ATCO NEWSLETTER

VOLUME 24 NUMBER 3 **July 2007**

The ATCO newsletter is the official publication of a group of amateur television operators known as AMATEUR TELEVISION IN CENTRAL OHIO Group Inc." and is published quarterly (January, April, July, and October)

ATCO SPOTLIGHT TOPIC

Well, it finally happened. I think I have honored everyone in our club at one time or another. (I hope I haven’t missed anyone. If I did, I’m truly sorry, let me know and I’ll spring into action!). The best now would be to recruit new members. In the meantime, I decided to spotlight topics of special interest. If you have additional suggestions, that would be great.

The most important item is the revamp of the ATCO web page. See the details inside but a sample partial view of the proposed web page is below. We are in the debug stage now and conversion to the active home page location will follow shortly.

ATCO Home

Sign In

You are not logged in.
Click the Login link to sign in. Register

Forgot your password?

Login

Menu

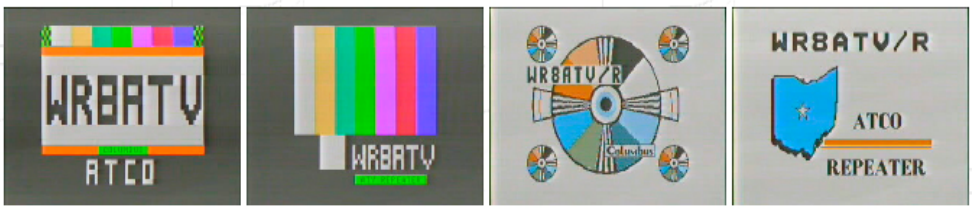
Home

Repeater Info
ATV P Level
View NewsLetter
Digital TV News

OVERVIEW:

The ATCO Group Inc, originally organized in 1980, is located in the Columbus, Ohio area and serves approximately 50 ATV'ers within a 50 mile radius. We operate an ATV repeater and hold weekly "net" meetings on 147.45MHz at 9:00pm Tuesdays to serve as the simplex "gathering spot" for audio activity and some control capabilities for our ATV repeater. If you are located within approximately 50 miles of Columbus or just passing thru, please join in ...you're always welcome. We also have special "Spring and Fall events" where we get together, swap stories and conduct formal business meetings. We conduct antenna parties during the summer and informal pizza parties at various times during the year. All are invited. The times and places are announced in our newsletters are identified below and also on the repeater bulletin board.

ATV REPEATER DETAILS:



ACTIVITIES ... from my "workbench"

Well, here goes the typical line for a leadoff into my "workbench" colum this time. "It's that time of the year, the weather is hot and …." Ok, ok, so much for that. Let's continue.

The main topic right now is there is no main ATV work on my part. But in the meantime, a few others were busy filling in the gaps. Notibly, Bob, N8NT, has been busy fixing the ATCO homepage and Dale, WB8CJW was busy repairing the digital ATV receiver at the repeater. Dale's comments are further in this Newsletter but Bob's afforts are identified here.

The ATCO web page needed some serious attention so I enlisted Bob, N8NT, for some help. **And help he did!** Sandwiched into his present busy schedule he found time to revamp the homepage and add some rather special features. Most important is the security issue. Because our Newsletters are on the web page and in the public eye, the names, addresses, phone numbers and the like deserve special attention. Many expressed concern and asked that, at least, the Email addresses be omitted. We did better than that. Bob assured me that because all data is now in an encrypted data base, all general member information is available only to members and member specific information like dues status is available only to the individual logged on. As a result, the complete member list with the mail and Email addresses will be on the web page "members only" portion and deleted from the ATCO Newsletter on the web. The mailed and Email copies will still have the full list. As a courtesy to the dues paying members, the current year Newsletters can be viewed only by the ATCO members. The general population can see all of the older issues. (I think that's fair, don't you?)

The new home page will be activated shortly. In the meantime, a sample first page is shown on the previous page for review and comments. The pictures were taken by Frank, WA8HFK, during his effort to create a short ATCO picture overview at Dayton this year. We plan to modify it slightly and maybe make "ATCO" larger and change some highlights. Also, Mike, KB8GHW, has given us picture suggestions we'd like to incorporate in some way and perhaps change the face of this Newsletter also. I've been told that the "lightning bolt" in our Newsletter logo is old fashioned and needs modernization help.

An ATCO flea market feature will be added to the members section of the home page and is in the trial debug stage at this time. Bob will put it on line shortly. It will allow any member to list any item desired for sale or needed for purchase. A place will be reserved to add a picture of the item(s) if desired. Once posted by the member, sale negotiations will be carried out on a person to person level. I'm excited about this new feature and hope it will serve us well. When it is officially in place, I will announce it to other ATV clubs in the hopes of attracting a larger croud (only members will be allowed to post items) so if it doesn't get too time consuming we could entertain the possibility of other clubs submitting ATV items on our web page under our control, of course.

Bob, N8NT has some additional comments:
"We need to make sure that everyone knows the initial password to get in. All current members who have either signed up or have been signed up will be assigned an initial password of netnite$1 with their call sign as the user name. Only call signs should be used for the username. I will begin verifying call signs against the Buckmaster Call Sign Database because I've had a few instances of people entering garbage into the database and that will be one way to keep them out. Besides that it will give me extra info to put into the DB for the members. This system will then let the user change the password to whatever they want and if they forget the password there is a recovery process. Frank, WA8HFK, and I will make a tutorial video that will show how to use the various features of the website and we'll put it up on the website. It will be a short video".

I am still in the process of moving my workroom to another basement location so ATV related work has taken a back seat to the relocation process. I estimate that I'm 80% finished now so "some" electronic activity can take place as needed. However, the hamshack portion is not complete and exists only as a pile of ATV gear at this time. A minimal setup has been constructed to be able to view the repeater and carry on the Tuesday night net activities but my ability to see all 439 MHz activity is still limited. For example, a long overhaed shelf needed for all of my video monitors has yet to be built so some ATV bands are unseen at this time.

