

Pneumatic Aluminium Mast Series Overview

Type - See Table

Racal Antennas series of aluminium push-up telescopic masts are precision engineered and designed to meet the most exacting tasks of modern communications. Although primarily for military use to support various types of antennas, the masts are used in a wide range of alternative applications, including support of remote controlled TV and CCTV cameras, public address loudspeakers, floodlights and emergency lighting for airfields and construction sites. They are also used in survey and triangulation work, to provide a point of fixed height above ground level. The masts are light, reliable and remarkably simple to erect, even by one man. Tested under severe environmental conditions by the School of Signals Trial Squadron, these masts are in current service with the British Army.

Technical Description

Manufactured from high tensile aluminium alloy, the standard 8, 10 and 12m masts comprise eight sections to ensure a combination of minimum weight, minimum retracted height and maximum strength. Each section is positively locked in its full or partially extended position by a specially designed friction clamp. This clamp is a particular feature of these masts and provides a positive self-aligning clamping force actuated by a lever forming part of an over-centre toggle arrangement.

Operation and Installation

The closed mast is supported on the base plate using the erection guys. A suitable foot pump or compressor is then connected to the base of the mast. The top section clamp is then unlocked, the top section erected and the clamp relocked by merely operating the clamp lever. This procedure is repeated for subsequent sections until the mast is fully extended or until the required height is reached. Lowering is achieved by unlocking the bottom clamp and allowing the mast to retract under its own weight. Subsequent clamps are unlocked similarly until the mast is fully retracted. The rate of fall during retraction is controlled by a pneumatic damping system which ensures the safety of the operator and the mast head equipment. The piston seals are so designed that they give sufficient cushioning effect during retraction while imposing minimal drag during manual extension. The mast is normally supplied complete with an accessory kit comprising all items needed for field deployment.



Telescopic Pneumatic Mast
Supporting Racal
Log Periodic Antennas



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