



# Jammertest 2025 Transmission Plan

Jammertest Consortium

2025-08-22  
12:37:50

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# Monday

## **Test Area 1**

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 with different waveforms, CW, Sweep, PRN at different GNSS bands.

## **Test Area 2**

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

## **Test Area 3**

No activity before lunch. Testing of mobile spoofing after lunch.

Table 1.1: Monday

| Monday<br>2025-09-15 | Test Area 1(1)   | Test Area 2(2)  | Test Area 3(3)   |
|----------------------|--|---|--|
| Start time:          | 11:00  | 11:00   | 11:00  |
| 08:00                |  |   |  |
| 09:00                |  |   |  |
| 10:00                |  |   |  |
| 11:00                | <b>11:00-13:00 - 0.0.1</b><br><b>Mandatory morning briefing</b><br>Comment: MANDATORY<br>Contact: Christian Skjetne (NPRA)   | <b>11:00-13:00 - 0.0.1</b><br><b>Mandatory morning briefing</b><br>Comment: MANDATORY attendance at Test Area 1 (Site 1)<br>Contact: Christian Skjetne (NPRA)   | <b>11:00-13:00 - 0.0.1</b><br><b>Mandatory morning briefing</b><br>Comment: MANDATORY attendance at Test Area 1 (Site 1)<br>Contact: Christian Skjetne (NPRA)  |
| 12:00                | Ongoing event. See above.  | Ongoing event. See above.   | Ongoing event. See above.  |
| 13:00                | <b>13:00-14:00 - 0.1.1</b><br><b>Grace period</b><br>Comment: Lunch<br>Contact: Christian Skjetne (NPRA)   | <b>13:00-14:00 - 0.1.1</b><br><b>Grace period</b><br>Comment: Lunch @ Stave (Site 3)<br>Contact: Jahn Erik Røhme (NPRA)   | <b>13:00-14:00 - 0.1.1</b><br><b>Grace period</b><br>Comment: Lunch @ Stave (Site 3)<br>Contact: Jahn Erik Røhme (NPRA)  |
| 14:00                | <b>14:00-14:10 - 1.2.1</b><br><b>Jammer F8.1: 50 W CW: L1</b><br>Comment: 47dBm Jamming from Porcus Maior at Ramnan.<br>Contact: Jørn Skorstad (Nkom)<br><hr/> <b>14:25-14:35 - 1.2.5</b><br><b>Jammer F8.1: 50 W CW: L1, G1, L2, L5, E6</b><br>Comment: 47dBm Jamming from Porcus Maior at Ramnan.<br>Contact: Jørn Skorstad (Nkom)<br><hr/> <b>14:50-15:00 - 1.3.10</b><br><b>Jammer F8.1: 50W frequency sweep, Sweep rate: 100kHz, BW: 20MHz, Bands: L1</b><br>Comment: 47dBm Jamming from Porcus Maior at Ramnan.<br>Contact: Jørn Skorstad (Nkom) | <b>14:00-14:12 - 1.1.1</b><br><b>Jammer S1.1</b><br>Contact: Øystein Karlsen (NKOM)<br><hr/> <b>14:16-14:28 - 1.1.4</b><br><b>Jammer S2.1</b><br>Contact: Øystein Karlsen (NKOM)<br><hr/> <b>14:32-14:44 - 1.1.8</b><br><b>Jammer U1.1</b><br>Contact: Øystein Karlsen (NKOM)<br><hr/> <b>14:48-15:00 - 1.1.12</b><br><b>Jammer H1.1</b><br>Contact: Øystein Karlsen (NKOM) | <b>14:00-14:15 - 2.6.1</b><br><b>Spoofing: Motorcade is stationary with dynamic spoofed position moving south</b><br><br>Power: 0.001W<br>Contact: Jahn Erik Røhme (NPRA)<br><hr/> <b>14:20-14:40 - 2.6.2</b><br><b>Spoofing: Motorcade moving with fixed spoofed position</b><br>Power: 0.001W<br>Contact: Jahn Erik Røhme (NPRA)<br><hr/> <b>14:50-15:10 - 2.6.3</b><br><b>Spoofing: Motorcade is driving while the spoofed position is moving south</b><br>Power: 0.001W<br>Contact: Jahn Erik Røhme (NPRA) |

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Table 1.1: Monday (Continued)

| Monday<br>2025-09-15 | Test Area 1(1)   | Test Area 2(2)  | Test Area 3(3)  |
|----------------------|--|---|---|
| 15:00                | <div><div><b>15:15-15:25 - 1.3.11</b><br/><b>Jammer F8.1: 50W frequency sweep,</b><br/><b>Sweep rate: 100kHz, BW: 20MHz,</b><br/><b>Bands: L1, G1, L2, L5, E6</b><br/>Comment: 47dBm Jamming from Porcus Maior at Ramnan.<br/>Contact: Jørn Skorstad (Nkom)</div><div><b>15:40-15:50 - 1.4.5</b><br/><b>Jammer F8.1: 50 W PRN: L1,</b><br/><b>Chiprate: 10 MHz</b><br/>Comment: 47dBm Jamming from Porcus Maior at Ramnan.<br/>Contact: Jørn Skorstad (Nkom)</div></div>       | <div><div><b>15:04-15:16 - 1.1.13</b><br/><b>Jammer H1.2</b><br/>Contact: Øystein Karlsen (NKOM)</div><div><b>15:20-15:32 - 1.1.16</b><br/><b>Jammer H3.1</b><br/>Contact: Øystein Karlsen (NKOM)</div><div><b>15:36-15:48 - 1.1.18</b><br/><b>Jammer H3.3</b><br/>Contact: Øystein Karlsen (NKOM)</div><div><b>15:52-16:04 - 1.1.19</b><br/><b>Jammer H4.1</b><br/>Contact: Øystein Karlsen (NKOM)</div></div> | <div><div><b>15:20-15:40 - 2.6.4</b><br/><b>Spoofing: Motorcade is driving while the spoofed position is driving in the terrain next to the road</b><br/>Power: 0.001W<br/>Contact: Jahn Erik Røhme (NPRA)</div><div><b>15:50-16:10 - 2.6.5</b><br/><b>Spoofing: Motorcade moving from Crossroads northbound to Stave, while the spoofed position moves southbound towards Nordmela</b><br/>Power: 0.001W<br/>Contact: Jahn Erik Røhme (NPRA)</div></div> |
| 16:00                | <div><div><b>16:05-16:15 - 1.4.6</b><br/><b>Jammer F8.1: 50 W PRN: L1, G1, L2, L5, E6, Chiprate: 10 MHz</b><br/>Comment: 47dBm Jamming from Porcus Maior at Ramnan.<br/>Contact: Jørn Skorstad (Nkom)</div><div><b>16:30-17:45 - 1.8.1</b><br/><b>Jammer F8.1: PRN pyramid</b><br/>Power: 50W<br/>Comment: 47dBm Pyramid jamming from Porcus Maior at Ramnan. Adding jamming bands in sequence: E6, E5b, L5, G2, L2, B1I, G1, L1<br/>Contact: Jørn Skorstad (Nkom)</div></div> | <div><div><b>16:08-16:20 - 1.1.20</b><br/><b>Jammer H6.1</b><br/>Contact: Øystein Karlsen (NKOM)</div><div><b>16:24-16:36 - 1.1.21</b><br/><b>Jammer H6.2</b><br/>Contact: Øystein Karlsen (NKOM)</div><div><b>16:40-16:52 - 1.1.22</b><br/><b>Jammer H6.3</b><br/>Contact: Øystein Karlsen (NKOM)</div><div><b>16:56-17:08 - 1.1.23</b><br/><b>Jammer H6.4</b><br/>Contact: Øystein Karlsen (NKOM)</div></div> | <div><div><b>16:20-16:40 - 2.6.6</b><br/><b>Spoofing: Motorcade moving with fixed spoofed position</b><br/>Power: 0.001W<br/>Contact: Jahn Erik Røhme (NPRA)</div><div><b>16:50-17:10 - 2.6.7</b><br/><b>Spoofing: Motorcade is driving from Crossroads to Stave, while the spoofed location is following the road at a higher speed 100km/h</b><br/>Power: 0.001W<br/>Contact: Jahn Erik Røhme (NPRA)</div></div>  |