In addition to my workroom relocation efforts, I've been spending more time at job related activities. However, that will becoming to a screeching halt shortly as I've announced I will retire October 1st. I hope that after the "honeydo" projects are complete, I'll have more time to devote to Ham activities.

I appologize for not having an antenna party before now. I'm told that Teds wife located the missing antenna controller but I've not been able to go over there and reclaim it so the needed repairs have not been made. It may have to wait for a while and perhaps until next year but I promise, it will return. Stay tuned.

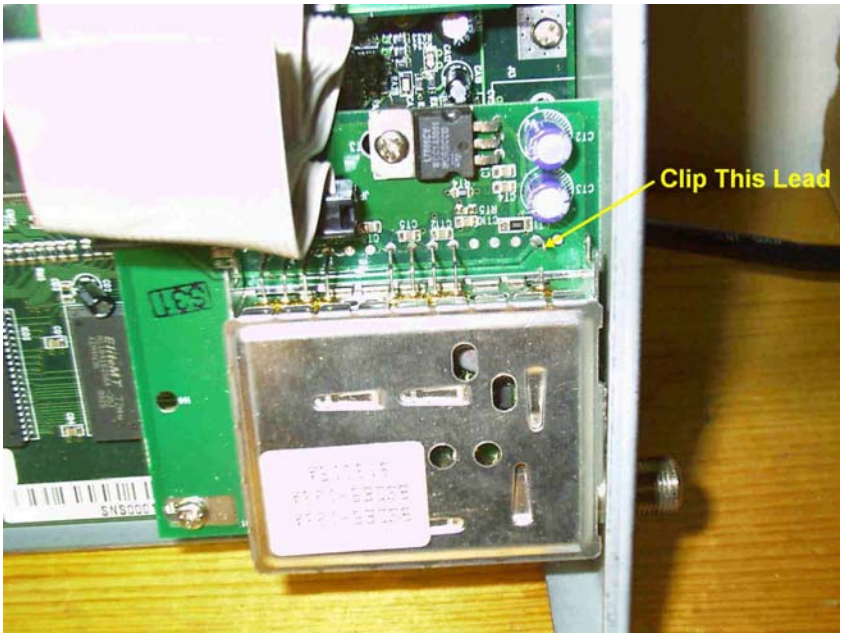
That's all for now. Don't forget, the next hamfest is this **Saturday** 8/4/07 at the Aladian Shrine in Columbus. Most of our ATV group will show up so try to make it. See you there.
…WA8RMC

QUANTUM 1500 RECEIVER SATELLITE TUNER MOD

For those of you who own a Quantum 1500 Digital Receiver here is an easy mod to eliminate the need for a DC block at the satellite input. See the picture at the right for the modification. It's done by clipping a lead at the tuner. Remove the 4 screws holding the cover on.

Happy clipping,
…N8OCQ

Note: *The preamp (LNA) 18VDC power on the antenna line can also be turned off in setup. However, the method above is "sure fire" so you won't accidentally enable it by mistake and fry something. ED.*



W8BI TOWER COMES DOWN

In early June we removed the antennas depicted in the photos below in preparation for the tower dismantling. The DARA group has lost their right to the land and must move. At this time, they have several prospects but nothing is finalized for a new tower location. It was a 2 week job but now all repeater items are tucked away awaiting a new location. They hope to be back on the air by early next year.

At left Dick, W8RVH, measures the power and then pulls the main switch while Charles, WB8LGA, looks on.

On the right is Jessie, KB8OFF removing the Lindsay antenna from the top of the 180 foot tower.

And finally…all people rest as we talk about a job well done.

The Lindsay antenna is in the right bottom corner.

NEW ANTENNA FLYING AT WA8KQQ QTH

I put this new antenna up this evening - it is a 96 element collinear for 1.2 GHz. I fired it up at 7:30 pm and so far it looks pretty good. I have 20 watts going out and so far nothing coming back. The draw back is it's only 30 feet up so I have to see how it works and maybe go higher. I'll wait till later this evening to see if W8RVH at New Carlisle gets on. If he can see me I know it works!

Damm, it's fun to play
…Dale
WA8KQQ

***Dale**: You'll have to tell us how it worked out..*
ED

AMATEUR RADIO PERSPECTIVE FROM A HIGH SCHOOL SENIOR

The following text was forwarded to me from Tom, WU8O, who inspired Clayton to research and report on Amateur Radio. Isn't it great to see the capabilities of some of our younger generation? Congratulations to Tom for the suggestions and especially to Clayton for writing it. Clayton, you will be very successful in future years. Ed.

Amateur Radio

Part 1 – "What I Knew"

At the beginning of the second semester of the 2006-2007 school year, I knew relatively little about amateur (ham) radio. I had often discussed ham radio with Tom Walter, [WU8O] my aunt's husband, prior to the project. From these talks I knew that ham radio was similar to citizen band (CB) radio, that it has countless applications and that I could make my own radio. I knew that Tom would be eager to help me, so I chose ham radio because it offered all that I needed for a good senior project: convenient mentor, tangible product, academic stretch, enjoyable project and short time frame.

Part 2 – "The Search"

For one and a half years I had heard seniors talking about their senior projects and asking me what I was going to do. I really had no idea, so I started thinking about a senior project towards the end of my junior year. It came time to turn in proposals so that students could work on their projects over the summer; I was thinking hard and seriously trying to decide on a senior project by the deadline. At the time I was considering writing a textbook or making an alternative home power system. I am very happy that I did not invent some project to work on over the summer because I was very ambitious as a junior; then came senior year, when I just did not feel like working.

I waited out the first semester of school, eagerly anticipating the first day of senior project! Finally, after much consideration, I decided on ham radio. I called and arranged a mentorship with my aunt's husband who holds the highest class amateur radio license. That week I rode my bicycle out to his house and we talked about the project. He suggested for a product I could build a radio transmitter and receiver; I anticipated a small Morse code key attached to an antenna and power supply, transmitting to a receiver on the other side of the classroom, Tom, however, had bigger ideas.

