ABSTRACT OF THE DISCLOSURE

DIFFERENTIAL PHASE TRACKING CIRCUIT

A circuit and method for generating differential phase detection tracking error in devices employing an optical disc media employs a photo-detector (102) having four separate light receiving areas (A-D) that receive light reflected from the surface of the optical media and generates signals (A1,A2) representing the amplitude of the light received by each area. The signals are converted into digital pulses (B1,B2). The phase difference between the digital signals is measured (112), and discrete voltage signals (UP,DN) are produced to represent the phase difference. Valid phase difference measurements are applied to and stored in a ping-pong capacitor charge pump (122). The latest valid phase measurement is then selected and filtered (124) to produced a tracking error signal (126).

Figure 5