific device, the trooper testified he activated the radar device causing it to internally check itself at the start of his shift. He also used tuning forks to check the calibration of the device at the beginning of his shift at 2:00 p.m. and at the end of his shift at 10:00 p.m. (Tr. 25-26, 41-42). The troopers do not keep a daily log of these checks. (Tr. 41, 46). He explained that this is not the calibration of the device but is the test to ensure the device is maintaining an accurate calibration. (Tr. 47, 68). A radio technician checks the calibration every six months and performs any necessary recalibration. (Tr. 26, 28-29); (State Ex. 4-6). For instance, a “radar and tuning fork frequency measurement report” was issued by a radio technician who checked the device on March 11, 2014 and on November 18, 2014. (State Ex. 4). The trooper attested the radar device was working properly and correctly calibrated on the day in question. (Tr. 26, 31, 101).

{¶5} The owner’s manual for the radar device was admitted into evidence by Appellant, who represented himself. (Def. Ex. 4). Appellant questioned the trooper on his knowledge of various scenarios that could potentially cause interference and asked him to read excerpts from the owner’s manual. Appellant presented a witness in his defense, who said she was the front seat passenger on the day Appellant received the citation. She testified Appellant was travelling at 55 miles per hour and was using his cruise control at the time in question. (Tr. 111-113).

{¶6} The court issued a judgment entry concluding the trooper was properly trained to operate the radar device and properly operated it in a manner consistent with his training. The court credited the officer’s testimony that he used the tuning forks to check calibration before and after his shift, concluding his testimony on frequent measurement checks is enough to show the device was working. Upon researching law cited by Appellant, the trial court found no support for his suggestion that a written log must be kept on the use of tuning forks. Citing its *Cuiksa* case, the court reiterated its prior recognition of Doppler radar as a commonly accepted scientific method for measuring the speed of a motor vehicle. The court noted that

Appellant elicited from the trooper possible items that can affect a scientific instrument such as the radar device but this did not indicate any error occurred that day.

{¶7} Appellant was found guilty of speeding in violation of R.C. 4511.21(D). A fine of \$100 was imposed (plus costs of \$139.50). Appellant filed a timely notice of appeal from the December 28, 2016 sentencing entry.

GENERAL LAW ON RADAR EVIDENCE

{¶8} In 1958, the Ohio Supreme Court was presented with the question: “May a defendant be convicted of speeding solely upon evidence obtained from a radar speed meter, in the absence of expert testimony with respect to the construction of the meter and its method of operation?” *City of E. Cleveland v. Ferrell*, 168 Ohio St. 298, 299, 154 N.E.2d 630, 631 (1958). In answering this question in the affirmative, the Court explained:

The radar speed-detecting devices commonly used in traffic control operate on what is known as the Doppler effect and utilize a continuous beam of microwaves sent out at a fixed frequency. The operation depends upon the physical law that when such waves are intercepted by a moving object the frequency changes in such a ratio to the speed of the intercepted object that, by measuring the change of frequency, the speed may be determined. * * * In operation, the radar device * * * is set up along the side of a road or street, usually in or upon a parked police car, with the beam being played along the highway. When a moving vehicle crosses that beam, the speed of the vehicle is registered * * *.

Id. at 300 (also noting the Doppler effect has been used for over a century in determining the speed of stars and for over a decade in measuring the speed of airplanes and their height above the ground).

{¶9} When a witness testifies as to information from an instrument constructed on knowledge of scientific laws, “three fundamental propositions apply”:

A. The type of apparatus purporting to be constructed on scientific principles must be accepted as dependable for the proposed purpose by the profession concerned in that branch of science or its related art. This can be evidence by qualified expert testimony; or, if notorious, it will be judicially noticed by the judge without evidence.

B. The particular apparatus used by the witness must be one constructed according to an accepted type and must be in good condition for accurate work. This may be evidenced by a qualified expert.

C. The witness using the apparatus as the source of his testimony must be one qualified for its use by training and experience.

Id. at 301, quoting Wigmore, *The Science of Judicial Proof*, 450.