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Table 1.1: Monday (Continued)

| Monday<br>2025-09-15 | Test Area 1(1)  | Test Area 2(2)  | Test Area 3(3)  |
|----------------------|---|---|---|
| 17:00                |   | <div>17:12-17:24 - 1.1.26<br/>Jammer H8.1<br/>Contact: Øystein Karlsen (NKOM)</div> <div>17:28-17:40 - 1.1.27<br/>Jammer F6.1<br/>Contact: Øystein Karlsen (NKOM)</div> <div>17:44-17:56 - 1.1.29<br/>Jammer H2.1<br/>Contact: Øystein Karlsen (NKOM)</div> | <div>17:20-17:35 - 2.6.8<br/>The motorcade is stationary at Stave.<br/>The clock will jump forward in time by 1 hour and 15 minutes<br/>Power: 0.001W<br/>Contact: Jahn Erik Røhme (NPRA)</div> |
| 18:00                | <div>18:30-19:00 - 0.0.2<br/>Mandatory afternoon (de)briefing<br/>Contact: Christian Skjetne (NPRA)</div> | <div>18:30-19:00 - 0.0.2<br/>Mandatory afternoon (de)briefing<br/>Comment: MANDATORY attendance at Stave (Site 3)<br/>Contact: Jahn Erik Røhme (NPRA)</div>   | <div>18:30-19:00 - 0.0.2<br/>Mandatory afternoon (de)briefing<br/>Comment: MANDATORY attendance at Stave (Site 3)<br/>Contact: Jahn Erik Røhme (NPRA)</div>                                     |
| 19:00                |   |   |   |
| 20:00                |   |   |   |
| 21:00                |   |   |   |
| 22:00                |   |   |   |

# Tuesday

## **Test Area 1**

Tuesday will be used for jamming and meaconing and unintentional RFI test. During the evening there will be a high power jamming running until 22:00.

## **Test Area 2**

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

## **Test Area 3**

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

Table 2.1: Tuesday

|                       |  |  |  |
|-----------------------|--|--|--|
| Tuesday<br>2025-09-16 | Test Area 1(1)   | Test Area 2(2)   | Test Area 3(3)   |
| Start time:           | 08:00  | 08:00  | 08:00  |
| 08:00                 | <b>08:00-08:30 - 0.0.1</b><br><b>Mandatory morning briefing</b><br>Comment: MANDATORY<br>Contact: Christian Skjetne (NPRA)   | <b>08:00-08:30 - 0.0.1</b><br><b>Mandatory morning briefing</b><br>Comment: MANDATORY attendance at Stave (Site 3)<br>Contact: Christian Skjetne (NPRA)  | <b>08:00-08:30 - 0.0.1</b><br><b>Mandatory morning briefing</b><br>Comment: MANDATORY attendance at Stave (Site 3)<br>Contact: Jahn Erik Røhme (NPRA)  |
| 09:00                 | <b>09:00-09:23 - 1.6.7</b><br><b>Jammer F8.1: 7.9 μW (-21dBm) to 50 W (47dBm) with 2 dB increments</b><br><b>PRN: L1</b><br>Comment: Power ramping test from Porcus Maior at Ramnan<br>Contact: Jørn Skorstad (Nkom)<br><hr/> <b>09:40-10:03 - 1.6.8</b><br><b>Jammer F8.1: 7.9 μW (-21dBm) to 50 W (47dBm) with 2 dB increments</b><br><b>PRN: L1, G1, L2, L5, E6</b><br>Comment: Power ramping test from Porcus Maior at Ramnan<br>Contact: Jørn Skorstad (Nkom) | <b>09:00-09:10 - 1.19.1</b><br><b>3 jammers at 50 meters from center S1.1, S1.2 and S1.3</b><br>Contact: Øystein Karlsen (NKOM)<br><hr/> <b>09:16-09:26 - 1.19.2</b><br><b>3 jammers at 100 meters from center S1.1, S1.2 and S1.3</b><br>Contact: Øystein Karlsen (NKOM)<br><hr/> <b>09:32-09:42 - 1.19.3</b><br><b>3 jammers at 150 meters from center S1.1, S1.2 and S1.3</b><br>Contact: Øystein Karlsen (NKOM)<br><hr/> <b>09:48-09:58 - 1.19.4</b><br><b>3 jammers at 50 meters from center S2.1, S2.2 and S2.3</b><br>Contact: Øystein Karlsen (NKOM) | <b>09:00-11:00 - 1.10.3</b><br><b>Vehicle starting in dual-band denied environment</b><br>Power: 6.31W<br>Comment: Jammers available for testing: H1.6,H1.6,H3.2,F6.1<br>Contact: Jahn Erik Røhme (NPRA) |

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Table 2.1: Tuesday (Continued)