I went back to Tom's house the next week to start the project. He told me that he had ordered a book on ham radio titled *Now You're Talking*. I watched a video about the significance of ham radio today and I observed while he made some contacts on his radio. A few days later Tom dropped by my house for an unexpected visit. He gave me the book that had just arrived in the mail and told me what to study. He made a joke, "The test is on Saturday." The next day, I went online to take a practice test, before reading any material, to establish how well I knew ham radio at the beginning. I scored 62.9%, whereas a 70% is needed to obtain a

technician class license. In my excitement I ran home and read the first chapter of *Now You're Talking*. The next day I went to Tom's. He told me I should take the test to see how I was doing. I took the test and scored 88.6%. Tom and I were very excited; thus I went to take the ham radio test that Saturday! What started as a joke, ended in reality!

I overcame my first obstacle before I even knew it existed. Tom's plan was to make an ATV transmitter so that I could transmit more than sound, in fact, a picture, across the room. In order to do this legally Tom either would have had to come with me on presentation day or I would have to obtain a license.

With the test under my belt, it was time to move on to building the radio. The first step was building the antennae. I was surprised at these marvelous little contraptions because they had an interesting name, "coffee can" antennae. Surprisingly, as nontechnical as that name sounds, there was a good deal of math involved in determining the placement of the antenna inside the coffee can. The coffee can serves only to 'directionalize' the signal. Directionalization is important in the transmitter because it concentrates the signal in one direction; whereas directionalization is beneficial is the receiver because it blocks out all of the noise from every direction except where it is pointed, that way more of the intended signal is received along with less noise. Building these coffee can antennae was an exciting process because neither my mentor nor I had ever built them! Tom was very excited when we tested them. We hooked one antenna to a small receiver, then hooked the receiver to a small portable television in Tom's little radio shack. I walked outside with my coffee can and pointed it towards Columbus. Tom enthusiastically said, "I can see it!" What we were seeing on the tv was the signal from Tom's radio club in downtown Columbus!

Having built the antennae, the we next built the actual receiver and transmitter. First we stopped by [snip] DX shop, which was a little, hole-in-the-wall CB shop. Tom thought that this CB shop might have some of the parts we needed. Tom had never been here, he had just heard of it once before. When we arrived there were monstrous pit bulls roaming the parking lot! The owner rounded them up and drove them into the back yard. We went to the door, but it was locked, even though the sign said, "Open." I thought this was strange, but a guy with no more than three teeth came over and opened the door. Then we walked in and I marveled at all the gadgets that of which I knew no names. Tom talked to the dealer. We left the shop without purchasing any merchandise. On the ride home Tom discussed the penalties of illegal operating practices, equipment, etc. with me. The DX shop happened to have loads of illegal stuff!

Two days later we went and bought legitimate goods from a Radio Shack. Tom soldered the first box together with the receiver in it, then I soldered the second box together, following his example, with the transmitter in it. Soldering was easy because I already knew how to do it. Having done that, the radios were finished.

Working with Tom was an exciting experience because he was very enthusiastic, often more so than I was, about my senior project. I chose Tom as a mentor because I knew he would be eager to help me. At the end of the project, Tom told me, "There's a catch to this. You have to help two people into ham radio now; that's how we keep out numbers up." Some day I will be a senior project mentor and I hope I can be at least half as good as Tom was!

Part 3 – "What I Learned"

During the course of my senior project I learned a volume of information about the science of ham radio such as how radio waves are sent to others and many Federal Communications Commission regulations. I also learned what I never expected to learn; that is, the ham radio community is a really tightly knit group of guys who all share the common link of ham radio. Every amateur operator to whom I talked was very amiable. Each time I listened to Tom's conversations on the air I noticed that Tom and the other operators were always eager to help each other! Every amateur operator that I met was genuinely excited that I had obtained my license and used ham radio as a senior project. I am genuinely excited to be a part of the ham radio community.

One interesting observation that I made about the ham radio community was the nearly universal antipathy towards citizen band radio (CB.) This deep rooted disgust comes from the total anarchy on the citizen band in contrast with the happy coexistence on ham radio bands. Hams even refer to CB as 'criminal band' because of all the foul language and other deprecated practices in use on CB.

Part 4 – "The History of Amateur Radio"

The history of radio began about fourteen billion years ago with the Big Bang. At that moment, an enormous amount of electromagnetic energy was radiated into space as our universe was created. With the formation of the first star from coagulating clumps of space dust came the next landmark in radio history. Each visible star emits electromagnetic waves on all parts of the spectrum! Visible light is just one type of electromagnetic wave. The waves used in man made radio transmissions are much lower in frequency.

The ancient world had relay systems similar to radio so that they could propagate a message more quickly. One such system consisted of fires built on top of a series of hills; when the man nearest the sea saw the enemy ships, he lit his fire. The man on the next hill, seeing the first fire lit, lit his own fire and the process continued. Finally the message made it back to the commanders, who could then dispatch their troops accordingly. Other similar methods of messaging existed, but these clearly were not the most efficient means.

The first human inklings in radio came about 2500 years ago when the Greeks learned that by rubbing amber together small bits of leaves or feathers could be attracted. This was the discovery of static electricity! Scientific experimentation lead to the further discovery of electrical current, i.e. the electricity used in modern appliances.

Finally, in 1823 Sir Francis Ronalds built a telegraph in his back yard. This was the beginning of the long distance communications systems. When Ronalds first built his telegraph, though, there was very little general interest. Soon, however, word had spread about this curious invention, the telegraph, and entrepreneurs in America developed the system further. By 1835 the Morse code had been patented and the same man, Samuel F. B. Morse, had developed an efficient relay system.

Morse, constructed a series of relays from Baltimore to Washington D.C. The first message transmitted on this wire system was, “What God hath wrought!” The success of this system led to the construction, in 1861, of a telegraph stretching from the east coast to the west coast.

