

Abstract

Receiver radio is one of the communication that works to change modulation signal or radio wave into audio signal. The designing of receiver radio FM as media learning can give a understanding. In addition to the recipient of information, radio receiver can also be a medium for listening to music, humor and news.

In this Final Project is design of radio receiver on frequency 89-108 MHz that can receive signals from the transmitter to be delivered to the receiver. The circuit receiver radio FM between antenna, RF amplifier, mixer, oscillator, IF amplifier, limiter, FM detector, audio amplifier and speaker. The design of the receiver radio FM use Software. Antenna used is a monopole antenna.

The result of this Final Project is capable to realize Radio Receiver FM for Frequency 89-108 MHz. With the results measure the distance of transmit power is up to 10 meters with clear sound quality and power obtained at 93 MHz frequency of -51.23 dBm, FM Tuner output with V_{max} 100 mV, V_{min} -16mV and V_{pp} is 116mV. The antenna test results are VSWR is 1.06 and the Return Loss is -30.62 dB.

Keywords: Radio Receiver FM, frequency 89-108 MHz and Software Altium.