| Tuesday<br>2025-09-16 | Test Area 1(1)  | Test Area 2(2)  | Test Area 3(3)  |
|-----------------------|---|---|---|
| 10:00                 | <p><b>10:20-10:30 - 3.1.3</b><br/> <b>Meaconing with F1.1: RX1 at 10 W</b><br/> Comment: 40dBm meaconing from Porcellus at Ramnan<br/> Contact: Jørn Skorstad (Nkom)</p> <hr/> <p><b>10:45-11:00 - 3.1.4</b><br/> <b>Meaconing with F1.1: RX1 at 10 W with initial jamming</b><br/> Comment: 10 minutes of 40dBm meaconing from Porcellus preceded by 5 minutes of PRN jamming from Porcus Maior at Ramnan<br/> Contact: Jørn Skorstad (Nkom)</p> | <p><b>10:04-10:14 - 1.19.5</b><br/> <b>3 jammers at 100 meters from center S2.1, S2.2 and S2.3</b><br/> Contact: Øystein Karlsen (NKOM)</p> <hr/> <p><b>10:20-10:30 - 1.19.6</b><br/> <b>3 jammers at 150 meters from center S2.1, S2.2 and S2.3</b><br/> Contact: Øystein Karlsen (NKOM)</p> <hr/> <p><b>10:36-10:46 - 1.19.7</b><br/> <b>3 jammers at 50 meters from center U1.1, U1.2 and U1.3</b><br/> Contact: Øystein Karlsen (NKOM)</p> <hr/> <p><b>10:52-11:02 - 1.19.8</b><br/> <b>3 jammers at 100 meters from center U1.1, U1.2 and U1.3</b><br/> Contact: Øystein Karlsen (NKOM)</p>    | Ongoing event. See above.   |
| 11:00                 | <p><b>11:15-11:49 - 3.3.1</b><br/> <b>Meaconing with F1.1: RX1 with ramping power</b><br/> Power: 10W<br/> Comment: Ramping up meaconing signal power from 0dBm to 40dBm with Porcellus at Ramnan<br/> Contact: Jørn Skorstad (Nkom)</p>  | <p><b>11:08-11:18 - 1.19.9</b><br/> <b>3 jammers at 150 meters from center U1.1, U1.2 and U1.3</b><br/> Contact: Øystein Karlsen (NKOM)</p> <hr/> <p><b>11:24-11:34 - 1.19.10</b><br/> <b>3 jammers at 50 meters from center H6.4, H6.5 and H6.6</b><br/> Contact: Øystein Karlsen (NKOM)</p> <hr/> <p><b>11:40-11:50 - 1.19.11</b><br/> <b>3 jammers at 100 meters from center H6.4, H6.5 and H6.6</b><br/> Contact: Øystein Karlsen (NKOM)</p> <hr/> <p><b>11:56-12:06 - 1.19.12</b><br/> <b>3 jammers at 150 meters from center H6.4, H6.5 and H6.6</b><br/> Contact: Øystein Karlsen (NKOM)</p> | <p><b>11:00-13:00 - 1.10.2</b><br/> <b>Driving while passing a parked car with multi-band jammer</b><br/> Power: 1W<br/> Comment: Jammers available for testing: H3.2,H4.1,H3.3,H8.1<br/> Contact: Jahn Erik Røhme (NPRA)</p> |

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Table 2.1: Tuesday (Continued)

| Tuesday<br>2025-09-16 | Test Area 1(1)   | Test Area 2(2)  | Test Area 3(3)  |
|-----------------------|--|---|---|
| 12:00                 | <p><b>12:05-12:41 - 3.2.7</b><br/> <b>Meaconing with F1.1: RX1 and RX2 at 10 W alternating with different switching frequencies.</b></p> <p>Comment: 40dBm Meaconing from Porcellus at Ramnan. Two-minute intervals with more and more rapid switching between receiving antennas RX1 and RX2.<br/> Contact: Jørn Skorstad (Nkom)</p>  | <p><b>12:12-12:22 - 1.19.13</b><br/> <b>3 jammers at 50 meters from center H1.1, H1.4 and H1.5</b><br/> Contact: Øystein Karlsen (NKOM)</p> <hr/> <p><b>12:28-12:38 - 1.19.14</b><br/> <b>3 jammers at 100 meters from center H1.1, H1.4 and H1.5</b><br/> Contact: Øystein Karlsen (NKOM)</p> <hr/> <p><b>12:44-12:54 - 1.19.15</b><br/> <b>3 jammers at 150 meters from center H1.1, H1.4 and H1.5</b><br/> Contact: Øystein Karlsen (NKOM)</p> | Ongoing event. See above.   |
| 13:00                 | <p><b>13:00-14:00 - 0.1.1</b><br/> <b>Grace period</b></p> <p>Comment: Lunch<br/> Contact: Christian Skjetne (NPRA)</p>  | <p><b>13:00-14:00 - 0.1.1</b><br/> <b>Grace period</b></p> <p>Comment: Lunch @ Stave (Site 3)<br/> Contact: Jahn Erik Røhme (NPRA)</p>  | <p><b>13:00-14:00 - 0.1.1</b><br/> <b>Grace period</b></p> <p>Comment: Lunch @ Stave (Site 3)<br/> Contact: Jahn Erik Røhme (NPRA)</p>  |
| 14:00                 | <p><b>14:00-14:36 - 3.2.10</b><br/> <b>Meaconing with F1.1: RX1 and RX2 at 10 W alternating with different switching frequencies and with jamming</b></p> <p>Comment: 40dBm Meaconing from Porcellus at Ramnan with increasing switching frequency between receiving antennas RX1 and RX2. Accompanied by PRN jamming on L5, G1, G2, B1I, E5b and E6 from Porcus Maior.<br/> Contact: Jørn Skorstad (Nkom)</p> <hr/> <p><b>14:55-15:10 - 1.18.5</b><br/> <b>Jammer F8.1: CW signal drift: 1545 to 1620 MHz, 15 minutes sweep time</b></p> <p>Comment: 47dBm Out of band jamming from Porcus Maior at Ramnan<br/> Contact: Jørn Skorstad (Nkom)</p> | <p><b>14:30-14:42 - 1.20.1</b><br/> <b>3 jammers at 50 meters from center H1.1, H1.4 and H1.5</b><br/> Power: 3W<br/> Comment: 30dBm from each direction, A, B and C<br/> Contact: Øystein Karlsen (NKOM)</p> <hr/> <p><b>14:48-15:00 - 1.20.2</b><br/> <b>3 jammers at 100 meters from center H1.1, H1.4 and H1.5</b><br/> Power: 3W<br/> Comment: 30dBm from each direction, A, B and C<br/> Contact: Øystein Karlsen (NKOM)</p>                | <p><b>14:00-16:00 - 1.11.11</b><br/> <b>Motorcade while jammer vehicle is in the middle of the motorcade</b></p> <p>Power: 1W<br/> Comment: Jammers available for testing: H6.1,H3.3<br/> Contact: Jahn Erik Røhme (NPRA)</p> |

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Table 2.1: Tuesday (Continued)

| Tuesday<br>2025-09-16 | Test Area 1(1)   | Test Area 2(2)   | Test Area 3(3)            |
|-----------------------|--|--|---------------------------|
| 15:00                 | <div><div><b>15:25-15:40 - 1.18.7</b><br/><b>Jammer F8.1: CW signal drift: 1620 to 1545 MHz, 15 minutes sweep time</b><br/>Comment: 47dBm Out of band jamming from Porcus Maior at Ramnan<br/>Contact: Jørn Skorstad (Nkom)</div><div><b>15:55-16:10 - 1.18.13</b><br/><b>Jammer F8.1: 50 W drift: 1150 to 1300 MHz, with CW and sweep time of 15 minutes</b><br/>Comment: 47dBm Out of band jamming from Porcus Maior at Ramnan<br/>Contact: Jørn Skorstad (Nkom)</div></div> | <div><div><b>15:06-15:18 - 1.20.3</b><br/><b>3 jammers at 150 meters from center H1.1, H1.4 and H1.5</b><br/>Power: 3W<br/>Comment: 30dBm from each direction, A, B and C<br/>Contact: Øystein Karlsen (NKOM)</div><div><b>15:24-15:36 - 1.20.4</b><br/><b>3 jammers at 50 meters from center H1.1, H1.4 and H1.5</b><br/>Power: 3W<br/>Comment: 30dBm from each direction, A, B and C<br/>Contact: Øystein Karlsen (NKOM)</div><div><b>15:42-15:54 - 1.20.5</b><br/><b>3 jammers at 100 meters from center H1.1, H1.4 and H1.5</b><br/>Power: 3W<br/>Comment: 30dBm from each direction, A, B and C<br/>Contact: Øystein Karlsen (NKOM)</div></div> | Ongoing event. See above. |

