

Necessary Bandwidth Exhibit

The necessary bandwidth for our application was listed as 40,000 Hz.

This is based on an assumption, reported in “Space Mission Analysis and Design” that for Frequency Shift Keying (FSK) operation a bandwidth of at least twice the expected data rate is required for proper separation of the Frequency1 and Frequency2 values about the center frequency for digital communication.

Our radios are to be operated at 19200 Bps throughput data rate (~20,000 Bps), twice this is the reported value of 40,000 Hz bandwidth.

References:

Larson, W.J., Wertz, J.R., “Space Mission Analysis and Design,” 3rd Ed. Boston, Microcosm Press, 2004.