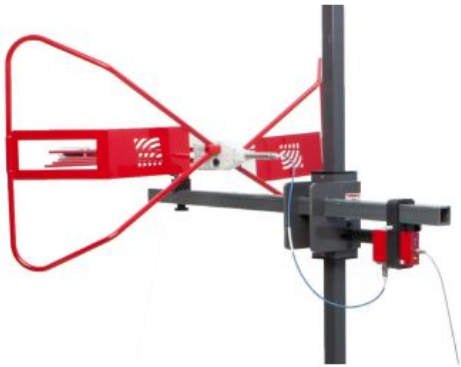


## 3142E-PB BICONILOG WITH PRE-AMPLIFIER

ETS-Lindgren's Model 3142E-PB BiConiLog™ is a hybrid antenna that combines innovative design, compact size, and excellent performance with an updated pre-amplifier module.



ETS-Lindgren's Model 3142E-PB BiConiLog is a hybrid antenna that combines innovative design, compact size, and excellent performance with an updated pre-amplifier module. This antenna enables users to measure a frequency range of 30 MHz to 6 GHz in one sweep, negating the need for multiple antennas and time consuming equipment setup. The antenna and pre-amplifier module are calibrated together including the cable section that connects the module to the antenna port. Any possible mismatch between the pre-amplifier and the antenna is taken into account in the antenna

factor. Please note, the 3142E-PB is not intended for RSE testing of intentional radiators.

### Key Features

- 30 MHz to 6 GHz Frequency Range
- Pre-Amplifier Module
- Designed for Emissions Testing
- Flexible Mounting
- Individually Calibrated

### Features

#### Frequency Range

The model 3142E-PB covers the entire range of the 3142E antenna from 30 MHz to 6 GHz.

#### Pre-amplifier Module

The pre-amplifier attached to the antenna has a frequency range of 30 MHz to 6 GHz and a minimum typical gain of 30 dB. The gain flatness is  $\pm 2.5$  dB and the noise figure is 3 dB above 200 MHz and 5 dB typical below 200 MHz. The power output is +20 dBm minimum at the 1 dB point. The input and output characteristics of the pre-amplifier are an input and output VSWR of 2:1 maximum. The operating temperature ranges from -20°C to +75°C (-4°F to +167°F).

#### Emissions Antenna

The 3142E-PB is an emissions only antenna, with the pre-amplifier increasing the signal level received by the antenna. By placing the amplifier close to the antenna, the signal to noise ratio is preserved in the amplified signal.

#### Flexible Mounting

The model 3142E-PB's mounting bracket accepts either a 1/4 in x 20 thread screw or rear stinger mount. The pre-amplifier module attaches to the antenna via a flexible coaxial cable, so that the antenna can be supported by the stinger. The 3142E-PB includes two brackets to mount the pre-amplifier module to the carrier of any motorized mast. This allows the antenna to be scanned from 1 m to 4 .



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## Specifications

### Electrical Specifications

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Frequency Minimum: 30 MHz  
Frequency Maximum: 6 GHz  
VSWR (Average): N/A (Rx Only)  
Maximum Continuous Power: N/A (Rx Only)  
Impedance (Nominal): 50  $\Omega$   
Connector (Amplifier Output): SMA (Female)

### Physical Specifications

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Model	Width	Depth	Weight
3142-PA (Antenna)	133.9 cm (52.7 in)	139.2 cm (54.8 in)	5.7 kg (12.5 lb)
Pre-amplifier Box	8.9 cm (3.5 in)	8.9 cm (3.5 in)	0.5 kg (1.0 lb)

### Other Specifications

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- Antenna and Pre-amplifier
  - Antenna Mounting Bracket Drilled to Accept ETS-Lindgren or Other Tripod Mounts with 1/4 in x 20 Thread
  - Rear "Stinger" Mount
  - Pre-amplifier Mounting Brackets
    - 2171B/2170B Antenna Masts
    - 5 cm x 5 cm (2 in x 2 in) Booms
  - AC/DC Power Supply for the Pre-amplifier Module
  - Connection Cable from the Antenna to the Pre-amplifier
  - Individually Calibrated at 10 m H pol. per ANSI C63.5
  - Manual
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