While the telegraph was gaining popularity, professor of experimental physics at Cambridge University, James Maxwell mathematically predicted the existence of radio waves. Heinrich Hertz followed suit; eight years after Maxwell's death, Hertz constructed a device capable of producing and receiving electromagnetic radiation. He demonstrated the existence of electromagnetic waves by transmitting across his laboratory on a frequency of about 300 Mhz.

Almost simultaneously with Herzt, Mahlon Loomis is experimenting with radio waves in the mountains of West Virginia. Using two kites and a primitive radio system, Loomis successfully transmitted a message between two mountains 18 miles apart! The great significance of this event is that messages can now be transmitted great distances without any physical connection between transmitter and receiver. The United States Navy would never pass up such an incredible discovery, thus five years later, sponsored by the Navy, Loomis successfully sent messages between two ships stationed two miles apart!

Between 1898 and 1912, amateur radio was born. Experimenters all over the world were sending and receiving in the flurry of messaging excitement. The most astounding feat in the early history of amateur radio is Macoroni's transatlantic transmission! In 1901 the Morse letter 'S' was transmitted from Poldhu to Newfoundland!

In 1912, the government stepped into the radio scene and imposed regulations. Before 1912, amateurs created their own call signs, but from 1912 the call signs were issued by the government. By 1922 two classes of amateur radio license existed. To be licensed one must exhibit proficiency in the international Morse code, an understanding of United States radio laws and a general knowledge of international conventions. With a license the operator was restricted to operating on any frequency 200 MHz or lower and at a power not exceeding 1000 watts.

Amateur radio has gone relatively unchanged since 1922 with the exception of widespread international participation and vastly refined equipment, both of which led to more government legislation regarding the amateur service; thus, that is the history of ham radio.

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…Clayton KD8FOZ.

ATV INTERFERENCE?

Hi Art,
Here's an interesting email which I received from Dave, KB2ARL. He lives in north Columbus, works part-time at Universal Radio. Dave sold his ATV station to Mike, KB8GHW about a year ago.
…Bill, W8DMR

While shopping at a Meijers Store (Cleveland Ave & Route -161), I noticed TV screens in the store and all of the checkouts playing commercials. It was really annoying. Closer inspection proved the video system was wireless. Each checkout counter appeared to have a strobe light. Additional inspection showed they were actually miniature microwave parabolic antennas. Meijers is beaming microwave, Fast-Scan Television throughout the store.

The main transmitting antenna was located by observing the orientation of the little dishes. I'm curious as to the frequency of operation, 2.4, 5 GHz., or another? Probably FM or Digital modulation also. I'd like to take a 2.4 GHz transmitter next time into a Meijers store with me. That could be fun, hi.

Please share the info to the ATV fellows. I certainly hope it isn't installed at the Brice Road store because I shop there also. An OFF-ON switch didn't appear anywhere, hi.
…Dave KB2ARL, and former ATV operator.

NEW DARA NEWSLETTER…Our competition?????

Hey Guys, It has been suggested to me that we (The ATV Group) start a small info page. I will try my hand at it and if there is enough interest, maybe it could become permanent. I thought I would keep it to a single page so the dial up guys wouldn't spend all night downloading it. Send your suggestions to KB8OFF@ARRL.net
..Jess KB8OFF

The Nine O'clock News

VOLUME 1 | June 13, 2007 | Number 1

Hey Guys, It has been suggested to me that We (The ATV Group) start a small info page. I will try my hand At it and if there is enough interest, maybe it could become permanent I thought I would keep it to a single page so the dial up guys wouldn't spend all night Downloading it. Send your Suggestions to KB8OFF@ARRL.net

Jess

The ATV REPEATER From Start To end !

Put into operation April 20, 1979 By…

Stephan Stith , WA8MCH (Chairman)
Bruce A. Jaquish , WB8UGV (Asst. Chairman)
Randy L. Midkiff , WB8ART
Leo J. Schaaf , WA8ZHE

Input = 439.25 Mhz
Output= 426.25 Mhz 2 meter Input = 147.45 Mhz

On June 19, 2001 John Hey, W8STB / Dick Goode, W8RVH / Harry Covault, K8GCS / Jack Sargent, K8BSM & Jess Nicely, KB8OFF
Received a check from D.A.R.A. for aprox. $1500.00 to rebuild the Repeater. We also made the decision to move the Output Frequency to 421.25 MHZ. After lots of hard work from a lot of ATV enthusiasts and Loosing John Hey to a Heart attack on June 21 2001 the repeater went back on the air as follows.
Input = 439.25 Mhz
Output = 421.25 Mhz

We also had a 1280 Mhz Input / Output Depending on the mode dubbed A or B by W8RVH. The 2 meter Input was 144.34 mhz
In March 2007 we added 900 Mhz in/out from the link from Jones rd. It sent Video to And from Columbus on 1250 Mhz.

In early spring 2007 the Drake family sold the property on Beyers Rd.
On June 2 2007 at 10:00 AM Dick Goode, W8RVH shut down the repeater and between June 2 and June 9 2007 all of the equipment , antennas and coax were removed.

I want to thank,W8RVH, K8GCS, K8BSM, K8UD, W8ILC, KA8HBT, K8STV, K8MID, W8GUC, NR8ATV, WB8UGV, WA8RMC, WB8QZZ, KB9JGF, WB8LGA & KD8ASF!!!

REMEMBER NET NIGHT IS STILL 9:00 PM ON WEDNESDAY !!!

I got some pretty good feedback on the first news letter. I hope you guys will send me something to print. Below is what I know to date about the Repeater.
…KB8OFF Jess

The Nine O'clock News

VOLUME 1 June 27, 2007 Number 2

I got some pretty good feedback on the first news letter. I hope you guys will send me something to print. Below is what I know to date about the Repeater.

73

Jess

1. Almost all of the Repeater is stored in my back room where I work.
2. We were talking to the engineer out in Huber Heights about the Tower at Old Troy Pike And Needmore but the last time we talked was the Thursday before Hamvention. (I think I scared him when I talked about our 2 440 antennas needing about 40 ft of Tower space)
3. Jack (K8BSM) and I had a lead on some property southwest of town but the Zoning Didn't work out.
4. I am currently talking to the City of Dayton about Vacant land somewhere. I have Also looked at the monopole on Olive rd. This sure might be a possibility. Also there is talk that Ch. 2 may let us use there old Tower. I will Investigate this.

