

To Earn the Pedestrian Awareness Badge

To Earn First Star of Pedestrian Awareness (PA) Badge

Define the "Critical Second." Find LOS (Line-Of-Sight) Blockages Make 45° Search at LOS Blockages Make 90° Search at Intersections before entering Know how to locate and evaluate the Target Area Be able to evaluate Targeting Path of Travel Determine whether Targeting Path (TP) is open or closed Earn a score of 100 on the Exiting Quiz*

To Earn Second Star of PA Badge

Know how to measure space in seconds Judge space of vehicle within one-second of accuracy Turn Head to See TP before turning body to Target Know how to locate the Target Know how to aim your body on target Know when your body gets off target Know how to use Central Vision Know now to use Fringe Vision

To Earn Third Star of PA Badge

Describe the Buffer Make B Zone, A Zone, C Zone Search at Intersection before crossing Know how to locate gaps in traffic flows Know how to locate holes in traffic flows Know how to use LP1, LP2, LP3 Know how to use Lane Positions to predict drivers' a

To Earn Fourth Star of PA Badge

Use Selective Attention Matrix A Future Zone Know conditions of: Open or Closed Zones Use Selective Attention Matrix B and C Present Zon Find LOS Blockages caused by Environment: Curves, Hills, Intersections, Buildings, Bridges, Bushes, Signs, Weather Conditions Fog, Rain, Snow, Ice, Snow Banks Find LOS Blockages Caused by Vehicles: Parked Vehicles (Trucks, Buses, SUVs, Cars), Vehicles that are: Stopped, Slow Moving, Enteri the Roadway, Tailgating

To Earn Fifth Star of PA Badge

Search to Target Area for Conditions Know how to Search 15-Second Range Search 15-Seconds for "Go" or "Slow" Condition Be Aware at the 4-Second Danger Zone Know the 2-Second Point-Of-No-Return (PONR) Be Aware of the Critical Second



Pedestrian Awareness Badge

*To earn each Star, a score of 100 must be achieved on the Exiting Quiz.

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To Earn the Bicyclist Awareness Badge

To Earn First Star of BA Badge

Practice all Actions from Pedestrian Badge into Habits Learn how to Find P.O.T(Path-OF-Travel) Blockages

Stopped, Slow-moving vehicles, Pedestrians, Animals, Road surface Learn Staggered Stop at Intersections Learn Legal Stop at Intersections Learn Safety Stop at Intersections With car in Front have "Stop to See tires" space

To Earn Second Star of BA Badge

Be aware of Rear A Zone when stopped Unstable Rear Zone Identify "Sand Barrels" Communicate Know Escape Path Know Tailgater Types Charger One Pacer Habits

To Earn Third Star of BA Badge

Respond to Regulatory Signs Learn conditions that dictate Speed Limits Learn to Read Traffic lights: Green, Yellow, Red Learn factors for timing traffic lights Know when at PONR Read Traffic Signal Arrows: Green, Yellow, Red Learn how to read Pavement Markings Learn How Warning Signs are Cues for Actions

To Earn Fourth Star of BA Badge

Learn how to Find, Solve, and Control Critical Seconds Know 4-Second Separation Be able to explain Benefits of Separation Space Know how to Control Closure Rate Learn how to Manage LOS Blockages Know how to Control the Buffer

To Earn Fifth Star of BA Badge

Know how to use Speed, LPs, Communication to Time Separation Identify Fixes C and B Zone LOS and TP Blockages Identify Moving B and C Zone LOS and TP Blockages
Know how to Change Lanes
Be Aware of changing nighttime conditions: Evaluate depth perception Learn nighttime Environmental problems Difference in visibility with Full Moon vs New Moon Rural Road problems Urban environment problems



Bicyclist Awareness Badge



Developed by **Professor Frederik R. Mottola** National Institute for Driver Behavior

