ABOUT SAF Tehnika

- Profitable/no debt balance sheet
- Presence in 130+ countries
- Manufacturing in the European Union
- ISO 9001 certified
- 20 years in business
- Publicly traded on NASDAQ Riga Stock Exchange
- Flexible R&D, able to provide custom solutions based on customer requirements
MAIN PRODUCT GROUPS

POINT-TO-POINT SYSTEMS
www.saftehnika.com

MW SPECTRUM ANALYZERS
www.spectrumcompact.com

ARANET WIRELESS SENSOR SOLUTIONS
www.aranet.com
PERFORMANCE GUARANTEE

- Every Spectrum Compact passes a full-cycle thermo test (-15°C/5F to 55°C/131F)
- SAF products are guaranteed to meet our published specifications:
  - Noise floor [dBm]
  - Accuracy [dB]
  - Scanning speed [s]
- Quality Technical support
- Assistance in usage
- Short lead times
SPECTRUM COMPACT SERIES

- Small & Light, designed for field use
- Ready to use full solution
  - T&M devices,
  - PC software,
  - Intuitive user interface,
  - Accessories.
- Quick MW spectrum measurements from ground level
- Built-in memory for measurement data logging
- Instant ON functionality
- No hidden costs
WORLD’S SMALLEST

Spectrum Compact is the world’s smallest test and measurement solution for real-life applications like interference detection, site survey, path alignment and many more. Devices have a market leading receiver sensitivity of -128 dBm at 10 kHz RBW.
<table>
<thead>
<tr>
<th>SC RANGE (GHz)</th>
<th>0.3-3</th>
<th>2-8</th>
<th>5.95-12</th>
<th>10-18</th>
<th>17-24.3</th>
<th>24-43</th>
<th>56-67</th>
<th>70-87</th>
</tr>
</thead>
<tbody>
<tr>
<td>SG RANGE (GHz)</td>
<td>5.95-12</td>
<td>10-18</td>
<td>17-24.3</td>
<td>24-40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**HIGHLIGHTS & BENEFITS**

**Ultra-compact form factor**
Truly hand-held device, designed specifically for convenient outdoor use in a variety of challenging environments.

**Compatible with different antenna systems**
Can be used with antennas from other manufacturers and radio system.

**Resistive LCD Touchscreen**
Resistive LCD touchscreen allows to leave your gloves on while operating the unit. Intuitive UI makes it easy to control the unit.

**Leading Sensitivity**
Industry leading receiver sensitivity in all frequency range allows to discover even weak signals.

**PC software**
Upload, save, compare, analyze and print your saved spectrum scans using free PC software.

**IP marking 54**
IP 54 International Protection Marking (IP code) ensures that the analyzer is fully dust protected and can be used in rainy conditions. For devices 56 – 87 GHz.
### HIGHLIGHTS & BENEFITS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency range</strong></td>
<td>0.300 - 3.000 GHz</td>
</tr>
<tr>
<td><strong>Displayed Average Noise Level</strong></td>
<td>128 dBm @ RBW=10 kHz</td>
</tr>
<tr>
<td><strong>Max. input power</strong></td>
<td>+27 dBm</td>
</tr>
<tr>
<td><strong>RBW</strong></td>
<td>10, 30, 100, 300 kHz</td>
</tr>
<tr>
<td><strong>Min. Span</strong></td>
<td>0.5 MHz</td>
</tr>
<tr>
<td><strong>Sweep speed</strong></td>
<td>0.15 s @ 15 MHz Span</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>+/-1 dB</td>
</tr>
<tr>
<td><strong>Input</strong></td>
<td>50 ohm SMA (f)</td>
</tr>
<tr>
<td><strong>Operating temperature</strong></td>
<td>-15°C to +50°C / 9% to 91°F</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>0.57 kg / 20.11 oz</td>
</tr>
</tbody>
</table>

*Guaranteed at 21°C/70°F CW signal.*
INDUSTRIES & SOLUTIONS

- Telecoms
- 5G
- Distributed antenna systems (DAS)
- Defence & Aerospace
- Drones
- Indoor signal mapping
- Regulatory
- Satellite communications
  …and more
Spectrum Compact provides visual reference of signal using the «Max Hold» trace mode helps observing maximum signal level achieved while sweeping. Spectrum analyzers help better understand signal quality, channel, and spectrum occupancy during or before link installation. «Power In Band» function measures the Rx level on antenna RF output port in dBm’s and functions as a power meter.

- Site survey and Line-of-site verification
- Radio status verification
- Radio link antenna alignment
- Site acceptance and reporting
- Radio troubleshooting
- Interference detection
- Targets: Telecoms, internet service providers, system integrators and installators
Spectrum Compact provides visual reference of signal. Using the «Max Hold» trace mode helps observing maximum signal level achieved while sweeping.

Spectrum analyzers help better understand signal quality, channel and spectrum occupancy during or before link installation.

«Power In Band» function measures the Rx level on antenna RF output port in dBm’s and functions as a power meter.

