Sounding System

GS-U

Compact, light and mobile sounding system with integrated battery

Main benefits

- IP65 ingress protection for use in harsh ambient conditions
- Ideal for portable use
- Software defined radio (SDR) and antenna pre-amplifier for optimal range
- Integrated battery enables an entire sounding without external power supply
- Industry standard USB-interface connects to the sounding workstation

Key specifications	
Compatibility	All Graw radiosondes
Sounding workstation	Windows PC connected via USB running grawMet software
Radio receiver	400-406 MHz, Software Defined Radio, portable or detached antenna
Power supply	Internal battery backup and external DC connection
Enclosure	Small and robust pelicase with IP65 ingress protection

Product description

GS-U is a sounding system for mobile and cost-effective applications. The robust pelicase houses our proven SDR receiver together with a battery pack which can support an entire sounding without external power supply and can also serve as an uninterruptable power supply.

The GS-U uses a single antenna, which can either be a portable antenna, directly connected to the unit or a detached antenna with separate pre-amplifier. The sounding workstation is connected to the sounding system via USB and can be configured flexibly: from a customer supplied PC to a highly resistant mobile workstation.

Features

As easy as possible

The GS-U has exactly one job: to make your application as easy as possible. Thanks to the no-frills design and the mobile enclosure, it is one of the easiest sounding systems on the market to set up. Furthermore, it integrates the transport enclosure and uninterruptable power supply into a single unit, which reduces setup effort. A portable antenna can support missions in the lower portions of the atmosphere as well as payload recovery, while the detached antenna offers the same performance as known from our installation sounding systems GS-E and GS-I.

Advanced Radio Receiver

The state-of-the-art SDR receiver provides excellent reception performance combined with a high immunity to in-band and out-of-band interferences. This is shown in the class-leading performance values for rejection, dynamic range and third-order intercept point.

Intuitive grawMet Software

The easy-to-use grawMet software sets a new standard in sounding processing. All relevant information can be visualised using various views including tables, graphs and maps. During the sounding, both freely configurable and WMO standard messages are generated according to the user's wishes. The software, compatible with any standard PC running Microsoft Windows, simplifies the set-up and routine station operations, providing an easy to maintain sounding workstation.

Technical Data

General	
Dimensions	270 x 245 x 120 mm
Weight	3.9 kg
Power Consumption	< 20 W
Power Supply	110-240 V (AC), 50-60 Hz; 12 V (DC)
Cooling System	passive cooling
Operating Conditions	-10 … 40° C, 10 … 90 %RH (non-condensing)
Regulatory	CE (Europe), CSA (Canada), NFPA / NEC (USA)
Ingress Protection	IP65
Battery Runtime	> 3 hours

User Interface	
Connectivity	USB for connection to GrawMet Software
Device	Multi-colour indicator LEDs for various system functions

Connections	
Power	Neutrik XLR 4-pin; IEC C9 (external AC power supply)
Telemetry Antenna	Standard: 1x BNC-Type (integrated amplifier) Long Range variant: 1x N-Type with 12 V (DC) / 300 mA amplifier power supply
Sounding Workstation	1x USB-B
Other	M6 bolt for equipotential bonding

Radio Receiver	
Topology	Dual IF Software Defined Radio
Input Diversity	Switchable between two channels
Modulation	FSK/GFSK
Frequency Range	400-406 MHz
Receiving Range	Standard: < 100 km Long Range variant: < 350 km
Sensitivity	< -115 dBm
Image Rejection	> 60 dB
Spurious-free Dynamic Range	> 90 dB
Third Order Intercept Point (IIP3)	> 0 dBm
Input Impedance	50 Ohm

Imprint/Disclaimer

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Errors and omissions excepted!