

# CONVENIENT LECTURE THEATER MONITOR SYSTEM

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## ABSTRACT

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This project is designed to function as a convenient lecture theatre monitor system with retractable seats and platform. Retractable seating system is a telescopic system, which means that it is able to retract and extend according to user demand.

Basically, retractable system has all the advantages of fixed system and it is a more innovative way to maximize the usage of a smart theatre. The following are advantages of retractable seating system:

1. Simplicity, The system is controlled by PIC microcontroller and we only need to press a button to extend or retract the system.
2. Reliability, The system is fully automated and less error will occur.
3. It saves up a lot of floor space for other purpose and activities.

Retractable is suitable for a range of application, such as theatre, dance studio, TV studio, and exhibition hall. Designing and building the retractable seats and platform involve some mechanisms which are able to enforce the seats to retract and extract. During the process of retracting and extracting the seats or on-going activities, noise will increase and therefore a noise reduction system have to be included as part of the projects. Besides, a specification dimension of the chairs is being designed as well to ensure all the users are having a comfortable condition all the time.

Other than that, the lecture theatre should consist of the features of allowing user to set the seat capacity requirement, enabling user to remotely close the doors at entrance by pressing a button at the consol, determining the number of attendance in the theatre, dimming certain lights automatically when LCD is in use. These electrical and electronic controls are performed by the preprogrammed microcontroller PIC16F887, which its detail will be discussed in the section later.