Abstract Submitted
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Nanotube Radio KENNETH JENSEN, JEFF WELDON, HENRY GARCIA, ALEX ZETTL, University of California at Berkeley — We have constructed a fully functional, fully integrated radio receiver from a single carbon nanotube. The nanotube serves simultaneously as all essential components of a radio: antenna, tunable band-pass filter, amplifier, and demodulator. A direct current voltage source, as supplied by a battery, powers the radio. Using carrier waves in the commercially relevant 40-400 MHz range and both frequency and amplitude modulation techniques, we demonstrate successful music and voice reception.

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