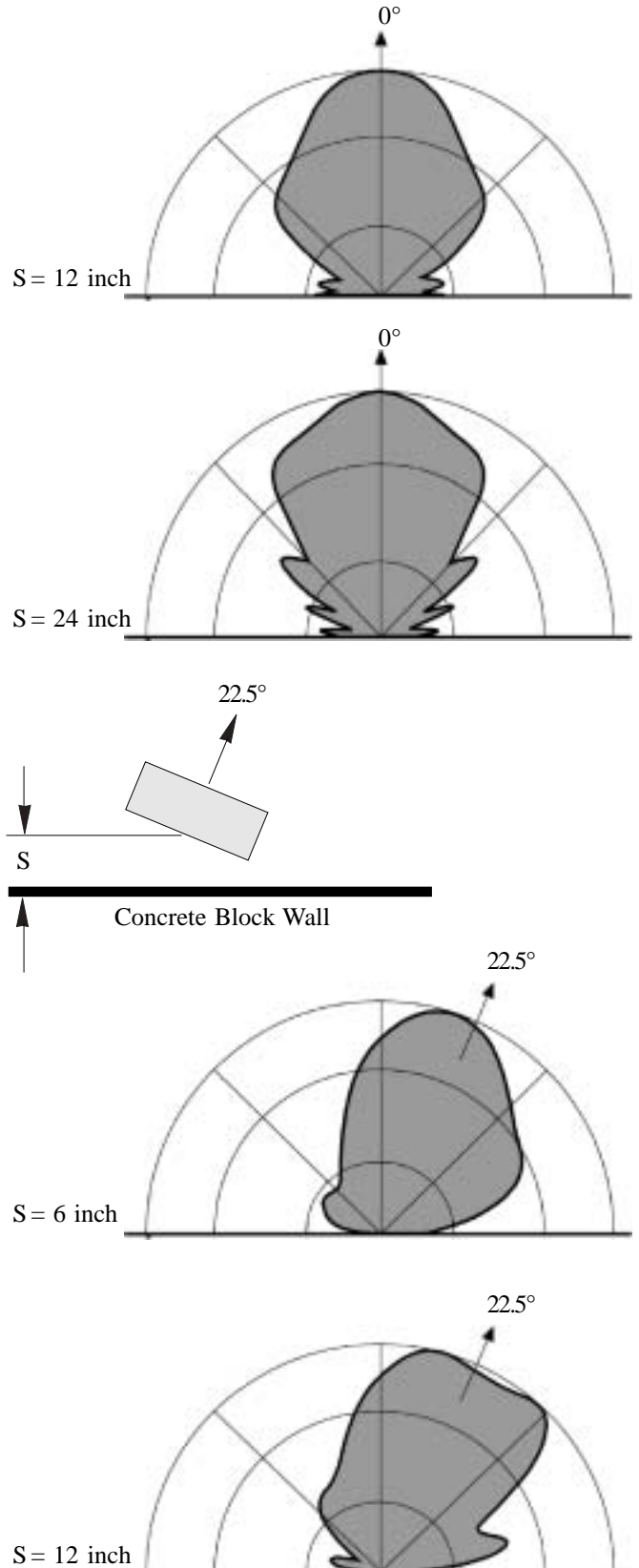
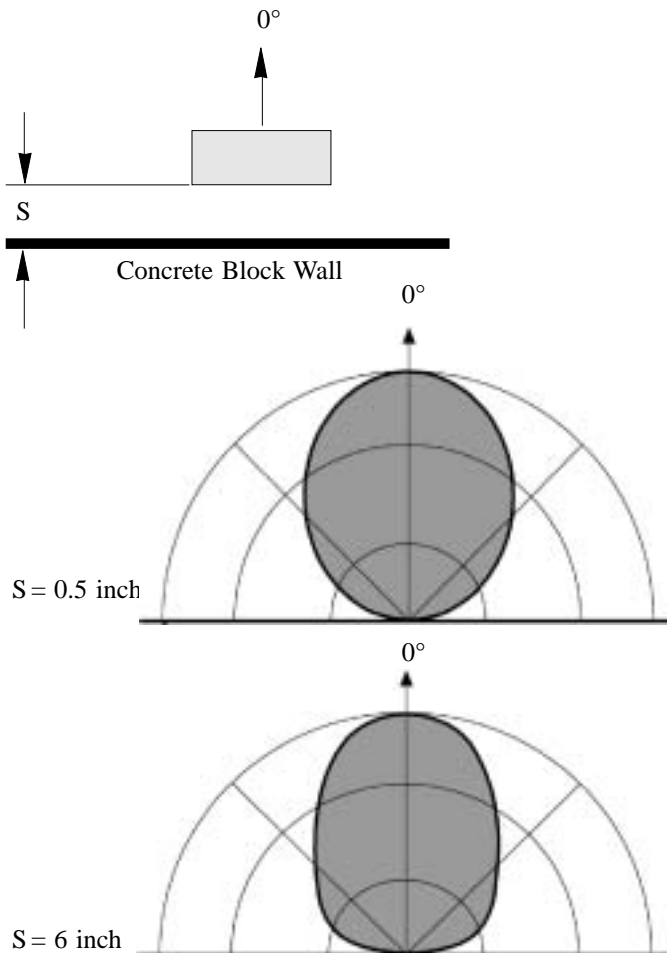


