

Electronic circuits (B)

Mid-term Project, 3 Com., Feb. 2015

Aim:

Make use of learned concepts to understand the function and operation of some electronic circuits used in many applications and devices.

Procedures:

- Select an op-amp based communication transmitter/receiver circuit related :
 - Analog modulation (AM, FM, ..)
 - Digital modulation (ASK, FSK, ...)
- Analyze the circuit using a suitable simulation tool to show its input and output signals.
- Prepare the PCB layout and implement the circuit on it.
- Test your circuit in the lab using the oscilloscope and save the displayed waveforms on your USB flash.
- Validate your circuit by testing it with your partner.

Teams:

Couple of students, one will implement the transmitter and the other will implement the receiver circuit.

Delivery time:

End of March 2015.

Links of sample projects:

http://www.eeweb.com/blog/extreme_circuits/opamp-vhf-fm-transmitter

<http://www.circuitstoday.com/simple-opamp-radio>

<http://www.aaroncake.net/circuits/index.asp#2>

<http://www.qariya.info/electronics/communi.htm>

<http://www.electronics-lab.com/projects/rf/index.html>

<http://www.circuitstoday.com/category/radio-transmitters>

<http://www.electronicshub.org/free-project-circuits/communication/>