Abstract

Anacom MedTek, a medical device company, produces pillow speakers as their main product line. Pillow speakers are a healthcare communications tool that allow for hospital patients to control many entertainment and environmental components of the hospital room from one controller. These pillow speaker devices have anywhere from 3 to 27 metal dome key cap buttons based on their customization. Before they can be shipped to a customer, each button must be tested to ensure that it is functioning properly. This test is currently done manually by a testing technician. With so many buttons to be tested for each unit and a production of 100,000 units a year, Repetitive Strain Injuries have become a concern for the technicians. Such injuries have resulted in major costs to Anacom in the last several years in the form of workers compensation claims and lost worker time. To avoid this human factors issue this project is to design a prototype that will automate the pillow speaker testing process to avoid Repetitive Strain Injuries in the testing technicians while meeting specific production and usability requirements.