

Model 1200 Low Loss Ground to Antenna Tower Top Link

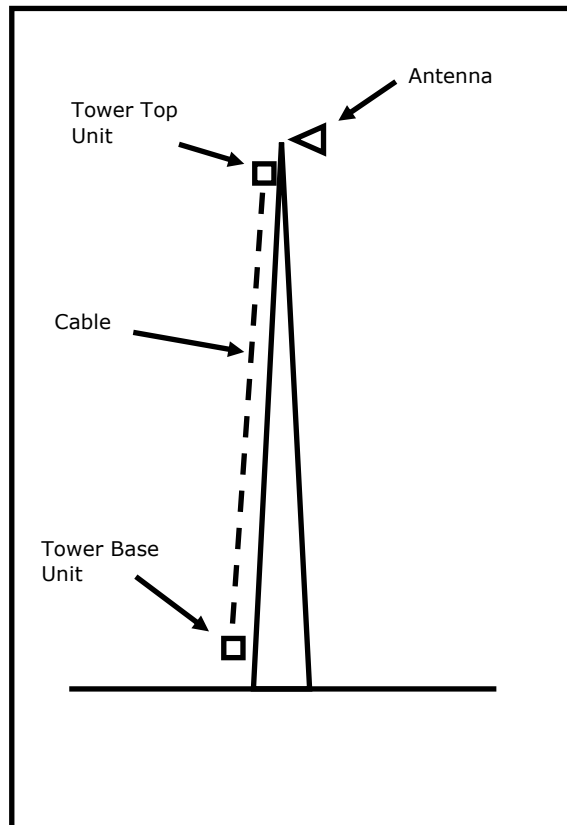
Bringing the Test Range to Your Test Bench

Product Summary

Introduction

The Eastern OptX Model 1200 Low Loss Ground to Antenna Tower Top Link dramatically reduces the loss associated with RF Cable links (Up to 40 GHz) used in antenna tower connections. These connections are often found in Radar test systems and Communication systems.

The 1200 not only reduces signal loss and SNR degradation, but provides a turn-key solution including cables, antennas, Tower Top Units, Tower Base Unit, and System Control. Custom options available. USB and Ethernet control. DC and AC power options.



Standard System

Features

- Complete Turn-Key System
- Cables, Antennas, Tower Top Units, Tower base Unit, System Control
- RF over Fiber Links.
- Tower Top Mounted Transceiver
- Gain Control
- 0.1—40 GHz Operation
- Weather Tight Housings
- Compatible with Radar Repeater and Target Simulation System
- Programmable (SCPI Commands)
- Intuitive Control Panel
- Easy Connectivity
- Single and Full Duplex Operation

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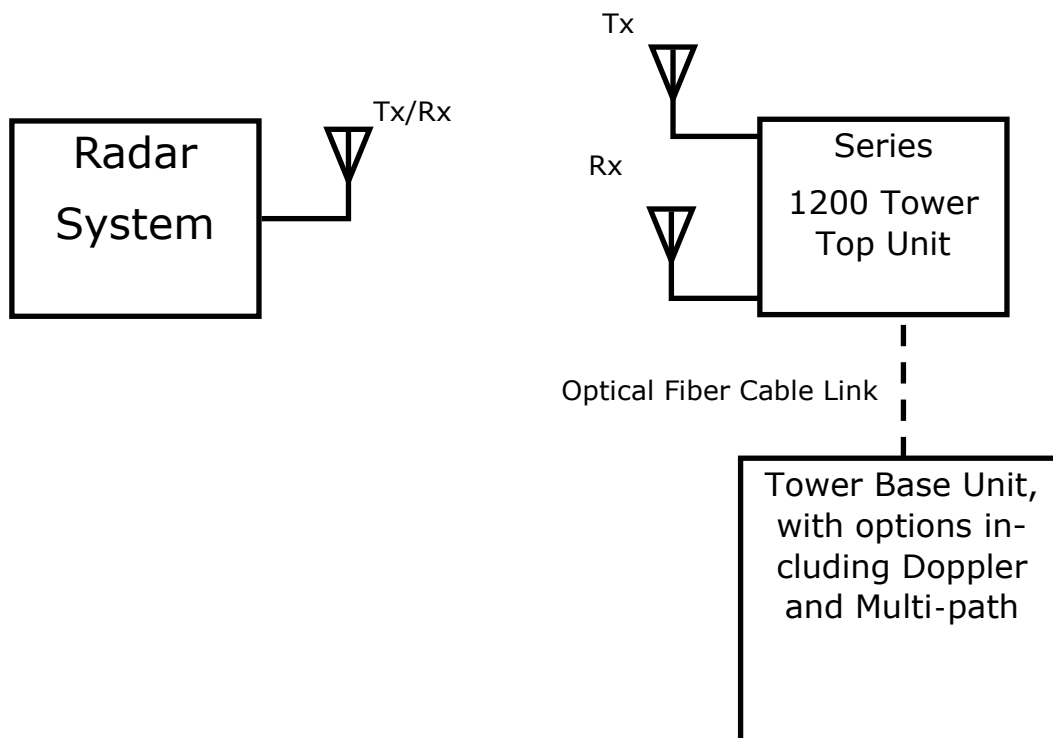
710 E. Main Street • Moorestown, NJ 08057 • 877 870 6789 (toll free) • 856-231-9022 (fax)

