Myers Engineering International, Inc.

Passive Signal Enhancement examples:

MOTOR HOME MOBILE PHONE RANGE EXPANSION

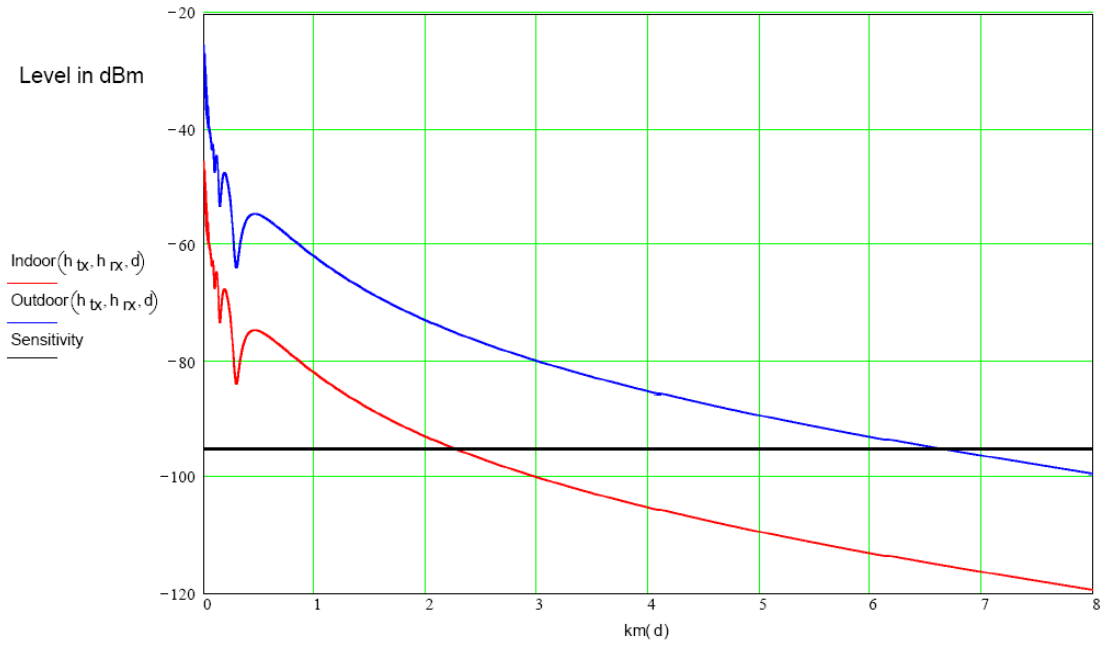
Goal: expand mobile phone coverage

Extension of mobile phone (cell phone) coverage by use of a rooftop antenna.

Coverage, mobile phone in hand

MEI Propagation Model

Passive Range Booster Model



Range in kilometers

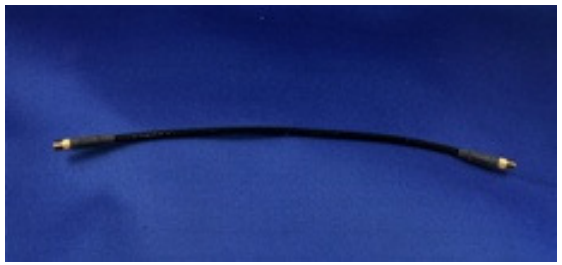
ASSUMPTIONS:

- 15 meter site tower
- +5 dBil net site gain
- -2 dBi handset gain
- 1 meter (3 ft) handset height
- Indoor/Outdoor ratio –20 dB
- Unobstructed radio path
- US PCS band, 1900 MHz (worst case)

Basic range working into a 15 m (50 ft) tall cell site antenna tower is approximately 2.2 km (1.4 statute miles) indoors and 6.5 km (4.0 mi) outdoors.

Passive booster system description

Omni Antenna + Coaxial Cable + Coupler



Omnidirectional Passive Booster kit

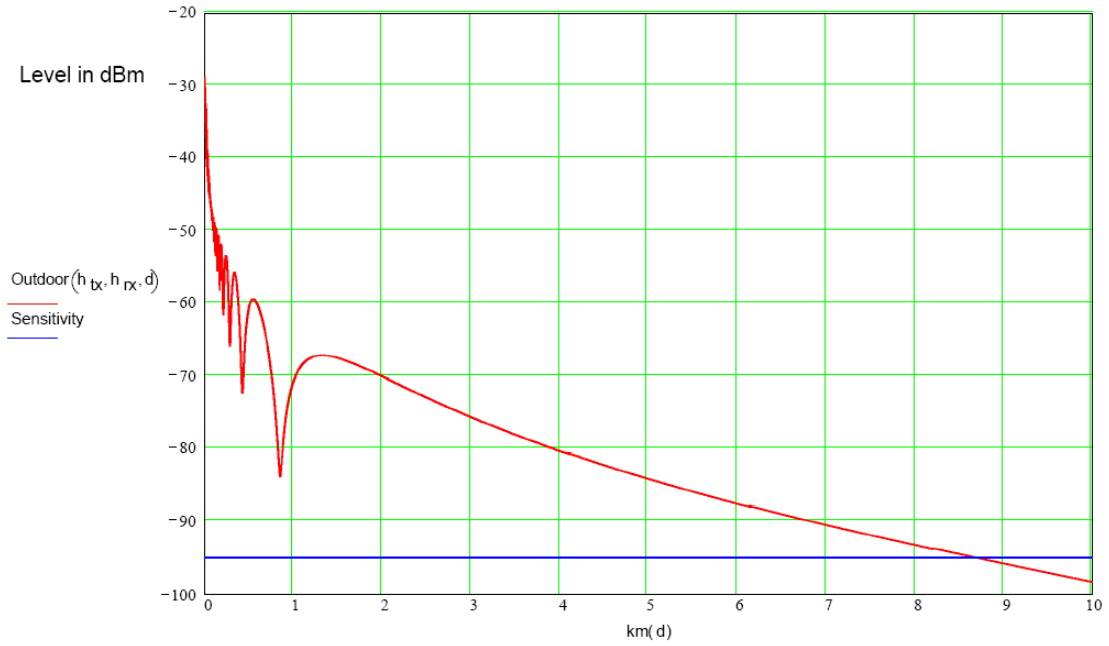
Passive Booster kit description:

- **Roof mounted/pole mounted antenna (UL-1400-D345USF)**
- **Coaxial cable, 8 meter (26 ft) with SMA connectors at ends**
- **Dual-Band RF coupler (UL-1400-D379USF)**
- **Cost: $135**
- **Use existing Bluetooth headset for comfort and safety (optional) while driving**

Coverage, with Passive Booster

MEI Propagation Model

Passive Range Booster Model



Range in kilometers

ASSUMPTIONS:

- 15 meter site tower
- +5 dBil net site gain
- -6 dB coupling gain
- 4 meter (13 ft) rooftop height
- Indoor = Outdoor
- Unobstructed radio path
- US PCS band, 1900 MHz (worst case)

Passive Booster range working into a 15 m (50 ft) tall cell site antenna tower is approx. 8.5 km (5.3 statute miles) indoors or outdoors (using a Bluetooth headset).