

What the heck is ATV?

What the heck is ATV? Well, it stands for Amateur Television. Yes, radio amateurs have TV type signal privileges on several bands! Lets look into it.

Two radio clubs currently have ATV repeaters up and running in the Tulsa area. The Tulsa Repeater Organization has a UHF/UHF machine and The Tulsa Amateur Radio club has a UHF/900 machine. What this amounts to is both machines use a 434.250 (UHF) input. This would be the frequency you would want to transmit on if you wanted to key the machine for TV (video) rebroadcast. Now stay with me, its not that complicated. The TRO machine rebroadcast your signal at 421.250 MHz. This is the frequency you want to tune to receive the signal. (More on this later) The TARC machine rebroadcasts your UHF signal on 913.250 MHz. This is the frequency you would want to tune in you wanted to receive that signal. Works just like an FM repeater, doesn't it? See, its really pretty simple.

There are two ways to receive an ATV signal. Lets look at the cheap and easy way first. If you have a cable ready TV, you may be able to pick up the signal direct, without any other equipment. The TRO 421.250 signal can be found on cable channel 57. Please take strong note that is cable channel 57, not regular TV channel 57! The TARC 913.250 signal can be found on cable channel 144. This is why you need a cable ready TV to go this route. As far as antennas for receive, anything goes! Note both machines are vertically polarized. Some folks do great with an uhf or dual band mag mount. Try your uhf beam. Build a cheapie vertical, cut to frequency. Rabbit ears (with appropriate tin foil of course)! Try an old bedspring. Like I said, anything goes for receive! Of course, the best low loss coax you can come up with gives the best results.

Ok, you have a cable ready TV and you have tried the direct method. Little or no picture. You might want to try an ATV down converter. This device goes in between your coax from your antenna and the back of your TV or monitor. It brings the signal received into your TV. There is a tuning dial (pot) in front to give you a much better tuning range on your set. Most also have a GAS-FET front end to give you a little signal amplification. Of course, there are several options for other preamps.

Now, how about transmitting. No biggie! Camera wise, most any camcorder will work. All you need to know is if it produces NTSC video. Don't worry, that covers about 98% of the camcorders in the U.S. Don't bother asking the guy at the pawnshop, he won't know. Should the camcorder have the markings of PAL OR SEECAM, you can't use it. These are foreign formats. These are so rare in the U.S. its almost not worth mentioning, but I have seen them in pawnshops or on Ebay. If the recording section has gone South, don't worry about it. All you need is a good picture from a camera part. You can pick up some real bargains on camcorders that have broken recording devices. Again, just make sure the video output is ok. You need a camcorder or camera with an RCA type video out put jack. BNC is also ok with a suitable adapter available from Radio Shack, etc. Fortunately, this also covers most video cameras. Old security cameras work just fine also. Black and white? No problem. Remember, this is Amateur TV. Most ATV transmitters are low power 1 to 20 watts. Usually that is all that's needed. Yes, ATV linear amps are available but again, you probably won't need one. Of course, you must have the correct transmit crystal installed to key the machine. Connect your vertically polarized antenna to your transmitter output. There are also transceivers available that transmit and receive in one package. Pretty spiffy! Connect your camera to the video in on your transmitter and you're on the air! Show your smiling face or pictures of your shack. Show your latest project. Convince the YL to smile for the camera. Pets are always good. Needless to say, these are family repeaters so to speak. Do not show anything offensive or in bad taste. This could result in the loss of yours and the clubs license! Just use common sense. I.D. is required just like when you're on the air with audio. A lot of cameras have built in character generators. These are ideal for identification purposes. You can also hold up a simple block lettered sign with your call on it every 10 minutes or so. This fulfills the requirements. Don't forget portable ATV. I have done several remotes at parks, parades, field day etc. Same requirements, just using portable power and antennas. You can also go back and forth on simplex to another ATV station. Great fun.

The TRO machine broadcast from the Autumn Oaks building at approx 67th and Yale. The TARC machine broadcast from Channel 8 studio facilities on Lookout Mountain. When the machines are not being used as repeaters (which is 90% of the time) they broadcast the live radar from the TV station weather depts. I don't care what kind of weather set up you receive on the internet. I don't care what kind of weather station you have at your home. Nothing beats your own private real time radar 24/7 at your home. Free! Its also interesting to see some of the things they do when they're not doing weather broadcast. Both clubs are very grateful to the local TV stations for allowing us to continually "tap" into their radar signal. There is also a very loose ATV roundtable on Wednesday nights at 8.00 P.M. local time. We shoot live video back and forth and usually communicate by voice on the 145.110 machine. Sometimes there are several people on and sometimes there is no one. Like I said, it is way loose. Jump in and join us!

Ok, where do I get the "stuff" to do this? One great source is PC Electronics. I have several pieces of their equipment and am satisfied with them. Look them up on the internet at www.hamtv.com

Do an internet search on ATV and you will find all kinds of sources, ATV clubs and lots of info, including "how to" articles. Look in the ARRL Handbook and Operating Manual for more information. Again, we would love to have you join us in the ATV activities. No club affiliation is required. All you need is some "stuff" and a Tech or higher Amateur Radio License. Questions? Feel free to email me at W5ATV@HOME.COM I'll try to help. See you on ATV!

73 de W5ATV