{¶10} Focusing on the first prong of this test, the Court pointed to a “developing realization” that expert testimony on the electronic principles involved in radar speed detection is no longer required, i.e., a court need not hear expert testimony in each speeding ticket case “as to the nature, function or scientific principles underlying” the radar detector. *Ferrell*, 168 Ohio St. at 301-303. After reviewing decisions of other state courts, the Ohio Supreme Court stated, “We are in accord with the trend of the most recent decisions that readings of a radar speed meter may be accepted in evidence, just as we accept photographs, X rays, electroencephalographs, speedometer readings, and the like, without the necessity of offering expert testimony as to the scientific principles underlying them.” *Id.* at 303. (There was no indication the trial court had taken judicial notice in any manner aside from allowing the officer to testify, just as a court does not announce it is taking judicial notice that an x-ray or camera works on established scientific principles.)

{¶11} The remaining issues for the *Ferrell* Court concerned the second and third prongs of the test, which were described as questions involving: “the sufficiency of the evidence concerning the accuracy of the particular speed meter involved in the instant case and the qualifications of the person using it.” *Id.* In finding compliance

with the second proposition, the Court said the city electrician explained how he checked the calibration of this particular device on the morning of the violation and found it was in proper working order. *Id.* On the third proposition, the Court concluded, “the officer in charge of the radar car was merely required to read the dial on the meter in the same way that a speedometer is read. A police officer with five years of experience is certainly qualified to do that.” *Id.* at 303-304.

{¶12} Accordingly, upon finding Doppler radar devices for ascertaining the speed of a vehicle need no longer be established as scientifically reliable in speeding cases, the Court expressed the two issues left for the prosecution in presenting the speed measurement generated by the device was to show the particular device was working accurately at the time (through evidence on calibration checks) and the officer was qualified to use the device. *See id.* at 301-304.

{¶13} At the time of the *Ferrell* decision, the radar devices were operated while the user was stationary. Law enforcement thereafter began using radar devices that provided speed measurements while the user was moving. Although the Ohio Supreme Court eliminated the need for expert testimony to prove scientific principles of the Doppler radar technology used by police radar devices in order to admit speed measurements, it was concluded by various appellate districts this holding would “not apply to a device which not only measures speed but adjusts such speed measurement to compensate for the speed of the moving vehicle in which it is mounted”. Thus the state was required to present “expert testimony with respect to construction of the device and its method of operation with respect to its ability to differentiate the speed of a vehicle approaching the moving patrol car from the opposite direction from the combined speed at which the two vehicles are moving toward each other.” *See, e.g., State v. Wilcox*, 40 Ohio App.2d 380, 319 N.E.2d 615 (10th Dist.1974), syllabus.¹

{¶14} In addressing the state’s burden, the *Ferrell* Court was concerned with the scientific principle underlying the device, not the manufacturer or model of the device; the holding applied to the scientific basis for radar technology. Nevertheless,

some courts began requiring testimony for new models of moving radar device prior to the taking of judicial notice. Other appellate districts concluded judicial notice is not device-specific as judicial notice involves the scientific principle upon which the device operates when the scientific principle has been accepted as dependable. See, e.g., *State v. Wiest*, 1st Dist. No. C-070609, 2008-Ohio-1433, ¶ 12 (“It is the scientific principle underlying a device's reliability-and not the reliability of a specific model-that renders judicial notice proper”); *State v. Yaun*, 3d Dist. No. 8-07-22, 2008-Ohio-1902, ¶ 18 (trial court did not err in taking judicial notice of the Python II radar device when it had previously taken judicial notice of the K-55 device as they operated on the same principle). The *Ferrell* Court likened the matter to one of accepting x-rays at trial; and when a new model of x-ray machine is released, courts are not required to hear expert testimony or find a prior case regarding that model.

JUDICIAL NOTICE OF RADAR DEVICE

{¶15} Appellant sets forth three assignments of error, the first of which contends:

“THE TRIAL COURT ERRED IN ADMITTING INTO EVIDENCE THE SPEED MEASUREMENTS TAKEN BY THE BEE III RADAR DEVICE WITHOUT A PROPER FOUNDATION.”