To Earn the Zone Control Awareness Co-Driver License

Level 1: Power Tools for Awareness

Session 1: Introduction to Zone Control e-Coach

Introduction:

- 1. For family members from 4-to-90-years-old
- 2. Co-Drivers to Cultivate Awareness Habits
- 3. The Power of Habits Control your Actions
- 4. Skid Control before learning to drive
- 5. What a toddler can teach drivers
- 6. Playing the piano vs. learning to drive
- 7. Intro to Critical Second and LOS-POT
- 8. Zone Control and Selective Attention Matrix
- 9. Ten Habits and Partnership for Expert Driving
- 10. Awareness to Share the Road for Control
- *Guide 27. Use of Selective Attention Matrix
 - 1. Evaluate Future Window Is there a LOS-POT Blockage? Is it a Go or Slow condition?
 - 2. Look for Critical Seconds

Session 2: Earn Awareness Badge

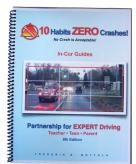
- Guide 14. Buffer and Zone Control
 - 1. Identify LOS-POT Blockage
 - 2. Respond to Close A Zone Condition Check Rear A Zone Consider/Apply Best Speed Control Option Keep same speed Decelerate Off-Gas, Cover Brake Off-Gas, Apply Brake Increase Speed

3. Respond to A/B/C Zone Change Check Opposite Zone Apply Speed Control Option Apply Lane Position LP1, LP2, LP3 Guide 27. Use of Selective Attention Matrix 3. Evaluate B and C Present Windows

5. Evaluate B and C Present Windows Find a LOS-POT Blockage Check the Other Zone

Guide 18. Rear Zone Control

1. Use of Rearview Mirror After Seeing a Zone Change Before and After Braking



Session 3: Managing LOS-POT Blockages Guide 16. Communications

a. Courtesy a Gift to Yourself b. Receive messages Guide 13 Recognition of LOS-POT 1. Identify LOS-POT Front A Zone See to Target Area See 15-Second Range See Within Danger Zone 2. Identify LOS-POT Left-Front B Zone FIND in Target Area SOLVE at 15-Second Range CONTROL 4-second Danger Zone 3. Identify Closed Zones Closed Front A Zone LOS-POT Closed B or C Zone LOS-POT Guide 10. Finding LOS-POT Blockages 1. LOS Caused by Environment Curves, Hills, Intersections, Buildings, Bridges, Fences, Trees, Bushes, Signs Weather: fog, night, Snow bank 2. LOS Caused by Vehicles

- Parked vehicles, busses, trucks Vehicle stopped, Slow moving Vehicles entering roadway
- 3. POT Caused by Environment Red lights, Stop & Yield signs, Intersections, Narrowing lanes Surface; Rough, Bumpy, Holes Loose Gravel, Sand, Leaves Rain, Water, Snow, Ice
- 4. POT Caused by Vehicles Slow Moving, Turns, Stops No 4-second Separation Space Pedestrians, Animals, Car

*Guide numbers are in reference to those listed in the 10 Habits Zero Crashes Partnership for Expert Driving book by Professor Mottola.

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Session 4: Earn Space Management Badge

Guide 26. Separation from Vehicles

- 1. Adjust Front A Zone Closure Rate
- 2. Become Alert to Slower Vehicles
- 3. Keep 4-Seconds of Separation
- 4. Try to Improve LOS Condition
- 5. Read Traffic 12-15 Seconds Ahead
- 6. Control the Rear Zone
- 7. Response to Communications
- 8. Read Meaning of Slowdowns
- 9. Know the Rewards received
- 17 Actions for EXPERT Control

Session 5: Control of Vision for Car Control

Guide 04. On Target - Off Target

- 1. Selection of Target
- 2. Use of Central Vision
- 3. Use of Fringe Vision
- 4. Aiming for Targets
- 5. Looking into Turns
- 6. Use of Steering Wheel (for drivers)
- 7. Transition Peg for Left and Right Turns
- 8. Recovery at Transition Peg (Tpeg)
- 9. Effective use of gas and brake pedal