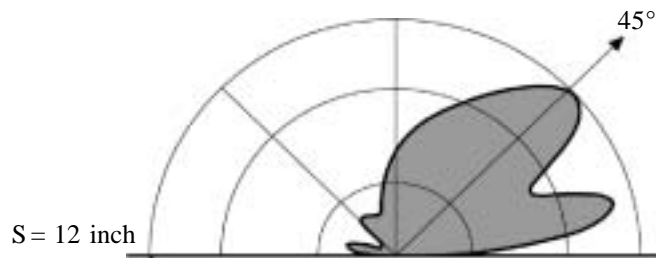
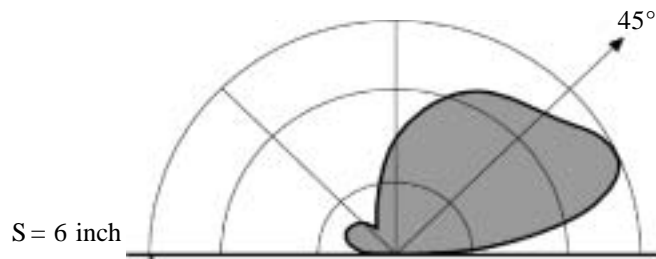
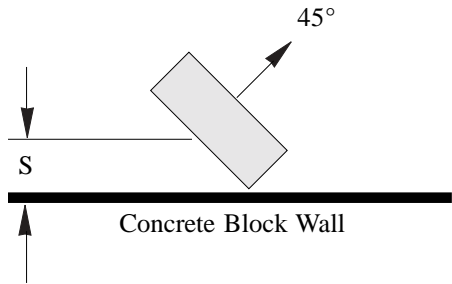
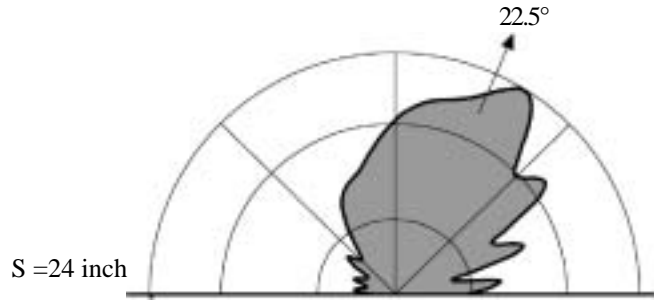
Antennas mounted in front of a reflecting surface, like a building face or other large conductive surface, will cause the horizontal radiation pattern to change. Part of the radiated energy is reflected and coupled with the reflecting surfaces. Little to no change is noticed in a reflective environment to the horizontal pattern, when the center of the main lobe is perpendicular to the reflecting wall. Deviation from this angle results in more power being radiated towards the wall, causing greater reflections and coupling with more distortion of the horizontal radiation pattern.

The reflecting surface depicted in the attached diagrams consists of a concrete block wall. The panel antennas have 18 dBi of gain and a 65° horizontal half-power beamwidth. The resulting patterns shown in the following diagrams are for various distances (d) in front of the wall and angles ( $\alpha$ ) at a frequency of 1850 MHz. Gain variances reflect changes to the horizontal pattern.

Conclusion: When using an antenna with 60–65 degree half-power beamwidth, the skew angle can be up to  $\approx 30^\circ$ . Antennas with 90° should be at a skew angle of no more than  $\approx 15^\circ$ . In all instances, the distance from the building should be kept to a minimum.



All specifications are subject to change without notice



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