Parkinson's disease is a progressive disorder of the central nervous system and Deep Brain Stimulation (DBS) is one of the most effective treatments of Parkinson symptoms. This project is focused on developing a Closed-loop Deep Brain Stimulator that searches for optimum parameters for the treatment of Parkinson's disease. This device has 8 recording/ 64 stimulating channels and interface circuits. A microcontroller takes the recorded data as feedback and calculates the parameters to optimally attenuate the symptoms of the disease.