



Jammertest 2025 Transmission Plan

Jammertest Consortium

2025-06-25
10:58:37

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Monday

Location 1 Bleik

Monday morning before lunch will be used for setting up equipment and checking that all systems are operational. After lunch the testing will start with high power jamming.

Location 2 Grunnvatn

No activity before lunch. Testing of low-power handheld jammers after lunch.

∞ **Location 3 Motorcade**

No activity before lunch. Testing of low-power handheld jammers inside and outside vehicles after lunch.

Table 1.1: Monday

Monday 2025-09-15	Bleik(1)	Grunnvatn(2)	Motorcade(3)
Start time:	11:00	11:00	11:00
08:00			
09:00			
10:00			
11:00	11:00-13:00 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)	11:00-13:00 - 0.0.1 Mandatory morning briefing Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)	11:00-13:00 - 0.0.1 Mandatory morning briefing Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)
12:00			
13:00	13:00-14:00 - 0.1.1 Grace period Comment: Lunch Contact: Christian Skjetne (NPRA)	13:00-14:00 - 0.1.1 Grace period Comment: Lunch @ Bleik (Site 1) Contact: Christian Skjetne (NPRA)	13:00-14:00 - 0.1.1 Grace period Comment: Lunch @ Stave (Site 3) Contact: Jahn Erik Røhme (NPRA)
14:00	14:00-14:10 - 1.2.1 Jammer F8.1 "Porcus Major": 50 W CW: L1 Power: 50W Contact: Anders Eriksen (NKOM) <hr/> 14:20-14:30 - 1.2.4 Jammer F8.1 "Porcus Major": 50 W CW: L1, G1, L2, L5 Power: 50W Contact: Anders Eriksen (NKOM) <hr/> 14:40-14:50 - 1.3.5 Jammer F8.1 "Porcus Major": 50 W sweep: L1, sweep rate: 1 kHz, BW: 6 MHz Power: 50W Contact: Anders Eriksen (NKOM)	14:00-14:12 - 1.1.1 Jammer S1.1 Contact: Øystein Karlsen (NKOM) <hr/> 14:16-14:28 - 1.1.4 Jammer S2.1 Contact: Øystein Karlsen (NKOM) <hr/> 14:32-14:44 - 1.1.8 Jammer U1.1 Contact: Øystein Karlsen (NKOM) <hr/> 14:48-15:00 - 1.1.12 Jammer H1.1 Contact: Øystein Karlsen (NKOM)	14:00-14:15 - 2.6.1 Spoofers (in vehicle with roof mounted antenna) stationary with dynamic spoofed position. Power: 0.001W Contact: Jahn Erik Røhme (NPRA) <hr/> 14:20-14:40 - 2.6.2 Spoofers (in vehicle with roof mounted antenna) stationary and then moving with fixed spoofed position. Power: 0.001W Contact: Jahn Erik Røhme (NPRA) <hr/> 14:50-15:10 - 2.6.3 Spoofers (in vehicle with roof mounted antenna) moving with fixed spoofed position. Power: 0.001W Contact: Jahn Erik Røhme (NPRA)

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Table 1.1: Monday (Continued)

Monday 2025-09-15	Bleik(1)	Grunnvatn(2)	Motorcade(3)
15:00	<div>15:00-15:10 - 1.3.8 Jammer F8.1 "Porcus Major": 50 W sweep: L1, G1, L2, L5, sweep rate: 1 kHz, BW: 6 MHz Power: 50W Contact: Anders Eriksen (NKOM)</div> <div>15:20-15:30 - 1.4.1 Jammer F8.1 "Porcus Major": 50 W PRN: L1, Chiprate: 3 MHz Power: 50W Contact: Anders Eriksen (NKOM)</div> <div>15:40-15:50 - 1.4.4 Jammer F8.1 "Porcus Major": 50 W PRN: L1, G1, L2, L5, Chiprate: 3 MHz Power: 50W Contact: Anders Eriksen (NKOM)</div>	<div>15:04-15:16 - 1.1.13 Jammer H1.2 Contact: Øystein Karlsen (NKOM)</div> <div>15:20-15:32 - 1.1.16 Jammer H3.1 Contact: Øystein Karlsen (NKOM)</div> <div>15:36-15:48 - 1.1.18 Jammer H3.3 Contact: Øystein Karlsen (NKOM)</div> <div>15:52-16:04 - 1.1.19 Jammer H4.1 Contact: Øystein Karlsen (NKOM)</div>	<div>15:20-15:40 - 2.6.4 Spoofers (in vehicle with roof mounted antenna) stationary and then moving with first fixed and then dynamic spoofed position. Power: 0.001W Contact: Jahn Erik Røhme (NPRA)</div> <div>15:50-16:10 - 2.6.5 Spoofing: Motorcade moving with fixed spoofed position Power: 0.001W Contact: Jahn Erik Røhme (NPRA)</div>

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Table 1.1: Monday (Continued)

