This Sheet Has Been Replaced



ABSTRACT

A digital demodulator compensates for frequency offset between modulated and unmodulated carrier signals by detecting the frequency offset during a preamble with a known modulation pattern. Samples obtained during the preamble are stored in a memory during clock recovery, and read from the memory after the recovered clock signal has become stable. Phase offset is detected from a histogram of the phase differences between the two carrier signals, calculated modulo a certain phase angle, and compensation for phase offset is applied. The maximum histogram value is found by comparisons made according to a single-elimination tournament plan. In a diversity receiver, the maximum histogram value is used to select the output data.