

The Kathrein K523221 directional broadband panel antenna is intended for use in professional fixed-station applications in the 146–174 MHz band. It features:

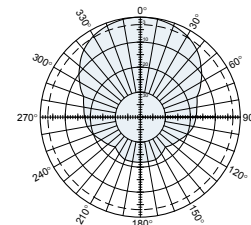
- Heavy-duty construction.
- Excellent bandwidth, VSWR of 1.15:1 across the band, with no field adjustment.
- Hot-dip galvanized steel panel assembly.
- Radiating elements protected with fiberglass radomes.
- Horizontal or vertical polarization.
- Multiple panels may be configured to meet a variety of radiation pattern requirements.
- Stainless steel hardware throughout.

Specifications:

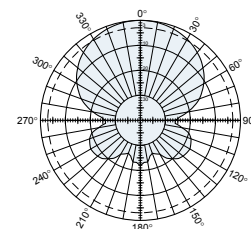
Frequency range	146–174 MHz (broadband)
Gain	10 dBi
Impedance	50 ohms
VSWR	<1.15:1
Polarization	Horizontal or vertical
Front-to-back ratio	>20 dB
Maximum input power	1100 watts (at 50°)
H-plane beamwidth	65 degrees (half-power)
E-plane beamwidth	58 degrees (half-power)
Connector	N female
Weight	55.1 lb (25 kg)
Dimensions	52 x 52 x 26.5 inches (1320 x 1320 x 510 mm)
Equivalent flat plate area	6.34 ft ² (0.589 m ²)
Wind survival rating*	130 mph (220 kph)
Shipping dimensions	55.1 x 55.1 x 29.5 inches (1400 x 1400 x 750 mm)
Shipping weight	85 lb (38.6 kg)
Mounting	A mounting kit is available for masts of 2.375 to 4.5 inches (60 to 115 mm) OD.

See reverse for order information.

* Mechanical design is based on environmental conditions as stipulated in EIA-222-F (June 1996) and/or ETS 300 019-1-4 which include the static mechanical load imposed on an antenna by wind at maximum velocity. See the Engineering Section of the catalog for further details.



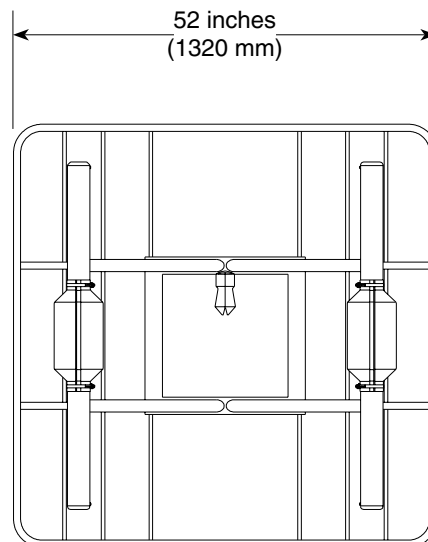
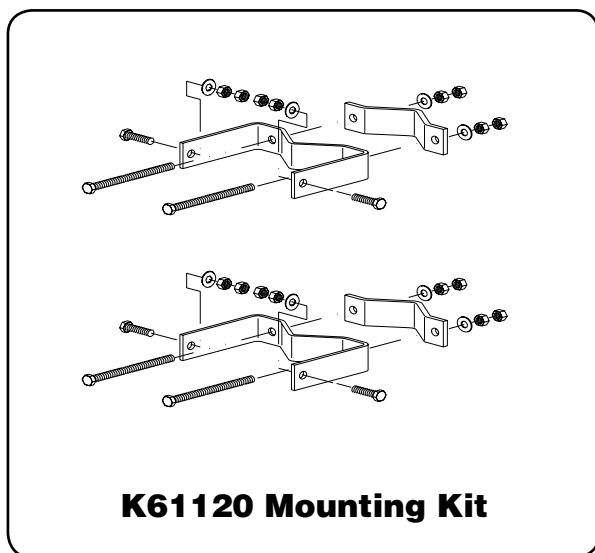
H-plane
Horizontal pattern – V-polarization
Vertical pattern – H-polarization



E-plane
Horizontal pattern – H-polarization
Vertical pattern – V-polarization

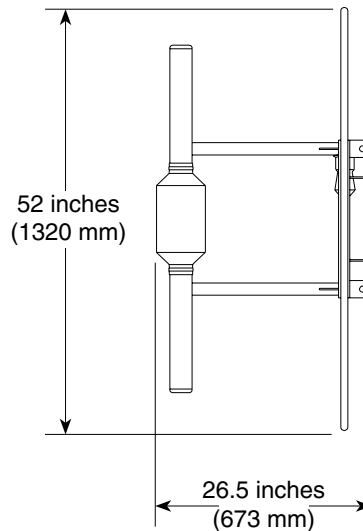


10228-C
936.058a



Mounting Options:

Model	Description
K61120	Mounting kit for 2.375 to 4.5 inch (60 to 115 mm) OD mast.



