ABSTRACT

One of the important components of radio communications is antenna. Antennas were used in the radio communications as that released electromagnetic energy to space propagation and as the electromagnetic energy recipient from space propagation. Together with the increase in the requirement for increasingly fast technology then at this time was needed an antenna with bandwidth that was wide so as to be able to be used for various application sorts.

So in this end project was carried out drafted got up antenna with the principle of the High Pass Filter work (HPF). With the principle of the HPF work then these antenna could work in the frequency on his minimal frequency, in this end project his minimal frequency was 800 MHz. To be able to have the principle the HPF work was in planning used by the calculation with the method exponential, with counted the variation of the channel of characteristics impedance, the material dielectric, wide stripes, and length the element of antenna. Afterwards , in the construction these antenna were made from one stripes with the transformation from the channel one the wire, with the form of stripes took the form of three horns.

In this end project was brought about principled antenna the HPF work with the minimal frequency 800 MHz received by 2 frequencies of the work to VSWR ≤ 1,5 , that is in the frequency 800 MHz – 1000 MHz and 1200 MHz – 3000 MHz . So in this end project was obtained dual bandwidth that is 200 MHz and 1800 MHz with unidirectional radiation pattern, ellipse polarization and gain of 7,808 dBi in frequency 800 MHz.

Key words: wide bandwidth antenna, gradual exponential, tricula antenna