Monday 2025-09-15	Bleik(1)	Grunnvatn(2)	Motorcade(3)
16:00	<p>16:00-16:14 - 1.6.1 Power ramping with Jammer F8.1 "Porcus Major": 0.2 μW (-37dBm) to 50 W (47dBm) with 2 dB increments PRN: L1 Power: 50W Contact: Anders Eriksen (NKOM)</p> <hr/> <p>16:25-16:39 - 1.6.4 Power ramping with Jammer F8.1 "Porcus Major": 0.2 μW (-37dBm) to 50 W (47dBm) with 2 dB increments PRN: L1, G1, L2, L5 Power: 50W Contact: Anders Eriksen (NKOM)</p> <hr/> <p>16:50-18:05 - 1.8.1 Jammer F8.1 "Porcus Major": 50 W PRN pyramid: E6, E5b, L5, G2, L2, B1I, G1, L1 Power: 50W Contact: Anders Eriksen (NKOM)</p>	<p>16:08-16:20 - 1.1.20 Jammer H6.1 Contact: Øystein Karlsen (NKOM)</p> <hr/> <p>16:24-16:36 - 1.1.21 Jammer H6.2 Contact: Øystein Karlsen (NKOM)</p> <hr/> <p>16:40-16:52 - 1.1.22 Jammer H6.3 Contact: Øystein Karlsen (NKOM)</p> <hr/> <p>16:56-17:08 - 1.1.23 Jammer H6.4 Contact: Øystein Karlsen (NKOM)</p>	<p>16:20-16:40 - 2.6.6 Spoofing: Motorcade moving north, while the dynamic fixed position moves south Power: 0.001W Contact: Jahn Erik Røhme (NPRA)</p> <hr/> <p>16:50-17:10 - 2.6.7 Spoofing: Motorcade driving south, while the spoofed speed is following the road at a high speed, stops and returns at low speed Power: 0.001W Contact: Jahn Erik Røhme (NPRA)</p>
17:00		<p>17:12-17:24 - 1.1.26 Jammer H8.1 Contact: Øystein Karlsen (NKOM)</p> <hr/> <p>17:28-17:40 - 1.1.27 Jammer F6.1 Contact: Øystein Karlsen (NKOM)</p> <hr/> <p>17:44-17:56 - 1.1.29 Jammer H2.1 Contact: Øystein Karlsen (NKOM)</p>	
18:00	<p>18:30-19:00 - 0.0.2 Mandatory afternoon (de)briefing Contact: Christian Skjetne (NPRA)</p>	<p>18:30-19:00 - 0.0.2 Mandatory afternoon (de)briefing Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)</p>	<p>18:30-19:00 - 0.0.2 Mandatory afternoon (de)briefing Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)</p>

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Table 1.1: Monday (Continued)

Monday 2025-09-15	Bleik(1)	Grunnvatn(2)	Motorcade(3)
19:00			
20:00			
21:00			
22:00			

Tuesday

Location 1 Bleik

Tuesday will be used for meaoning and unintentional RFI test. During the evening there will be very high power jamming running untill 22:00.

Location 2 Grunnvatn

Test of multiple low-power handheld jammers in circular configuration. Relevant for mobile testing in car, drones and CRPA antennas.

Location 3 Motorcade

Testing of low-power handheld jammers inside and outside vehicles.

Table 2.1: Tuesday

Tuesday 2025-09-16	Bleik(1)	Grunnvatn(2)	Motorcade(3)
Start time:	08:00	08:00	08:00
08:00	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY attendance at Stave (Site 3) Contact: Jahn Erik Røhme (NPRA)
09:00	09:00-09:05 - 3.1.1 Meacon F1.1 "Porcellus": RX1 at 1 W Power: 1W Contact: Anders Eriksen (NKOM) <hr/> 09:15-09:25 - 3.1.2 Meacon F1.1 "Porcellus": RX1 at 1 W with initial jamming Power: 1W Contact: Anders Eriksen (NKOM) <hr/> 09:35-09:40 - 3.1.3 Meacon F1.1 "Porcellus": RX1 at 10 W Power: 10W Contact: Anders Eriksen (NKOM) <hr/> 09:50-10:00 - 3.1.4 Meacon F1.1 "Porcellus": RX1 at 10 W with initial jamming Power: 10W Contact: Anders Eriksen (NKOM)	09:00-09:10 - 1.19.1 3 jammers at 50 meters from center S1.1, S1.2 and S1.3 Power: 0.171W Contact: Øystein Karlsen (NKOM) <hr/> 09:16-09:26 - 1.19.2 3 jammers at 100 meters from center S1.1, S1.2 and S1.3 Power: 0.171W Contact: Øystein Karlsen (NKOM) <hr/> 09:32-09:42 - 1.19.3 3 jammers at 150 meters from center S1.1, S1.2 and S1.3 Power: 0.171W Contact: Øystein Karlsen (NKOM) <hr/> 09:48-09:58 - 1.19.4 3 jammers at 50 meters from center S2.1, S2.2 and S2.3 Power: 1.26W Contact: Øystein Karlsen (NKOM)	09:00-11:00 - 1.10.3 Vehicle starting in dual-band denied environment Power: 6.31W Comment: Jammers available for testing: H1.6,H1.6,H3.2,F6.1 Contact: Jahn Erik Røhme (NPRA)

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Table 2.1: Tuesday (Continued)

Tuesday 2025-09-16	Bleik(1)	Grunnvatn(2)	Motorcade(3)
10:00	10:10-10:15 - 3.1.5 Meacon F1.1 "Porcellus": RX2 at 10 W Power: 10W Contact: Anders Eriksen (NKOM)	10:04-10:14 - 1.19.5 3 jammers at 100 meters from center S2.1, S2.2 and S2.3 Power: 1.26W Contact: Øystein Karlsen (NKOM)	
	10:25-10:45 - 3.2.3 Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W turned on and off at different times Power: 10W Contact: Anders Eriksen (NKOM)	10:20-10:30 - 1.19.6 3 jammers at 150 meters from center S2.1, S2.2 and S2.3 Power: 1.26W Contact: Øystein Karlsen (NKOM)	
	10:55-11:05 - 3.2.4 Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W alternating Power: 10W Contact: Anders Eriksen (NKOM)	10:36-10:46 - 1.19.7 3 jammers at 50 meters from center U1.1, U1.2 and U1.3 Contact: Øystein Karlsen (NKOM)	
		10:52-11:02 - 1.19.8 3 jammers at 100 meters from center U1.1, U1.2 and U1.3 Contact: Øystein Karlsen (NKOM)	

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Table 2.1: Tuesday (Continued)

