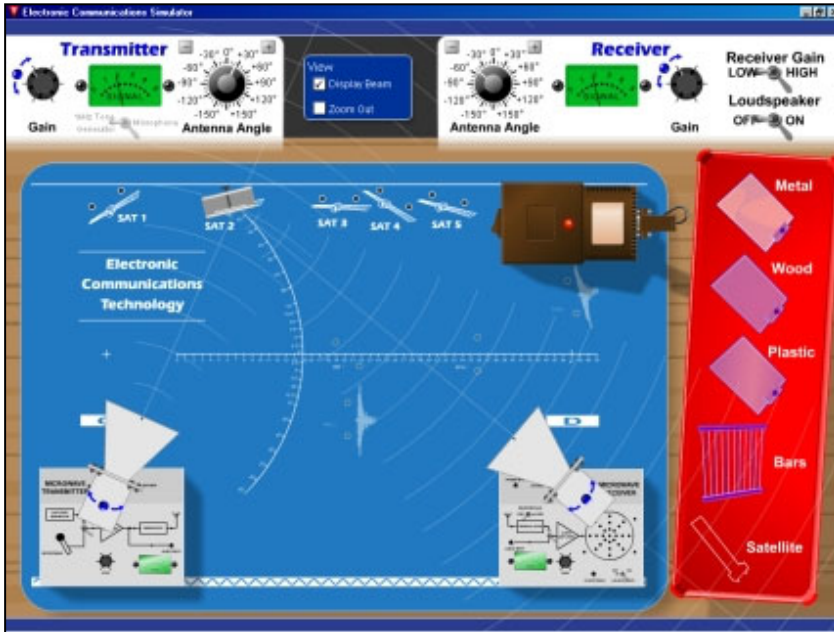


Electronic Communications (Engineering Unit)



- Identify the different types of cables used by computer networks.
- Follow a design loop to identify a problem in a computer network..
- Use a simulated chat room to communicate with other Internet users.
- Observe the consequences of restricting the bandwidth of speech and music.
- Determine the most cost effective communication link between two towns.

Each lesson is designed to meet a number of performance objectives. These include academic, technical and occupational objectives. The lessons are written in such a way as to enable a student to attain the performance objectives, with continuous assessment activity questions and assessment test questions linked to these in order to provide a measure of true competency.

The performance objectives are used by the ClassAct or ClassCampus management systems to generate a comprehensive portfolio of student reports.

The items supplied with this instructional unit include:

- On-screen Student Curriculum CD
- Instructor's Guide

Additional items required:

- ST200/40 Electronic Communications
- Computer

This is one of a series of instructional curriculum units designed specifically to operate within a lockstep environment where all students carry out assignments simultaneously within the same topic area. It can be run independently, or as an ideal addition to our ScanTEK Technology Program.

This unit makes use of hardware supplied with the ScanTEK technology module. It includes 10 lessons of on-screen curriculum materials in an html format. These can be delivered via a LAN using our ClassAct classroom management system or via the Internet using our ClassCampus management system.

The curriculum includes continuous assessment, assessment tests and a workbook journal to create a portfolio of work during the lessons. Typical activities include hands-on investigations, problem-solving, and group projects.

Each lesson contains between one and two hours of study. A lesson typically begins with a PowerPoint presentation that provides students with background information required to complete the rest of the lesson. If used with our ClassAct SRS system, questions integrated into the PowerPoint can be tracked as each student responds on their handheld keypad.

Demonstration activities are carried out by the instructor using purpose built hardware. Students carry out hands-on activities using a software simulation of the hardware. The students also have an opportunity to verify their solutions using the hardware.

Where appropriate, research activities that include the use of multimedia explorers are also incorporated.

This instructional unit uses a unique software simulation of our electronic communications hardware. This enables the whole class to carry out activities in the same topic areas at the same time.

Students use the simulator to establish a signal transmission across a direct (and via satellite) microwave link, identify broadcast range and coverage, and investigate the penetration properties of microwaves.

Topic areas include:

- Early Forms of Communication
- Telephones
- Fax Machines
- Cell Phones
- Broadcast Communication
- Computer Networks
- Troubleshooting Networks
- The Internet
- Bandwidth
- Problem Solving – Planning a Communications Link

Activities include:

- Encode and send Morse code messages.
- Calculate the number of direct connections required for a telephone network.
- See how local, national and international telephone calls are connected.
- Send a fax from one computer to another across a network.
- Use a simulated cell phone network.
- Transmit a microwave signal via a satellite.
- See how terrestrial television is transmitted.
- Install simulated network equipment into a building.

Module Facts

Order as:
ST200/LS/10 Electronic Communications (Engineering)

	No.	Average time
Lessons	10	1 hr 40 mins
Total		17 hours



ClassAct, ClassAct SRS & ClassCampus enabled



LJ Technical Systems
Web site: www.ljgroup.com