What is Amateur Radio ?

Introduction

Amateur radio operators in the community are available to handle public service communications. Also known a "ham" radio, what once started as a hobby has been expanded into a nationwide network that provides communications for the Civil Air Patrol, Department of Emergency Services, Department of Civil Defense, the Red Cross, and other groups participating in emergency situations. Amateur radio operators have traditionally been on the scene of major disasters such as floods, hurricanes, tornadoes, and earthquakes. This dedicated group of volunteers provides disaster relief information in the form of health and welfare messages during time of disaster. Locally, this can be anything from reporting an injury accident to provide communications during the May '80 eruption, when normal channels are overloaded.

Activities

This community minded activities are absolutely without charge. The individual amateur maintains his/her station at his/her own cost. The amateur radio service is regulated mostly by itself, in accord with rules and regulations set down by the F.C.C. which requires passing a radio principles to obtain an amateur radio license to operate his/her station. The service has no commercial purpose as per part 97 of the FCC rules. There is no discrimination practiced concerning who may become an amateur operator, or who requires their help.

VHF-UHF & repeaters

Some of the traffic handled by amateurs are on VHF and UHF bands, which are "line-of-sight" frequency bands. Amateur "repeaters" or relay stations, extend this local coverage to other towns and counties, and in some cases state-wide.
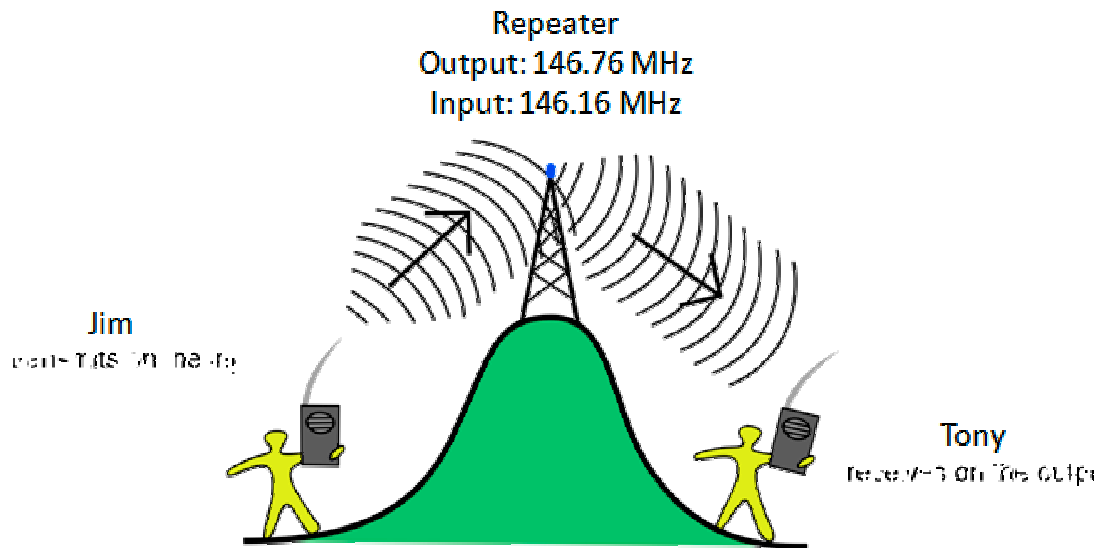
Shown is the principle of line of sight radio signals that are blocked by obstacles.
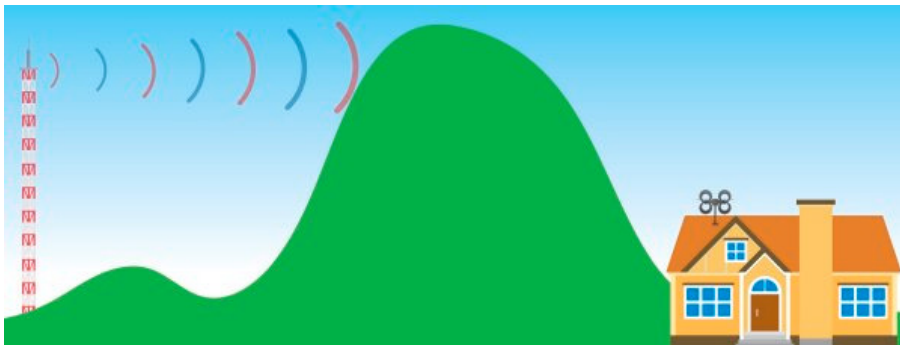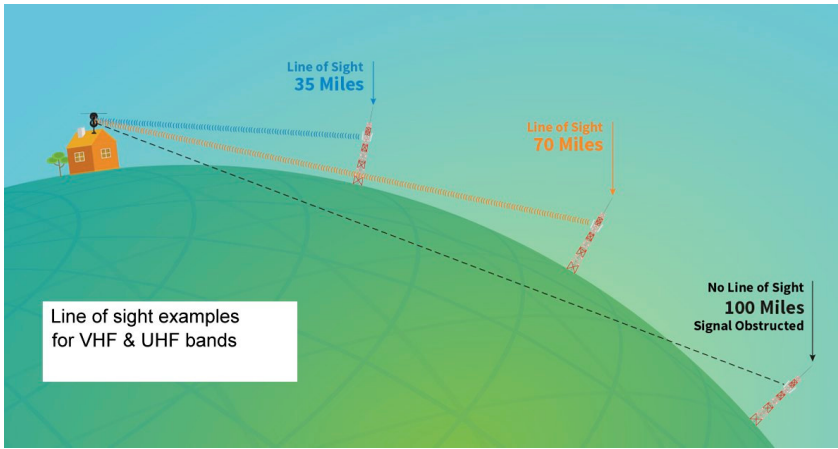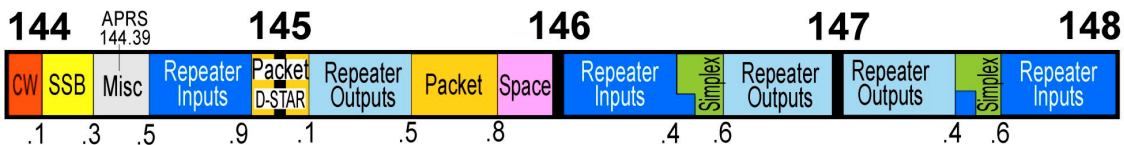
On a larger view shows signals that are blocked by the curvature of the Earth.

Shown below is an example of how two people can communicate through a repeater.

It's important for newcomers to be familiar on how to access and operate a repeater. Shown here are the repeater inputs and outputs.

As you can see there are simplex frequencies set up for two or more people to communicate without going through a repeater. Never use repeater inputs for simplex use. Doing so would disrupt normal repeater operation.

This is what a typical repeater (station) looks like inside and out. Show here are several repeaters / systems in one rack.

IPCOP Firewall
TelPac PS
UHF Duplexer
TelPac Packet Radio
KVM Switch
LAN HUB
Echolink
TelPac
IRLP
Echolink Audio Processing
PTT Interface Motorola Squelch
UHF Repeater
RLC4 Controller
VHF Duplexer
VHF Repeater
UPS Units
70 Amp PS
Ground Strap

View Facing South
Repeater Antenna
Solar Panel Array
Equipment Shelter

K7SRG