

ABSTRACT

Collimator is one part of the plane X-ray has a function for setting the size of the radiation field. Collimator has several components, namely light collimator, lead plate forming field meter to measure the distance from the focus to the detector or to a movie, the button to turn on the light collimation, and filters Aluminum (Al) and / or copper (Cu) as an additional filter.

Each aircraft can have an X-ray collimator shapes and different designs but in general collimator components, as already mentioned. collimators are often used or needed in the health sector that can be interpreted as an x-ray irradiation window which will illuminates to patients, part of the tool can be opened or closed so that x-rays can be adjusted as needed penyinarannya, with a wireless modification to open and close the windows system This dikolimator irradiation, to allow the operator and provide broad accuracy of x-ray irradiation before the patient gets out to be irradiated.

To improve the quality of the modules, module authors to add or modify the remote control system or without wires for Suter narrow width collimator settings. Using a transmitter and receiver system for drive sutter fr4ekuensi the collimator with a 434HZ.

There is also an analysis and calculation of the voltage at the point the point off the circuit before and after the transmitter on the frequency as well as to issue a point at the circuit in the receiver before getting the frequency and after receiving frequency to control the motor driver circuit. Lighting calibration against x-ray films with a distance of 100cm. Once everything is done the error or error value should be <5% that the module worked as expected and specified.

After doing a process of planning and study literature, experiments, testing and data collection tools, the authors can conclude that if the controller sutter collimator without a wired or wireless settings allow the operator to operate the smooth narrow and wide a broad pemyimaram sutter koliamator as the patient.

Keywords: collimation, wireless, frequency, transmitter, receiver, sutter collimator