

## Dynamic Equilibration System using a $\mu$ Controller

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### **Abstract**

*This project achieves a digitally controlled dynamic adjustment system. It will maintain the stability of a ball on a rectangular mobile platform at a fixed point determined by the user. The command is performed using a 8051 family processor and the ball positioning point is controlled by the user. The system does not require a calibration before putting into service, and the ball positioning error is minimal. Ball size will not affect the functionality of the device. To maintain the balance, the platform will require two degrees of freedom, corresponding to the two axes. There will be necessary a feedback loop to adjust the position, and a user interface for setting the balance point of the ball.*