Tuesday 2025-09-16	Bleik(1)	Grunnvatn(2)	Motorcade(3)
11:00	11:15-11:35 - 3.2.5 Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W alternating with breaks Power: 10W Contact: Anders Eriksen (NKOM)	11:08-11:18 - 1.19.9 3 jammers at 150 meters from center U1.1, U1.2 and U1.3 Contact: Øystein Karlsen (NKOM)	11:00-13:00 - 1.10.2 Driving while passing a parked car with multi-band jammer Power: 1W Comment: Jammers available for testing: H3.2,H4.1,H3.3,H8.1 Contact: Jahn Erik Røhme (NPRA)
	11:45-12:01 - 3.2.6 Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W alternating with decreasing durations without breaks Power: 10W Contact: Anders Eriksen (NKOM)	11:24-11:34 - 1.19.10 3 jammers at 50 meters from center H6.4, H6.5 and H6.6 Power: 1.58W Contact: Øystein Karlsen (NKOM)	
		11:40-11:50 - 1.19.11 3 jammers at 100 meters from center H6.4, H6.5 and H6.6 Power: 1.58W Contact: Øystein Karlsen (NKOM)	
		11:56-12:06 - 1.19.12 3 jammers at 150 meters from center H6.4, H6.5 and H6.6 Power: 1.58W Contact: Øystein Karlsen (NKOM)	
12:00	12:25-12:59 - 3.3.1 Meacon F1.1 "Porcellus": RX1 with ramping power Power: 10W Contact: Anders Eriksen (NKOM)	12:12-12:22 - 1.19.13 3 jammers at 50 meters from center H1.1, H1.4 and H1.5 Power: 0.1W Contact: Øystein Karlsen (NKOM)	
		12:28-12:38 - 1.19.14 3 jammers at 100 meters from center H1.1, H1.4 and H1.5 Power: 0.1W Contact: Øystein Karlsen (NKOM)	
		12:44-12:54 - 1.19.15 3 jammers at 150 meters from center H1.1, H1.4 and H1.5 Power: 0.1W Contact: Øystein Karlsen (NKOM)	

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Table 2.1: Tuesday (Continued)

Tuesday 2025-09-16	Bleik(1)	Grunnvatn(2)	Motorcade(3)
13:00	13:00-14:00 - 0.1.1 Grace period Comment: Lunch Contact: Christian Skjetne (NPRA)	13:00-14:00 - 0.1.1 Grace period Comment: Lunch @ Stave (Site 3) Contact: Christian Skjetne (NPRA)	13:00-14:00 - 0.1.1 Grace period Comment: Lunch @ Stave (Site 3) Contact: Jahn Erik Røhme (NPRA)
14:00	<div> 14:00-14:14 - 3.2.7 Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W alternating with different switching frequencies. Power: 10W Contact: Anders Eriksen (NKOM) </div> <div> 14:25-14:45 - 3.2.5 Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W alternating with breaks Power: 10W Contact: Anders Eriksen (NKOM) </div> <div> 14:55-15:11 - 3.2.6 Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W alternating with decreasing durations without breaks Power: 10W Contact: Anders Eriksen (NKOM) </div>	<div> 14:30-14:42 - 1.20.1 3 jammers at 50 meters from center H1.1, H1.4 and H1.5 Power: 1W Comment: +30dBm from each direction, A, B and C Contact: Øystein Karlsen (NKOM) </div> <div> 14:48-15:00 - 1.20.2 3 jammers at 100 meters from center H1.1, H1.4 and H1.5 Power: 1W Comment: +30dBm from each direction, A, B and C Contact: Øystein Karlsen (NKOM) </div>	14:00-16:00 - 1.11.11 Motorcade while jammer vehicle is in the middle of the motorcade Power: 1W Comment: Jammers available for testing: H6.1,H3.3 Contact: Jahn Erik Røhme (NPRA)

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Table 2.1: Tuesday (Continued)

Tuesday 2025-09-16	Bleik(1)	Grunnvatn(2)	Motorcade(3)
15:00	<p>15:25-15:39 - 3.2.7 Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W alternating with different switching frequencies.</p> <p>Power: 10W Contact: Anders Eriksen (NKOM)</p>	<p>15:06-15:18 - 1.20.3 3 jammers at 150 meters from center H1.1, H1.4 and H1.5</p> <p>Power: 1W Comment: +30dBm from each direction, A, B and C Contact: Øystein Karlsen (NKOM)</p> <hr/> <p>15:24-15:36 - 1.20.4 3 jammers at 50 meters from center H1.1, H1.4 and H1.5</p> <p>Power: 1W Comment: +30dBm from each direction, A, B and C Contact: Øystein Karlsen (NKOM)</p> <hr/> <p>15:42-15:54 - 1.20.5 3 jammers at 100 meters from center H1.1, H1.4 and H1.5</p> <p>Power: 1W Comment: +30dBm from each direction, A, B and C Contact: Øystein Karlsen (NKOM)</p>	

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Table 2.1: Tuesday (Continued)