{¶16} Appellant points out the state did not present expert testimony on the reliability of a Doppler radar device used to ascertain the speed of a moving vehicle from a moving vehicle. He acknowledges a court conducting a trial for a speeding ticket can avoid the need for an expert on the moving radar device by taking judicial notice of its accuracy. See, e.g., *East Liverpool v. Lawson*, 7th Dist. No. 13 CO 52, 2014-Ohio-5858, ¶ 10; *State v. Tulugu*, 7th Dist. No. 10-MA-77, 2011-Ohio-5134, ¶ 66. Appellant contests the trial court’s taking of judicial notice in this case.

{¶17} Evid.R. 201 governs judicial notice of adjudicative facts (defined as “the facts of the case”). Evid.R. 201(A). This rule has been applied by this court in the context of speed device cases. *Lawson*, 7th Dist. No. 13 CO 52 at ¶ 10; *Tulugu*, 7th Dist. No. 10-MA-77 at ¶ 66. Pursuant to Evid.R. 201(B): “A judicially noticed fact

¹ Similar holdings were made as to laser speed measuring devices as their use grew.

must be one not subject to reasonable dispute in that it is either (1) generally known within the territorial jurisdiction of the trial court or (2) capable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned.” A court has discretion to take judicial notice even if not requested and must take judicial notice if requested by a party who supplies the necessary information. Evid.R. 201(C)-(D). “A party is entitled upon timely request to an opportunity to be heard as to the propriety of taking judicial notice and the tenor of the matter noticed. In the absence of prior notification, the request may be made after judicial notice has been taken.” Evid.R. 201(E).

{¶18} It has been stated there are three paths for taking judicial notice of the accuracy of a scientific device in a case under the territorial jurisdiction option: (1) a “reported municipal court decision” from that jurisdiction;² (2) a “reported or unreported case from the appellate district” covering that jurisdiction; or (3) the previous consideration of expert testimony about a specific device where the trial court notes it on the record. *Lawson*, 7th Dist. No. 13 CO 52 at ¶ 10-11; *Tulugu*, 7th Dist. No. 10-MA-77 at ¶ 66 (upholding the taking of judicial notice on laser device), quoting *Columbus v. Bell*, 10th Dist. No. 09AP-1012, 2010-Ohio-2908, ¶ 14, citing *Cincinnati v. Levine*, 158 Ohio App.3d 657, 2004-Ohio-5992, 821 N.E.2d 613.

{¶19} Appellant cites the Sixth District’s *Shelt* case where the court found the record contained expert testimony on the construction and method of operation of the MR-7 moving radar device mounted on the moving patrol vehicle to determine the speed of a vehicle approaching from the opposite direction. *State v. Shelt*, 46 Ohio App.2d 115, 346 N.E.2d 345 (6th Dist.1976), paragraph one of syllabus. Upon this conclusion, the court declared: “Upon publication of this opinion, it may be judicially noticed that the MR-7 moving radar device, using the Doppler effect, is acceptable as dependable for its proposed purpose.” *Id.* at paragraph two of syllabus.

{¶20} Appellant distinguishes this case from his as there was no expert testimony here and there has been no similar pronouncement in this appellate

² We note the quote refers to a “municipal court case” but clearly a case out of the pertinent *trial* court (whether it be county court, common pleas court, or municipal court) would be appropriate as well.

district. It has been asserted a court cannot take judicial notice based merely on a decision in another district. See, e.g., *Lawson*, 7th Dist. No. 13 CO 52 at ¶ 12. The taking of cross-jurisdictional notice within the state has been suggested. See, e.g., *Cleveland v. Tisdale*, 8th Dist. No. 89877, 2008-Ohio-2807, ¶ 14.

{¶21} Regardless, judicial notice of adjudicative facts can be taken where the fact is capable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned. Evid.R. 201(B)(2). This includes a scientific fact which can be verified and is beyond reasonable dispute. See *id.* at 1980 Staff Note. In 1958, the Ohio Supreme Court’s *Ferrell* decision pronounced the acceptance of the results of radar devices using Doppler to measure the speed of moving vehicles noting such acceptance was akin to courts accepting readings from other devices without expert testimony on how the device scientifically works (such as x-rays or speedometers). Moving radar devices have been in use in law enforcement for over forty years since the initial appellate decisions refused to apply the principle in *Ferrell* to cases where the measurement was not taken with a stationary radar device.