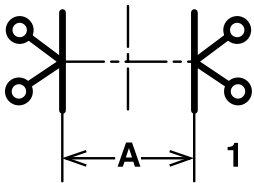
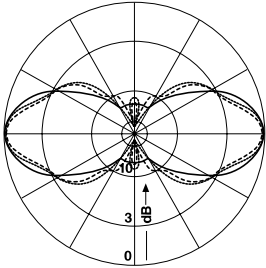
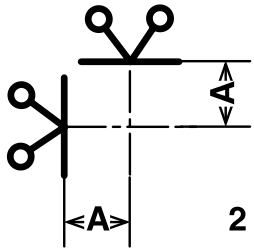
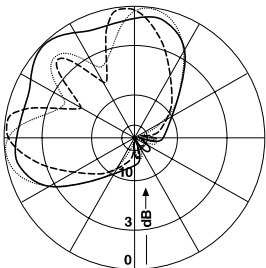
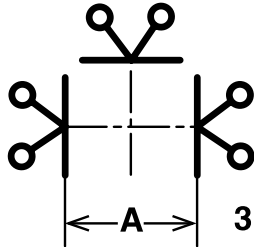
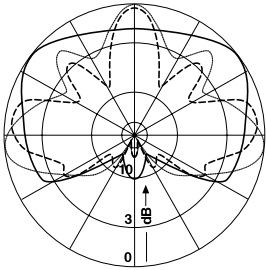
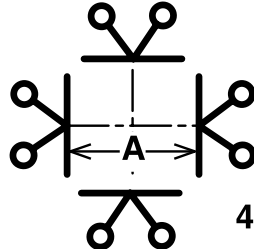
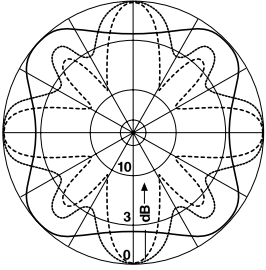
(Shown vertically polarized)

Order Information:

Model	Description
K523221	Panel antenna with N connector

All specifications are subject to change without notice. The latest specifications are available at www.kathrein-scala.com.

Examples for radiation patterns at 160 MHz

Arrangement	Horizontal T Radiation Pattern	Technical Data									
		<p>Spacing A</p> <p>—— 1.64 ft</p> <p>----- 6.56 ft</p> <p>----- 13.12 ft</p>	<p>100 % rel. field strength corresponds to a gain* of</p> <table border="1"> <thead> <tr> <th>1 bay</th> <th>2 bays</th> </tr> </thead> <tbody> <tr> <td>5.4 dB</td> <td>8.4 dB</td> </tr> <tr> <td>5.2 dB</td> <td>8.2 dB</td> </tr> <tr> <td>5.4 dB</td> <td>8.4 dB</td> </tr> </tbody> </table>	1 bay	2 bays	5.4 dB	8.4 dB	5.2 dB	8.2 dB	5.4 dB	8.4 dB
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		<p>Spacing A</p> <p>—— 2.3 ft</p> <p>----- 4.59 ft</p> <p>----- 6.56 ft</p>	<p>100 % rel. field strength corresponds to a gain* of</p> <table border="1"> <thead> <tr> <th>1 bay</th> <th>2 bays</th> </tr> </thead> <tbody> <tr> <td>4.8 dB</td> <td>7.8 dB</td> </tr> <tr> <td>5.5 dB</td> <td>8.5 dB</td> </tr> <tr> <td>6.1 dB</td> <td>9.1 dB</td> </tr> </tbody> </table>	1 bay	2 bays	4.8 dB	7.8 dB	5.5 dB	8.5 dB	6.1 dB	9.1 dB
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		<p>Spacing A</p> <p>—— 4.59 ft</p> <p>----- 9.19 ft</p> <p>----- 13.12 ft</p>	<p>100 % rel. field strength corresponds to a gain* of</p> <table border="1"> <thead> <tr> <th>1 bay</th> <th>2 bays</th> </tr> </thead> <tbody> <tr> <td>3.3 dB</td> <td>6.3 dB</td> </tr> <tr> <td>4.0 dB</td> <td>7.0 dB</td> </tr> <tr> <td>5.0 dB</td> <td>8.0 dB</td> </tr> </tbody> </table>	1 bay	2 bays	3.3 dB	6.3 dB	4.0 dB	7.0 dB	5.0 dB	8.0 dB
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Required components with conn. N female (without mounting kits):
2 antennas K523221, 2 junction cables,
1 power divider K625521

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2 antennas K523221, 2 junction cables,
1 power divider K625521

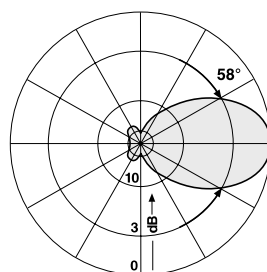
Required components with conn. N female (without mounting kits):
3 antennas K523221, 3 junction cables,
1 power divider K625621

Required components with conn. N female (without mounting kits):
4 antennas K523221, 4 junction cables,
1 power divider K625721

* ref. $\lambda/2$ dipole

Vertical Radiation Pattern of the Arrangements 1,2,3 and 4

1 Bay



Vertical Radiation Pattern of the Arrangements 1,2,3 and 4

2 Bays
(Vertical spacing $0.96 \lambda = 1.8 \text{ m}$)