Session 6: Use Your Eyes to Feed the Brain

Guide 12. Searching to Target Areas

- Search to Target Area Use Matrix's Future Window Ask: "Is it a Go or Slow Condition?" Find LOS-POTs in Target Area Ask: "Is Target Area open or closed?" Identify Conditions of POT Response to Zone Changes
- 2. Search 15-Second Range Find LOS-POT Blockages Respond to LOS-POTs
- 3. Know 4-Second Range Use Central Vision Use Fringe Vision

4. Judge Distance in Seconds Take a Guess Guess first is important to feed brain Count off by 1001, 1002, etc Test your accuracy — redo often Take guesses at various speeds

Session 7: Earn Car Control Badge

- Guide 05. Reference Point Discoveries
 - 1. Line-of-vision blind area
 - 2. Right Side Limitation
 - 3. Left Side Limitation
 - 4. Front even with Curb line
 - 5. Rear even with line
 - 6. Lane Position #2 (LP2)
 - 7. Lane Position #1 (LP1)
 - 8. Lane Position #3 (LP3)

Session 8: Receive Rewards Approaching Vehicle

Guide 01. Getting Ready to Drive

- 1. Be mentally and physically fit to co-drive
- 2. Know how to detect drowsiness
- 3. Know how to correct drowsy driving
- 4. Have key in hand
- 5. Evaluate surroundings on approach Look under the car on approach Look at and around the car
- 6. Before Opening the Door Look inside the car Control the door swing
- 7. After Entering the Car Lock Doors, Key in ignition (if needed) Head Restraint up to ears Adjust seat, Butt-in-seating Check and adjust all mirrors Safety belt on all, windows up

Exiting Exam for Entry into Level 2

Teens are able to earn Badges and Stars for Achievement Before Beginning to Drive!











Teens are able to earn the Zone Control Co-driver License as their Ticket to Begin the Driving Phase.

Level 2: Building Routines into Habits

Session 9: Earn Awareness Badge 1st Star

Guide 27. Use Matix Practice Commentary

- 1. Look for Critical Seconds in A Future Zone
- 2. Evaluate B and C Present Zones Find LOS-POT Blockage Check Other Zones
- 3. Use Actions for Best Control Speed Selection Lane Position Communication
- 4. Verbalize Condition of Zones Control Critical Second at PONR Full Attention, Adjust Speed, best LP
- 5. Practice for 10-15 minutes at a time

Session 10: The Beginning for Precision Turns

Guide 05. Reference Points for Turns Right Turn References from Stop Position 1. Side Position 2. Forward Position Left Turn References from Stop Position 1. Side Position

2. Forward Position

Session 11: Earn Space Manage Badge 1st Star

Guide 06A. Entering and Crossing Traffic Using Holes and Gap for Control Select Gap from Curbside 1. Use of signal lights 2. Mirrors checked Know rear zone before stopping Know side zone before turning

- 3. Evaluate Path to Enter
- 4. Locate Gap or Hole to enter
- While Entering Traffic Flow
 - 1. Avoid Hesitation
 - 2. Look to Target Area
 - 3. Side position reference point
 - 4. Steering technique
 - 5. Speed control

After Entering Traffic Flow

- 1. Cancel Signal
- 2. Evaluate Tracking Path
- 3. Re-evaluate Rear A Zone
- 4. Look for new LOS-POTs

Session 12: Priming the Brain to Control Turns

Guide 06B. Precision Turns

- Before Turning
 - 1. Use of Signals
 - 2. Mirrors & Blind area checked
 - 3. Side Position Reference Point
 - 4. Speed Control brake
 - 5. Staggered Stop on Approach
 - 6. Smooth Legal Stop at stop line
 - 7. Forward Position/Safety Stop
 - 8. Search Deep to Target Area
 - 9. Search L, F, R Zones for Gap/Hole
 - 10. Get Commitment