James K8HBT has volunteered to help repair the Lindsey Antenna that was Damaged From the weather.

Wynn (W6CDR) Is looking into The city Land.

Dick (W8RVH) Is making some test gear for the repeater.

That's about It. If anyone can work on finding us a spot please let me know. I know That it will not be probable to get this thing back up this summer but Don't give up YET !

This Week We are starting something new with the NET CONTROLLER. James will Be the Net manager and we are going to rotate around for controllers. Harry (K8GCS) Will be the first in the rotation. Good Luck Harry !!!

REMEMBER NET NIGHT IS STILL 9:00 PM ON WEDNESDAY !!

A REPORT FROM LIMA OHIO

Hi Art!
Here's my latest report from Lima. Please say Hi to all of the group, and sorry I couldn't make it to the last event. I will try for the Fall event. See you soon, I hope.
…Dick.

Hello ATCO members. My new tower project got as far as my digging the first one foot of the hole, and there it sets; I started feeling bad and had to go lie down. Then I went into surgery for a heart bypass job and am now just beginning recovery. I am doing just fine, but not on the air still, durnnit. The good news is that WLIO_TV where I work has donated two old, tired, ENG cameras to our ATV group, Sony, series 300 jobs and one of the two is fairly pristine and works absolutely perfectly. The other works, but its lens is messed up and is ok for only fixed shots. We plan to use it for a room cam at the repeater site.

Speaking of the repeater, we have located a new cabinet for same, and equipment is being transferred from the old cabinet as we speak. Hopefully we can get the repeater going again soon. My partner in ATV crime, Dave Morris, WB8PJZ (Ol' 'Pajama Zipper') just recovered not long ago from heart bypass surgery himself, so he is not quite 100% either, meaning that this project is taking a very long time, but it can't be helped.

I just finished building an Elecraft K2 and got it on the air on HF, and made initial contacts on CW and SSB, and was planning to use it on HF Field Day, But God had other plans: I went into the hospital for some serious stuff, and lightning took out my K2 big time...and this computer I'm writing this on. Obviously the computer is fixed (New power supply, motherboard, CPU and NIC card), but the K2 has to go back to the factory...just too much wrong with it. Moral: When you think things are going just fine, that's the time to wonder if you're being reasonable with your thinking!

Oh well. This, too, shall pass; I'll get my tower up, the K2 will get back from the factory, and we will get the Lima ATV repeater back on the air, and I'll get back to 100% physically. With this attitude, it'll probably all happen within about two more months, HI! (RIIIIGHT!)

See ya on the air.

…73's from Lima. Dick Knowles, N8IJ.

REPEATER HAS DIGITAL RECEIVE VIDEO AGAIN

Hi guys,
I made a trip to the repeater last night and now we have digital receive on 1280MHz. again. What's different now is the video from the receiver is being switched on when valid decoded video is received. This switched output is now being fed into the 900MHz. A/V inputs of the controller and gets transmitted on all transmitters. There is a 7 second delay after the received signal drops to display the 3 seconds of memory and drop-out/recovery time for weak signals.

The original Geosun would not power up. I attempted to install the one I picked up on eBay but found the capacitor in the power supply I replaced was too tall so I couldn't get it to slide in the case. I removed the power supply from the original unit and swapped with the other. That power supply didn't work. So, I decided I would put my receiver back together and have to install it without the case. I found some pink bubble-wrap and roughly cut it to size to insulate the bottom and sides of the receiver/power supply. I put a *Caution* note on the lid of the main receiver enclosure. Not the way I wanted to do things but we need to be aware of this hazard.

I was apprehensive about whether I would be able to see if it worked when I got home. It worked! I was able to view my digital video (couple watts) on 1250 FM receiver. There was some pixelization of my video but I was really shocked I was able to do that well.

The original Geosun looks really toasted on the bottom of the board. The main ball-grid LSI chip really gets hot! This is where the most discoloration is. I'm hoping it is just the power supply that failed. I used an Ohm meter looking for something shorted but didn't find anything that looked unreasonable. With the power supply hooked up to the main board the voltages come on, then go off about every second or so - it's trying but shuts down because it can't supply the current. I will check around to see if I can locate suitable replacement capacitors.

…Dale WB8CJW

SOME DIGITAL TV INFO

With the best hardware today, it takes 2-3 seconds to encode MPEG, and the better units make a two pass vs. a single pass filtering/compression cycle that reduces noise and packs it better. MPEG 2 uses a GOP (group of pictures) so to even begin to process the video it has to receive 15 or more frames for a standard GOP, plus two passes = 30 frames before it can even begin to exit the processor. That's because it's an interframe compressor, with IBP frames. Yes you can make it all I frame (GOP of 1) but the compressor isn't doing much. MPEG 4 is an intraframe process, goes a little faster, and you get about 80% more compression (theory says double the compression but there is meta data and other stuff that cuts that down a bit. MPEG 4 can be sent fairly easily over data links as it needs less bandwidth. You can get MPEG 4 or AVC (advanced video codec) products in consumer video stuff at reasonable prices and use the 1394 firewire ports to send/receive.

Yes digital is "noise free" until you hit the blue wall. There is 1 dB between perfect and nothing. So don't expect a lot of DX since you can't find the signal in the noise without a spectrum analyzer and BPF [band pass filter].

If you use 8VSB, [USA terrestrial] you have to recover the pilot to lock the decode/demod clocks, and PID/PSIP to identify the packets. So if the receiver doesn't know you are 0x41 video, 0x44 audio, it will never find it.

DVB-S [European satellite & USA ATV] and DVB H [new handheld standard for i Pods etc.] are a lot easier. Any digital sat receiver can find it. They are cheap, a typical "free to air" sat receiver is $99 to $499. The better ones actually will tell you the FEC (1/2, 3/4, 7/8, etc) the data rate or symbol rate, and give a Viterbi lock indication. You can get a nice combo unit, spectrum analyzer, decoder, display for about $6 grand. For transmit, just about any MPEG encoder exciter will do. The Europeans have a couple for a few hundred bucks, or you can get a "cable TV digital modulator."