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Table 2.1: Tuesday (Continued)

| Tuesday<br>2025-09-16 | Test Area 1(1)   | Test Area 2(2)   | Test Area 3(3)   |
|-----------------------|--|--|--|
| 16:00                 | <p><b>16:25-16:40 - 1.18.15</b><br/><b>Jammer F8.1: 50 W drift: 1300 to 1150 MHz, with CW and sweep time of 15 minutes</b></p> <p>Comment: 47dBm Out of band jamming from Porcus Maior at Ramnan<br/>Contact: Jørn Skorstad (Nkom)</p> | <p><b>16:00-16:12 - 1.20.6</b><br/><b>3 jammers at 150 meters from center H1.1, H1.4 and H1.5</b></p> <p>Power: 3W<br/>Comment: 30dBm from each direction, A, B and C<br/>Contact: Øystein Karlsen (NKOM)</p> <hr/> <p><b>16:18-16:30 - 1.20.7</b><br/><b>3 jammers at 50 meters from center H1.1, H1.4 and H1.5</b></p> <p>Power: 3W<br/>Comment: 30dBm from each direction, A, B and C<br/>Contact: Øystein Karlsen (NKOM)</p> <hr/> <p><b>16:36-16:48 - 1.20.8</b><br/><b>3 jammers at 100 meters from center H1.1, H1.4 and H1.5</b></p> <p>Power: 3W<br/>Comment: 30dBm from each direction, A, B and C<br/>Contact: Øystein Karlsen (NKOM)</p> <hr/> <p><b>16:54-17:06 - 1.20.9</b><br/><b>3 jammers at 150 meters from center H1.1, H1.4 and H1.5</b></p> <p>Power: 3W<br/>Comment: 30dBm from each direction, A, B and C<br/>Contact: Øystein Karlsen (NKOM)</p> | <p><b>16:00-18:00 - 1.11.4</b><br/><b>Driving with dual-band jammer in vehicle overtaking the test vehicle</b></p> <p>Power: 6.31W<br/>Comment: Jammers available for testing: H1.6,H3.3,H4.1,F6.1<br/>Contact: Jahn Erik Røhme (NPRA)</p> |

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Table 2.1: Tuesday (Continued)

| Tuesday<br>2025-09-16 | Test Area 1(1)  | Test Area 2(2)   | Test Area 3(3)   |
|-----------------------|---|--|--|
| 17:00                 | <p><b>17:00-17:28 - 3.4.4</b><br/> <b>Meaconing and spoofing from four emitters in three locations in sequence.</b></p> <p>Comment: Meaconing and spoofing from four emitters in three locations (Ramnan, Cemetery and the Community House), one at a time. 5 minutes per emitter, then 2 minutes each with 10 second overlapping.<br/> Contact: Jørn Skorstad (Nkom)</p> <hr/> <p><b>17:45-18:00 - 3.4.1</b><br/> <b>Meaconing and spoofing at the same time from different locations.</b></p> <p>Comment: Meaconing and spoofing from Ramnan, the cemetery and the community house at the same time.<br/> Contact: Jørn Skorstad (Nkom)</p> | <p><b>17:12-17:24 - 1.20.10</b><br/> <b>3 jammers at 50 meters from center H1.1, H1.4 and H1.5</b></p> <p>Power: 3W<br/> Comment: 30dBm from each direction, A, B and C<br/> Contact: Øystein Karlsen (NKOM)</p> <hr/> <p><b>17:30-17:40 - 1.20.11</b><br/> <b>3 jammers at 100 meters from center H1.1, H1.4 and H1.5</b></p> <p>Power: 3W<br/> Comment: 30dBm from each direction, A, B and C<br/> Contact: Øystein Karlsen (NKOM)</p> <hr/> <p><b>17:46-17:58 - 1.20.12</b><br/> <b>3 jammers at 150 meters from center H1.1, H1.4 and H1.5</b></p> <p>Power: 3W<br/> Comment: 30dBm from each direction, A, B and C<br/> Contact: Øystein Karlsen (NKOM)</p> | Ongoing event. See above.  |
| 18:00                 | <p><b>18:30-19:00 - 0.0.2</b><br/> <b>Mandatory afternoon (de)briefing</b></p> <p>Contact: Christian Skjetne (NPRA)</p>   | <p><b>18:30-19:00 - 0.0.2</b><br/> <b>Mandatory afternoon (de)briefing</b></p> <p>Comment: MANDATORY attendance at Stave (Site 3)<br/> Contact: Christian Skjetne (NPRA)</p>   | <p><b>18:30-19:00 - 0.0.2</b><br/> <b>Mandatory afternoon (de)briefing</b></p> <p>Comment: MANDATORY attendance at Stave (Site 3)<br/> Contact: Jahn Erik Røhme (NPRA)</p> |
| 19:00                 | <p><b>19:00-22:00 - 1.16.5</b><br/> <b>High Power PRN jamming from two locations: L1, G1, L2, L5, E6</b></p> <p>Power: 100W<br/> Comment: One hour of 50dBm jamming from Porcus Maior at Ramnan, then one hour jamming from both Porcus Maior and Winnie the Spoof at the cemetery, then one hour of jamming from Winnie the Spoof.<br/> Contact: Jørn Skorstad (Nkom)</p>  |  |  |
| 20:00                 | Ongoing event. See above.   |  |  |
| 21:00                 | Ongoing event. See above.   |  |  |
| 22:00                 |   |  |  |



# Wednesday

## **Test Area 1**

Wednesday will be used for position and EGNOS spoofing. During the evening there will be a long period with drifting position and time spoofing until 22:00.

## **Test Area 2**

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

## **Test Area 3**

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

Table 3.1: Wednesday

|                         |  |   |   |
|-------------------------|--|---|---|
| Wednesday<br>2025-09-17 | Test Area 1(1)   | Test Area 2(2)  | Test Area 3(3)  |
| Start time:             | 08:00  | 08:00   | 08:00   |
| 08:00                   | <b>08:00-08:30 - 0.0.1</b><br><b>Mandatory morning briefing</b><br>Comment: MANDATORY<br>Contact: Christian Skjetne (NPRA)           | <b>08:00-08:30 - 0.0.1</b><br><b>Mandatory morning briefing</b><br>Comment: MANDATORY attendance at Test Area 1 (Site 1)<br>Contact: Christian Skjetne (NPRA)   | <b>08:00-08:30 - 0.0.1</b><br><b>Mandatory morning briefing</b><br>Comment: MANDATORY attendance at Stave (Site 3)<br>Contact: Jahn Erik Røhme (NPRA)   |
| 09:00                   | <b>09:00-09:40 - 2.1.1</b><br><b>Large position and time jump, with power ramp</b><br>Power: 0.316W<br>Contact: Jørn Skorstad (Nkom) | <b>09:00-09:40 - 2.10.1</b><br><b>Spoofing route GPS L1 and Galileo E1 only</b><br>Power: 0.001W<br>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.<br>Contact: Øystein Karlsen (NKOM)<br><hr/> <b>09:50-10:55 - 2.10.2</b><br><b>Circle of 3 stationary jammers, L1, L2 and spoofing route GPS L1 and Galileo E1 only</b><br>Power: 3W<br>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<br>Contact: Øystein Karlsen (NKOM) | <b>09:00-11:00 - 1.10.3</b><br><b>Vehicle starting in dual-band denied environment</b><br>Power: 1W<br>Comment: Jammers available for testing: H3.2,H4.1,H6.1,H6.3<br>Contact: Jahn Erik Røhme (NPRA) |

