

# Development of a control loading system for flight simulators

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## ABSTRACT

In order to obtain the goal of this research, a control loading system was designed for flight simulators. This system can simulate the real feeling of the pilot when controlling an airplane. Because the joystick is touched all most of time by the pilot during training time, so the joystick is an important part in control loading system for flight simulators. This system is needed equipping high quality component parts and high sensitive loading sensors. In order to show real dynamic force feedback characteristics, the inner loop system is used to calculate the variable gain. The outer loop system is designed using two mass mechanical systems and employing control loading measure equipment to obtain force-position curves and parameters of the real system. The results showed that this system can indeed be simulated force feedback.

Keywords : control loading system, flight simulators

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