



Huntsville, AL | April 2-3
 Baltimore, MD | April 7-8
 Denver, CO | July 30-31
 Los Angeles, CA | August 4-5

2025 Spirent Federal PNT Training Seminars

Planned Agenda – Subject to Change

Theme: Navigation Warfare (NAVWAR) Simulation for PNT Testing

Day 1

7:00	Registration & Light Breakfast			
8:00	Orientation			
8:15	State of NAVWAR			Session 1
9:15	Break with Refreshments			
	Beginner User Track		Experienced User Track	
9:30	NAVWAR Fundamentals I Session 2b Intent: In sessions 2b-3b, experts will guide users through creating, executing, and analyzing a jamming scenario on a Spirent PNT X simulator connected to a GPS receiver. Scenario description: The scenario occurs on an Army test range. A ground-based receiver tracking truth GPS signals navigates through multiple static GPS jammers. Users will build the scenario step by step alongside the instructor and then analyze the effects on a live receiver. As time permits, the group will experiment with audience input on jammer modifications.		Advanced NAVWAR I Session 2e Intent: In sessions 2e-3e, experts will guide users through creating, executing, and analyzing a spoofer scenario on a Spirent PNT X simulator connected to a GPS receiver. Scenario description: The scenario occurs off the coast of San Diego. An arial receiver with circular motion tracking true GPS encounters a high-powered jammer, followed by a spoofer. Jamming is subsequently removed, and the spoofing signal slowly deviates from the true trajectory. Users will build the scenario step by step alongside the instructor and then analyze the effects on a live receiver.	
11:30	Lunch			
12:30	Beg. Scenario I Cont'd Session 3b Finish scenario, run test, analyze receiver reaction, and iterate with different jammer modifications.		Adv. Scenario I Cont'd Session 3e Finish scenario, run test, analyze receiver reaction, and iterate with different spoofer settings.	
2:45	Break with Refreshments			
3:00	CRPA Testing			Session 4
4:00	High Dynamic Testing with Remote Motion			Session 5
5:00	Happy Hour at the Venue			
6:00	Dinner at the Venue			

Day 2

7:00	Light Breakfast	
	Beginner User Track	Experienced User Track
8:00	<p>NAVWAR Fundamentals II Session 6b</p> <p>Intent: In session 6b, experts will guide users to build upon the day-1 scenario by introducing a spoofer.</p> <p>Scenario description: The scenario involves creating a static spoofer transmitter and spoofer signal with a static position offset. Jamming signals will be modified as necessary to maximize spoofer effectiveness at a specified time and location. As time permits, we will experiment with spoofer modifications that add receiver clock deviations. The test setup mirrors that of day 1, with users building the scenario alongside the instructor and analyzing results on a live receiver connected to a simulator.</p>	<p>Advanced NAVWAR II Session 6e</p> <p>Intent: In session 6e, experts will guide users through advanced spoofing techniques with minimal use of jamming.</p> <p>Scenario description: The scenario involves constructing spoofers with a focus on GPS time manipulation and message modifications. Participants will leverage power scripting with a remote interface to implement these techniques, which require executing various real-time scenario commands in rapid succession. The test setup mirrors that of day 1, with users building the scenario alongside the instructor and analyzing results on a live receiver connected to a simulator.</p>
9:15	Break with Refreshments	
10:40	<p>Fundamentals II Cont'd Session 6b</p> <p>Finish scenario, run test, analyze receiver reaction, and iterate with different power and modulation levels.</p>	<p>Adv. NAVWAR II Cont'd Session 6e</p> <p>Finish scenario, run test, analyze receiver reaction, and iterate with different settings.</p>
11:30	Lunch	
	Assured PNT in NAVWAR	
12:30	<p>Field Testing in NAVWAR Applications Session 7</p> <ul style="list-style-type: none"> • Live-sky synchronization for spoofing and anechoic chambers • Record & playback at test events 	
1:15	<p>Complementary PNT Session 8</p> <ul style="list-style-type: none"> • LEO PNT, ALTNAV • Inertial & sensor fusion 	
2:00	Break with Refreshments	
2:15	<p>PNT Roadmap Session 9</p>	
3:00 – 4:00	<p>CUI SESSION – US Citizens Only, Visit Request & ID Required Session 10</p> <p>GPS M-Code</p> <ul style="list-style-type: none"> • How to test GPS M-Code • MNSA, AES, SDS, Regional Military Protection (RMP) 	