

## EM-7100 | Horn Antenna Kit



### Description

The EM-7100 horn antenna kit features the EM-7102 (1GHz-18GHz | Dual Ridge Horn), the EM-7103 (18GHz-26.5GHz | Standard Gain Horn) and the EM-7104 (26.5GHz-40GHz | Standard Gain Horn) antennas covering the frequency range of 1GHz to 40GHz.

Each EM-7100 Horn Kit includes individual calibration data for Gain and Antenna Factor at 1m for each antenna. Each kit also includes a rugged case with custom cut foam.

### Specifications

#### Electrical

**Frequency Range:** 1GHz – 40GHz

**Polarization:** Linear, Vertical

**Impedance:** 50Ω, Nominal

#### Kit Contents

**EM-7102** | 1GHz-18GHz, Type 'N'

**EM-7103** | 18GHz-26.5GHz, SMA

**EM-7104** | 26.5GHz-40GHz, 2.92mm 'K'

#### Mechanical

##### EM-7102 Dimensions:

Length: 23.5 cm (9.25 in.)

Width: 24.1 cm (9.5 in.)

Height: 17.15 cm (6.75 in.)

Weight: 1.15 kg (2.2 lbs.)

##### EM-7103 Dimensions:

Length: 7.7cm (3.03 in.)

Width: 5.2cm (2.05 in.)

Height: 3.2cm (1.26 in.)

Weight: 60g (0.13 lbs.)

##### EM-7104 Dimensions:

Overall Length: 7.2 cm (2.8")

Width: 4.3 cm (0.7")

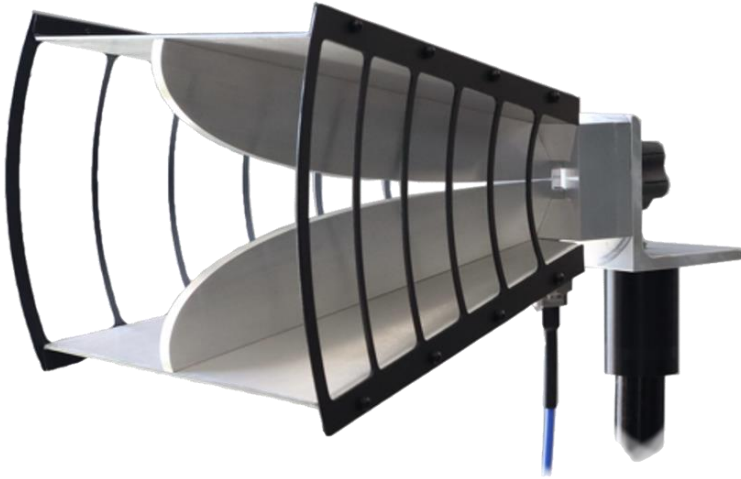
Height: 2.7 cm (1.2")

Weight: 45g (0.10 lbs.)

Specifications subject to change without notice, unless otherwise specified. Product is manufactured in Johnstown, NY, U.S.A.



## EM-7102 | Dual Ridged Horn Antenna



### Description

The Electro-Metrics EM-7102 is a high performance Dual Ridged Horn Antenna designed to cover the L, S, C, X, and Ku bands across the extensive 1-18GHz frequency range. The EM-7102 is ideal for precision measurements, EMC testing, antenna characterization, UWB communications, and spectrum monitoring.

The EM-7102 is an updated design featuring the maximum gain of the antenna along its boresight without nulls or lobe-splitting. The EM-7102 also features a consistent beamwidth with a low VSWR for improved measurement quality.



### Specifications

#### Electrical

**Frequency Range:** 1GHz – 18GHz Calibrated

700MHz – 1GHz Uncalibrated

**Polarization:** Linear, Vertical

**VSWR:** 1.8:1 Average, 3.5:1 Max

**3dB Beamwidth:** 80° - 20° Typical Azimuth

80° - 20° Typical Elevation

**Impedance:** 50Ω, Nominal

**Gain:** 12-15 dBi Typical > 3GHz

6dBi @ 1000MHz

**Max\* Power:** 100W

**Connector:** Type 'N' (EM-7102 | 1GHz-18GHz)

#### Mechanical

##### Dimensions:

Length: 23.5 cm (9.25 in.)

Width: 24.1 cm (9.5 in.)

Height: 17.15 cm (6.75 in.)

Weight: 1.15 kg (2.2 lbs.)