Tuesday 2025-09-16	Bleik(1)	Grunnvatn(2)	Motorcade(3)
16:00	<div><div>16:00-16:01 - 1.18.4 Jammer F8.1 "Porcus Major": 50 W drift: 1545 to 1620 MHz, with CW and sweep time of 1 minute Power: 50W Contact: Anders Eriksen (NKOM)</div><div>16:10-16:25 - 1.18.5 Jammer F8.1 "Porcus Major": 50 W drift: 1545 to 1620 MHz, with CW and sweep time of 15 minutes Power: 50W Contact: Anders Eriksen (NKOM)</div><div>16:35-16:50 - 1.18.7 Jammer F8.1 "Porcus Major": 50 W drift: 1620 to 1545 MHz, with CW and sweep time of 15 minutes Power: 50W Contact: Anders Eriksen (NKOM)</div></div>	<div><div>16:00-16:12 - 1.20.6 3 jammers at 150 meters from center H1.1, H1.4 and H1.5 Power: 1W Comment: +30dBm from each direction, A, B and C Contact: Øystein Karlsen (NKOM)</div><div>16:18-16:30 - 1.20.7 3 jammers at 50 meters from center H1.1, H1.4 and H1.5 Power: 1W Comment: +30dBm from each direction, A, B and C Contact: Øystein Karlsen (NKOM)</div><div>16:36-16:48 - 1.20.8 3 jammers at 100 meters from center H1.1, H1.4 and H1.5 Power: 1W Comment: +30dBm from each direction, A, B and C Contact: Øystein Karlsen (NKOM)</div><div>16:54-17:06 - 1.20.9 3 jammers at 150 meters from center H1.1, H1.4 and H1.5 Power: 1W Comment: +30dBm from each direction, A, B and C Contact: Øystein Karlsen (NKOM)</div></div>	<div><div>16:00-18:00 - 1.11.4 Driving with dual-band jammer in vehicle overtaking the test vehicle Power: 6.31W Comment: Jammers available for testing: H1.6,H3.3,H4.1,F6.1 Contact: Jahn Erik Røhme (NPRA)</div></div>

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Table 2.1: Tuesday (Continued)

Tuesday 2025-09-16	Bleik(1)	Grunnvatn(2)	Motorcade(3)
17:00	<p>17:00-17:01 - 1.18.8 Jammer F8.1 "Porcus Major": 50 W drift: 1545 to 1620 MHz, gaussian noise with BW of 500 kHz and sweep time of 1 minute</p> <p>Power: 50W Contact: Anders Eriksen (NKOM)</p> <hr/> <p>17:10-17:25 - 1.18.13 Jammer F8.1 "Porcus Major": 50 W drift: 1150 to 1300 MHz, with CW and sweep time of 15 minutes</p> <p>Power: 50W Contact: Anders Eriksen (NKOM)</p> <hr/> <p>17:35-17:50 - 1.18.15 Jammer F8.1 "Porcus Major": 50 W drift: 1300 to 1150 MHz, with CW and sweep time of 15 minutes</p> <p>Power: 50W Contact: Anders Eriksen (NKOM)</p> <hr/> <p>17:59-18:00 - 1.18.16 Jammer F8.1 "Porcus Major": 50 W drift: 1150 to 1300 MHz, gaussian noise with BW of 500 kHz and sweep time of 1 minute</p> <p>Power: 50W Contact: Anders Eriksen (NKOM)</p>	<p>17:12-17:24 - 1.20.10 3 jammers at 50 meters from center H1.1, H1.4 and H1.5</p> <p>Power: 1W Comment: +30dBm from each direction, A, B and C Contact: Øystein Karlsen (NKOM)</p> <hr/> <p>17:30-17:40 - 1.20.11 3 jammers at 100 meters from center H1.1, H1.4 and H1.5</p> <p>Power: 1W Comment: +30dBm from each direction, A, B and C Contact: Øystein Karlsen (NKOM)</p> <hr/> <p>17:46-17:58 - 1.20.12 3 jammers at 150 meters from center H1.1, H1.4 and H1.5</p> <p>Power: 1W Comment: +30dBm from each direction, A, B and C Contact: Øystein Karlsen (NKOM)</p>	
18:00	<p>18:30-19:00 - 0.0.2 Mandatory afternoon (de)briefing</p> <p>Contact: Christian Skjetne (NPRA)</p>	<p>18:30-19:00 - 0.0.2 Mandatory afternoon (de)briefing</p> <p>Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)</p>	<p>18:30-19:00 - 0.0.2 Mandatory afternoon (de)briefing</p> <p>Comment: MANDATORY attendance at Stave (Site 3) Contact: Jahn Erik Røhme (NPRA)</p>
19:00	<p>19:15-22:00 - 1.16.4 High Power PRN jamming: L1, G1, L2, L5</p> <p>Power: 100W Contact: Anders Eriksen (NKOM)</p>		

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Table 2.1: Tuesday (Continued)

Tuesday			
2025-09-16	Bleik(1)	Grunnvatn(2)	Motorcade(3)
20:00			
21:00			
22:00			

Wednesday

Location 1 Bleik

Wednesday will be used for position and SBAS spoofing.

Location 2 Grunnvatn

Test of stationary coherent spoofing with circle of jammers. Relevant for mobile testing in car, drones and CRPA antennas.

Location 3 Motorcade

Booking of timeslots available for custom testing.

Table 3.1: Wednesday

Wednesday 2025-09-17	Bleik(1)	Grunnvatn(2)	Motorcade(3)
Start time:	08:00	08:00	08:00
08:00	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY attendance at Stave (Site 3) Contact: Jahn Erik Røhme (NPRA)
09:00	09:00-09:40 - 2.1.1 Large position and time jump, with power ramp Power: 0.316W Contact: Anders Eriksen (NKOM)	09:00-09:40 - 2.10.1 Spoofing route GPS L1 and Galileo E1 only Power: 0.001W Comment: Spoofing route that start at LOK2-ORIG, and goes out forming a spoofing circle above position A150, B150 and C150. Spoofing signal will perform power ramp from uW to mW during the first 30 minutes of the test. Signals: GPS L1 C/A. Galileo E1. No initial jamming. Spoofing route duration is 40 minutes. Contact: Øystein Karlsen (NKOM) <hr/> 09:50-10:55 - 2.10.2 Circle of 3 stationary jammers, L1, L2 and spoofing route GPS L1 and Galileo E1 only Power: 3W Comment: Jamming from A50, B50 and C50, with jammer H1.1, H1.4 and H1.5, L1, L2, CHIRP. HIGH PWR. The Jammers are connected to RHCP antennas to boost the power. 15 minutes of initial jamming first. Then spoofing starts, same spoofing route as test 2.10.1 Contact: Øystein Karlsen (NKOM)	09:00-11:00 - 1.10.3 Vehicle starting in dual-band denied environment Power: 1W Comment: Jammers available for testing: H3.2,H4.1,H6.1,H6.3 Contact: Jahn Erik Røhme (NPRA)

