



Tuned Dipole Antenna Set

AD-100

Features

Frequency range - 30 MHz - 1000 MHz

Low balun loss

Appropriate for EMI site calibration

Carrying case

Two year warranty



Description

The Tuned Dipole set model AD-100 is a standard antenna set which operates in the frequency range of 30 MHz to 1000 MHz for E-Field measurements. This set consists of four baluns and was designed according to American National Standard for Calibration of Antennas for Radiated Emissions in Electromagnetic Interference (EMI) Control C63.5.

The dipoles can be tuned to any frequency by selecting the balun for that frequency and adjusting the length of antenna elements to the half wavelength (calculated by $3 \times 10^8 / \text{frequency in MHz} / 2$). The length can be achieved by attaching together pairs of fixed and adjustable elements (lower frequencies) or a pair of adjustable elements (higher frequencies) to each side of the antenna balun. The fixed length elements were designed to minimize drooping, especially at low frequencies where the tuned dipole elements are long.

The dipoles are shipped with typical calibration data, which is included in the manual. However, the dipole set can be individually calibrated upon request. The antenna set includes a custom carrying case.

Application

Although broadband antennas such as biconical and log periodic antennas are used for day-to-day EMC measurement, tuned dipoles antennas are still considered the standard antenna. Dipole antennas are not considered the antennas of choice for sweep measurements, because it must be tuned at each frequency.

However, dipoles are preferable and in some cases required for site attenuation measurements. It is also considered the reference antenna that can be used to calibrate other antennas operating in the same frequency range.

Standard Configuration:

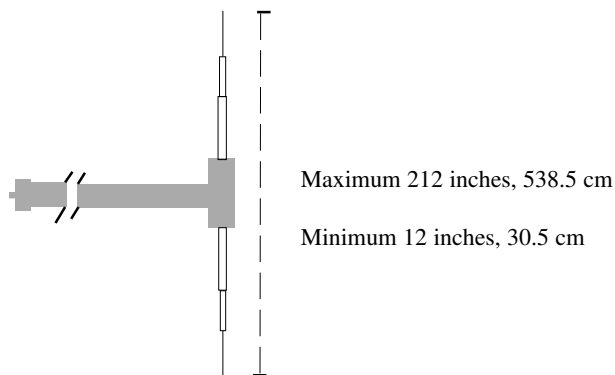
- Four antenna baluns
- Four fixed length extension rods
- Two low frequency adjustable elements
- Two medium frequency adjustable elements
- Balun 1 base drilled to accept 1/4" x 20 threads
- Typical calibration data in the manual

Optional items:

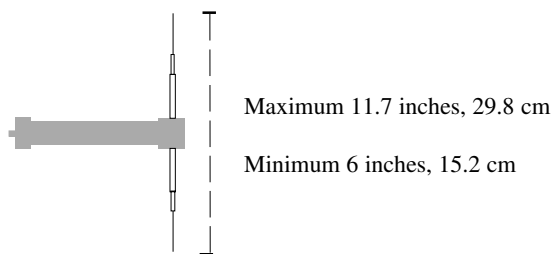
- Clamp block (ATC-001) for tripod mounting.
- Individual calibration data & certificate.

Specifications

Antenna Type:	Half wave tuned dipole
Frequency Range:	Balun 1 (dB1): 30 MHz - 65 MHz Balun 2 (dB2): 65 MHz - 175 MHz Balun 3 (dB3): 175 MHz - 400 MHz Balun 4 (dB4): 400 MHz - 1000 MHz
Impedance:	50 Ohm
Connector Type:	BNC female
Element length assembled:	min: 6 inches, 15 cm max: 212 inches, 538 cm
Weight:	8 lbs, 36 kg

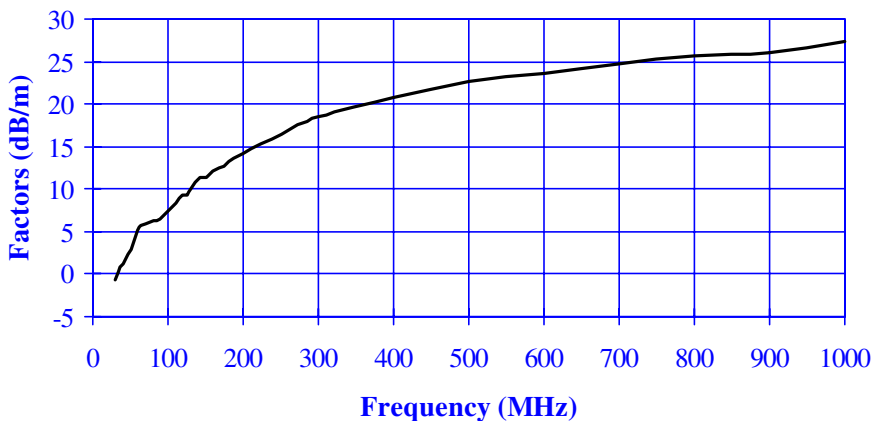


Balun 1, 2, 3 (30 MHz - 400 MHz)



Balun 4 (400 MHz - 1000 MHz)

Typical Antenna Factor



All values are typical, unless specified.
 Specifications are subject to change without notice.
 Last update: 1/02