

MANHATTAN CONSTRUCTION – P-BAND (308–348 MHz) SWEEP GENERATOR

I designed/built this test oscillator to simulate the output of the VLA P-band receivers. It is a sweep generator VCO for about 250–400 MHz to test the entire range and for sweeping the bandpass filters in the upconverter, or setting a single frequency, such as 327 MHz, the water vapor spectral line. The noise source generator is also injected before the test filters. The output power divider provides 2 identical signals to simulate the left-hand and right-hand circular polarization signals from the receivers. The directional coupler samples -10dB for monitoring the output power via a power detector circuit (not shown).