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Low Loss Ground to Antenna Tower Top

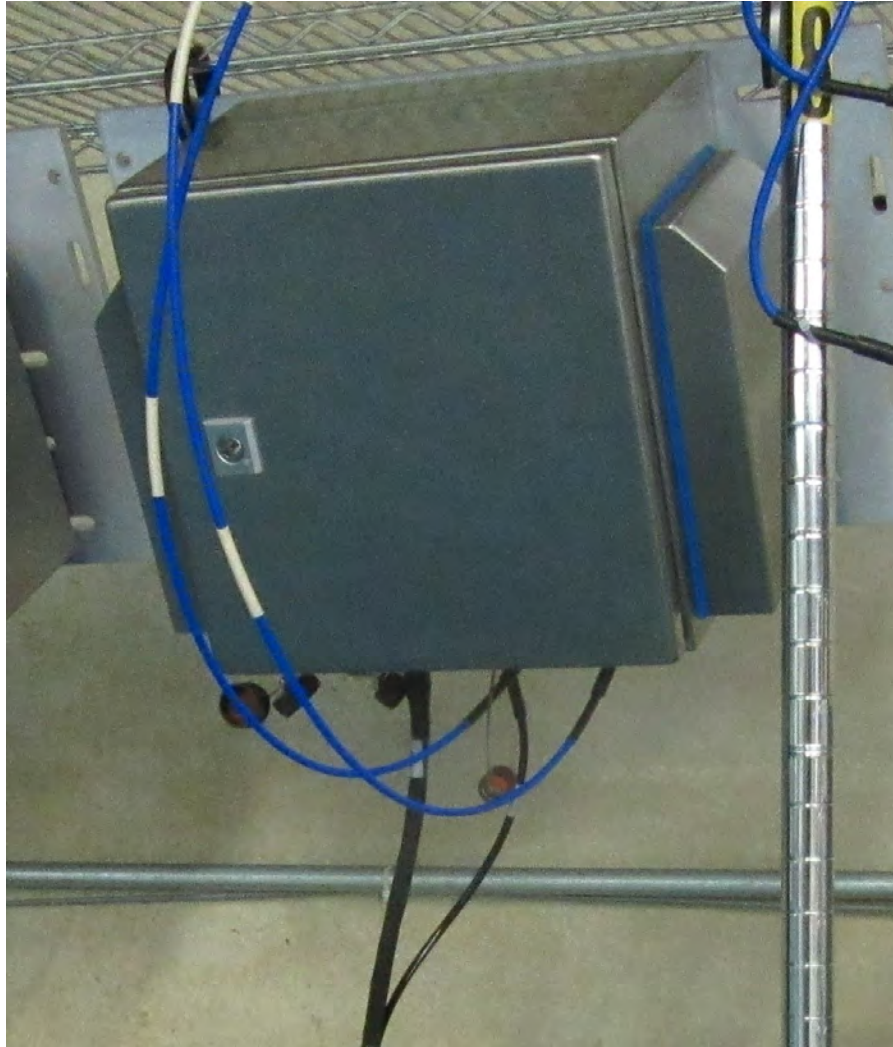
System Description

The block diagram below shows a typical 1200 System used as a repeater for a typical system. The 1200 receives the signal transmitted from the radar, Converts it for optical fiber transmission, relays the signal to the base unit, demodulates, and may then be further processed. That processing may include target simulation (propagation loss and delay) or made available for other user signal processing. After processing, the resulting signal is modulated for optical transmission, transmitted to the tower top unit, converted back to RF and transmitted. Additional features including tower top gain control, transmit and receive isolation, Doppler generation, multipath interference, and wanted and unwanted interferers.





