



Technical Note: Channel Availability

Frequency allocations by varying governmental agencies for the 1.9GHz communication spectrum around the world determine the number of microphone channels available for Revolabs Solo™ Executive wireless microphone systems. In particular, the Unlicensed Personal Communication Spectrum (UPCS) in the U.S. and Canada mandate the use of 1920 to 1930MHz, while the European Union (EU) DECT allocation use 1880 to 1900MHz.

The Revolabs Solo™ Executive system uses Multi-Carrier, Time Division Multiple Access and Time Division Duplex (MC/TDMA/TDD) radio access methodology to partition the allocated frequency spectrum into sub-carrier bands with timeslots for sending audio signals both to and from the microphone and base station. Bursts of digital data (users' speech in this case) are sent and received along these paths. Simultaneously, the paths are monitored by the base station for interference from other sources and the bursts are re-assigned to un-used paths as required (handovers).

In developing and testing our systems, we have discovered that building materials and RF interference from other devices often preclude using the maximum number of theoretically available channels in the respective spectrums. As such, we recommend using no more than 16 microphones in a UPCS based system, or 24 microphones in a DECT based system.