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Table 3.1: Wednesday (Continued)

Wednesday 2025-09-17	Bleik(1)	Grunnvatn(2)	Motorcade(3)
10:00	<p>10:00-10:15 - 2.1.3 Large position and time jump. Galileo E1 only Power: 0.316W Contact: Anders Eriksen (NKOM)</p> <hr/> <p>10:20-10:35 - 2.1.2 Large position and time jump. GPS L1 C/A only Power: 0.316W Contact: Anders Eriksen (NKOM)</p> <hr/> <p>10:40-10:55 - 2.1.4 Large position and time jump. GPS L1 and Galileo E1 only Power: 0.316W Contact: Anders Eriksen (NKOM)</p>		
11:00	<p>11:25-11:40 - 2.1.9 Simulated driving (route 1). GPS L1 C/A and Galileo E1, with initial jamming Power: 0.316W Contact: Anders Eriksen (NKOM)</p> <hr/> <p>11:45-12:00 - 2.1.10 Simulated driving (route 1), with initial jamming Power: 0.316W Contact: Anders Eriksen (NKOM)</p>	<p>11:05-12:00 - 2.10.3 Circle of 3 stationary jammers, 2 moving jammers L1, L2 and spoofing route GPS L1 and Galileo E1 only Power: 4W Comment: Jamming from A50, B50 and C50, with jammer H1.1, H1.4 and H1.5, L1, L2, CHIRP. HIGH PWR. The Jammers are connected to RHCP antennas to boost the power. Two additional mobile jammers will be added H1.6 and H1.7 with L1, L2 NB, HIGH PWR. 15 minutes of initial jamming first. Then spoofing starts, same spoofing route as test 2.10.1 Contact: Øystein Karlsen (NKOM)</p>	<p>11:00-13:00 - 1.10.2 Driving while passing a parked car with multi-band jammer Power: 6.31W Comment: Jammers available for testing: H3.3,H4.1,H8.1,F6.1 Contact: Jahn Erik Røhme (NPRA)</p>

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Table 3.1: Wednesday (Continued)

Wednesday 2025-09-17	Bleik(1)	Grunnvatn(2)	Motorcade(3)
12:00	<p>12:30-12:40 - 2.8.1 EGNOS with "Do Not Use GPS" commands Power: 1W Contact: Anders Eriksen (NKOM)</p> <hr/> <p>12:45-13:00 - 2.8.1 EGNOS with "Do Not Use GPS" commands Power: 1W Contact: Anders Eriksen (NKOM)</p>	<p>12:10-13:05 - 2.10.4 Circle of 3 stationary jammers, 5 moving jammers and spoofing route GPS L1 and Galileo E1 only Power: 5W Comment: Jamming from A50, B50 and C50, with jammer H1.1, H1.4 and H1.5, L1, L2, CHIRP. HIGH PWR. The Jammers are connected to RHCP antennas to boost the power. Five additional mobile jammers will be added H1.6 and H1.7 with L1, L2 NB, HIGH PWR, and H6.3, H6.4 and H6.5, L1, L2. 15 minutes of initial jamming first. Then spoofing starts, same spoofing route as test 2.10.1. Contact: Øystein Karlsen (NKOM)</p>	
13:00	<p>13:00-14:00 - 0.1.1 Grace period Comment: Lunch Contact: Christian Skjetne (NPRA)</p>	<p>13:00-14:00 - 0.1.1 Grace period Comment: Lunch @ Stave (Site 3) Contact: Christian Skjetne (NPRA)</p>	<p>13:00-14:00 - 0.1.1 Grace period Comment: Lunch @ Stave (Site 3) Contact: Jahn Erik Røhme (NPRA)</p>
14:00	<p>14:00-14:15 - 2.2.3 Position jump Power: 0.316W Contact: Anders Eriksen (NKOM)</p> <hr/> <p>14:20-14:35 - 2.3.3 Small position jump Power: 0.316W Contact: Anders Eriksen (NKOM)</p> <hr/> <p>14:40-14:55 - 2.3.2 Small position jump with initial and continuous jamming Power: 0.316W Contact: Anders Eriksen (NKOM)</p>	<p>14:10-14:50 - 2.10.1 Spoofing route GPS L1 and Galileo E1 only Power: 0.001W Comment: Spoofing route that start at LOK2-ORIG, and goes out forming a spoofing circle above position A150, B150 and C150. Spoofing signal will perform power ramp from uW to mW during the first 30 minutes of the test. Signals: GPS L1 C/A. Galileo E1. No initial jamming. Spoofing route duration is 40 minutes. Contact: Øystein Karlsen (NKOM)</p>	<p>14:00-16:00 - 1.11.11 Motorcade while jammer vehicle is in the middle of the motorcade Power: 6.31W Comment: Jammers available for testing: H3.3,H6.1,H8.1,F6.1 Contact: Jahn Erik Røhme (NPRA)</p>

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Table 3.1: Wednesday (Continued)

