

Antenna directivity of Smrad maritime Radars types DX45 and DX60

Equipment: Simrad DX45 and Simrad DX60 4 KW maritime radars.

Subject: Antenna directivity as measured

Purpose: Stating the relationship between the gains of antennas in the equipment in question.

FCC relevance: Radiated Spurious / Out of band Emissions , FCC 80.211(f) & 2.1053

The Equipment, type designated DX45 and DX60 respectively, comprises slotted waveguide antennas, having measured directivities of:

Equipment Type Designation	Aperture cm	Directivity dBi
DX45	40	23.7
DX60	55	24.9

The feeding parts as well as overall construction of the two antennas are within measurement and manufacturing tolerances identical, apart from the aperture size.

Losses in the two antennas are estimated to be in the order of less than 0.5 dB, difference in loss between the two types being less than 0.5 dB.

The directivity, and hence the gain, of type DX60 is in the order of 1.2 dB higher than the corresponding value of the type DX45 equipment. This difference is in accordance with the difference in aperture size, the DX60 comprising the larger aperture.