

Description of Modulating Signal:

Three Modulation types will be used by ARCE are BPSK denoted by A1D, QPSK denoted by G1D, and 16-QAM denoted by D1D. Tables 1 through 3 below detail each emission and its corresponding data rate. The designation codes correspond to the ITU standard. The first 4 alphanumeric characters correspond to bandwidth and a single letter K corresponding to the 10^3 order of magnitude. For example, 12K4 means a 12.4 kHz Bandwidth.

All modulating signals are band limited using a Root Raised Cosine Pulse Shaping Filter. The Peak to Average Power Ratio of the 16 QAM modulating Signals will be 5 dB.

Table 1: BPSK Emissions

Emission	Data Rate (kbps)
35K2 A1DCW	16
70K4 A1DCW	32
140K A1DCW	64
280K A1DCW	128
563K A1DCW	256

Table 2: QPSK Emissions

Emission	Data Rate (kbps)
17K6 G1DCW	16
35K2 G1DCW	32
70K4 G1DCW	64
140K G1DCW	128
280K G1DCW	256

Table 3: 16-QAM Emissions

Emission	Data Rate (kbps)
8K80 D1DCW	16
17K6 D1DCW	32
35K2 D1DCW	64
70K4 D1DCW	128
140K D1DCW	256