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Table 3.1: Wednesday (Continued)

| Wednesday<br>2025-09-17 | Test Area 1(1)   | Test Area 2(2)   | Test Area 3(3)   |
|-------------------------|--|--|--|
| 10:00                   | <p><b>10:00-10:15 - 2.1.3</b><br/> <b>Large position and time jump. Galileo E1 only</b><br/> Power: 0.316W<br/> Contact: Jørn Skorstad (Nkom)</p> <hr/> <p><b>10:20-10:35 - 2.1.2</b><br/> <b>Large position and time jump. GPS L1 C/A only</b><br/> Power: 0.316W<br/> Contact: Jørn Skorstad (Nkom)</p> <hr/> <p><b>10:40-10:55 - 2.1.5</b><br/> <b>Large position and time jump. GPS and Galileo.</b><br/> Power: 0.316W<br/> Contact: Jørn Skorstad (Nkom)</p> |  | Ongoing event. See above.  |
| 11:00                   | <p><b>11:25-11:40 - 2.1.9</b><br/> <b>Simulated driving (route 1). GPS L1 C/A and Galileo E1, with initial jamming</b><br/> Power: 0.316W<br/> Contact: Jørn Skorstad (Nkom)</p> <hr/> <p><b>11:45-12:00 - 2.1.10</b><br/> <b>Simulated driving (route 1), with initial jamming</b><br/> Power: 0.316W<br/> Contact: Jørn Skorstad (Nkom)</p>  | <p><b>11:05-12:00 - 2.10.3</b><br/> <b>Circle of 3 stationary jammers, 2 moving jammers L1, L2 and spoofing route GPS L1 and Galileo E1 only</b><br/> Power: 4W<br/> 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<br/> Contact: Øystein Karlsen (NKOM)</p> | <p><b>11:00-13:00 - 1.10.2</b><br/> <b>Driving while passing a parked car with multi-band jammer</b><br/> Power: 6.31W<br/> Comment: Jammers available for testing: H3.3,H4.1,H8.1,F6.1<br/> Contact: Jahn Erik Røhme (NPRA)</p> |

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Table 3.1: Wednesday (Continued)

| Wednesday<br>2025-09-17 | Test Area 1(1)  | Test Area 2(2)   | Test Area 3(3)   |
|-------------------------|---|--|--|
| 12:00                   | <p><b>12:30-12:40 - 2.8.1</b><br/><b>EGNOS with "Do Not Use GPS" commands</b><br/>Power: 1W<br/>Contact: Jørn Skorstad (Nkom)</p> <hr/> <p><b>12:45-13:00 - 2.8.2</b><br/><b>EGNOS with "Do Not Use GPS" commands and normali spoofing</b><br/>Power: 1W<br/>Contact: Jørn Skorstad (Nkom)</p>  | <p><b>12:10-13:05 - 2.10.4</b><br/><b>Circle of 3 stationary jammers, 5 moving jammers and spoofing route GPS L1 and Galileo E1 only</b><br/>Power: 5W<br/>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.<br/>Contact: Øystein Karlsen (NKOM)</p> | Ongoing event. See above.  |
| 13:00                   | <p><b>13:00-14:00 - 0.1.1</b><br/><b>Grace period</b><br/>Comment: Lunch<br/>Contact: Christian Skjetne (NPRA)</p>  | <p><b>13:00-14:00 - 0.1.1</b><br/><b>Grace period</b><br/>Comment: Lunch @ Stave (Site 3)<br/>Contact: Jahn Erik Røhme (NPRA)</p>  | <p><b>13:00-14:00 - 0.1.1</b><br/><b>Grace period</b><br/>Comment: Lunch @ Stave (Site 3)<br/>Contact: Jahn Erik Røhme (NPRA)</p>  |
| 14:00                   | <p><b>14:00-14:15 - 2.2.3</b><br/><b>Position jump</b><br/>Power: 0.316W<br/>Contact: Jørn Skorstad (Nkom)</p> <hr/> <p><b>14:20-14:35 - 2.2.5</b><br/><b>Small position jump</b><br/>Power: 0.316W<br/>Contact: Jørn Skorstad (Nkom)</p> <hr/> <p><b>14:40-14:55 - 2.2.2</b><br/><b>Small position jump, with initial and continuous jamming</b><br/>Power: 0.316W<br/>Contact: Jørn Skorstad (Nkom)</p> | <p><b>14:10-14:50 - 2.10.1</b><br/><b>Spoofing route GPS L1 and Galileo E1 only</b><br/>Power: 0.001W<br/>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.<br/>Contact: Øystein Karlsen (NKOM)</p>   | <p><b>14:00-16:00 - 1.11.11</b><br/><b>Motorcade while jammer vehicle is in the middle of the motorcade</b><br/>Power: 6.31W<br/>Comment: Jammers available for testing: H3.3,H6.1,H8.1,F6.1<br/>Contact: Jahn Erik Røhme (NPRA)</p> |

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Table 3.1: Wednesday (Continued)

| Wednesday<br>2025-09-17 | Test Area 1(1)   | Test Area 2(2)   | Test Area 3(3)  |
|-------------------------|--|--|---|
| 15:00                   | <p><b>15:25-15:35 - 2.3.8</b><br/> <b>Simulated driving (route 1). Galileo only</b><br/> Power: 0.316W<br/> Contact: Jørn Skorstad (Nkom)</p> <hr/> <p><b>15:40-15:50 - 2.3.5</b><br/> <b>Simulated driving (route 1). GPS only</b><br/> Power: 0.316W<br/> Contact: Jørn Skorstad (Nkom)</p> <hr/> <p><b>15:55-16:05 - 2.3.10</b><br/> <b>Simulated driving (route 1)</b><br/> Power: 0.316W<br/> Contact: Jørn Skorstad (Nkom)</p> | <p><b>15:00-15:55 - 2.10.2</b><br/> <b>Circle of 3 stationary jammers, L1, L2 and spoofing route GPS L1 and Galileo E1 only</b><br/> Power: 3W<br/> 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<br/> Contact: Øystein Karlsen (NKOM)</p>  | Ongoing event. See above.   |
| 16:00                   | <p><b>16:10-16:25 - 2.3.11</b><br/> <b>Simulated driving (route 1) with initial and continuous jamming.</b><br/> Power: 0.316W<br/> Contact: Jørn Skorstad (Nkom)</p> <hr/> <p><b>16:55-17:05 - 2.3.15</b><br/> <b>Flying (route 2) - "helicopter scenario"</b><br/> <br/> Power: 0.316W<br/> Comment: Actual test not decided yet, will depend on helicopters need<br/> Contact: Jørn Skorstad (Nkom)</p>                           | <p><b>16:05-17:00 - 2.10.3</b><br/> <b>Circle of 3 stationary jammers, 2 moving jammers L1, L2 and spoofing route GPS L1 and Galileo E1 only</b><br/> Power: 4W<br/> 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<br/> Contact: Øystein Karlsen (NKOM)</p> | <p><b>16:00-18:00 - 1.11.4</b><br/> <b>Driving with dual-band jammer in vehicle overtaking the test vehicle</b><br/> Power: 6.31W<br/> Comment: Jammers available for testing: H3.3,H6.1,H8.1,F6.1<br/> Contact: Jahn Erik Røhme (NPRA)</p> |

