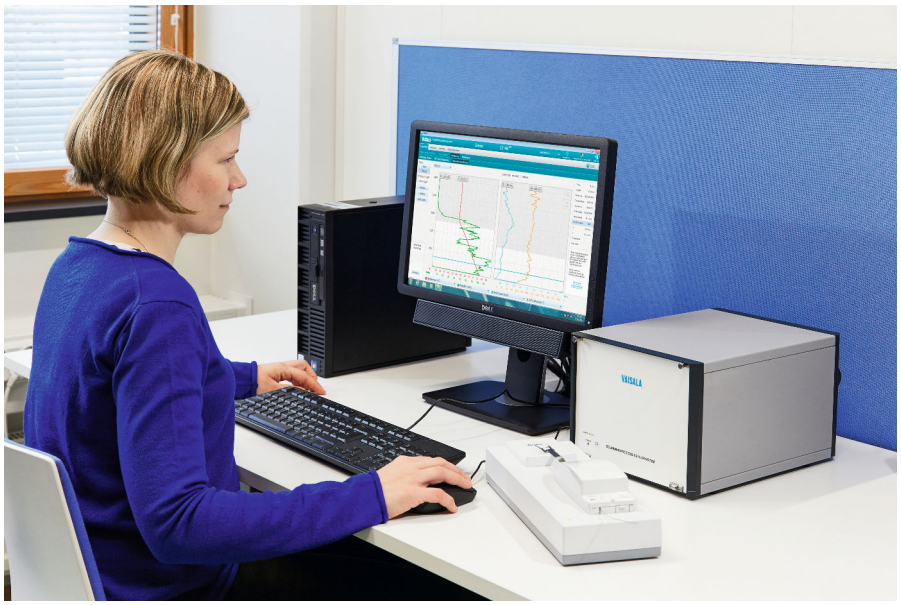
DigiCORA® Sounding System MW41

The New Level of Operational Experience



Features

- Easy integration to existing soundings network
- Increased flexibility through advanced networking options
- Easy and simple operation, no specialist knowledge needed
- Quick station parameter configuration and modification, also remotely
- Consistent high quality data

Vaisala MW41 System supports the world-class performance of Vaisala RS41 radiosonde family as well as the previous generation RS92-SGP. This makes MW41 an excellent choice for both synoptical and research applications.

Cost Efficient Integration

MW41 offers a smooth and cost-effective upgrade path from earlier Vaisala sounding systems. MW41 software is compatible with commonly used Windows operating systems and hardware, meaning that it supports our customers' current installed IT base and also helps to minimize maintenance costs. It also includes connectivity to existing Vaisala Automatic Weather Stations, providing highly accurate surface weather information, and making operation simpler and less sensitive to human error.

Increased Flexibility

The user interface is separated from other software functionalities and can be operated from anywhere within the customer's network. For example, sounding operations can be transferred from the sounding station to another network location. Additionally, all network users can remotely access sounding data online using commercially available web browser.

MW41 software is available as a standard software package that includes all features needed to perform synoptic soundings. A number of optional modules can be added for more advanced sounding needs, for example ozone sounding capability or extended graphics. This makes the system very flexible; it can be tailored for the specific needs of a sounding station.

Easy Operation

MW41 automatically follows the radiosonde preparation process, and a minimum of user clicking and input is needed. Clear status indicators and animations are shown on the screen. A context-sensitive help function is also available to guide the operator. With its highly intuitive operation, the interface also speeds up the training process. The available configuration options are designed to provide a simple and straightforward way of performing sounding while at the same time offering a wide range of customization options for operation. By utilizing different user groups and their related privileges, the operator can access a specific set of functionalities.

Efficient Maintenance

MW41 is also easy to configure for operation. The user interface supports quick station parameter configuration, including any necessary message creation and sending parameters. Furthermore, the system can be configured remotely.

Sounding-data validation ensures that MW41 provides high quality data. The system is able to create WMO messages and special text reports using the validated data. Data is also available in XML format.

Technical Data

Compatibility

Radiosonde	Compatible with Vaisala RS41-SG, RS41-SGP, RS41-SGM, RS41-D, and RS92-SGP Radiosondes
Special sensor	Compatible with ECC-6A ECC and Z ECC ozone sensors

Minimum System Requirements for Sounding Workstation

Computer	Commercial PC delivered by Vaisala includes: • Pre-installed DigiCORA Sounding Software • System recovery tools, including USB drive with recovery image • Optional Edgeport serial extension Optionally, any PC that fulfills the requirements below can be used.
Operating system	Windows 7 Professional SP1 32-bit or SP1 64-bit (English) Windows 8.1 Pro 32-bit or 64-bit (English) Windows 10 Pro 64-bit (English)
Web browser	Microsoft Internet Explorer 10 or higher (English) with Adobe Flash Player Mozilla Firefox newest version (English) with Adobe Flash Player Google Chrome newest version (English) with Adobe Flash Player
Processor	Intel Pentium Dual Core or equivalent (Quad Core recommended)
Memory	2 GB RAM
Hard disk space	160 GB
Display	1366 × 768
DVD-ROM drive	
USB port for Ground Check Device RI41	
Serial ports, either integrated or via USB/RS232 converter	1 for GC25/RS92 and 1 for possible Automatic Weather Station
Ethernet adapter	
Speakers integrated either into computer or display	
Remote client PC	It is recommended to use devices that fulfill the same requirements as for Sounding Workstations. However, it is likely that devices with lower hardware specifications, other operating systems, or other browsers can be used as long as the browsers have Adobe Flash Player.

Vaisala Sounding Processing Subsystem SPS311

Software-defined radio technology
Code-correlating GPS

Operating Environment

Indoor Equipment	
Operating temperature	+10 … +35 °C (+50 … +95 °F)
Storage temperature	-40 … +65 °C (-40 … +149 °F)
Operating humidity	10 … 90 %RH
Storage humidity	5 … 95 %RH
Outdoor Equipment	
Operating temperature	-40 … +55 °C (-40 … +131 °F)
Storage temperature	-50 … +71 °C (-58 … +160 °F)
Operating humidity	0 … 100 %RH
Storage humidity	0 … 100 %RH
Operating wind speed	0 … 65 m/s (0 … 145 mph)
Operating precipitation	Unlimited

Telemetry

Frequency band	400.15 … 406 MHz
Tuning step (user-adjustable)	10 kHz
Error detection and correction	Reed-Solomon
Telemetry range (using directional antenna)	Up to 350 km (217.5 mi)

Meteorological Messages

Available in standard software	TEMP FM35-XI, TEMP SHIP FM36-XI, TEMP MOBIL FM38-XI PILOT FM32-XI, PILOT SHIP FM33-XI, PILOT MOBIL FM34-XI BUFR 3'09'052 (for TEMP data / High resolution data) BUFR 3'09'052 (for temperature, humidity and wind sounding) BUFR 3'09'050 and BUFR 3'09'051 (for PILOT data / High resolution data)
Advanced option	CLIMAT TEMP FM 75-X BUFR 3'09'053 (for descent sounding) Range Format
Special sensor option	NILU, WOUDC
Defense messages option	METCM STANAG 4082, METB2/ METB3 STANAG 4061, METFM STANAG 2103, METSR/METSRX, METTA STANAG 4140, METEO 11

Antennas

Directional UHF antenna (automatic direction control)
Omnidirectional UHF antenna
Portable antenna for UHF and GPS
GPS antenna
Advanced Multipath Rejection GPS antenna

Ground Check Set

See separate brochure for details.

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