HIGHVELD AMATEUR RADIO CLUB
SHACKNEWS

COMMUNICATION IS THE NAME OF THE GAME

Meeting The last meeting I was unable to attend (ed.). I heard that there was a discussion about the repeater at the present site. At the next meeting let's look at weather satellites, programs and antennas. Ever heard of a QHF antenna. Come along and find out.

SSC This months meeting was held at the QTH of Doug and Merle. A good turn out and thanks to the hosts for all the catering.
The next meeting, 13 May 2006, will be held at ???? Any volunteers?

---oooOOOooo---

To Each His Own

I cannot change the way I am,
I never really try,
God made me different and unique,
I never ask him why.

If I appear peculiar,
There's nothing I can do,
You must accept me as I am,
As I've accepted you.

God made a casting of each life,
Then threw the old away,
Each child is different from the rest,
Unlike as night from day.

So often we will criticize,
The things that others do,
But, do you know, they do not think,
The same as me and you.

So God in all his wisdom,
Who knows us all by name,
He didn't want us to be bored,
That's why we're not the same

~Author Unknown~

---oooOOOooo---

What is a Modem?

A modem (a modulator/demodulator) lets you connect your computer to a standard telephone line so you can transmit and receive electronically transmitted data. It is the key that unlocks the world of the Internet and its World Wide Web, commercial online services, electronic mail (E-mail), and bulletin board systems (BBSes).

Types of Modems

Depending upon how your computer is configured and your preferences, you can have an external, internal or PC modem card. All three types work the same way, but each has its advantages and disadvantages.

External modem.

This is the simplest type of modem to install because you don't have to open the computer. External modems have their own power supply and connect with a cable to a computer's serial port. The telephone line plugs into a socket on the rear panel of the modem.

Because external modems have their own power supply, you can turn off the modem to break an online connection quickly without powering down the computer. Another advantage over an internal modem is that an external modem's separate power supply does not drain any power from the computer. You also can monitor your modem's connection activity by watching the status lights.

Internal modem.

Most internal modems come installed in the computer you buy. Internal modems are more directly integrated into the computer system and, therefore, do not need any special attention. Internal modems are activated when you run a communications program and are turned off when you exit the program. This convenience is especially useful for novice users.

Internal modems usually cost less than external modems, but the price difference is usually small. The major disadvantage with internal modems is their location: inside the computer. When you want to replace an internal modem you have to go inside the computer case to make the switch.

PC Card modem.

These modems, designed for portable computers, are the size of a credit card and fit into the PC Card slot on notebook and handheld computers. These modems are removed when the modem is not needed. Except for their size, PC Card modems are like a combination of external and internal modems. These devices are plugged directly into an external slot in the portable computer, so no cable is required other than the telephone line connection. The computer powers the cards, which is fine unless the computer is battery-operated. Running a PC

Card modem while the portable computer is operating on battery power drastically decreases the life of your batteries.

How Modems Work

When a modem first makes a connection, you will hear screeching sounds coming from the modem. These are digital signals coming from the computer to which you are connecting being modulated into audible sounds. The modem sends a higher-pitched tone to represent the digit 1 and a lower-pitched tone to represent the digit 0.

At the other end of your modem connection, the computer attached to its modem reverses this process. The receiving modem demodulates the various tones into digital signals and sends them to the receiving computer. Actually, the process is a bit more complicated than sending and receiving signals in one direction and then another. Modems simultaneously send and receive signals in small chunks. The modems can tell incoming from outgoing data signals by the type of standard tones they use.

