

Designing a System

Acknowledgements: Developed by Phyllis J. Cooke, Instructional Developer

Time Required: 1 hour

Team or Individual: This is an individual activity.

Learning Objectives:

1. Design a system using a block diagram to represent the electronic components.
2. Identify components of the system and describe how they work together.

Introduction:

A system is usually made up of two or more pieces of electronic equipment interconnected to do some particular function. For instance, a home entertainment system is made up of a TV set, VCR, DVD, and DVR units plus the audio components like a surround sound amplifier, CD player, tuner, speakers, and other equipment. A system may take on many sizes, shapes, and functions.

Block diagrams are the key working documents of most electronic equipment and systems. Each block represents an IC, a circuit, or assembly that does some particular thing. It may be an amplifier, filter, memory, regulator, or disk drive. The diagram uses lines to show the various interconnections between the blocks. These lines may be copper traces on a PCB, wires, or cables with connectors. The block diagrams show the relationship between the blocks and the flow of signals between them.

Performance and Task Procedures: Draw a block diagram for an electronic system. Be creative. Your system can be anything but it must have a power supply and a control system. Use the examples shown in the narrative as a starting point for ideas.

Share your system with your classmates and be able to describe the components.

Deliverable:

Block diagram showing an electronic system

Scoring or Grading Criteria:

The criteria for grading is left to the discretion of the instructor.