



## ABSTRACT

*The purpose of this final project to trainer alarm and central lock which later can be used by practicum in the Automotive Laboratory of Mechanical Engineering of SV UGM. So that students can practice and observe directly the alarm and central lock which is part of the security system on the car.*

*The process of making alarm and central lock trainers includes preparation for design, component preparation, frame making, component assembly and testing. Testing of alarm systems and central lock includes: testing the function of components, testing system components, measuring the voltage, current and power of the alarm system and central lock. The results of the design of making learning media training for alarm systems and central lock include the design of components used in the design of circuits where the components used are such as fuse, alarm module switch, central lock module and actuator lock. The making of an alarm and central lock trainer is done in accordance with the manufacturing plan including the formation of a media frame that is delivered to an electric welder after, trimming the frame and painting the frame, then making a display board with acrylic and installing media components including batteries, fuses, central lock motors, modules alarm and central lock and central lock switch.*

*As a result, proper alarm and central lock trainers are used in terms of the completeness of system components, ease of system maintenance, ease of use and security in the use of teaching and learning practices in the Automotive Laboratory of the Mechanical Engineering Department of the UGM Vocational School*



## INTISARI

Tujuan tugas akhir ini adalah membuat *trainer alarm* dan *central lock* yang nantinya dapat digunakan praktikum di Laboratorium Otomotif Teknik Mesin SV UGM. Sehingga mahasiswa dapat mempraktikkan dan mengamati secara langsung *sistem alarm dan central lock* yang merupakan bagian dari sistem keamanan pada mobil.

Proses pembuatan *trainer alarm* dan *central lock* meliputi persiapan membuat desain, persiapan komponen, pembuatan rangka, perakitan komponen dan pengujian. Pengujian *sistem alarm dan central lock* meliputi: pengujian fungsi komponen, pengujian sistem komponen, pengukuran tegangan, arus dan daya dari sistem *alarm* dan *central lock*. Hasil rancangan pembuatan training media pembelajaran sistem *alarm* dan *central lock* meliputi rancangan komponen yang digunakan rancangan rangkaian dimana komponen yang digunakan seperti *fuse*, saklar modul alarm, modul *central lock* dan *lock actuator*. Pembuatan *trainer alarm* dan *central lock* dikerjakan sesuai dengan rencana pembuatan meliputi pembentukan rangka media yang diserahkan ke tukang las listrik setelah, merapikan rangka dan pengecatan rangka, selanjutnya pembuatan papan peraga dengan *acrylic* dan pemasangan komponen media yang meliputi baterai, *fuse*, motor *central lock*, modul *alarm* dan *central lock* dan saklar *central lock*.

Hasilnya *trainer alarm* dan *central lock* layak digunakan dari segi kelengkapan komponen sistem, kemudahan dalam perawatan sistem, kemudahan penggunaan dan keamanan dalam penggunaan untuk kegiatan belajar mengajar praktik di laboratorium Otomotif Departemen Teknik Mesin Sekolah Vokasi UGM.