



Description

The active monopole antenna SAX-10 consists of a vertical rod and an impedance matching amplifier. The rod has a standard length of 1m (other rod length on request) and can be considered as short compared to the wave length in the frequency range 9 kHz–30MHz. The conversion factor is independent of the frequency because of the extremely high impedance of the matching amplifier. The circuit gives best results of noise and intermodulation for a conversion factor (antenna factor) of +10 dB and sensitive measuring receivers are able to use the whole dynamic range of the antenna. For very high field strength, an optional plug-in attenuator reduces the amplification by 20 dB.

In order to avoid absolutely any influence by the mains, power supply, voltage regulator a. o., the SAX-10 has built-in NiMH rechargeable batteries. The typical operation time is at least 50 hours. Charging time is 2-4 hours using the quick charger.

Rod antenna and amplifier cabinet are made of aluminium. The top plate can be fixed to the metal ground plane (counterpoise) with 4 screws. The connectors and controls are situated below the two plates. The rod length begins exactly at the top plate.

Technical specifications

Frequency range	9 kHz – 30 MHz
Antenna factor	+10 dB/m ± 1.5 dB
Upper limit of field strength measurement	1 V/m (F=1 MHz, 1 dB compression) Input attenuator for higher field strength optional
Lower limit of field strength measurement	Limitation by internal noise: Typ. -3 dBµV/m / 10 MHz, CISPR-Quasipeak, 9 kHz bandwidth Typ. -8 dBµV/m / 10 MHz, average detector, 9 kHz bandwidth
Output of the monopole amplifier	BNC-connector, fem., 50 Ω nom.
Power supply	9.6 V / 1100 mAh NiMH
Dimensions and weight:	Length including thread connection 1 m, weight approx.: 0.2 kg
Monopole (rod)	180 x 80 x 40 mm (WxHxD) without BNC-connector (female) and controls.
Amplifier	Top plate 220 x 120 mm, weight approx.: 0.7 kg
Construction of the monopole (rod)	Aluminium rod 16 mm diameter with thread-hole M8
Construction of the amplifier	Cabinet made of aluminium profiles. Top plate 3mm aluminium material
Threads for tripods	1/4", 3/8"