

**EQUIPMENT MANUAL
HIGH POWER BICONICAL ANTENNA
EMCO MODEL 3108**

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Revision B

WARRANTY

The Electro-Mechanics Company (EMCO) warrants that our products are free from defects in materials and workmanship for a period of two years from the date of shipment. If you notify us of a defect within the warranty period, we will, at our option, either repair or replace those products which prove to be defective. If applicable, we will also recalibrate the product.

There will be no charge for warranty services performed at the location we designate. You must however, prepay inbound shipping costs and any duties or taxes. We will pay outbound shipping costs for a carrier of our choice, exclusive of any duties or taxes. You may request warranty services to be performed at your location, but it is our option to do so. If we determine that warranty service can only be performed at your location, you will not be charged for our travel related costs.

This warranty does not apply to:

1. Normal wear and tear of materials
2. Consumable items such as fuses, batteries, etc.
3. Products which have been improperly installed, maintained, or used.
4. Products which have been operated outside of specifications.
5. Products which have been modified without authorization.
6. Calibration of products, unless necessitated by defects.

THIS WARRANTY IS EXCLUSIVE. NO OTHER WARRANTY, WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

THE REMEDIES PROVIDED BY THIS WARRANTY ARE YOUR SOLE AND EXCLUSIVE REMEDIES. IN NO EVENT ARE WE LIABLE FOR ANY DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO, DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER BASED ON CONTRACT, TORT, OR ANY OTHER LEGAL THEORY.

Please contact our Sales Department for a Return Material Authorization Number before shipping equipment to us.

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Photo of Model 3108

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DESCRIPTION AND USE OF THE EMCO MODEL 3108 HIGH POWER BICONICAL ANTENNA

General Description

The EMCO Model 3108 High Power Biconical Antenna is designed to operate over the 30 to 300 MHz frequency range for measurements in accordance with present and proposed DoD and Military EMI specifications. Its ability to handle large power levels over a broadband make the 3108 excellent for use in Radiated Susceptibility as well as Radiated Emission testing.

The lightweight breakdown construction of the Model 3108 makes for ease of storage and portability. The biconical elements are made from tack welded aluminum rods. The 4 to 1 balun network is fabricated from TFE thermoplastics and silver plated brass and aluminum.

The Model 3108 is manufactured in accordance with ECOM drawings ES-DL-176433 and ES-F-201286. Each antenna is individually calibrated during manufacturing. The Gain and Antenna Factors for the individual antenna are tabulated and included in this manual for use in Specification Compliance Testing.

Refer to Table 1 for Typical Antenna Factor and Gain.

Refer to Figure 1 for Typical VSWR vs Frequency.

Refer to Figure 2 and 3 for Typical Antenna Radiation Pattern.

Specifications

Frequency Range: 30 to 300 MHz

Impedance: Matched to 50 Ohms

Connector: Type N

Power Input Capability: 300 Watts Continuous Power

500 Watts Short Term Peak Power

Assembled Dimensions:

Length: 51.8 inches (131.6 cm)

Diameter: 20.5 inches (52 cm)

Weight: 6 lb (2.7 kg)

NOTE: EMCO recommends using a 6 db pad attached to the end of the antenna, otherwise high VSWR may occur.