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Table 3.1: Wednesday (Continued)

| Wednesday<br>2025-09-17 | Test Area 1(1)   | Test Area 2(2)  | Test Area 3(3)   |
|-------------------------|--|---|--|
| 17:00                   | <p><b>17:10-17:20 - 2.3.12</b><br/> <b>Flying (route 4) - "drone scenario"</b><br/> <b>GPS L1 C/A only</b><br/>           Power: 0.316W<br/>           Comment: Actual route not yet decided<br/>           Contact: Jørn Skorstad (Nkom)</p> <hr/> <p><b>17:30-17:40 - 2.3.13</b><br/> <b>Flying (route 4) - "drone scenario"</b><br/>           Power: 0.316W<br/>           Comment: Actual route not yet decided<br/>           Contact: Jørn Skorstad (Nkom)</p> <hr/> <p><b>17:45-18:00 - 2.3.15</b><br/> <b>Flying (route 2) - "helicopter scenario"</b><br/> <br/>           Power: 0.316W<br/>           Comment: Actual test not decided yet, will depend on helicopters need<br/>           Contact: Jørn Skorstad (Nkom)</p> | <p><b>17:10-18:05 - 2.10.4</b><br/> <b>Circle of 3 stationary jammers, 5 moving jammers and spoofing route GPS L1 and Galileo E1 only</b><br/>           Power: 5W<br/>           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<br/>           Contact: Øystein Karlsen (NKOM)</p> | Ongoing event. See above.  |
| 18:00                   | <p><b>18:30-19:00 - 0.0.2</b><br/> <b>Mandatory afternoon (de)briefing</b><br/>           Comment: MANDATORY<br/>           Contact: Christian Skjetne (NPRA)</p>  | <p><b>18:30-19:00 - 0.0.2</b><br/> <b>Mandatory afternoon (de)briefing</b><br/>           Comment: MANDATORY attendance at Stave (Site 3)<br/>           Contact: Jahn Erik Røhme (NPRA)</p>  | <p><b>18:30-19:00 - 0.0.2</b><br/> <b>Mandatory afternoon (de)briefing</b><br/>           Comment: MANDATORY attendance at Stave (Site 3)<br/>           Contact: Jahn Erik Røhme (NPRA)</p> |
| 19:00                   | <p><b>19:00-22:00 - 2.3.17</b><br/> <b>Longer period with drifting position and time spoofing</b><br/>           Power: 0.316W<br/>           Comment: 2.3.16 or 2.3.17<br/>           Contact: Jørn Skorstad (Nkom)</p>   |   |  |
| 20:00                   | Ongoing event. See above.  |   |  |
| 21:00                   | Ongoing event. See above.  |   |  |
| 22:00                   |  |   |  |

# Thursday

## **Test Area 1**

Thursday will be used for time spoofing.

## **Test Area 2**

Test of multiple low-power handheld jammers, and Jammer onbaord a drone. Relevant for mobile testing in car, drones and CRPA antennas.

## **Test Area 3**

Testing of mobile spoofing. Repetitions of tests from Monday except the last test of the day.

Table 4.1: Thursday

|                        |  |  |  |
|------------------------|--|--|--|
| Thursday<br>2025-09-18 | Test Area 1(1)   | Test Area 2(2)   | Test Area 3(3)   |
| Start time:            | 08:00  | 08:00  | 08:00  |
| 08:00                  | <b>08:00-08:30 - 0.0.1</b><br><b>Mandatory morning briefing</b><br>Comment: MANDATORY<br>Contact: Christian Skjetne (NPRA)   | <b>08:00-08:30 - 0.0.1</b><br><b>Mandatory morning briefing</b><br>Comment: MANDATORY attendance at Test Area 1 (Site 1)<br>Contact: Christian Skjetne (NPRA)  | <b>08:00-08:30 - 0.0.1</b><br><b>Mandatory morning briefing</b><br>Comment: MANDATORY attendance at Stave (Site 3)<br>Contact: Jahn Erik Røhme (NPRA)  |
| 09:00                  | <b>09:00-09:30 - 2.5.2</b><br><b>Time offset 15 minutes from real time, with power ramp</b><br>Power: 0.0316W<br>Contact: Jørn Skorstad (Nkom)<br><hr/> <b>09:55-10:10 - 2.4.3</b><br><b>Time offset -3 minutes from real time, with power jump</b><br>Power: 0.0316W<br>Contact: Jørn Skorstad (Nkom) | <b>09:00-10:00 - 1.23.1</b><br><b>Jammer S1.1 with 10dB gain at 50 meters above ground</b><br>Power: 0.316W<br>Comment: Drone with jammer onboard.<br>Dependent on weather conditions<br>Contact: Øystein Karlsen (NKOM) | <b>09:00-09:15 - 2.6.1</b><br><b>Spoofing: Motorcade is stationary with dynamic spoofed position moving south</b><br><br>Power: 0.001W<br>Contact: Jahn Erik Røhme (NPRA)<br><hr/> <b>09:20-09:40 - 2.6.2</b><br><b>Spoofing: Motorcade moving with fixed spoofed position</b><br>Power: 0.001W<br>Contact: Jahn Erik Røhme (NPRA)<br><hr/> <b>09:50-10:10 - 2.6.3</b><br><b>Spoofing: Motorcade is driving while the spoofed position is moving south</b><br>Power: 0.001W<br>Contact: Jahn Erik Røhme (NPRA) |
| 10:00                  | <b>10:20-10:35 - 2.4.12</b><br><b>Static + Pseudorange error</b><br>Power: 0.0316W<br>Contact: Jørn Skorstad (Nkom)<br><hr/> <b>10:50-11:05 - 2.4.13</b><br><b>Static + Pseudorange error, with initial and continous jamming</b><br>Power: 0.001W<br>Contact: Jørn Skorstad (Nkom)                    | <b>10:00-11:00 - 1.23.1</b><br><b>Jammer S1.1 with 10dB gain at 50 meters above ground</b><br>Power: 0.316W<br>Comment: Drone with jammer onboard.<br>Dependent on weather conditions<br>Contact: Øystein Karlsen (NKOM) | <b>10:20-10:40 - 2.6.4</b><br><b>Spoofing: Motorcade is driving while the spoofed position is driving in the terrain next to the road</b><br>Power: 0.001W<br>Contact: Jahn Erik Røhme (NPRA)<br><hr/> <b>10:50-11:10 - 2.6.5</b><br><b>Spoofing: Motorcade moving from Crossroads northbound to Stave, while the spoofed position moves southbound towards Nordmela</b><br>Power: 0.001W<br>Contact: Jahn Erik Røhme (NPRA)   |

