SA3000 EMC Analyser

Compliance EMC conducted and radiated measurements to 3GHz

- 9KHz—3GHz range to cover EN, FCC and international standards.
- Powerful PC software control and automation included.
- 200Hz RBW and Tracking Generator options.
- USB interface for very simple operation.
- Compact and simple to use whilst including all the necessary features for self testing your own products.

The Laplace SA3000 EMC analyser provides an exceptionally powerful and cost effective tool for manufacturers and others who wish to measure EMC emissions from their products. When used with the RF9xx range of pre-selectors, accurate measurements even with conducted broadband emissions are obtained.

Entirely controlled from an intuitive Windows software package, the analyser can enable a self-test and self-certification strategy to be adopted with confidence.

The software is a true Windows program which means that results can be easily transferred to printer and disk and to other applications such as Word and Excel.

A full range of compatible accessories is available, including compact test cells and antennas, all fully calibrated to 3GHz.

COMPREHENSIVE The SA3000 covers both conducted and radiated emissions testing from 9KHz to 3GHz. An optional 200Hz I.F. filter ensures fully compliant measurements covering ALL emissions including Band A (9KHz—150KHz).

POWERFUL This analyser and the associated software includes all the facilities required to perform accurate EMC measurements, even on non-compliant test sites.

CONVENIENCE The SA3000 and associated ancillaries can eliminate the use of expensive and inconvenient test lab visits. The ‘Self test and self certification’ strategy avoids costly reworking of design and reduces ‘time-to-market’.

SIMPLICITY These systems are renowned for ease of operation. The software is outstanding in terms of flexibility and intuitive user interface.

LAPLACE INSTRUMENTS LIMITED
# SA3000, 3GHz EMC analyser

## Hardware

The SA3000 is an exceptionally well featured EMC analyser designed to match the requirements of all common EMC standards and includes:

- **9KHz—3GHz frequency range**
- **200Hz (opt), 9KHz, 120KHz and 1MHz RBW**
- **Peak, Quasi-peak and Average detectors**
- **Precision frequency measurement at all points in any scan.**
- **Instant zoom capability to any point in a scan.**
- **Audio demodulator (FM and AM)**
- **USB interface, just plug and go!**
- **Optional pre-selector for conducted emissions.**
- **Optional tracking generator output.**

## Specification

<table>
<thead>
<tr>
<th><strong>Hardware</strong></th>
<th><strong>Software</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency range</strong></td>
<td>9KHz—3GHz</td>
</tr>
<tr>
<td><strong>Scan coverage</strong></td>
<td>Continuous scan, no gaps on any range</td>
</tr>
<tr>
<td><strong>Zoom settings</strong></td>
<td>Infinitely variable.</td>
</tr>
<tr>
<td><strong>Minimum zoom</strong></td>
<td>&lt;30MHz: 500KHz &gt;30MHz: 10KHz Plus single frequency mode</td>
</tr>
<tr>
<td><strong>Sensitivity</strong></td>
<td>2dBuV with pre-amplifier ON</td>
</tr>
<tr>
<td><strong>Flatness</strong></td>
<td>±3dB</td>
</tr>
<tr>
<td><strong>Max RF input level</strong></td>
<td>+3dBm</td>
</tr>
<tr>
<td><strong>Compression warning</strong></td>
<td>Detector at input.</td>
</tr>
<tr>
<td><strong>Spurious responses</strong></td>
<td>&lt;5dB above baseline</td>
</tr>
<tr>
<td><strong>Input protection</strong></td>
<td>Diode clamped</td>
</tr>
<tr>
<td><strong>RBW</strong></td>
<td>200Hz (option), 9KHz, 120KHz, 1MHz</td>
</tr>
<tr>
<td><strong>Input dynamic range</strong></td>
<td>70dB</td>
</tr>
<tr>
<td><strong>RF attenuator</strong></td>
<td>0, 10, 20, 30dB</td>
</tr>
<tr>
<td><strong>Audio demodulator</strong></td>
<td>Slope demodulator (FM and AM). Variable volume control.</td>
</tr>
<tr>
<td><strong>Detectors</strong></td>
<td>Peak, Quasi-peak and Average.</td>
</tr>
<tr>
<td><strong>Frequency accuracy</strong></td>
<td>Better than 80ppm anywhere in scan.</td>
</tr>
<tr>
<td><strong>Scanning Modes</strong></td>
<td>Continuous scanning, single scan and single frequency mode,</td>
</tr>
<tr>
<td><strong>Optional tracking generator</strong></td>
<td>Frequency range: 9KHz—3GHz, locked to scan frequency</td>
</tr>
<tr>
<td><strong>Frequency Output range</strong></td>
<td>-30dBm (77dBuV) nominal</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>Via USB interface</td>
</tr>
<tr>
<td><strong>Control software</strong></td>
<td>Windows software included</td>
</tr>
<tr>
<td><strong>Connectors:</strong></td>
<td>&lt;1GHz, N type &gt;1GHz, N type + SMA adaptor</td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>230V 50/60Hz 40W, 115V factory set option</td>
</tr>
<tr>
<td><strong>Physical</strong></td>
<td>30.5 x 27 x 14.5cm Weight: 5kg</td>
</tr>
</tbody>
</table>

## Compatibility

Any PC running Win98 or later o.s.

## Functions

Total control of all aspects of SA3000 operation, results display, saving to disk, printer output, and all EMC data processing.

## Graphical scale

- **Vertical** dBuV, dBm, dBuV/m, dBuA
- **Horizontal** KHz, MHz, Log or Linear mS or S (Single freq. Mode)

## Single freq. mode

Simultaneous plot of Pk, QP and Ave values vs time.

## Traces

- Current
- Stored
- Difference
- Archive
- Limits

## Pre-loaded Limits

- EN55011/12/13/14/15/22/25
- FCC, As/NZ equivalents

## Additional and User limits

Tabular entry field. Automatic interpolation

## Antenna factor correction

Automatic

## Additional correction data

Tabular entry field. Automatic interpolation against linear or log frequency axis.

## Tabular listing

Up to 20 selected points. Real time display of Pk, QP and Ave values

## Cursor readout

All trace values and freq. readout at cursor location.

## Expert system

TestDirector mode provides full details of common standards and associated test techniques.

## Data storage

Full data set with setup and limits with title and notes saved to user selected file.

## Data retrieval

Traces and setups can be recalled in any combination.

## Printer

Direct output to any Windows printer.

## Data Format

ASCII text, comma delimited

## Order codes:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA3000</td>
<td>Standard analyser with PC software.</td>
</tr>
<tr>
<td>SA3000-A</td>
<td>As above, plus 200Hz RBW for Band A.</td>
</tr>
<tr>
<td>SA3000-TG</td>
<td>Includes tracking generator option.</td>
</tr>
<tr>
<td>SA3000-A-TG</td>
<td>Includes both options.</td>
</tr>
</tbody>
</table>

Available from:

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