5G Applications / Targets

- Devices for all 5G bands (low, mid/high, mmW)
- Real world signal propagation
- Radio verification (freq., BW, power)
- Indoor, mmW DAS
- Target – Mobile operators, integrators
UAV / DRONE SOLUTIONS

Applications:

✓ Interference hunting
✓ Transmitter parameter measurements (freq., BW, power)
✓ Line-of-sight verification (in conjunction with portable transmitters)

For drone integrators:

✓ Integration ready API
✓ Small size and weight of SC - perfect for placing on drone
✓ Access Spectrum Compact remotely with PC software
✓ Targets - Drone system integrators, telecoms, mobile operators, regulators
Applications/Targets

- License parameter verification of any installed radio (channel bandwidth, center frequency, etc.)
- Scanning all installed radios in a given band or across several radio bands
- Illegal spectrum user detection
- Perform field measurements from ground level
- Target – national regulatory authorities
Applications/Targets

✓ Integrated with TRX systems NEON signal mapper
✓ GPS and GPS denied environments
✓ Applications for public safety DAS, outdoor wireless coverage
✓ Targets – DAS contractors/certification companies, local code enforcement, public safety organizations
Applications/Targets

✓ Easy physical layer investigation
✓ In-building coverage measurement
✓ Targets – DAS integrators, mobile operators
Applications/Targets

- L-band (1.5GHz), Ka (26.5-40GHz) terminal maintenance, antenna alignment. MSS/FSS/VSAT
- Targets – satellite internet companies, traditional satcom (military, industrial), TV broadcast
SG Compact

Essential tool for antenna alignment and testing. Top choice for Line-of-sight verification applications.

<table>
<thead>
<tr>
<th>P/N</th>
<th>JOSSAG11</th>
<th>JOSSAG12</th>
<th>JOSSAG13</th>
<th>JOSSAG14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency range</td>
<td>5.925 - 12.000 GHz</td>
<td>10.000 - 18.000 GHz</td>
<td>17.000 - 24.300 GHz</td>
<td>24.000 - 40.000 GHz</td>
</tr>
<tr>
<td>Output power range</td>
<td>-3 dBm to +13 dBm</td>
<td>-3 dBm to +11 dBm</td>
<td>-3 dBm to +10 dBm</td>
<td>-3 dBm to +5 dBm</td>
</tr>
<tr>
<td>Frequency accuracy</td>
<td>+/- 10 ppm</td>
<td>+/- 10 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase noise</td>
<td>&lt;= -80dBc/Hz @100kHz</td>
<td>&lt;= -80dBc/Hz @100kHz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjustable frequency step</td>
<td>1 MHz</td>
<td>1 MHz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjustable power step</td>
<td>1 dBm</td>
<td>1 dBm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signal form</td>
<td>Continuous wave</td>
<td>Continuous wave</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accuracy*</td>
<td>+/- 1 dBm</td>
<td>+/- 1 dBm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output</td>
<td>50 ohm SMA (f)</td>
<td>50 ohm 2.92mm (f)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interface</td>
<td>mini USB 2.0 (1.1)</td>
<td>mini USB 2.0 (1.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery life</td>
<td>up tp 4h</td>
<td>up to 3h</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-15°C to +55°C / 5°F to 131°F</td>
<td>-15°C to +55°C / 5°F to 131°F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>128 x 81 x 24 mm / 5.04 x 3.2 x 0.94 in</td>
<td>130 x 81 x 28 mm / 5.11 x 3.2 x 1.1 in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>0.3 kg / 10.6 oz</td>
<td>0.3 kg / 10.6 oz</td>
<td>0.4 kg / 14.11 oz</td>
<td></td>
</tr>
</tbody>
</table>

* Guaranteed throughout all the temperature range
Hand held directional antennas

<table>
<thead>
<tr>
<th>Horn type</th>
<th>J0AA0305HG02</th>
<th>J0AA0507HG02</th>
<th>J0AA0610HG02</th>
<th>J0AA1115HG01</th>
<th>J0AA1724HG01</th>
<th>J0AA2640HG03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covered frequency range, GHz</td>
<td>3.0-5.0</td>
<td>5.0-7.5</td>
<td>5.925-11.0</td>
<td>10.7-17.0</td>
<td>17.0-26.5</td>
<td>26.5-43.0</td>
</tr>
<tr>
<td>Typical Gain, dBi</td>
<td>12-15.5</td>
<td>14.5-17.5</td>
<td>14.5-18.0</td>
<td>19.5-20.5</td>
<td>21.0-21.5</td>
<td>20.5-22.0</td>
</tr>
</tbody>
</table>
0.3 – 43 GHZ ACESSORIES
V-BAND & E-BAND ACCESSORIES
Intuitive and user-friendly GUI
Remote control function with Spectrum Compact analyzer
10 markers with options MAX/MIN/FREQ/DELTA
Trace controls: AVG 2/4/8/16; Hold MAX/MIN/MINMAX
Power in Band
Overlay
Create masks
Save images and raw spectrum files
Add GPS files
Create reports
Update Spectrum Compact Analyzer