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Table 4.1: Thursday (Continued)

| Thursday<br>2025-09-18 | Test Area 1(1)   | Test Area 2(2)  | Test Area 3(3)   |
|------------------------|--|---|--|
| 11:00                  | <b>11:35-12:00 - 2.5.22</b><br><b>Static + Nav data manipulation (clock/frequency related), with initial and continuous jamming.</b><br>Power: 0.001W<br>Contact: Jørn Skorstad (Nkom)           | <b>11:00-12:00 - 1.23.2</b><br><b>Jammer S1.1 with 10dB gain at 100 meters above ground</b><br>Power: 0.316W<br>Comment: Drone with jammer onboard.<br>Dependent on weather conditions<br>Contact: Øystein Karlsen (NKOM) | <b>11:20-11:40 - 2.6.6</b><br><b>Spoofing: Motorcade moving with fixed spoofed position</b><br>Power: 0.001W<br>Contact: Jahn Erik Røhme (NPRA) <hr/> <b>11:50-12:10 - 2.6.7</b><br><b>Spoofing: Motorcade is driving from Crossroads to Stave, while the spoofed location is following the road at a higher speed 100km/h</b><br>Power: 0.001W<br>Contact: Jahn Erik Røhme (NPRA) |
| 12:00                  | <b>12:25-13:00 - 2.5.25</b><br><b>Static + UTC-parameter nav. data manipulation (adding leap seconds), with initial and continuous jamming</b><br>Power: 0.001W<br>Contact: Jørn Skorstad (Nkom) | <b>12:00-13:00 - 1.23.2</b><br><b>Jammer S1.1 with 10dB gain at 100 meters above ground</b><br>Power: 0.316W<br>Comment: Drone with jammer onboard.<br>Dependent on weather conditions<br>Contact: Øystein Karlsen (NKOM) | <b>12:20-12:35 - 2.6.8</b><br><b>The motorcade is stationary at Stave. The clock will jump forward in time by 1 hour and 15 minutes</b><br>Power: 0.001W<br>Contact: Jahn Erik Røhme (NPRA)  |
| 13:00                  | <b>13:00-14:00 - 0.1.1</b><br><b>Grace period</b><br>Comment: Lunch<br>Contact: Christian Skjetne (NPRA)   | <b>13:00-14:00 - 0.1.1</b><br><b>Grace period</b><br>Comment: Lunch @ Stave (Site 3)<br>Contact: Jahn Erik Røhme (NPRA)   | <b>13:00-14:00 - 0.1.1</b><br><b>Grace period</b><br>Comment: Lunch @ Stave (Site 3)<br>Contact: Jahn Erik Røhme (NPRA)  |

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Table 4.1: Thursday (Continued)

| Thursday<br>2025-09-18 | Test Area 1(1)   | Test Area 2(2)  | Test Area 3(3)  |
|------------------------|--|---|---|
| 14:00                  | <div><div><b>14:00-14:15 - 2.5.5</b><br/>Time offset 15 minutes from real time.<br/><b>Galileo E1</b><br/>Power: 0.0316W<br/>Contact: Jørn Skorstad (Nkom)</div><div><b>14:20-14:35 - 2.5.4</b><br/>Time offset 15 minutes from real time.<br/><b>GPS L1 C/A</b><br/>Power: 0.0316W<br/>Contact: Jørn Skorstad (Nkom)</div><div><b>14:40-14:55 - 2.5.6</b><br/>Time offset 15 minutes from real time<br/>Power: 1e-05W<br/>Contact: Jørn Skorstad (Nkom)</div></div> | <div><div><b>14:00-15:00 - 0.3.1</b><br/>Ad hoc test<br/>Contact: Øystein Karlsen (NKOM)</div></div>  | <div><div><b>14:00-14:15 - 2.6.1</b><br/>Spoofing: Motorcade is stationary with dynamic spoofed position moving south<br/><br/>Power: 0.001W<br/>Contact: Jahn Erik Røhme (NPRA)</div><div><b>14:20-14:40 - 2.6.2</b><br/>Spoofing: Motorcade moving with fixed spoofed position<br/>Power: 0.001W<br/>Contact: Jahn Erik Røhme (NPRA)</div><div><b>14:50-15:10 - 2.6.3</b><br/>Spoofing: Motorcade is driving while the spoofed position is moving south<br/>Power: 0.001W<br/>Contact: Jahn Erik Røhme (NPRA)</div></div> |
| 15:00                  | <div><div><b>15:25-15:40 - 2.5.13</b><br/>Static + Pseudorange error. GPS L1 and Galileo E1 only<br/>Power: 0.001W<br/>Contact: Jørn Skorstad (Nkom)</div><div><b>15:45-16:00 - 2.5.15</b><br/>Static + Pseudorange error<br/>Power: 1e-05W<br/>Contact: Jørn Skorstad (Nkom)</div></div>  | <div><div><b>15:00-16:00 - 1.22.1</b><br/>12 jammers at 50 meters from center<br/>Comment: U1.1, U1.2, U1.3, S2.1, S2.2, S2.3, H1.1, H1.4, H1.5, H6.4, H6.5, H6.6<br/>Contact: Øystein Karlsen (NKOM)</div></div> | <div><div><b>15:20-15:40 - 2.6.4</b><br/>Spoofing: Motorcade is driving while the spoofed position is driving in the terrain next to the road<br/>Power: 0.001W<br/>Contact: Jahn Erik Røhme (NPRA)</div><div><b>15:50-16:10 - 2.6.5</b><br/>Spoofing: Motorcade moving from Crossroads northbound to Stave, while the spoofed position moves southbound towards Nordmela<br/>Power: 0.001W<br/>Contact: Jahn Erik Røhme (NPRA)</div></div>   |

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Table 4.1: Thursday (Continued)