Wednesday 2025-09-17	Bleik(1)	Grunnvatn(2)	Motorcade(3)
15:00	<div><div>15:25-15:35 - 2.3.8 Simulated driving (route 1). Galileo only Power: 0.316W Contact: Anders Eriksen (NKOM)</div><div>15:40-15:50 - 2.3.5 Simulated driving (route 1). GPS only Power: 0.316W Contact: Anders Eriksen (NKOM)</div><div>15:55-16:05 - 2.3.10 Simulated driving (route 1) Power: 0.316W Contact: Anders Eriksen (NKOM)</div></div>	<div><div>15:00-15:55 - 2.10.2 Circle of 3 stationary jammers, L1, L2 and spoofing route GPS L1 and Galileo E1 only Power: 3W Comment: Jamming from A50, B50 and C50, with jammer H1.1, H1.4 and H1.5, L1, L2, CHIRP. HIGH PWR. The Jammers are connected to RHCP antennas to boost the power. 15 minutes of initial jamming first. Then spoofing starts, same spoofing route as test 2.10.1 Contact: Øystein Karlsen (NKOM)</div></div>	
16:00	<div><div>16:10-16:25 - 2.3.11 Simulated driving (route 1) with initial and continuous jamming. Power: 0.316W Contact: Anders Eriksen (NKOM)</div><div>16:55-17:05 - 2.3.15 Flying (route 2) - "helicopter scenario" Power: 0.316W Contact: Anders Eriksen (NKOM)</div></div>	<div><div>16:05-17:00 - 2.10.3 Circle of 3 stationary jammers, 2 moving jammers L1, L2 and spoofing route GPS L1 and Galileo E1 only Power: 4W Comment: Jamming from A50, B50 and C50, with jammer H1.1, H1.4 and H1.5, L1, L2, CHIRP. HIGH PWR. The Jammers are connected to RHCP antennas to boost the power. Two additional mobile jammers will be added H1.6 and H1.7 with L1, L2 NB, HIGH PWR. 15 minutes of initial jamming first. Then spoofing starts, same spoofing route as test 2.10.1 Contact: Øystein Karlsen (NKOM)</div></div>	<div><div>16:00-18:00 - 1.11.4 Driving with dual-band jammer in vehicle overtaking the test vehicle Power: 6.31W Comment: Jammers available for testing: H3.3,H6.1,H8.1,F6.1 Contact: Jahn Erik Røhme (NPRA)</div></div>

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Table 3.1: Wednesday (Continued)

Wednesday 2025-09-17	Bleik(1)	Grunnvatn(2)	Motorcade(3)
17:00	<p>17:10-17:20 - 2.3.12 Flying (route 4) - "drone scenario" GPS L1 C/A only Power: 0.316W Contact: Anders Eriksen (NKOM)</p> <hr/> <p>17:30-17:40 - 2.3.13 Flying (route 4) - "drone scenario" Power: 0.316W Contact: Anders Eriksen (NKOM)</p> <hr/> <p>17:45-18:00 - 2.3.15 Flying (route 2) - "helicopter scenario" Power: 0.316W Contact: Anders Eriksen (NKOM)</p>	<p>17:10-18:05 - 2.10.4 Circle of 3 stationary jammers, 5 moving jammers and spoofing route GPS L1 and Galileo E1 only Power: 5W Comment: Jamming from A50, B50 and C50, with jammer H1.1, H1.4 and H1.5, L1, L2, CHIRP. HIGH PWR. The Jammers are connected to RHCP antennas to boost the power. Five additional mobile jammers will be added H1.6 and H1.7 with L1, L2 NB, HIGH PWR, and H6.3, H6.4 and H6.5, L1, L2. 15 minutes of initial jamming first. Then spoofing starts, same spoofing route as test 2.10.1 Contact: Øystein Karlsen (NKOM)</p>	
18:00	<p>18:30-19:00 - 0.0.2 Mandatory afternoon (de)briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)</p>	<p>18:30-19:00 - 0.0.2 Mandatory afternoon (de)briefing Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)</p>	<p>18:30-19:00 - 0.0.2 Mandatory afternoon (de)briefing Comment: MANDATORY attendance at Stave (Site 3) Contact: Jahn Erik Røhme (NPRA)</p>
19:00			
20:00			
21:00			
22:00			

Thursday

Location 1 Bleik

Thursday will be used for time spoofing. During the evening there will be long time meaconing running untill 22:00.

Location 2 Grunnvatn

Test of multiple low-power handheld jammers in circular configuration. Relevant for mobile testing in car, drones and CRPA antennas.

Location 3 Motorcade

Mobile SDR spoofing. Timeslot after lunch is still not decided.

Table 4.1: Thursday

Thursday 2025-09-18	Bleik(1)	Grunnvatn(2)	Motorcade(3)
Start time:	08:00	08:00	08:00
08:00	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY attendance at Stave (Site 3) Contact: Jahn Erik Røhme (NPRA)
09:00	09:00-09:25 - 2.4.2 Time offset 15 minutes from real time, with power ramp Power: 0.0316W Contact: Anders Eriksen (NKOM) <hr/> 09:40-09:55 - 2.4.3 Time offset -3 minutes from real time, with power jump Power: 0.0316W Contact: Anders Eriksen (NKOM)	09:00-10:00 - 1.23.1 Jammer S1.1 with 10dB gain at 50 meters above ground Power: 0.316W Comment: Drone with jammer onboard. Dependent on weather conditions Contact: Øystein Karlsen (NKOM)	09:00-09:15 - 2.6.1 Spoofers (in vehicle with roof mounted antenna) stationary with dynamic spoofed position. Power: 0.001W Contact: Jahn Erik Røhme (NPRA) <hr/> 09:20-09:40 - 2.6.2 Spoofers (in vehicle with roof mounted antenna) stationary and then moving with fixed spoofed position. Power: 0.001W Contact: Jahn Erik Røhme (NPRA) <hr/> 09:50-10:10 - 2.6.3 Spoofers (in vehicle with roof mounted antenna) moving with fixed spoofed position. Power: 0.001W Contact: Jahn Erik Røhme (NPRA)

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Table 4.1: Thursday (Continued)

