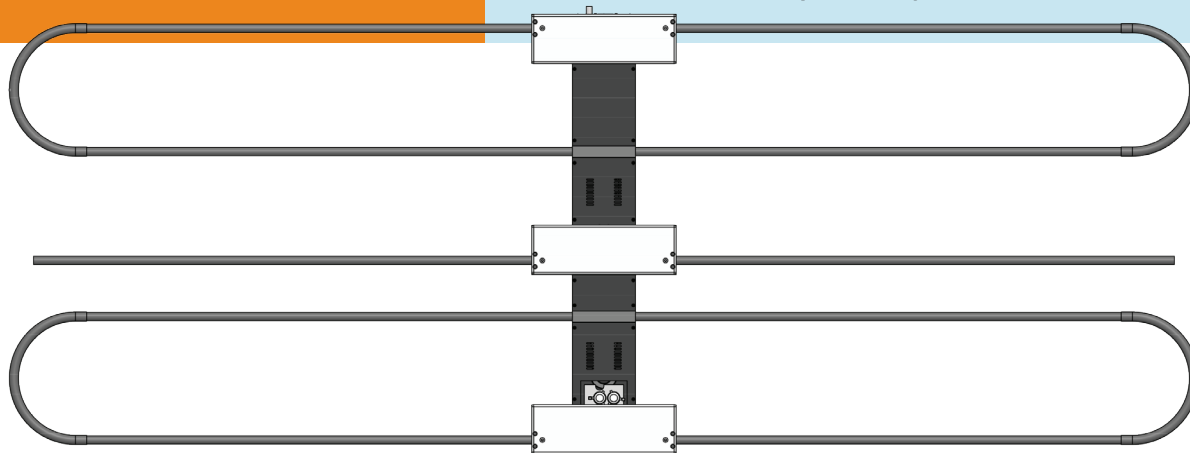




SY3-EMC

Auto-Tune Antenna System
for MIL-STD-461 RS103
Radiated Susceptibility, 30-200 MHz



THE NEW STANDARD

The SteppIR SY3-EMC Auto-tuned Yagi system is the very best solution to MIL-STD-461 RS103 radiated susceptibility testing over the 30-200 MHz frequency range - making it the only system in the world that can legitimately claim to reach or exceed the required 200 V/m @1 meter, with the RF signal coming from the fundamental frequency.

Fixed length horizontal antennas (dipole, Yagi, biconical, log-periodic) are basically single frequency devices that work well over a very narrow range, typically 0.5% change in frequency. Fixed length antennas compensate for this issue by using a variety of techniques, all resulting in serious degradation of performance. Our patented solution is to mechanically adjust (using stepper motors) each of the individual antenna elements to the optimal length required at any given frequency, creating a unique, optimized antenna for every test frequency, in both horizontal and vertical polarization.

The ultra-low SWR (1.5:1 typical) allows for reduced input power from the amplifier, resulting in much less opportunity for amplifier saturation, which in turn greatly reduces potential for harmonic radiation. The SY3-EMC Yagi antenna is resonant at all frequencies and acts as a harmonic filter - with 2nd harmonic reduction of 25 dB or more - ensuring that the RF is coming from the fundamental frequency, not the harmonics.

The patented OptimizIR-EMC auto-tune system is the "brains" of the operation, and makes it possible to effortlessly tune the antenna to the exact length required at any given frequency - automatically. The tuning procedure is fast, highly accurate, automatically saves to memory and does not require that an EMC technician be present during the process.



SY3-EMC SPECS

WHAT'S INCLUDED

- SY3-EMC Yagi Antenna
- OptimizIR-EMC Electronics Tower
- Mini-Bicon receive antenna
- Non-metallic fiberglass antenna stand

SPECIFICATIONS

| | |
|--------------------------------------------------|--------------------|
| Frequency | 30-200 MHz |
| Power Input, CW | 2500 watts maximum |
| Gain | 6.9-7.6 dBi |
| Impedance | 50 ohms nominal |
| VSWR (maximum) | < 3:1 |
| 3dB Beamwidth (average) | 64-68 degrees |
| Polarization | Linear |
| Pattern | Directional |
| Front-to-rear Ratio | 8.28-16.14 dB |
| Harmonics Filtering | > 25 dB typical |
| Time between frequency change, small steps | < 1 sec |
| Average antenna tune time, horiz. polarization | 1 hr 57 min |
| Average antenna tune time, vertical polarization | 2 hr 11 min |
| Memory storage avail. for saved antenna tunes | YES / 8 GB |
| Time to retract element from max length | 16 seconds |
| Connector Type | N (f) |

WEIGHTS AND DIMENSIONS

Antenna

| | |
|-----------------------------------|-----------------|
| Weight | 30.5 lb |
| Horizontal Dimensions (W x H x D) | 110" x 5" x 39" |
| Vertical Dimensions (W x H x D) | 39" x 110" x 5" |

Antenna Stand

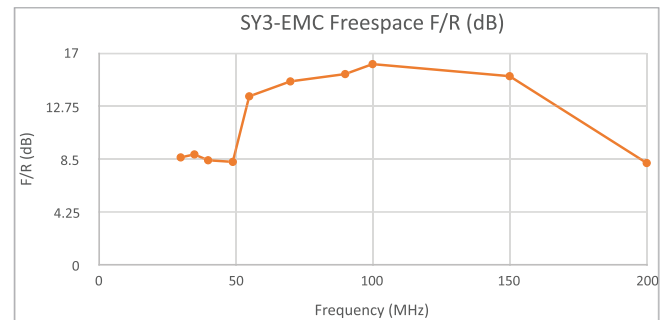
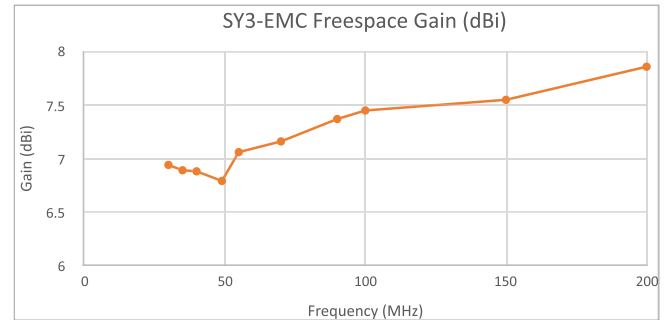
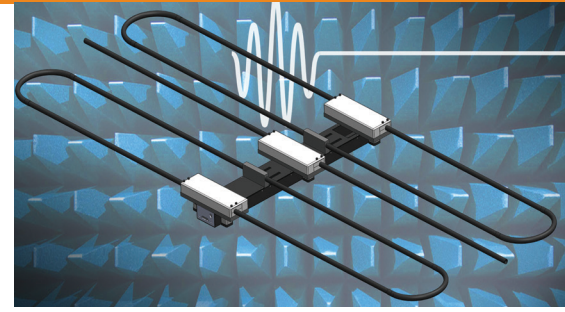
| | |
|------------|---------|
| Weight | 11.5 lb |
| Min height | 44" |
| Max height | 72" |

OptimizIR-EMC Electronics Tower

| | |
|------------------------|-----------------|
| Weight | 106.5 lb |
| Dimensions (W x H x D) | 20" x 43" x 18" |

EXPORT CLASSIFICATION

EAR99



200 V/m

THE WAY IT WAS MEANT TO BE



The SY3-EMC has been tested at all required frequencies between 30 and 200 MHz in both horizontal and vertical positions.