

**Police Traffic  
RADAR & LIDAR  
Instructor Course Agenda  
by  
Law Enforcement Services, LLC**



<u>Day 1</u>	<u>08:00 - 12:00</u>	<u>4 hours</u>	<u>Day 1</u>	<u>13:00 - 17:00</u>	<u>5 hours</u>
<b>Objectives, Handouts, &amp; Testing</b>		<b>.5</b>	<b>Radar Basics</b>		<b>2.0</b>
<b>Student Introductions</b>		<b>.5</b>	4.1	Types of Radar	
<b>The Speed Problem</b>		<b>1.0</b>	4.2	The Doppler Principle	
1.1	History		4.3	Waves and Frequencies	
1.2	National Statistics		4.4	Characteristics of Radio Waves	
1.3	2000 NHTSA Statistics		4.5	The Doppler Shift	
1.4	Recognition and Reaction Time		4.6	Police Traffic Radar	
1.5	Braking and Total Stopping Distance		4.7	The Radar Beam	
1.6	Velocity and Speed		4.8	Understanding Trigonometric Functions	
1.7	Momentum and Kinetic Energy (chapter review questions)		4.9	Determining Beam Widths	
<b>Speed Laws and Public Safety</b>		<b>1.0</b>	4.10	Lines of Equal Sensitivity	
2.1	Basic Speed Law		4.11	Inverse Square Law	
2.2	Speed Limit Misconceptions		4.12	Contour Lines of Equal Sensitivity	
2.3	Speed Limits and Compliance		4.13	Beam Range - Sensitivity	
2.4	85th Percentiles		4.14	Automatic Gain Circuitry	
2.5	Public Safety (chapter review questions)		4.15	Target Reflectivity	
<b>Speed Enforcement</b>		<b>1.0</b>	4.16	Range Control Techniques	
3.1	Pacing		4.17	Doppler Audio	
3.2	Time-Distance		4.18	Cosine Effect (chapter review questions)	
3.3	Time-Distance Computers		<b>Installation, Testing and Operation</b>		<b>1.0</b>
3.4	RADAR		5.1	Installation	
3.5	LIDAR		5.2	Testing	
3.6	Estimating Distances		<b>Practical Exercise</b>		<b>1.0</b>
3.7	Estimating Speeds			Light Segment Test	
3.8	Stopwatch Calibration Checks			Internal Circuitry Test	
3.9	Distance Calibration Checks			Tuning Fork Tests	
3.10	Speedometer Calibration Checks (chapter review questions)			Tuning Fork Mode	
				Stationary Mode	
				Front & Rear Antenna	
				Faster Vehicle Mode	
				Moving Mode	
				Front Opposite & Same	
				Rear Opposite & Same	
			<b>Home Work</b>		<b>1.0</b>
				Review Chapters 1-5 (read IACP testing)	