{¶22} Accordingly, some judges have voiced that the time has come for a decision resembling *Ferrell* to be rendered by any court presented with the reliability issue as to a radar device used while moving (which also use the Doppler effect) and even to lasers, leaving the court to determine only the accuracy or working order of the particular device and the officer’s qualifications to operate it. See, e.g., *Tisdale*, 8th Dist. No. 89877 at ¶ 15-18 (where the majority concluded expert testimony is no longer required to establish the general reliability of moving radar or laser devices used to determine speed); *State v. Freiteg*, 9th Dist. No. 07CA0082, 2008-Ohio-6573, ¶ 21-26 (Whitmore, J., dissenting) (“I consider these requirements outdated and unnecessary given the state of the science surrounding all radar and laser-based speed monitoring devices and the revised opinion reporting rules of the Ohio Supreme Court”³; “speed measuring devices have reached the point that they are

³ The Supreme Court designated its own website as the Ohio Official Reports for opinions of the courts of appeals and the court of claims. Rep.Op.R. 3.2. Under the 2012 Amendments to the Ohio Supreme Court’s Rules for

generally accepted as scientifically reliable”).

{¶23} On this topic, the Eighth District (in 2008) considered whether “Ohio courts may have fallen behind the technological advancements” and found “[t]he city makes a compelling argument that all radar-based speed measuring devices in use today, and arguably all laser-based units now in use, are reliable, even in the absence of expert testimony as to their reliability.” *Tisdale*, 8th Dist. No. 89877 at ¶ 12, 15. In 2017, a concurring judge of that district observed: “At this point, all radar measuring systems have stood the test of time, and the general reliability should be common knowledge to all. Requiring expert testimony for moving systems is absurd. The same can be said for laser devices, which have an even greater level of accuracy and reliability.” *Greater Cleveland Metroparks v. Ismail*, 8th Dist. No. 104412, 2017-Ohio-5570, ¶ 20 (Gallagher, J., concurring).

{¶24} In debating a new approach, however, the appellate courts have generally decided to wait until the Ohio Supreme Court is presented with an opportunity to specifically rule on the matter. For instance, after the *Tisdale* holding, a different panel of the Eighth District disavowed *Tisdale* but stated:

Further in light of the increasing debate among appellate courts, we would encourage the Ohio Supreme Court to consider whether expert testimony should be required to establish the general reliability of moving-radar and laser speed devices. Arguably, both radar and laser technology are now commonly accepted and recognized methods for reliably and accurately measuring the speed of a moving vehicle. The need to revisit the issue of judicial notice is compelling.

Cleveland v. Craig, 8th Dist. No. 99619, 2013-Ohio-5742, ¶ 22.

{¶25} Appellate courts have concluded the lack of foundation for a speed measuring device implicates the sufficiency of the evidence where judicial notice was not taken. *New Middletown v. Yeager*, 7th Dist. No. 03 MA 104, 2004-Ohio-1549 ¶ 7,

Reporting Opinions, trial court decisions are no longer published by the Ohio Supreme Court (with the exception of the court of claims). See Former Rep.Op.R. 5, 7, 10. Even before that, the reporter had discretion to refuse a trial court case submitted by a trial court judge for publication. See Former Rep.Op.R. 10 (and its 2002

9, 11 (where the radar device was unspecified at trial, there was no indication the trial court took judicial notice, and there was no evidence officer was qualified to operate device). See also *State v. Looney*, 7th Dist. No. 89-B-33 (May 17, 1990) (“Where there is no testimony as to the construction and method of operation of a speed measuring device not the subject of judicial notice, the testimony of the user, standing alone, is insufficient to sustain a conviction for speeding.”).

