

# Electronic Communications (10-assignment)



This is an integrated instructional module designed specifically to operate within a Modular Program environment. It is ideal for use with our Scantek Technology or IT2020 Information Technology programs. The module includes a 10-assignment exploratory curriculum that is split into two parts. Each part includes a pre-test and post test. The module includes hardware, software and curriculum materials sufficient to provide a complete learning experience.

The curriculum incorporates continuous assessment through questions. When used in conjunction with a ClassAct networked management system, this provides instant feedback of student performance. The assessments begin with a comprehensive pre-test. This quiz includes questions for each subsequent assignment, together with questions that will specifically test math and reading ability.

Every assignment starts with a series of questions designed to track inventory. These ensure that any missing items are located before they are needed.

Each assignment is divided into a series of tasks. Hands-on tasks form the core of the student work. Where appropriate, these are accompanied by research tasks based software applications. Assessment questions are incorporated into each task.

**Typical 10-assignment topic areas include:**

- Radio wave communication
- Light as a line-of-sight transmission
- Messages across a microwave link
- Radio wave communication
- Electromagnetic spectrum
- Omnidirectional and unidirectional transmission
- Basic properties of microwaves
- Penetration properties of microwaves
- Radar object detection
- Satellites

**Typical 10-assignment activities include:**

- Explore a string based communication system.
- Recognize sound as a vibration.
- Use light communication to discover line of sight.
- Demonstrate the advantages of using radio waves for communication.
- Describe the basic process of radio communication.
- Use a microwave system to send voice messages.
- Identify the function of the parts in a microwave communication system.
- Identify the difference between omnidirectional and unidirectional transmission.
- Recognize how antenna type determines transmission direction.
- Investigate wire based communication systems.
- Recognize how the environment affects the transmission of microwaves.
- Identify the penetration properties of microwaves.
- Identify different terms relating to waves.
- Relate microwaves to the electromagnetic spectrum.
- Investigate laser, sonar and radar technology.
- Demonstrate the principle of radar for detecting objects.

Each assignment is designed around a list of performance objectives. These lists include academic, technical and occupational objectives. The assignments are written in such a way as to enable a student to attain the performance objectives, with the assessment questions linked to these in order to provide a measure of true competency.

The performance objectives are used by the ClassAct management system to generate a comprehensive portfolio of student competency reports. Default reports supplied with this module include:

- Entry report
- Technical/Occupational Exit report
- Basic Skills report based upon the federal SCAN's report.

**The items supplied with this instructional module include:**

- 10-assignment On-Screen Student Assignment Guide CD
- 10-assignment Student Assignment Guide
- 10-assignment Student Workbook
- 10-assignment Instructor's Guide
- Computer Aided Instruction software
- Walkie-talkies
- Microwave Communications Base board
- Microwave Transmitter
- Microwave Receiver
- Reel of string
- Plastic cups
- Accessory kit

**Additional items required:**

- Computer

## Module Facts

For Technology Program, order as:  
ST200/10 Electronic Communications

For IT Program, order as:  
NS4E Electronic Communications

	No.	Average time
Assignments	10	45 minutes
Extension Activities	2	45 minutes
<b>Total</b>		<b>9 hours</b>



**LJ Technical Systems**  
Web site: [www.ljgroup.com](http://www.ljgroup.com)