##### Mounting Options Available:

¼-20 Mount with 45° detent (included)

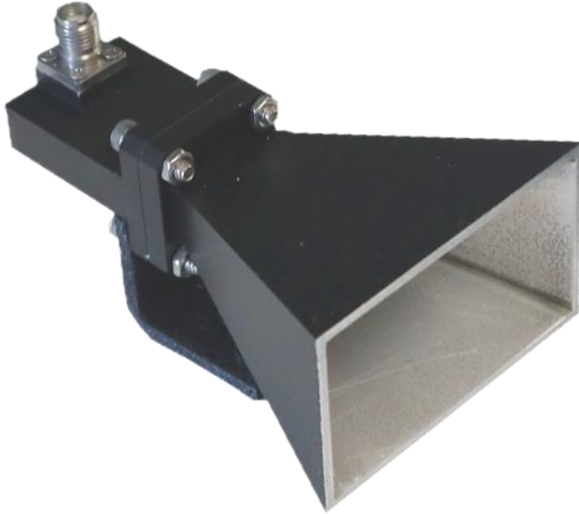
##### Color Options:

- Black
- Unfinished Aluminum
- Custom Paint Available

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## EM-7103 | Antenna, Standard Gain Horn, Passive, Directional



### Description

The EM-7103 Standard Gain Horn is a WR-42 waveguide based K band antenna featuring high gain and stable beamwidth across its frequency range.

The EM-7103 is based on the standard WR-42 waveguide and features a detachable UG595/U flange mount which allows for the horn flare and coax-to-waveguide adapter to be used separately.

Each EM-7103 comes standard with NIST Traceable 1m gain and antenna factor calibration data.

### Specifications

#### Electrical

**Frequency Range:** 18GHz – 26.5GHz

**Polarization:** Linear, Vertical

**VSWR:** < 1.3:1 Typical

**3dB Beamwidth:** 24° - 11° Typical Azimuth

27° - 16° Typical Elevation

**Impedance:** 50Ω, Nominal

**Gain:** 15-18dBi Nominal

**Connector:** SMA (EM-7103 | 18GHz-26.5GHz)

**Waveguide:** WR42

#### Mechanical

##### Dimensions:

Length: 7.7cm (3.03 in.)

Width: 5.2cm (2.05 in.)

Height: 3.2cm (1.26 in.)

Weight: 60g (0.13 lbs.)

##### Mounting Options Available:

**EM-7103** ¼ - 20 Vertical/Horizontal mount

**EM-7103A** WR-42 Coax-to-Waveguide Adapter

**EM-7103B** WR-42 15-20dBi Gain Horn Flare

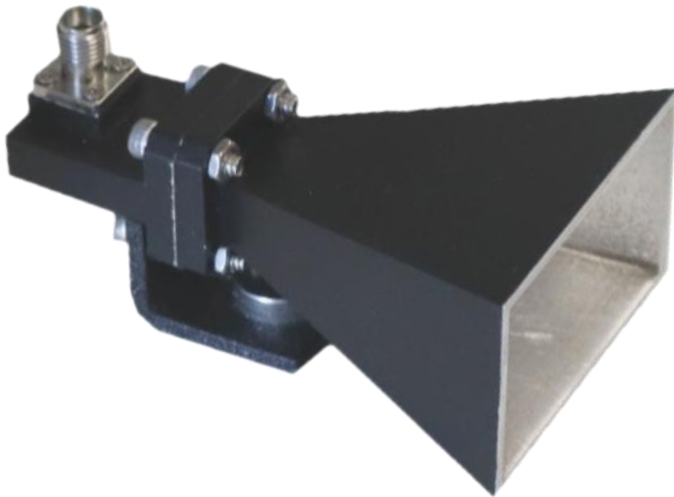
##### Color Options:

- Black (default)
- Custom colors available upon request

Specifications subject to change without notice, unless otherwise specified. Product is manufactured in Johnstown, NY, U.S.A.



## EM-7104 | Antenna, Standard Gain Horn, Passive, Directional



### Description

The EM-7104 Standard Gain Horn is a WR-28 waveguide based Ka band antenna featuring high gain and stable beamwidth across its frequency range.

The EM-7104 is based on the standard WR-28 waveguide and features a detachable UG-599/U flange mount which allows for the horn flare and coax-to-waveguide adapter to be used separately.

Each EM-7104 comes standard with NIST Traceable 1m gain and antenna factor calibration data.

### Specifications

#### Electrical

**Frequency Range:** 26.5GHz – 40GHz

**Polarization:** Linear, Vertical

**VSWR:** < 1.3:1 Typical

**3dB Beamwidth:** 14° - 17° Typical Horizontal

14° - 20° Typical Vertical

**Impedance:** 50Ω, Nominal

**Gain:** 17-21 dBi Nominal

**Connector:** Type 'K' (EM-7104 | 26.5GHz-40GHz)

**Waveguide:** WR28

#### Mechanical

##### Dimensions:

Overall Length: 7.2 cm (2.8")

Width: 4.3 cm (0.7")

Height: 2.7 cm (1.2")

Weight: 45g (0.10 lbs.)

##### Mounting Options Available:

**EM-7104** ¼ - 20 Vertical/Horizontal mount

**EM-7104A** WR-28 Coax-to-waveguide Adapter.

**EM-7104B** WR-28 20dBi Gain Horn Flare

##### Color Options:

- Black (default)
- Custom colors available upon request

Specifications subject to change without notice, unless otherwise specified. Product is manufactured in Johnstown, NY, U.S.A.

