

Relationship between switch programming and RF power output

The RF power switch settings are selected such that the maximum peak power emissions with the selected antenna are not exceeded. The switches define a 6-bit control word that sets the output power.

Example: a single channel (6 MHz) hub system has a maximum peak power of 24.78 dBm into a 6 dBi antenna. Using a 15 dBi gain antenna requires a reduction in output power of 9 dB or a maximum output power of 15.78 dBm into the antenna. A control word of 110001 (49 decimal) is selected giving an output power of 15.4 dBm into the 15 dBi antenna.

All switch settings for the various antennas are calculated in the same fashion. Point-to-multipoint systems use the maximum antenna gain of 6 dBi and point-to-point systems 23 dBi for the maximum antenna gain

Output power vs. Control Word

