

# ATTENUATION OF BUILDING MATERIALS

NIST IR 6055

All wireless connectivity devices are susceptible to wireless interferences and Wireless DMX is no exception. Many obstacles in homes and office buildings interfere with your Wireless DMX signal. The main culprits being building materials. Building materials are the worst Wireless signal blockers, but they are not the only ones. Signal issues can also be caused by physical objects and radio waves from other devices.

Metal is the hardest material to penetrate because it's a conductor of electricity. What does electricity have to do with Wireless Signal? Radio waves are electromagnetic, meaning that metal has the ability to absorb them.

Anything that has metal, such as metal blinds, doors, furniture, buildings, and walls, can greatly lessen or completely kill Wireless signal. The more metal there is between your Wireless DMX Transmitter and the connected device, the worse the Wireless DMX signal will be.

We all want our Wireless DMX designs to be accurate, spotless, reason why is important to factor in a site survey. A site survey allows capturing of vital details, like wall attenuation, limitation, and preference regarding signal boost (MonoBoost) placement, and determine potential obstructions like AC units, ducts, pipes, and construction materials used that would attenuate the Wireless signal.

<b>BRICK-FACED CONCRETE</b> 18dB	<b>REINFORCED CONCRETE</b> 53dB	<b>STEEL/FIRE EXIT DOOR</b> 19dB
<b>DRYWALL</b> 3dB	<b>BOOKSHELF</b> 2dB	<b>MARBLE</b> 6dB
<b>DOUBLE-PANE COATED GLASS</b> 20db	<b>LUMBER (DRY - 38 MM)</b> 3dB	<b>SOLID WOOD DOOR</b> 6dB
<b>EXTERIOR GLASS</b> 3dB	<b>CONCRETE 203MM</b> 47dB	<b>BRICK-FACED</b> 10dB
<b>POLYURETHANE INSULATION BOARD WITH ALUMINUM 100MM</b> 35dB	<b>CUBICLE WALL</b> 4dB	