But if you just want noise free video, then good old FM video and an old Sat receiver work just fine, the signals are easier to find, and you don't need a BER or Vertibi output to "tune in" on the DX signal. I have a 10 yr old Standard Agile 1 rack unit satellite receiver (L band input) that has metering for C/N, signal level and center tune, and agile subcarrier tuners for 2 audio channels. Got it at a flea market for $77. Works fine. It even has adjustable IF bandwidth and audio/video levels so you don't need to screw around when signals are different transmit bandwidth. If you want to crank it down to 6 MHz, you can, but Nyquist will get you on resolution.

You can get a $99 8 VSB tuner, but you will need a converter that does not invert the sidebands to use it on non TV broadcast channels, unless it happens to tune cable channels, and that leaves out the 13 & 23 CM bands. You also need to have a very low phase noise LNB or LNA or converter for digital. For DVB or QAM satellite, figure on 5 or 10 kHz stability (some even recommend 2.5 k or better) and phase noise below -87 dBm. Figure $400 for a good LNB/LNA.

The cheapest route is just get some 2.4 gig part 15 wireless ISP units, (some are even free from providers going to 5.8 gig) add a better antenna and power amp (since you are going from duplex to simplex) and you have blazing bits.

As for getting an 8VSB-T exciter, just wait for the next flood, hurricane, tornado to wipe out a TV station and go beg for the old one. Otherwise, for now anyway, be prepared for a second mortgage on the house.

Henry AA9XW a9xw@cs.com wrote: Email on 6/15/07

FIRST TRANSATLANTIC SATELLITE TV TRANSMISSION

Monday July 23,2007 marked the 45th anniversary of the first transatlantic TV transmission via satellite. It occurred July 23, 1962.

The event marked the first high-quality video transmissions between Europe and the United States. On the same date, telephone calls, faxes and data were also transmitted using the new satellite. Consider how far technology has come in 45 years.

Telstar 1 required huge earth stations, which tracked the satellite's elliptical orbit in order to obtain 20 minutes of transatlantic connectivity in each pass. Today a teenager in London can snap a picture on her cell phone and e-mail it to a friend in the United States anytime day or night. With the right hardware, she can send video. By sending the video to YouTube, anyone in the world could see it. Instead of the signal traveling by satellite across the ocean, it goes to the nearest cell phone tower and, depending on the location of the tower, by microwave to a location where its connected to data circuits using fiber cable, copper and perhaps another microwave relay to move the data across the Internet to the viewer.

The change in broadcasting from analog to digital may seem huge, but it pales in comparison to the changes that have occurred in the past 45 years in moving content and data between continents.

…from Doug Lung's RF Report

ATV REPORT FROM YORK, PA…These guys are REAL active!

APRIL/MAY 2007

A new voice repeater is planned for the York area that probably will cause interference to the operation of the York repeater on 439.25 MHz. N3KZ, the Univ of Pa ARC, has obtained a coordination for a UHF repeater with an output on 442.0500 MHz in York. http://www.arcc-inc.opg/arc-fdbas.html The UHF repeater (442.2000 MHz) in Cumberland County/ Summerdale (Lam's Gap) already causes significant interference to the 439.25 MHz input at White Rock near Dillsburg. A 10 element horizontally polarized beam is pointing to the York ATV transmitter and a bandpass filter is inserted between the antenna and receiver. The next step is to use a notch filter at 442.2000 MHz. White Rock is using a directional antenna and cross polarization and still is has difficulty receiving a quality picture.

The meeting at the Historical Electronics Museum near BWI on March 25 was well attended. Reports were presented from York, Harrisburg, BRATS, and CATS. Plans for linking the Tabco repeater were discussed.

The video level, video frequency response, audio level, and audio subcarrier frequency testing of the 10.4 GHz transmitter was completed April 13, 2007. RF testing for adequate signal levels over an 8 mile path was conducted. The 10.4 GHz link is ready to be installed to connect White Rock/ Yorkto Tabco in Towson, Md.

A 3480 MHz receive two ft dish is to be installed in the next few weeks at Rising Sun at the 150 ft level of the 400 ft tower. Tabco (Towson) to Rising Sun is a 35 mile path. This will be the first part of a link from Tabco (Towson) to Delaware/ Philadelphia. Dave will be reinstalling his 900 MHz equipment to link Rising Sun to Delaware/ Philadelphia.

Video from an ENG truck at TMI and PEMA was retransmitted over the White Rock ATV repeater on Tuesday, April 17 from about 5:00 PM to 9:00 PM. The video was also seen on the York ATV repeater and relayed to BRATS by Bob Storm, WB3EAF. Tim Barefoot, AA3BJ, set up a receiver on 439.25 MHz at the York County EOC so the officials there could watch the live PEMA video. This teleconference is designed so that the officials at PEMA can consult with the personnel on-site at TMI.

June 2007

The coordination of the 442.050 MHz repeater in the York area still exists. It is not known if it will ever be built. But if you are concerned please write to : ARCC, PO Box 244, Plumsteadville, Pa 18949. Please indicate that a prior coordinated ATV repeater on 439.25 MHz may have significant interference caused by a voice repeater in the same primary coverage location. The channel occupied by this repeater is from 438 to 444 MHz. Frequencies above 444 MHz are available for voice repeater outputs. This repeater should have the same protected area as a voice repeater.

Sean Barnes, N3JQ lost his reception from White Rock at his home QTH in Boiling Springs. He was using a naked recycled LNB at a distance of three miles. A new LNBF restored the signal.

Rodner Gallagher, KB3OTY, in Middletown has a difficult location. The path from White Rock is obstructed by a hill in the center of the path. He can receive a marginal picture from his roof with enough elevation to just clear his neighbor's tree. Of course next year he may not clear the tree. A forty ft tower is needed. WITF has a better path but is blocked by numerous trees. A weak signal is visible between two trees that are ½ mile away.

