

Necessary Bandwidth Description

Known Quantities:

Maximum Modulation Frequency (M) = 37.4 KHz

Peak Frequency Deviation (D) = 90 KHz

Formula for Frequency Modulation, single channel telegraphy is assumed.

$$B_n = 2M + 2DK$$

$$B_n = 2*(37.4 \text{ KHz}) + 2*(90\text{KHz})*(1.2) = 290.8\text{KHz}$$