

ABSTRACT

Maintenance process sectoral antenna in the tower base stations by way should climb to the top of the tower in a sense very risky, less efficient, and the discussion is harmful to workers. So from now, we should start looking for a solution to resolve this problem.

In this final project, the author provides a solution to the maintenance process so that the process of setting sectoral antenna is easier and can be done directly from the bottom of the tower. The tool is called ***Sectoral antenna's mechanical tilting Adjuster using microcontroller and DC motor***. the first step is making the mechanical, and then making the electronics which serves as controller. and it must combine with a DC motor as the main component driving separately to change the angle of the antenna (Tilting and azimuth).

With this tool maintenance process sector antennas can be done easily, efficiently and reduce the risk of accidents working at height. The accuracy of this tool in changing the antenna tilt-up position with an accuracy 71,4%, antenna downtilt position with an accuracy of 62.5%, 66% right azimuth, and Azimuth left 70%.

Keywords: *Mechanical tilting, Azimuth, BTS, Antenna sectoral, Microcontroller, DC Motor*