Bob Raker, W0BR, west of Carlisle in the country has many mature trees. On paper it should be easy. A weak signal was received from the top of one tree. On property line signal was seen with severe multipath. A 50 ft tower next to his house would do wonders.

The link from Tabco towers in Towson, Md to Rising Sun, Md will now probably be installed in two to four weeks. Measurements were taken on May 28 to mount a receive dish at the 150 ft level.
Tabco: 39-24-08 76-35-52 538' amsl, 23 story bldg
Rising Sun: 39-38-05 76-00-50 423' amsl 150 ft level of 400 ft tower
Path distance: 35.06 miles
Free space loss at 3480 MHz: -138 dB
Azimuth from transmitter to receiver: 63 degrees
Transmit power: 25 watts (+44 dBm)
Transmit antenna gain: +11 dB omni
Transmit coax loss: -3 dB, Receive coax loss: none
Receive antenna gain: +24 dB (two ft dish)
Gains: +79 minus losses: -141 = -62 dBm
10 dB more signal than needed for broadcast quality video (-72 dBm)

The link from White Rock, Dillsburg, Pa to Tabco Towers, Towson, Md will now be installed about August 15. This delay is caused by work issues, weddings, vacations, etc. Permission has been granted to install the equipment on the Shrewsbury Water Tower in Shrewsbury, Pa. The signal from White rock will be received on 3480 MHz and then retransmitted on 10.400 GHz to Tabco Towers, Towson, Md. The reverse path will be through Bob Storm's QTH (WB3EAF). Bob will receive 3480 MHz from Tabco Towers, Towson, Md on an existing dish and retransmit on 426.25 MHz to the Dover receive site. The existing dish is now aimed at WITF North of Harrisburg, Pa but needs to be rotated toward Tabco towers in Towson, Md. Change date to be determined.

Douglas Evans, KB3LTC, in Hummelstown is not able to receive the WITF ATV transmitter from his second floor rear porch. The good news is that the path looks acceptable except for some nearby trees and a 50 ft tower is coming this summer.

Signal levels were checked at the Rawlinsville tower in southern Lancaster County. This site could possibly connect White Rock to Towson. No video was seen from White Rock, WITF, or Tabco at ground level. In previous years we did see excellent pictures but the foliage in the summer may limit reception. We need to test with our dish on the tower. Shrewsbury Water Tower had excellent pictures from White Rock and Tabco towers at ground level. This site should work well.

Jubilee Day is on Thursday, June 21. Live video from Mechanicsburg is scheduled from 3:00 PM until 9:00 PM. They say 60,000 people attend this one day celebration. Video will be seen on the White Rock ATV repeater.

July

Jubilee Day Mechanicsburg, Pa June 21, 2007 was Jubilee day in Mechanicsburg. This event was televised from 10:00 AM until 9:00 PM from an apartment above the Hardware store. Excellent pictures were obtained on the ground with a naked LNB (No dish) in the adjacent parking lot when a signal survey was taken two weeks prior to the event. We had excellent pictures on our monitor until the winds came. Our 1280 MHz transmitter was located on the second floor but it was aimed at a tree full of leaves. It turned out that we had severe fading of the picture on the received 3480 MHz signal. The leaves were moving in the wind. When we checked with other people receiving the 3480 MHz signal we were surprised to learn that the picture was stable without fading. The 1280 MHz transmitted signal was not affected by the leaves but the 3480 MHz received signal was. Thus we learned the difference in propagation between the two frequencies. If we had more height we would not be having this discussion. The Cumberland County EOC had an excellent picture and everyone there had an opportunity to view it on the two monitors in the Emergency Management area. A dish and receiver were set up at the Mechanicsburg EOC but lightning a few days prior to the event apparently destroyed the LNB. A swap of the receiver did not produce pictures. We used a fire truck to mount the dish but had no time to correct the reception problem. Perhaps next year we can do better. We did conduct a few interviews with a man on the street using an HT. The camera was tightly focused on the interview and an HT on 446 MHz was used to relay the audio to the microphone with the camera.

Field Day 2007 Saturday, June 23 to Sunday, June 24 we had video and audio from field day in Cumberland County. A continuous signal from 10:00 AM Saturday to 10:00 AM Sunday was sent from a camera mounted on a tripod under the outdoor shelter. We had trouble with reception last year at ground level so this year we mounted the antennas on the fourth floor of the fire training tower. The roof was used for the VHF and UHF gear so we were one floor down from that activity. We walked up steps, opened shutters, mounted the antenna on a pole stuck in a patio umbrella stand, and had excellent signals. The tower really made it easy. Bill Robinson, W3ROQ watched the activities for most of the time. He said it was just like being at field day. For years he had stayed up all night and operated but this year he was not able to come to the event. Bill also added to the point total by working the SMRA field day on six meters side band.

Firecracker Hamfest Wednesday, July 4, 2007 pictures were transmitted from the Hamfest to White Rock. Steve Gobat, KA3PDQ used the mobile van to send video on 1280 MHz with a six ft loop yagi. The transmitter has 50 watts out and he has a 12 ft loop yagi if needed. The two ft receive dish is mounted on an electrical conduit that has a 45 degree bend at the top. What else would an electrician use?

Limerick Nuclear Power Plant Drill This drill is similar to the TMI drill and happens every two years. Video from the power plant and PEMA is scheduled to begin at 6:00 PM on Tuesday, August 7, 2007. The power plant explains the problems and PEMA responds with a panel to assist and provide guidance to the local governments involved.
http://www.pema.state.pa.us/pema/cwp/browse.asp?a=200&bc=0&c=35115&pemaNav=|&pemaNav_GID=605#Nuclear%20Power%20Plant%20Drill%20Dates
Video is received from one of the Ku band satellites & sent to White Rock on 1280 MHz. This is a cooperative effort with PEMA.

