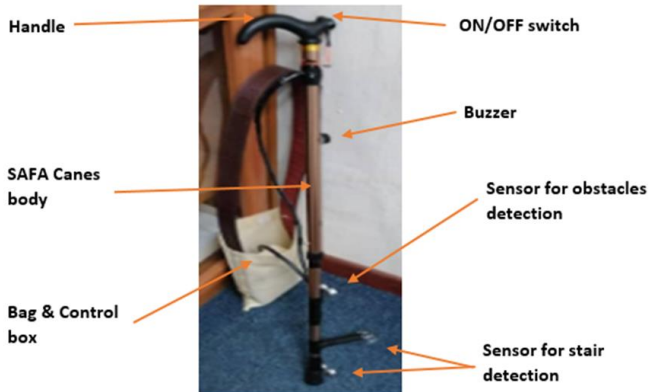




SAFETY ASSISTANT (SAFA) CANES

PRODUCT



PRODUCT DESCRIPTION

SAFA Canes are built with functions that can help the visually impaired in their daily lives when they need to move from one place to another. By using SAFETY ASSISTANT (SAFA) CANES, they can walk more confidently because sound alerts help them identify any obstacles ahead. In addition, the use of SAFETY ASSISTANT (SAFA) CANES can help them locate stairs and also give confidence to go up and down stairs. SAFETY ASSISTANT (SAFA) CANES will give a sound warning when climbing stairs and also when the stairs end.

PRODUCT POTENTIAL

The number of visually impaired people in the world is estimated at around 285 million people. Meanwhile, about 100,000 visually impaired people in Malaysia. With the development of this stick, it can help the lives of these people in making movements in their daily lives. It can also facilitate and increase their confidence in living life and help them in earning a living to support a family that is often very miserable.

MUHAMMAD AMIRDANIAL BIN HAMZAH
 MUHAMMAD HAIQAL NAZMI
 NURUL HAZWANI BINTI HASNUL HADI
 SITI MUSLIHA BINTI ABDUL KARIM
 MOHD KHAIRI HASLAMIA BIN MAT RIPIN

JABATAN KEJURUTERAAN MEKANIKAL,
 POLITEKNIK TUANKU SYED SIRAJUDDIN.
 mkhairi@ptss.edu.my

OBJECTIVE

The objectives of this project are to help a blind people:

- i. To identify obstacles while walking of being outside by give a sound warning.
- ii. To walk up and down the stairs confidently.

IMPACT

SAFA Canes is a practically feasible product and convenient to carry around like any other walking stick. This could also be considered a crude way of giving the blind a sense of vision. This also reduces the dependency on other family members, friends and guidance dogs while walking around. It can serve as a benchmark in aid for the blind like crutches are for the paraplegic. Where the embedded system integrates ultrasonic sensors as a signal input to detect the obstacles from three directions, namely front, upper and side. The microcontroller, Arduino board act as the control unit to process the system data.