Thursday 2025-09-18	Bleik(1)	Grunnvatn(2)	Motorcade(3)
10:00	10:10-10:25 - 2.4.12 Static + Pseudorange error Power: 0.0316W Contact: Anders Eriksen (NKOM)	10:00-11:00 - 1.23.1 Jammer S1.1 with 10dB gain at 50 meters above ground Power: 0.316W Comment: Drone with jammer onboard. Dependent on weather conditions Contact: Øystein Karlsen (NKOM)	10:20-10:40 - 2.6.4 Spoofers (in vehicle with roof mounted antenna) stationary and then moving with first fixed and then dynamic spoofed position. Power: 0.001W Contact: Jahn Erik Røhme (NPRA)
	10:40-10:55 - 2.4.13 Static + Pseudorange error, with initial and continuous jamming Power: 0.001W Contact: Anders Eriksen (NKOM)		10:50-11:10 - 2.6.5 Spoofing: Motorcade moving with fixed spoofed position Power: 0.001W Contact: Jahn Erik Røhme (NPRA)
11:00	11:25-11:40 - 2.5.6 Time offset 15 minutes from real time Power: 0.001W Contact: Anders Eriksen (NKOM)	11:00-12:00 - 1.23.2 Jammer S1.1 with 10dB gain at 100 meters above ground Power: 0.316W Comment: Drone with jammer onboard. Dependent on weather conditions Contact: Øystein Karlsen (NKOM)	11:20-11:40 - 2.6.6 Spoofing: Motorcade moving north, while the dynamic fixed position moves south Power: 0.001W Contact: Jahn Erik Røhme (NPRA)
	11:55-12:10 - 2.5.3 Time offset -3 minutes from real time, with power jump Power: 0.001W Contact: Anders Eriksen (NKOM)		11:50-12:10 - 2.6.7 Spoofing: Motorcade driving south, while the spoofed speed is following the road at a high speed, stops and returns at low speed Power: 0.001W Contact: Jahn Erik Røhme (NPRA)
12:00	12:25-13:00 - 2.5.25 Static + UTC-parameter nav. data manipulation (adding leap seconds), with initial and continuous jamming Power: 0.001W Contact: Anders Eriksen (NKOM)	12:00-13:00 - 1.23.2 Jammer S1.1 with 10dB gain at 100 meters above ground Power: 0.316W Comment: Drone with jammer onboard. Dependent on weather conditions Contact: Øystein Karlsen (NKOM)	
13:00	13:00-14:00 - 0.1.1 Grace period Comment: Lunch Contact: Christian Skjetne (NPRA)	13:00-14:00 - 0.1.1 Grace period Comment: Lunch @ Stave (Site 3) Contact: Christian Skjetne (NPRA)	13:00-14:00 - 0.1.1 Grace period Comment: Lunch @ Stave (Site 3) Contact: Jahn Erik Røhme (NPRA)

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Table 4.1: Thursday (Continued)

Thursday 2025-09-18	Bleik(1)	Grunnvatn(2)	Motorcade(3)
14:00	<div>14:00-14:15 - 2.5.5 Time offset 15 minutes from real time. Galileo E1 Power: 0.0316W Contact: Anders Eriksen (NKOM)</div> <div>14:20-14:35 - 2.5.4 Time offset 15 minutes from real time. GPS L1 C/A Power: 0.0316W Contact: Anders Eriksen (NKOM)</div> <div>14:40-14:55 - 2.5.6 Time offset 15 minutes from real time Power: 1e-05W Contact: Anders Eriksen (NKOM)</div>	<div>14:00-15:00 - 0.3.1 Ad hoc test Contact: Øystein Karlsen (NKOM)</div>	<div>14:00-14:15 - 2.6.1 Spoofers (in vehicle with roof mounted antenna) stationary with dynamic spoofed position. Power: 0.001W Contact: Jahn Erik Røhme (NPRA)</div> <div>14:20-14:40 - 2.6.2 Spoofers (in vehicle with roof mounted antenna) stationary and then moving with fixed spoofed position. Power: 0.001W Contact: Jahn Erik Røhme (NPRA)</div> <div>14:50-15:10 - 2.6.3 Spoofers (in vehicle with roof mounted antenna) moving with fixed spoofed position. Power: 0.001W Contact: Jahn Erik Røhme (NPRA)</div>
15:00	<div>15:25-15:40 - 2.5.13 Static + Pseudorange error. GPS L1 and Galileo E1 only Power: 0.001W Contact: Anders Eriksen (NKOM)</div> <div>15:45-16:00 - 2.5.15 Static + Pseudorange error Power: 1e-05W Contact: Anders Eriksen (NKOM)</div>	<div>15:00-16:00 - 1.22.1 12 jammers at 50 meters from center Comment: U1.1, U1.2, U1.3, S2.1, S2.2, S2.3, H1.1, H1.4, H1.5, H6.3, H6.4, H6.5 Contact: Øystein Karlsen (NKOM)</div>	<div>15:20-15:40 - 2.6.4 Spoofers (in vehicle with roof mounted antenna) stationary and then moving with first fixed and then dynamic spoofed position. Power: 0.001W Contact: Jahn Erik Røhme (NPRA)</div> <div>15:50-16:10 - 2.6.5 Spoofing: Motorcade moving with fixed spoofed position Power: 0.001W Contact: Jahn Erik Røhme (NPRA)</div>

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Table 4.1: Thursday (Continued)