| Thursday   |   |  |  |
|------------|---|--|--|
| 2025-09-18 | Test Area 1(1)  | Test Area 2(2)   | Test Area 3(3)   |
| 16:00      | <div><div><b>16:15-16:40 - 2.5.16</b><br/>Static + Pseudorange error, with initial and continuous jamming<br/>Power: 1e-05W<br/>Contact: Jørn Skorstad (Nkom)</div><div><b>16:55-17:20 - 2.5.26</b><br/>Static + UTC-parameter nav. data manipulation (removing leap seconds). GPS L1 C/A<br/>Power: 1e-05W<br/>Contact: Jørn Skorstad (Nkom)</div></div> | <div><div><b>16:05-16:15 - 1.1.1</b><br/>Jammer S1.1<br/>Contact: Øystein Karlsen (NKOM)</div><div><b>16:20-16:30 - 1.1.4</b><br/>Jammer S2.1<br/>Contact: Øystein Karlsen (NKOM)</div><div><b>16:35-16:45 - 1.1.8</b><br/>Jammer U1.1<br/>Contact: Øystein Karlsen (NKOM)</div><div><b>16:50-17:00 - 1.1.12</b><br/>Jammer H1.1<br/>Contact: Øystein Karlsen (NKOM)</div></div> | <div><div><b>16:20-16:40 - 2.6.6</b><br/>Spoofing: Motorcade moving with fixed spoofed position<br/>Power: 0.001W<br/>Contact: Jahn Erik Røhme (NPRA)</div><div><b>16:50-17:10 - 2.6.7</b><br/>Spoofing: Motorcade is driving from Crossroads to Stave, while the spoofed location is following the road at a higher speed 100km/h<br/>Power: 0.001W<br/>Contact: Jahn Erik Røhme (NPRA)</div></div> |
| 17:00      | <div><div><b>17:30-18:00 - 2.5.28</b><br/>Static + UTC-parameter nav. data manipulation (removing leap seconds), with initial and continuous jamming<br/>Power: 1e-05W<br/>Comment: 2.5.28 or 2.5.27 (with or without initial jamming)<br/>Contact: Jørn Skorstad (Nkom)</div></div>  | <div><div><b>17:05-17:15 - 1.1.18</b><br/>Jammer H3.3<br/>Contact: Øystein Karlsen (NKOM)</div><div><b>17:20-17:30 - 1.1.19</b><br/>Jammer H4.1<br/>Contact: Øystein Karlsen (NKOM)</div><div><b>17:35-17:45 - 1.1.22</b><br/>Jammer H6.3<br/>Contact: Øystein Karlsen (NKOM)</div></div>  | <div><div><b>17:20-17:35 - 2.6.9</b><br/>The motorcade is stationary at Stave. The clock will jump forward in time by 13 years (to the year 2038)<br/>Power: 0.001W<br/>Comment: Warning: This test could 'brick' some equipment.<br/>Contact: Jahn Erik Røhme (NPRA)</div></div>  |
| 18:00      | <div><div><b>18:30-19:00 - 0.0.2</b><br/>Mandatory afternoon (de)briefing<br/>Comment: MANDATORY<br/>Contact: Christian Skjetne (NPRA)</div></div>  | <div><div><b>18:30-19:00 - 0.0.2</b><br/>Mandatory afternoon (de)briefing<br/>Comment: MANDATORY attendance at Bleik (Site 1)<br/>Contact: Christian Skjetne (NPRA)</div></div>  | <div><div><b>18:30-19:00 - 0.0.2</b><br/>Mandatory afternoon (de)briefing<br/>Comment: MANDATORY attendance at Bleik (Site 1)<br/>Contact: Christian Skjetne (NPRA)</div></div>  |
| 19:00      |   |  |  |
| 20:00      |   |  |  |
| 21:00      |   |  |  |
| 22:00      |   |  |  |



# Friday

## **Test Area 1**

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.

## **Test Area 2**

There will be no testing on this site on Friday.

## **Test Area 3**

There will be no testing on this site on Friday.

Table 5.1: Friday

| Friday<br>2025-09-19 | Test Area 1(1)  | Test Area 2(2)   | Test Area 3(3)   |
|----------------------|---|--|--|
| Start time:          | 08:00   | 09:00  | 09:00  |
| 08:00                | <b>08:00-08:30 - 0.0.1</b><br><b>Mandatory morning briefing</b><br>Comment: MANDATORY<br>Contact: Christian Skjetne (NPRA)  |  |  |
| 09:00                | <b>09:00-09:10 - 0.3.1</b><br><b>Ad hoc test</b><br>Power: 0.316W<br>Comment: L2 only spoofing<br>Contact: Jørn Skorstad (Nkom)<br><hr/> <b>09:20-09:40 - 0.3.1</b><br><b>Ad hoc test</b><br>Power: 10W<br>Comment: 3.1.3 + 2.1.2, meaconing (10 W) + spoofing (20 dBm)<br>Contact: Jørn Skorstad (Nkom)<br><hr/> <b>09:50-10:00 - 3.2.5</b><br><b>Meaconing with F1.1: RX1 and RX2 at 10 W alternating with breaks</b><br>Power: 10W<br>Comment: Only using RX1<br>Contact: Jørn Skorstad (Nkom) | <b>09:00-16:00 - 0.1.1</b><br><b>Grace period</b><br>Comment: SITE IS CLOSED!<br>Contact: Øystein Karlsen (NKOM) | <b>09:00-16:00 - 0.1.1</b><br><b>Grace period</b><br>Comment: SITE IS CLOSED!<br>Contact: Christian Skjetne (NPRA) |
| 10:00                | <b>10:10-10:33 - 1.6.4</b><br><b>Jammer F8.1: 0.2 <math>\mu</math>W (-37dBm) to 50 W (47dBm) with 2 dB increments</b><br><b>PRN: L1, G1, L2, L5</b><br>Power: 50W<br>Comment: 20 seconds per step, power ramp (up and down) from -21 (to 47) dBm<br>Contact: Jørn Skorstad (Nkom)<br><hr/> <b>10:50-11:10 - 2.7.12</b><br><b>Static + Time manipulation (2 years forwards), with power ramp</b><br>Power: 0.0316W<br>Contact: Jørn Skorstad (Nkom)  | Ongoing event. See above.  | Ongoing event. See above.  |

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Table 5.1: Friday (Continued)

| Friday<br>2025-09-19 | Test Area 1(1)   | Test Area 2(2)            | Test Area 3(3)            |
|----------------------|--|---------------------------|---------------------------|
| 11:00                | <b>11:30-11:50 - 2.7.16</b><br><b>Static + Time manipulation (April 2019), with initial and continuous jamming</b><br>Power: 0.0316W<br>Contact: Jørn Skorstad (Nkom)  | Ongoing event. See above. | Ongoing event. See above. |
| 12:00                | <b>12:00-12:22 - 0.3.1</b><br><b>Ad hoc test</b><br>Power: 0.0316W<br>Comment: Spoofing<br>Contact: Jørn Skorstad (Nkom) <hr/> <b>12:30-12:40 - 0.3.1</b><br><b>Ad hoc test</b><br>Power: 0.0316W<br>Comment: Spoofing<br>Contact: Jørn Skorstad (Nkom) <hr/> <b>12:50-13:00 - 0.3.1</b><br><b>Ad hoc test</b><br>Power: 0.316W<br>Comment: Jamming of L1, G1, BII from S (the spoofing system)<br>Contact: Jørn Skorstad (Nkom) | Ongoing event. See above. | Ongoing event. See above. |
| 13:00                | <b>13:00-14:00 - 0.1.1</b><br><b>Grace period</b><br>Comment: Lunch<br>Contact: Christian Skjetne (NPRA)   | Ongoing event. See above. | Ongoing event. See above. |
| 14:00                | <b>14:00-14:30 - 0.0.2</b><br><b>Mandatory afternoon (de)briefing</b><br>Comment: Summary briefing and closing of event<br>Contact: Christian Skjetne (NPRA)   | Ongoing event. See above. | Ongoing event. See above. |
| 15:00                |  | Ongoing event. See above. | Ongoing event. See above. |
| 16:00                |  |                           |                           |
| 17:00                |  |                           |                           |

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Table 5.1: Friday (Continued)

|            |                |                |                |
|------------|----------------|----------------|----------------|
| Friday     |                |                |                |
| 2025-09-19 | Test Area 1(1) | Test Area 2(2) | Test Area 3(3) |
| 18:00      |                |                |                |
| 19:00      |                |                |                |
| 20:00      |                |                |                |
| 21:00      |                |                |                |
| 22:00      |                |                |                |