Tower Top Unit



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Typical Tower Base Unit



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Typical Configured System



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Low Loss Ground to Antenna Tower Top Link

Parameter	Specification	Notes
Input/Output Isolation	60 dB	Minimum
Low Loss	0.5 dB typical	
Repeatability	0.1%	At constant temperature
Lightweight	< 40 lb	Antenna Unit, including mounting plate
VSWR	2 : 1	Maximum
Spurious Free Dynamic Range	100 dB/Hz ^{2/3}	Minimum
1 dB Input Compression	-15 dBm	Minimum
Noise Figure	25 dB (13 dB Typ.)	Maximum (Lower NF optional)
Input/Output Impedance	50 Ω	Nominal
Dimensions	19" Rack Per EIA-310-D	3U, 18" - 22" depending on design, base unit

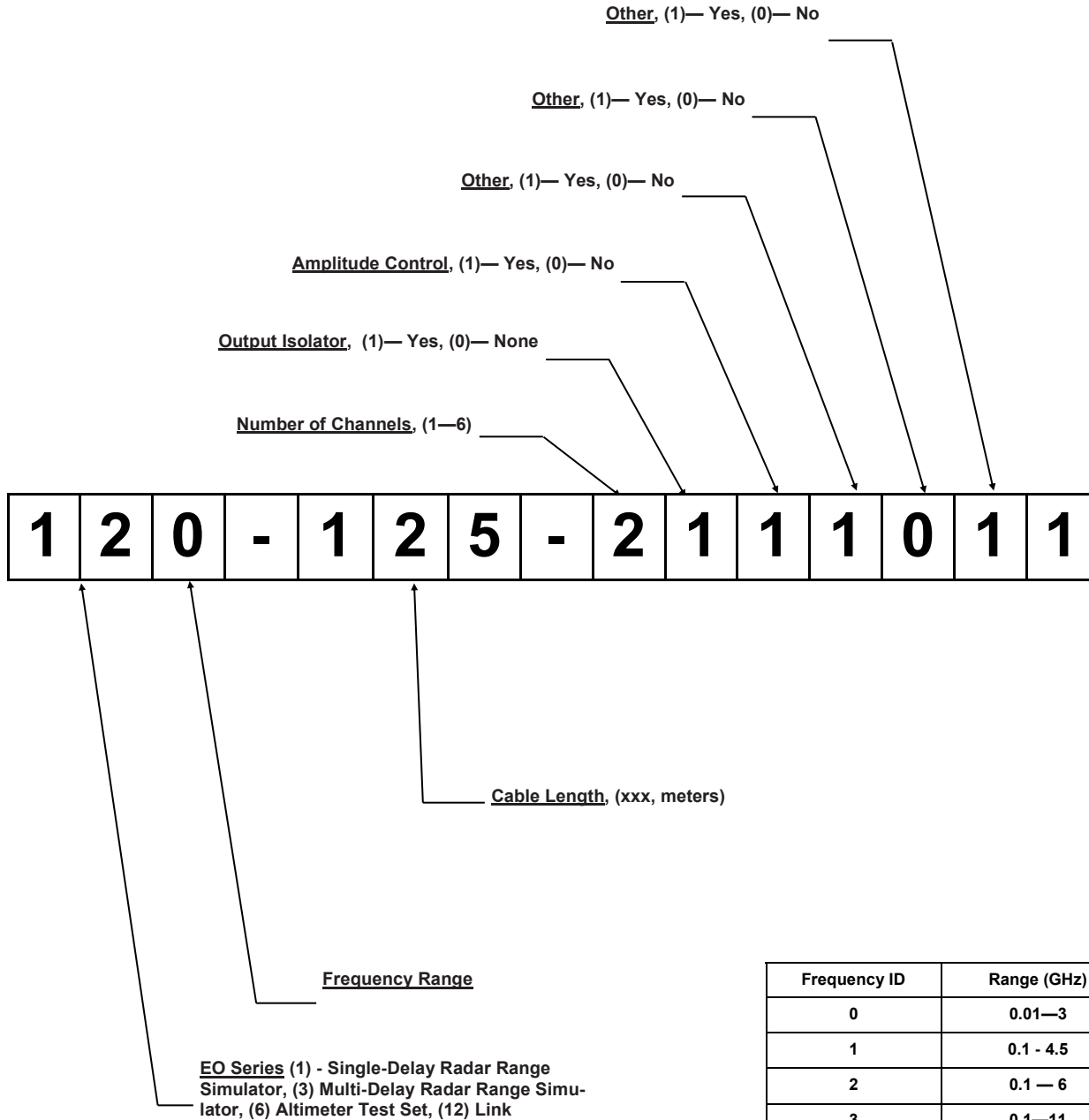
Typical System Performance:

- Frequency Range: 0.1 to 40 GHz
- Cable Length: 1—100 m
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Frequency ID	Range (GHz)
0	0.01—3
1	0.1 - 4.5
2	0.1 — 6
3	0.1—11
4	0.1—13
5	0.1—15
6	0.1—18
7	1—40

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