{¶26} Regardless, the issue is evidentiary where a trial court takes judicial notice of the device’s scientific reliability, the device’s accuracy of operation is shown, and officer qualifications are met. See *Yeager*, 7th Dist. No. 03 MA 104 at ¶ 14 (adopting the principle “that the failure to object to the judge taking judicial notice of the reliability of the radar detector waives that issue for appeal, but whether the detector was properly working and the administer was qualified to use it is not waived for purposes of appeal”), citing *State v. Brown*, 9th Dist. No. 02CA0034-M, 2002-Ohio-6463, ¶ 8 (failure to object to the decision to take judicial notice of the reliability of the radar device during the trial waived his challenge on appeal); *State v. Sadeghi*, 9th Dist. No. 14AP0051, 2016-Ohio-744, ¶ 22 (consider the judicially noticed evidence in evaluating an insufficiency claim). This distinction “recognizes that the state may rely upon the trial court’s evidentiary rulings in deciding how to present its case.” *State v. Brewer*, 121 Ohio St.3d 202, 2009-Ohio-593, 903 N.E.2d 284, ¶ 19.⁴

{¶27} The case at bar is distinguishable from any case where the device was not described by the officer and where the trial court did not take judicial notice. The trooper described the device installed in his vehicle as a BEE III Doppler radar, which he used while moving. The prosecutor asked the officer if his radar device was a scientifically acceptable means of measuring speed in the court’s jurisdiction, and he said it was. Appellant objected on the basis that there are numerous items that can affect the radar device’s ability to measure speed and he disclosed his plan to

Commentary). It has been suggested the “reported” trial court case option for judicial notice can be satisfied by a trial court entry filed of record discussing the topic.

⁴ A sufficiency review considers all evidence presented, whether admissible or not; if there is error in admitting evidence, the remedy is to remand for new trial (as opposed to the acquittal remedy for a sufficiency reversal). See *Brewer*, 121 Ohio St.3d 202 at ¶ 17-19, citing *Lockhart v. Nelson*, 488 U.S. 33, 109 S.Ct. 285, 102 L.Ed.2d 265 (1988).

question the trooper about these items. The trial court explained the officer was merely referring to a prior legal finding by the court. The court cited its prior case, concluding it found the principles underlying this type of radar device were scientifically accepted method for ascertaining speed. The state then asked the court to take judicial notice of the scientific reliability of the device. The court said it would take judicial notice, and no objection was entered.

{¶28} Appellant states he cannot find a *reported* trial court case or a Seventh District case concerning the radar device used by the trooper. He suggests the case cited by the trial court must not have been submitted for publication or thereafter chosen to be reported. We note the aforementioned discontinuation of the reporting of trial court cases by the Ohio Supreme Court.

{¶29} In any event, a third method of judicial notice listed is: the previous consideration of expert testimony about a specific device where the trial court notes it on the record. *Lawson*, 7th Dist. No. 13 CO 52 at ¶ 10. Although it may constitute best practices to provide the party with a copy of an entry from a prior unreported case heard by the court, this is not a requirement, especially where no objection was entered. When the trial court explained the court heard a prior case on the subject and would therefore take judicial notice of the reliability of the radar device used based upon the named case, Appellant did not object to the taking of judicial notice or inquire into the specific evidence involved in the prior case.

{¶30} A party must enter a timely objection to a trial court's decision to take judicial notice on the reliability of the device at issue. *See State v. Jamnicky*, 9th Dist. No. 03CA0039, 2004-Ohio-324, ¶ 12; *Stow v. Umpleby*, 9th Dist. No. 11260 (Jan. 18, 1984). *See also State v. DeLong*, 5th Dist. No. 16CA003, 2016-Ohio-4871 (no timely objection to judicial notice of moving radar described by trooper). This court adopted the principle "that the failure to object to the judge taking judicial notice of the reliability of the radar detector waives that issue for appeal * * *." *Yeager*, 7th Dist. No. 03 MA 104 at ¶ 14 ("but whether the detector was properly working and the administer was qualified to use it is not waived for purposes of appeal"), citing *State v. Brown*, 9th Dist. No. 02CA0034-M, 2002-Ohio-6463, ¶ 8 (failure to object to the

trial court's decision to take judicial notice of the reliability of the radar device during the trial waived his challenge on appeal).