During the Turn

- 1. Avoid Hesitation
- 2. Turn Head to Target Area
- 3. Get speed and steering control
- 4. Accelerate, steering recovery at Tpeg
- 5. Evaluate Accuracy of Tracking path
- After the Turn
 - 1. Re-evaluate Rear A Zone
 - 2. Look for LOS-POT Blockages

Session 13: Earn Car Control Badge 1st Star

Guide G17. Approach to Danger Squares

- 1. See Intersection in A Zone Target Area
- 2. Check B Rear Zone
- 3. Select Best Lane Position
- With Green Light, or no light Search Left, Front, Right Best to Worst Speed Control for 45° Search at LOS-POT Be In Control at PONR
- 5. Red Light or Stop Sign Staggered Stop Legal Stop Safety Stop
- 6. Stopping with Vehicle in Front Stop to See its Rear Tires touching the road When car in front moves, see if it's a "go" Avoid making false starts in motion
- 7. Stopped in Traffic
 - Monitor Rear until there are "Sand Barrels" Unstable Rear
 - Know escape path
 - Communicate

Session 14: Earn Awareness Badge 2nd Star

Guide 20. Traffic Lights

- Timing Lights for a Green
 - 1. See light in Target Area
 - 2. Red light is a Closed Zone
 - 3. See number of stopped vehicles
 - 4. Check A Rear Zone
 - 5. Alert Rear by Tapping brakes
 - 6. Reduce Speed by Slight braking
 - 6. Time Arrival into Open Zone
 - 7. One second per vehicle to move
 - 8. Green Light no stopped vehicles Search left, front, right zones Detect LOS-POT Blockage Search from best to worst Be in Control at PONR
 - 9. Red Light Cars stopped, stop to see tires No cars, Consider Staggered Stop Monitor Rear Zone
- Left Turn at Green Light, no arrow Wait Slightly beyond Forward Position Four Checks to Continually make
 - 1. Check Rear until stable
 - 2. Look for Gap or Hole to enter
 - 3. See Open Path to Enter Look for Pedestrians crossing Look for right-turning vehicles
 - 4. See Light Changing Look for vehicles to stop Check for red light runners Evaluate your POT again

Session 15: Being in Control at Roundabouts

- Guide 21. Entering/Exiting Roundabouts
 - 1. See Roundabout in Target Area
 - 2. Decide which Exit to Take
 - 3. Yield to Left traffic, Enter to Right
 - 4. Be Alert to others Entering
 - 5. Multiple Lanes, Enter Inside Lane
 - 6. To Exit, Lane Change to Outside
 - 7. Use Signal Light before lane change
 - 8. Use Outside Mirror to detect cars
 - 9. Look into Exiting Path

Session 16: Space Management Badge 2nd Star

- Guide 19. Stopping in Traffic
 - Note: These actions develop same habits to control highway slowdowns.
 - 1. See Closed POT in Future A Zone
 - 2. Check A Rear Zone
 - 3. Time Arrival into Open Zone
 - 4. Communicate to A Rear Zone
 - 5. Braking Without Delay
 - 6. Control A Rear Zone
 - 7. Gradual Approach to Stop
 - 8. Make Smooth Stop
 - 9. Monitor A Rear Zone
 - 10. With Stopped Traffic Stop to See its Rear Tires When car in front moves, see if it's a "go" Avoid making false starts in motion

Session 17: Managing Smooth Lane Changes

Guide 22. Precision Lane Change

- 1. Ask: "What's to gain by the change?"
- 2. Check other lanes
- 3. Mirror Checks
- 4. When opening is detected, signal on
- 5. Move to LP2 for changing to the left
- 6. Move to LP3 for changing to the right
- 7. Check blind area if rear is not stable
- 8. Time Arrival for Open Side Zone
- 9. Increase speed if necessary
- 10. Enter LP3 of new lane or LP2
- 11. Release Signal lever
- 12. Establish best LP for Conditions

