

Thanks for your interest in knowing more about working the Amateur Satellites. They are fun to work and if you are in a dead area for 2 meter or 440 stations this will give you another way to work stations using those bands! BTW AMSAT is the Sats number one organization with tons of information for the Sat user so keep this link handy:

<http://www.amsat.org/amsat/AmsatHome.html>

Ok..now for the Satellites.....if you crave some DX and more activity on VHF/UHF then working the Sats will do just that for you.

First offhow does a Satellite actually work?..... How the Sats work is quite simple really...they are like a floating repeater system.....you will transmit up on one band (like the 2 meter band) and then it will then return take your signal and transmit it down on another band (like the 440 band). That is the simple way to explain it now there are other things involved like knowing when the Satellites are in "view" or in your "window" in order to work them...knowing some about the position (height, angle etc) of the Satellite and also the doppler effect (which is like a loud car driving by you ... sounds and frequency will change as it is far to close etc). But really just think simple...this is not brain surgery and anyone can work the Sats!

First you will need to think about an antenna system to use for the Satellites. Like anything else in radio the better the antenna system the more stations (or Sats) you will work. I know many on just HT's or mobile antennas that work the Sats (possible but lots of trying! Also most have 2 meter FM rigs but maybe not a 440 rig but many of you DO have a scanner with 440 on it so try it with an outside 440 antenna).....but most are on Eggbeater or smaller beams. You will need one for each band the Satellite that you want to use uses...a nice 2 meter and 440 is good for starters (btw the Sats have different modes that are derived from the band you use going up and the band used coming back down to earth). Just to give you a look at some homebrew Sat antennas take a look at Jerry's K50E website.....he is a great guy and if you get into Sats then you will surely hear and work this guy...but look at all you can build for little of nothing...go here:

<http://members.aol.com/k50e/>

Another good Sat Antenna site:

<http://members.fortunecity.com/xelbef/vhf-uhf-antennas.htm>

So let you know I use a small 2 meter 5 element beam for the up band and a small 7 element 440 beam for the down band. You can also tilt your beam at an angle...I tilt my 440 beam at about 20 degrees or so up in the air at an angle to get better coverage of the Sats (I do not have an expensive rotor to do that so I just have them tilted up if that makes sense to you).

Ok...now you know what you have to have for antennas so how about reading a very good article on "WORKING THE EASY SATS".....after reading this article I worked my first Sat the next day.....make sure to note the Frequency Charts on this great article...also bookmark it or print it or copy it and use it as a reference!! I would work the UO-14 Sat first...it is by far the easiest but you will have to try lots as it is the hardest to get into also since it is the easiest.....remember on these FM type repeater Satellites the STRONGEST signals win out on them!! So go here and read this please!!! here:

<http://www.amsat.org/amsat/intro/faqs.html>

(look about midpage down for the "WORKING THE EASY SATS")

Also this is a good one:
http://www.qsl.net/vk3jed/1st_sat.html

Ok ...now you got an idea of what you need for antennas...and you got an idea how these Sats work by reading that article but now you need to know when you can work them...or when the Satellites are over your area. There is a nice online real-time tracking from Nasa called JTrack and you can use that if you are online and know when a Sat is in your view. Also on the NASA page you can print out plots or predictions so you have them at the ready...I think you can even have them email the predictions to you weekly if you like! The other program for tracking I strongly suggest is SATSCAPE....so go here and download the best Satellite Predicting program out there called SATSCAPE....and it is FREE!!! Go here and download and install your free version (I can help you set it up if you need help):

<http://members.tripod.com/satscape/>
<http://liftoff.msfc.nasa.gov/realtime/jtrack/Spacecraft.html>

Ok..now you got all the tools you need to work the Sats.....that is it!!! Don't make this complicated because it is not! It is lots of fun and although the windows for contact or short (like only 20 minutes per Sat passing) ..it is fun and worth it!!! You will get lots of QSL's of people wanting to confirm your grid square and contact! So have those QSL cards ready! If you need a program to make your own QSLs then go here ...get the FREE Qslmaker and make your own if you need too...that is what I use...go here:

<http://www.hfradio.org/wb8rcr/>

Ok...I went on way too long but I really like the Sats and Ham radio. So do these steps:

1. Have a 2 meter and 440 meter antenna ready to go (make them or use whatever you have now and see if you can hear the Sats....the homebrew stuff are easy and cheap!)
2. Read "Working the Easy Sats"....it will make since one you read it!
3. Use the NASA Jtrack or download and install SATSCAPE for FREE...you have to have a tracking program to know when you can work them!
4. Have Fun and work some stations!

My door is always open for help in away....so do not think you are bothering me if you need more help...you are not! I am on AOL Instant Message as dhobson123 or on Yahoo Messenger as KB9UMT so if you see me online contact me direct and we can talk or email anytime! I have even called Hams on the phone and helped them work there first few passes to get them started so I can do that too if need be. I also have got into Chatrooms via the Net and let new Satellite ops listen to me work some stations or hear what a Satellite pass sounds like and what goes on....so we can so that too....we can get in the Yahoo Group Chatroom and you can listen in if you want to or we can go there and try to work a pass together too! Hope this helps you some and I can get you more information and help more direct you just say the word.....GL on the Birds!

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ps..this is just a start once you get into them you will see the FM Sats are easy and you will want to work some SSB/voice/digital ones with more band space for long QSO's and other Sats out further with bigger contact areas! They are addicting!