{¶31} Objections must be set forth with specificity; an objection on one topic does not preserve an issue with regards to a subsequently raised topic. See Evid.R. 103(A)(1) (Error may not be predicated upon a ruling which admits evidence unless a substantial right is affected and a timely objection or motion to strike appears on record, stating the specific ground of objection, if the specific ground was not apparent from the context). Likewise, where the fact to be judicially noticed is considered adjudicative, a party is only entitled “to an opportunity to be heard on the propriety of taking judicial notice and the tenor of the matter noticed” if he makes “a timely request.” See Evid.R. 201(E). See also *State ex rel. Cty. of Cuyahoga v. Jones Lang Lasalle Great Lakes Co.*, 8th Dist. No. 104157, 2017-Ohio-7727, ¶ 108 (party who fails to timely request an opportunity to be heard regarding judicial notice waives any challenges to the judicially-noticed facts).

{¶32} In sum, when a court takes judicial notice, it is incumbent on a party (who wants to later oppose its taking of judicial notice) to challenge the judicial notice-taken by objecting and/or seeking an explanation of the specifics of the prior case heard by the court which was cited by the court on the record. Without such an objection and/or request to be heard on the propriety of taking judicial notice, the matter is waived.

{¶33} Upon the lack of a timely and specific objection, a reviewing court can, but need not, exercise its discretion to recognize plain error if an obvious error affected substantial rights. Crim.R. 52(B); *State v. Rogers*, 143 Ohio St.3d 385, 2015-Ohio-2459, 38 N.E.3d 860, ¶ 22–23. The plain error doctrine should be employed with utmost caution under only exceptional circumstances and only to prevent a manifest miscarriage of justice. *State v. Landrum*, 53 Ohio St.3d 107, 111, 559 N.E.2d 710 (1990). Any such review is still limited to the record below. *State v. Ishmail*, 54 Ohio St.2d 402, 406, 377 N.E.2d 500 (1978). Due to the lack of objection upon the taking of judicial notice, the record does not clearly evince an obvious error or incite our implementation of the discretionary plain error doctrine.

{¶34} We also hold pursuant to *Ferell* that expert testimony on the scientific principles involved in radar speed detection is no longer required for stationary or moving Doppler radar devices. A court need not hear expert testimony as to the nature, formation, or scientific principles underlying the radar detector. Use of Doppler radar devices over the past 60 plus years has established its scientific reliability. The trial court properly took judicial notice of this scientific principle. Accordingly, this assignment of error is overruled.

OFFICER QUALIFICATIONS

{¶35} Appellant's next assignment of error contends:

"THE TRIAL COURT ERRED IN RULING THAT THE BEE III RADAR DEVICE USED IN THE INSTANT CASE WAS PROPERLY CERTIFIED AND OPERATED."

{¶36} As aforementioned, after the Ohio Supreme Court held "readings of a radar speed meter may be accepted in evidence, just as we accept photographs, X rays, electroencephalographs, speedometer readings, and the like, without the necessity of offering expert testimony as to the scientific principles underlying them," the Court declared the remaining issues involve "the sufficiency of the evidence concerning the accuracy of the particular speed meter involved in the instant case and the qualifications of the person using it." *Ferell*, 168 Ohio St. at 303-304 (which the Court found were satisfied by evidence on calibration checks and officer experience).

{¶37} Appellant challenges the trooper's use of the radar device installed in his police cruiser, stating the trooper's training was critical to the case. Appellant argues the trooper's certificate of training form presented as an exhibit at trial revealed the trooper was not adequately trained to use the radar device operated on the day Appellant was cited. He contends the trooper's certificate of training form only shows one day of training on the BEE III radar device (in February 2012). He concludes the "paucity of training on the BEE III radar device used at the time of his traffic stop is in and of itself sufficient evidence to raise a reasonable doubt as to the reliability and accuracy of the reading taken by [the trooper] in this case."

