

## Portable Flat Mount Antenna Model SYN7391-B

### General Description

Model SYN7391-B is a pocket-sized, passive L-band antenna designed to operate with the NAL Research satellite modems and tracking modems. It provides continuous coverage from 1610 to 1626.5 MHz specifically for the Iridium network. The SYN7391-B is impact, UV, chemical and jet fuel resistance.



### Specifications

#### Mechanical

Dimensions: 1.54" L x 1.54" W x 0.37" H  
(3.91 cm x 3.91 cm x 0.94 cm)

Weight: 1.1 oz. (31.2 g)

Finish: Skydrol Resistant Polyurethane  
Enamel and Base Iridite Per  
MIL-C-5441

Color: Gloss White #17925  
Lusterless Gray #36320  
Olive Drab Green #34031  
Lusterless Black #37038

Connector: SMA Female Connector with 36"  
Cable  
(Option: TNC, MCX, MMCX or N)

Material: 6061-T6 Aluminum Alloy Base  
Composite Radome

Ground Plane: Requires horizontal, relatively  
flat, metallic mounting surface  
with minimum of 10" from all  
edges, centered for optimal  
performance

#### Electrical

Frequency: 1610 to 1626.5 MHz

Radiation Pattern: Hemispherical

Polarization: Right Hand Circular

VSWR: Less than 1.5 : 1

Gain (dB):

4-foot Ground Plane	2.6" Ground Plane
90° Zenith +4.9	90° Zenith +4.4
10° Elevation -1.0	10° Elevation -2.6
20° Elevation +1.5	20° Elevation -1.0
30° Elevation +2.4	30° Elevation +0.4
45° Elevation +3.3	45° Elevation +2.5
70° Elevation +4.7	70° Elevation +4.0

Axial Ratio: 2 dB

Impedance: 50 Ohms

Power Handling: 200 Watts

Lightning Protection: DC Grounded

Cable loss between  
antenna and modem: Less than 3dB

#### Environmental

Operating Temperature: -67°F to +185°F  
(-55°C to +85°C)

Operating Altitude: 70,000 ft (21 km)

Vibration: > 30 G's

Leakage: Hermetically Seal

#### Designed To

FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810 and SAE J1455

**NOTE: All dimensions are in inches [mm]**