Another part of the translation process involves transmission integrity. The modems exchange an added mathematical code along the way. This special code, called a **checksum**, lets both computers know if the data segments are coming through properly. If the mathematical sums do not match, the modems communicate with each other by resending the missing segments of data. Modems also have special circuitry that allows them to compress digital signals before modulating them and then decompressing them after demodulating the signals. The compression/decompression process compacts the data so that it can travel along telephone lines more efficiently.
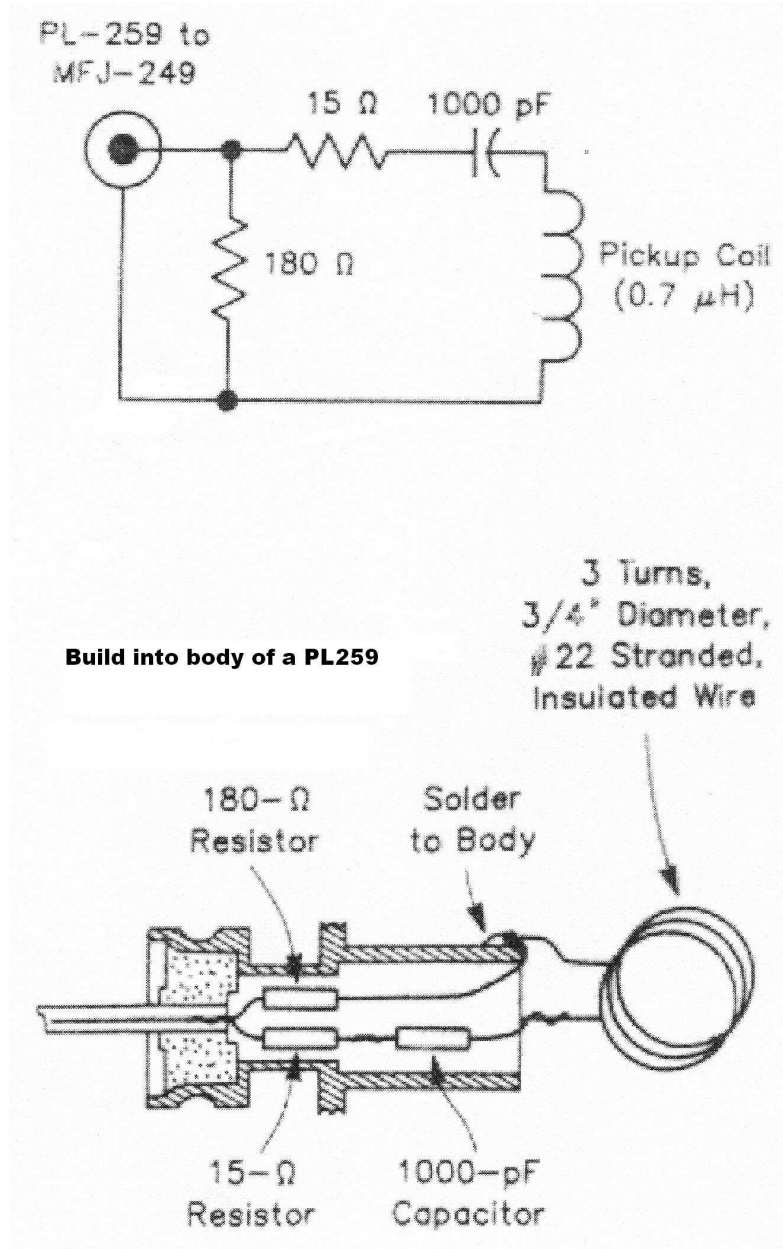
Modems convert analogue data transmitted over phone lines into digital data computers can read; they also convert digital data into analogue data so it can be transmitted. This process involves modulating and demodulating the computer's digital signals into analogue signals that travel over the telephone lines. In other words, the modem translates computer data into the language used by telephones and then reverses the process to translate the responding data back into computer language.

What is the difference between *digital* and *analogue* signals?

A computer performs its tasks by turning on and off a series of electronic switches represented by the numerical digits of 0 and 1. A 0 is the code for off, and a 1 is the code for on. Combinations of these digital codes represent text, computer commands, and graphics inside the computer. By comparison, the telephone works by sending sounds in a continuous analogue signal sent along an electronic current that varies in frequency and strength.

A simple 'GDO' add-on for the MFJ259 antenna analyser
(For those that own one)

Build into body of a PL259

73 Berridge ZS6BFL