{¶38} The trooper testified to his 18 years of service with the Ohio State Highway Patrol (16 years at the time of the ticket). He was trained to use radar devices at the police academy and identified a certificate he received for a course on electronic speed measuring devices in February 1999. (Tr. 26-27); (St. Ex. 1). Every year thereafter he received training in his vehicle on the installed radar device and on visually estimating speeds. (Tr. 26-28, 83); (St. Ex. 2-3). The state submitted his “instructor’s and operator’s certificate of training form” which certified his hours of annual radar training since June 1999. (St. Ex. 2-3). He passed his radar training courses every year since his first course in 1999. (Tr. 100). The trooper attested he was proficient and current in his training on this radar device. (Tr. 30, 101).

{¶39} The certification entry for the February 2012 training specified the trooper received four hours of training on “BEE III” which was the device used when Appellant was cited for speeding. Appellant discounts any experience an officer gains by years of training on a prior model of radar device and believes it is significant that entries subsequent to February 2012 did not specify the model of radar involved in the training. On this point, however, the trooper testified his subsequent training sessions were all on this same individual device, noting the training occurred in his cruiser and this was the device installed in his cruiser on and after the February training date. (Tr. 62, 73-74). After the four hours of training in February 2012, he received another two hours of training in May 2012 and four hours of training in June 2013; subsequent entries involved annual training after the citation. (St. Ex. 3).

{¶40} Contrary to Appellant’s contention, the state presented adequate evidence of the trooper’s qualifications to permit the radar speed measurement to be considered as evidence. This assignment of error is overruled.

{¶41} Finally, although not raised here, we note the testimony establishing the accuracy of the trooper’s radar device as set forth in the statement of the case supra: evidence was presented regarding recurring calibration checks by a radio technician; one such check occurred two months prior to the stop; the next two occurred six months and eleven months after the stop; the device internally checked itself when

the trooper started his shift; the trooper testified to performing tuning fork calibration checks at the beginning of his shift and at end of his shift; the citation was issued one hour and twenty minutes after his shift began; he checked the speed of the cruiser as registered on the cruiser's speedometer against the radar device's speed read-out for the cruiser to ensure they matched during the clocking of the target vehicle; no issues were discovered with regards to the calibration of the device during any of the checks; and the trooper attested the device was working properly and correctly calibrated on the day in question.

WEIGHT OF THE EVIDENCE

{¶42} Appellant's second assignment, discussed last, alleges:

"THE TRIAL COURT'S FINDING THAT DEFENDANT IS GUILTY OF A VIOLATION OF O.R.C SECTION 4511.21(D) IS AGAINST THE MANIFEST WEIGHT OF THE EVIDENCE."

{¶43} Weight of the evidence concerns "the inclination of the greater amount of credible evidence, offered in a trial, to support one side of the issue rather than the other." *State v. Thompkins*, 78 Ohio St.3d 380, 387, 678 N.E.2d 541 (1997). Whether a verdict is contrary to the manifest weight of the evidence is not a question of mathematics but depends on the effect of the evidence in inducing belief. *Id.* See also *id.* at 390 (Cook, J., concurring) (weight of the evidence involves the state's burden of persuasion, whereas sufficiency involves the burden of production). The appellate court is to review the entire record, weigh the evidence and all reasonable inferences, consider the credibility of witnesses, and determine whether, in resolving conflicts in the evidence, the fact-finder clearly lost its way and created such a manifest miscarriage of justice that the conviction must be reversed and a new trial ordered. *State v. Lang*, 129 Ohio St.3d 512, 2011-Ohio-4215, 954 N.E.2d 596, ¶ 220, citing *Thompkins*, 78 Ohio St.3d at 387.