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<u>Day 2</u>	<u>08:00 - 12:00</u>	<u>4 hours</u>	<u>Day 2</u>	<u>13:00 - 17:00</u>	<u>5 hours</u>
	<b>Installation, Testing and Operation</b>	<b>1.0</b>		<b>Modern Police Radar</b>	<b>2.0</b>
	(continued)			7.1 Digital Signal Processing	
5.3	Operation			7.2 Patrol 5/20 or 10/20	
5.4	Tracking History			7.3 Continuous Tracking	
5.5	Radar Effects (stationary)			7.4 Same Lane Tracking	
5.6	Enforcement Considerations			7.5 Patrol Speed Display-Lock	
5.7	Radar Detectors and Jammers			7.6 Patrol Speed Blank	
5.8	Radar Detector/Detectors (RDD)			7.7 Fastest Vehicle Mode	
5.9	Radar/Lidar Jammers			7.8 Complete Tracking History	
	(chapter review questions)			7.9 Counting Unit Displays	
	<b>Practical Exercise</b>	<b>1.0</b>		7.10 Counting Unit Controls	
	Light Segment Test			7.11 Rechargeable Battery Handles	
	Internal Circuitry Test			7.12 Directional Sensing Radar	
	Tuning Fork Tests			7.12 Directional Sensing Radar	
	Tuning Fork Mode			7.13 Vehicle Speed Sensor	
	Stationary Mode			7.14 STALKER DSR 2X	
	Front & Rear Antenna			7.15 POP Technology	
	Faster Vehicle Mode			7.16 Target Acquisition	
	Moving Mode			7.17 Speed Detection Video Interface	
	Front Opposite & Same			7.18 STALKER II MDR	
	Rear Opposite & Same			(chapter review questions)	
	<b>Understanding Moving RADAR</b>	<b>2.0</b>		<b>Radar and Occupational Safety</b>	<b>1.0</b>
6.1	Principles of Moving Radar			8.1 Energy Levels of Microwave	
6.2	Cosine Effects in Moving Radar			8.2 Microwave and Cancer	
6.3	Shadowing Effects in Moving Radar			8.3 Safety Rules	
6.4	Eliminating Low Doppler Errors			(chapter review questions)	
6.5	Calculating Moving Cosine and Shadowing Effects			<b>Photo Radar</b>	<b>1.0</b>
6.6	Moving Radar Operation			9.1 General Operation	
6.7	Radar Effects (moving)			9.2 Photo Radar and Private Enterprise	
6.8	Enforcement Considerations			9.3 Photo Radar Court Cases	
6.5	Calculating Moving Cosine and Shadowing Effects			9.4 State Laws Regulating Photo Radar	
6.6	Moving Radar Operation			(chapter review questions)	
6.7	Radar Effects (moving)			<b>Homework</b>	<b>1.0</b>
6.8	Enforcement Considerations			Review Chapters 5-9	
	(chapter review questions)				

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<u>Day 3</u>	<u>08:00 - 12:00</u>	<u>4 hours</u>	<u>Day 3</u>	<u>13:00 - 17:00</u>	<u>5 hours</u>
<b>LIDAR</b>		<b>2.0</b>	<b>Course Review &amp; Questions</b>		<b>1.0</b>
11.1	History of Laser		<b>Final Exam</b>		<b>1.0</b>
11.2	Principles of Operation		<b>Moot Court (preparation)</b>		<b>2.0</b>
11.3	Lidar Sighting Systems		Selection of:		
11.4	Lidar Tracking History		Officer, Defendant, Prosecutor,		
11.5	Lidar Effects		Defense Attorneys & Jury.		
11.6	Time-Distance		The traffic stop roleplay:		
11.7	Survey Measurements		(officer & defendant)		
11.8	Inclement Weather Program		<b>Homework</b>		<b>1.0</b>
11.9	Safety Considerations		(Classroom Presentation Preparation)		
11.10	Military Warning		<b>Day 4</b>	<b>08:00 - 12:00</b>	<b>4 hours</b>
11.11	Testing Lidar		<b>Instructor Presentations</b>		<b>4.0</b>
11.12	Lidar Case Law		<b>Day 4</b>	<b>13:00 - 17:00</b>	<b>5 hours</b>
11.13	Autovelox 105 SE		<b>Instructor Presentations</b>		<b>2.0</b>
	(chapter review questions)		<b>Practical Exercise</b>		<b>2.0</b>
			RADAR, LIDAR, Stopwatch Operation		
<b>Standards, Certification, and Law</b>		<b>2.0</b>	<b>Homework</b>		<b>1.0</b>
10.1	Federal Standards		(Moot Court Preparation)		
10.2	IACP Standards and Testing		<b>Day 5</b>	<b>08:00 - 12:00</b>	<b>4 hours</b>
10.3	Radar Case Law - United States		Moot Court		<b>3.0</b>
10.4	Radar Case Law - Canada		<b>Course Evaluation</b>		<b>.5</b>
10.5	Radar Case Law Conclusions		<b>Presentation of Certificates</b>		<b>.5</b>
10.6	Certification				
10.7	Court Testimony				
10.8	Traffic Evidence Kit				
	(chapter review questions)				