Thursday 2025-09-18	Bleik(1)	Grunnvatn(2)	Motorcade(3)
16:00	<div><div>16:15-16:40 - 2.5.16 Static + Pseudorange error, with initial and continuous jamming Power: 1e-05W Contact: Anders Eriksen (NKOM)</div><div>16:55-17:20 - 2.5.26 Static + UTC-parameter nav. data manipulation (removing leap seconds). GPS L1 C/A Power: 1e-05W Contact: Anders Eriksen (NKOM)</div></div>	<div><div>16:05-16:15 - 1.1.1 Jammer S1.1 Contact: Øystein Karlsen (NKOM)</div><div>16:20-16:30 - 1.1.4 Jammer S2.1 Contact: Øystein Karlsen (NKOM)</div><div>16:35-16:45 - 1.1.8 Jammer U1.1 Contact: Øystein Karlsen (NKOM)</div><div>16:50-17:00 - 1.1.12 Jammer H1.1 Contact: Øystein Karlsen (NKOM)</div></div>	<div><div>16:20-16:40 - 2.6.6 Spoofing: Motorcade moving north, while the dynamic fixed position moves south Power: 0.001W Contact: Jahn Erik Røhme (NPRA)</div><div>16:50-17:10 - 2.6.7 Spoofing: Motorcade driving south, while the spoofed speed is following the road at a high speed, stops and returns at low speed Power: 0.001W Contact: Jahn Erik Røhme (NPRA)</div></div>
17:00	<div><div>17:30-18:00 - 2.5.27 Static + UTC-parameter nav. data manipulation (removing leap seconds) Power: 1e-05W Contact: Anders Eriksen (NKOM)</div></div>	<div><div>17:05-17:15 - 1.1.18 Jammer H3.3 Comment: TBD Contact: Øystein Karlsen (NKOM)</div><div>17:20-17:30 - 1.1.19 Jammer H4.1 Comment: TBD Contact: Øystein Karlsen (NKOM)</div><div>17:35-17:45 - 1.1.22 Jammer H6.3 Comment: TBD Contact: Øystein Karlsen (NKOM)</div><div>17:50-18:00 - 1.1.23 Jammer H6.4 Comment: Lunch @ Stave (Site 3) Contact: Christian Skjetne (NPRA)</div></div>	
18:00	<div><div>18:30-19:00 - 0.0.2 Mandatory afternoon (de)briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)</div></div>	<div><div>18:30-19:00 - 0.0.2 Mandatory afternoon (de)briefing Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)</div></div>	<div><div>18:30-19:00 - 0.0.2 Mandatory afternoon (de)briefing Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)</div></div>

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Table 4.1: Thursday (Continued)

Thursday 2025-09-18	Bleik(1)	Grunnvatn(2)	Motorcade(3)
19:00	19:30-22:00 - 3.1.3 Meacon F1.1 "Porcellus": RX1 at 10 W Power: 10W Contact: Anders Eriksen (NKOM)		
20:00			
21:00			
22:00			

Friday

Location 1 Bleik

Friday will be used for time spoofing and repetitions of previous tests. Time after lunch will be used for tearing down and packing up equipment.

Location 2 Grunnvatn

There will be no testing on this site on Friday.

Location 3 Motorcade

There will be no testing on this site on Friday.

Table 5.1: Friday

Friday 2025-09-19	Bleik(1)	Grunnvatn(2)	Motorcade(3)
Start time:	08:00	09:00	09:00
08:00	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)		
09:00	09:00-09:10 - 0.3.1 Ad hoc test Power: 0.316W Comment: L2 only spoofing Contact: Anders Eriksen (NKOM)	09:00-16:00 - 0.1.1 Grace period Comment: SITE IS CLOSED! Contact: Øystein Karlsen (NKOM)	09:00-16:00 - 0.0.1 Mandatory morning briefing Comment: No tests planned Contact: Christian Skjetne (NPRA)
	09:20-09:40 - 0.3.1 Ad hoc test Power: 10W Comment: 3.1.3 + 2.1.2, meaconing (10 W) + spoofing (20 dBm) Contact: Anders Eriksen (NKOM)		
	09:50-10:00 - 3.2.5 Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W alternating with breaks Power: 10W Comment: Only using RX1 Contact: Anders Eriksen (NKOM)		
10:00	10:10-10:33 - 1.6.4 Power ramping with Jammer F8.1 "Porcus Major": 0.2 μW (-37dBm) to 50 W (47dBm) with 2 dB increments PRN: L1, G1, L2, L5 Power: 50W Comment: 20 seconds per step, power ramp (up and down) from -21 (to 47) dBm Contact: Anders Eriksen (NKOM)		
	10:50-11:10 - 2.7.12 Static + Time manipulation (2 years forwards), with power ramp Power: 0.0316W Contact: Anders Eriksen (NKOM)		

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Table 5.1: Friday (Continued)

Friday 2025-09-19	Bleik(1)	Grunnvatn(2)	Motorcade(3)
11:00	11:30-11:50 - 2.7.16 Static + Time manipulation (April 2019), with initial and continuous jamming Power: 0.0316W Contact: Anders Eriksen (NKOM)		
12:00	12:00-12:22 - 2.4.2 Time offset 15 minutes from real time, with power ramp Power: 0.0316W Contact: Anders Eriksen (NKOM)		
	12:30-12:40 - 2.5.5 Time offset 15 minutes from real time. Galileo E1 Power: 0.0316W Contact: Anders Eriksen (NKOM)		
	12:50-13:00 - 0.3.1 Ad hoc test Power: 0.316W Comment: Jamming of L1, G1, BII from S (the spoofing system) Contact: Anders Eriksen (NKOM)		
13:00	13:00-14:00 - 0.1.1 Grace period Comment: Lunch Contact: Christian Skjetne (NPRA)		
14:00	14:00-14:30 - 0.0.2 Mandatory afternoon (de)briefing Comment: Summary briefing and closing of event Contact: Christian Skjetne (NPRA)		
15:00			
16:00			
17:00			

Continued on next page

Table 5.1: Friday (Continued)

Friday 2025-09-19	Bleik(1)	Grunnvatn(2)	Motorcade(3)
18:00			
19:00			
20:00			
21:00			
22:00			