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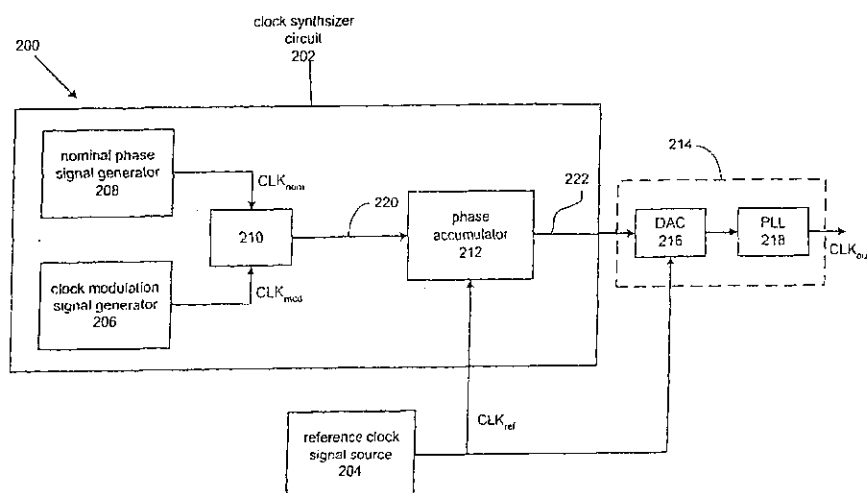
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(54) Title: METHOD AND APPARATUS UTILIZING DIRECT DIGITAL SYNTHESIZER AND SPREAD SPECTRUM TECHNIQUES FOR REDUCING EMI IN DIGITAL DISPLAY DEVICES



(57) Abstract: A DDS circuit arranged to provide a selectable spread spectrum based output clock signal is described. The synthesizer includes a phase accumulator circuit, a reference clock source coupled to the phase accumulator circuit arranged to provide a reference clock signal, a frequency shifter unit coupled to the phase accumulator, a nominal phase source coupled to the phase accumulator coupled to the frequency shifter unit arranged to provide a nominal phase signal, and a modulated phase source coupled to the frequency shifter unit arranged to provide a modulation signal. The frequency shifter unit combines the nominal phase signal and the modulation signal to form a frequency shift signal as input to the phase accumulator which uses the frequency shift signal to sample the reference clock signal so as to produce the output clock signal having a central frequency and a frequency spread based upon the modulation signal.