Session 18: Traffic Regulations Share the Road

- Guide 24. Laws, Signs, Signals & Markings
 - 1. Respond to Stop and Yield Signs
 - 2. Respond to Traffic Signal Lights Know PONR on Green Lights Red lights and Right Turn on Red Yellow Changing Lights PONR Green Light, 45° Search
 - 3. Signal Arrows: Green, Yellow, Red
 - 4. Flashing Signal Lights
 - 5. Respond to Traffic Signs
 - Regulatory, Warning, Guide Signs
 - 6. Respond to Pavement Markings
 - 7. Demonstrate Right-of-Way Laws

Session 19: Earn Car Control Badge 2nd Star

Guide 25. Approaching Curves and Hills

- 1. See Curve in Target Area
- 2. Check Rear Zone
- 3. Test Tire-Road Grip
- 4. See a Left or Right Curve
- 5. See 4-Seconds of Road for Speed Control
- 6. Get Best Speed Control
- 7. Look for Approaching Vehicles, Use LPs
- 8. See LOS-POT at Apex
- 9. Look into Curve for POT
- 10. Evaluate New Target Area
- 11. Evaluate Targeting Path
- 12. Hill crest Approach LP1
- 13. At Hill crest Evaluate POT

Session 20: Controlling Space on Freeways

Guide 34. Limited Access Highways

- Getting on the Highway
 - 1. Check the Rear Zone
 - 2. Keep 4-Seconds of Space
 - 3. On Ramp, Use Outside Mirror
 - 4. Search for Gap or Hole to Enter
 - 5. See length of Merge Lane
 - 6. Find Gap or Hole, Signal Light On
 - 7. Check Side Mirror for Traffic to Rear
 - 8. Accelerate to Blend into Traffic Flow
 - 9. Enter LP2 or LP3 like Lane Change
 - 10. Get Speed to that of Traffic Flow
- 11. Check Rear Zone

Getting Off the Highway

- 1. Plan Exit 12 or More Seconds Ahead
- 2. Get Rear Zone Status
- 3. Communicate
- 4. Change Lanes Early if Needed
- 5. Test Brakes on Deceleration Lane
- 6. Use Controlled Braking

Session 21: Being Passed and Passing Control

Guide 32A. Being Passed

- 1. Identify Type of Tailgater
- 2. Plan Ahead for Passing
- 3. Select Passing Location
- 4. Adjust Lane Position
- 5. Communicate if Needed
- 6. Adjust Speed
- 7. Adjust Separation Space

Session 21 (continued):

- Guide 32B: Passing
 - 1. Why Pass? Risk vs. Gain
 - 2. Keep at Least 3 Seconds Space
 - 3. Select Passing Location
 - 4. Outside Mirror, Blind Area if Needed
 - 5. Signal
 - 6. Check A Zone to Target Area Look for LOS-POT Blockages Look for Others Entering your POT Check B and C Zones
 - 7. Avoid Hesitation When Clear
 - 8. Accelerate Smoothly
 - 9. Keep Searching BAC Zones
 - 10. See Headlight in Rear View Mirror
 - 11. Return to Lane, Cancel Signal

Session 22: Acquire Night Vision

- Guide 31. Night Driving
 - 1. Adjust for Visibility Limits
 - Vehicle Readiness
 - Clean Light, Windows, Mirrors Check brake lights, signal lights Keep Dash lights low
 - Driver Readiness

Avoid Glaring Lights Evaluate your Depth Perception New Moon vs. Full Moon Visibility Rural Roadways, no lights Urban Street, overload of lights

