

ELTA North America Request for FCC Experimental License

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Necessary Bandwidth Calculation

The necessary bandwidth was determined using the equation in Annex J of the NTIA Manual¹ for FMCW radars (see Equation 1). The ELTA ELM-2114 emission has a maximum frequency deviation of 40 MHz. applying this frequency to Equation 1 yields a necessary bandwidth of 80 MHz.

¹ *Manual of Regulations and Procedures for Federal Radio Frequency Management*, Washington, DC: US Department of Commerce, National Telecommunications and Information Administration, 2008 (revision May 2011).

$$B_n = 2B_d(1)$$

where B_n = necessary bandwidth, MHz

B_d = frequency deviation bandwidth (peak difference between modulated wave instantaneous frequency and carrier frequency for FM/CW radar systems, MHz