{¶44} This discretionary power of the appellate court is to be exercised only in the exceptional case in which the evidence weighs heavily against the conviction. *Id.* The reviewing court must preserve the role of the trier of fact with respect to issues surrounding the credibility of witnesses and the weight of the evidence. *Thompkins*,

78 Ohio St.3d at 387, 389. In other words, “the weight to be given the evidence and the credibility of the witnesses are primarily for the trier of the facts.” *State v. Hunter*, 131 Ohio St.3d 67, 2011-Ohio-6524, 960 N.E.2d 955, ¶ 118, quoting *State v. DeHass*, 10 Ohio St.2d 230, 227 N.E.2d 212 (1967), paragraph one of syllabus. The trier of fact occupies the best position to weigh the evidence and judge the credibility of each witness by observing gestures, voice inflections, and demeanor. *Seasons Coal Co. v. Cleveland*, 10 Ohio St.3d 77, 80, 461 N.E.2d 1273 (1984). We therefore generally proceed under the premise that when there are two fairly reasonable views of the evidence or two conflicting versions of events, neither of which is unbelievable, we do not substitute our judgment and choose which one we believe is more credible. *State v. Gore*, 131 Ohio App.3d 197, 201, 722 N.E.2d 125 (7th Dist.1999). Until a version approaches the unbelievable, the incentive to intervene does not arise.

{¶45} Appellant states the only evidence of speeding was the measurement from the radar device and the trooper’s visual estimation testimony. He then relies on his prior argument that the radar measurement was inadmissible to conclude the finding of guilt was not based upon competent, credible evidence. He compares the trooper’s testimony on visual estimation of speed with his witness’s testimony that he was traveling 55 miles per hour and using cruise control. Noting the time that had passed since the citation was written (almost two years) and the many vehicles encountered by the trooper since the stop in question, Appellant urges the trooper’s testimony was less credible.

{¶46} Initially, it should be pointed out there was briefly a Supreme Court law holding mere visual estimation of speed could constitute a sufficient means to prove a speeding violation where the officer was trained, certified, and experienced in making such visual estimates. *Barberton v. Jenney*, 126 Ohio St.3d 5, 2010-Ohio-2420, 929 N.E.2d 1047, ¶ 19. However, the legislature responded in 2011 with the following statutory amendment: “No person shall be arrested, charged, or convicted of a violation of any provision of divisions (B) to (O) of section 4511.21 or section 4511.211 of the Revised Code or a substantially similar municipal ordinance based

on a peace officer's unaided visual estimation of the speed of a motor vehicle, trackless trolley, or streetcar.” R.C. 4511.091(C)(1). Notably, the amendment specifically states that it does not prohibit the use of visual estimation testimony; rather, the estimate cannot be “unaided.” The amendment additionally states: “This division does not * * * Preclude the use by a peace officer of a stopwatch, radar, laser, or other electrical, mechanical, or digital device to determine the speed of a motor vehicle * * *.” R.C. 4511.091(C)(1)(a).

{¶47} Consequently, where the allegation involves a vehicle travelling over a speed limit, such as Appellant’s citation under R.C. 4511.21(D), visual estimation alone is not sufficient to prove the violation. *Compare* R.C. 4511.21(A) (speed greater or less than is reasonable or proper, and speed greater than will permit the person to stop at an assured clear distance). For purposes of this case, without the radar measurement, the visual estimation of speed alone could not be used to sustain the speeding conviction under R.C. 4511.091(D).

{¶48} Appellant’s manifest weight of the evidence argument relies upon the elimination of the radar speed measurements from consideration under prior assignments. As his arguments against admitting the measurement are overruled, a review of the weight of the evidence would include the speed measurement of 67 miles per hour where the speed limit was 55 miles per hour. Although a specific argument on weight of the evidence with the speed measurement was not clearly made, we reviewed the weight of all the evidence. The trial court heard the testimony of the officer and the defense witness and could choose to believe the trooper’s testimony. The trooper viewed Appellant’s vehicle approaching him, visually estimated his vehicle as speeding, activated his radar device, and obtained a reading of 67 miles per hour on a road with a speed limit of 55 miles per hour. As aforesaid, his testimony on calibration checks and his qualification and proper usage of the radar device was believable. The trooper was familiar with topics discussed in the owner’s manual. The court was not required to adopt a theory of external radar interference. The read-out of the cruiser’s speed as clocked by the radar was separately displayed on the device, and this was checked against the

cruiser's speed displayed on the vehicle's speedometer. In sum, this assignment of error is overruled.

{¶149} The trial court's judgment is hereby affirmed

Waite, J., concurs.

DeGenaro, J., concurs.