- 2. Searching at Night Look beyond Headlights Look to Target Area Use High Beams with no Vehicles Look for Cars without lights on
 - See Curves and Intersections Early
- 3. Interacting With Others Look for Pedestrian Locations Dim High Beam with oncoming vehicles Communicate one flash to cars no lights No high beams when passing trucks See illuminate areas from others lights

Exiting Exam for Entry into Level 3

Level 3: Living in Your House of Habits

Session 23: Earn Car Control Badge 3rd Star

- Guide 18. Rear Zone Control
 - 1. Use of Mirrors After Seeing a LOS-POT Blockage Before and After Braking, While Stopped Before and After Turning, Lane Changing
 - 2. Check Mirror's Blind Area Know when a Blind Area Check is Needed Use Convex Mirror and/or Cameras Move Head and Eyes Effectively
 - 3. Rear Zone LOS-POT Blockage Fast Closing Vehicle LOS Blockage by Trucks Tailgater Type: Charger, One Pacer, Habitual
 - Awareness of Rear Zone Condition Open, Closed, Unstable Control Speed and Communication

Session 24: Control the Front Buffer is a Gift

Guide 26. Separation Space from Vehicles

- 1. Close in Gradually to POT Blockages
- 2. Become Alert to Slower Vehicles
- 3. Keep 4-Seconds for Front Buffer
- 4. Try to Improve LOS Blockages
- 5. Read Traffic Conditions In A Zone
- 6. Control the Rear A Zone
- 7. Respond to Communication Cues
- 8. When Front Vehicle Slows, look for reasons
- 9. Be able to Explain the Rewards gained

Session 25: Space Management Badge 3rd Star

Guide 27. Use Practice Commentary

- 1. Start with Okay Speed and Lane Position
- 2. Evaluate A, B, C Front Zones
 - Find LOS-POT and Critical Seconds Evaluate Rear A Zone Control Condition: Closed, Unstable
- 3. Decide On Best Options for Control Speed Control Lane Placement and LP1, 2, 3, 4, 5 Communication
- 4. Full Attention at 4-Second Danger Zone
- 5. 45° Search of LOS-POT before PONR
- 6. Receive the Reward of having Zone Control

Session 26: Separate Problems with Timing

- Guide 28A. Timing Side Zone
 - 1. Identify Fixed B or C Zone LOS-POT
 - 2. Identify Moving B or C Zone LOS-POT
 - 3. Time B Zone with a Fired C Zone
 - 4. Time C Zone with a Fixed B Zone
 - 5. Select best Lane Position
 - 6. With Closed B and C Zones, Reduce Speed
 - 7. Make Lane Change into Open B or C Zone
 - 8. While Passing, Time Open B and C Zone
 - 9. Communicate effectively
 - 10. Get Best Speed Control

Session 27: Earn Awareness Badge 3rd Star

Guide 28B. Control Critical Second

- 1. Control Critical Second when: Someone Enters your POT Your Car Gets Off Target
- 2. Critical Second Speed Control Closed Zones, Reduce Speed Closed A Zone, Adjust Speed Closed B and C Zones, Adjust Speed LOS-POT Blockage, Reduce Speed Danger Square, Adjust Speed Entering Curves, Reduce Speed Reduced Tire Grip, Reduce Speed Reduced Visibility, Adjust Speed Work Zones, School Zones, Reduce Speed

Session 28: Backing Into Space Gives you Control

- Guide 23. Perpendicular Backing Into Space
 - 1. Side and Forward Position
 - 2. Select 45^a Target, Check Side Mirror
 - 3. Creep, Turn Wheel Fast, Use Least Space
 - 4. Line up back with space, Shift to reverse
 - 5. Back to Rear Pivot point, Inch, Turn wheel
 - 6. Get Car Straight, Inch, Straighten Tires
 - 7. Back to rear Reference Point, Secure Car

Session 29: Managing Drowsy Driving

How to Detect and Correct Drowsy Driving

Session 30: Exiting Exam to earn: Zone Control Awareness Co-Driver License