Space Shuttle Launch STS-118 The next launch is scheduled for, you guessed it, Tuesday, August 7, 2007. Live coverage of this event will be on the ATV repeater but the PEMA drill will take priority.
http://www.nasa.gov/mission_pages/shuttle/launch/index.html

10 GHz Link We have a working one watt 10.4 GHz link but have not placed it into service. We have had multiple delays with facilities and climbers. Our primary focus needs to be the Harrisburg area so rethinking our deployment would dictate that the

available link should be installed from White Rock to the WITF ATV transmitter. This would enable WITF to carry the same video and audio as White Rock. Also it would provide a quality signal without interference from packet, radar, or other hams.

WITF ATV Transmitter Unfortunately the WITF transmitter power amp failed. This is being repaired and modifications to improve its reliability are being made. A new Astron 50 amp rack mount power supply has been installed. The voltage to the transmitter will be strictly controlled. The power will be reduced to 25 watts. A Polyphaser filter coaxial lightning arrestor will be installed. A new time base corrector is installed on the transmitter shelf along with the audio match. Two wall mount power supplies are eliminated. Thanks to John Jaminet, W3HMS, for rebuilding the 3480 MHz transmitter. A 10 GHz LNBF (Bob Platts) will be installed on a two ft dish to receive the signal from White Rock. A Scientific Atlanta 9660 satellite receiver will be used to receive the video and audio. This receiver is tuned to 3760 MHz. That is 10 MHz higher than expected since the local oscillator in the 10 GHz LNBF is off slightly. Also normally we would receive using a Ku band designation in the receiver but the video in our transmitted signal is not inverted according to the accepted conventions. 10400 MHz minus 9000 MHz local oscillator in 10 GHz LNBF equals 1400 MHz IF frequency or input frequency to the satellite receiver. To invert the video in the proper direction we use the C-band part of the receiver. 5150 MHz (most common local oscillator frequency for C-band) minus 1400 MHz equals 3750 MHz. That is why our receiver is tuned to 3750 MHz plus 10 MHz for the 10 GHz LNBF local oscillator error. The Scientific Atlanta receiver also is helpful with the audio. The instructions for the baseband modulator and audio subcarrier generator are in German. After reading them several times we found out why the audio sounds better without any de-emphasis. No audio pre-emphasis is used. The Scientific Atlanta receiver has a choice for audio de-emphasis that includes no de-emphasis. You may select 75 microseconds, 50 microseconds, J-17, or none.

BABY MONITOR KEEPS EYE ON ASTRONAUTS

PALATINE, Ill. --
An elementary school science teacher in this Chicago suburb doesn't have to turn on the news for an update on NASA's space mission. She just turns on her video baby monitor.

Since Sunday, one of the two channels on Natalie Meilinger's baby monitor has been picking up black-and-white video from inside the space shuttle Atlantis. The other still lets her keep an eye on her baby.

"Whoever has a baby monitor knows what you'll usually see," Meilinger said. "No one would ever expect this."

Live video of the mission is available on NASA's Web site, so it's possible the monitor is picking up a signal from somewhere.

"It's not coming straight from the shuttle," NASA spokeswoman Brandi Dean said. "People here think this is very interesting and you don't hear of it often - if at all."

Meilinger silenced disbelieving co-workers by bringing in a video of the monitor to show her class on Tuesday, her students' last day of school. At home, 3-month-old Jack and 2-year-old Rachel don't quite understand what their parents are watching.

"I've been addicted to it and keep waiting to see what's next," Meilinger said.

Summer Infant, the monitor's manufacturer, is investigating what could be causing the transmission, communications director Cindy Barlow said. She said she's never heard of anything similar happening.

"Not even close," she said. "Gotta love technology."

Doug Phelps, a member of an amateur radio club in neighboring Schaumburg, has an explanation. His organization, the Illinois chapter of the Motorola Amateur Radio Club, rebroadcasts NASA video as a public service. It is likely the monitor is picking up the video because amateur radio operates on the same frequency as baby monitors.

Members of Phelps' club have picked up audio from baby monitors in the past. “If you had a receiver in the right frequency, anybody in the public can pick up this signal," he said.

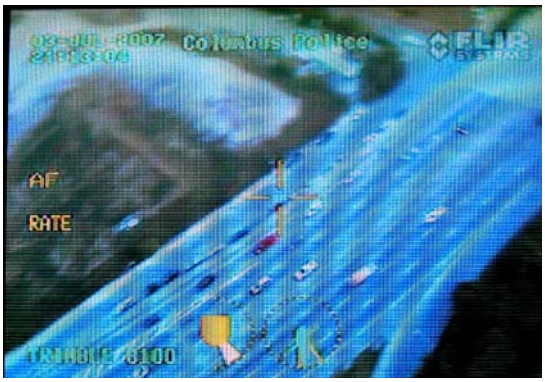
The Schaumburg club IS responsible for NASA over baby monitor! We are not on 2.4 GHz. We are using 900 MHz for our re-transmission. I think the baby monitors are a mix of 900 and 2.4. Apparently this one is on 900. We are running 100 Watts / 10 dB gain @ about 70 feet. We're currently using 2 horizontal yagis pointed north and west. With a good receiver and antenna, we get out about 10 miles. I live 10 miles away and have 10 dB gain @ 40 ft. I get a P4 - P5 picture at my house. We're trying to get our TX up on the Corp building at 175 ft. Also working on a 400 Watt TX. Should help out a lot.
…Skip K9SA

RED-WHITE-BOOM…What a great time.

The RED-WHITE-BOOM ATCO security mission was a "booming" success again this year. (See how I worked that in?). Although short on help, we were able to pull it off without problems. There were a few moments at the beginning when the 2398 MHz link to police EOC didn't work. After a near crisis attack on my part, I realized I gave Tom, KA8ZNY the wrong RF filter. It was tuned to 2433 instead of 2398 MHz. Filter removal produced a P5 signal the rest of the time. Also, the flawless helicopter video we tested to a 15 mile radius the day before failed to give us any signal even when it was directly overhead. During a brief question/ answer session they told me they replaced the helicopter antenna earlier that day because they found some oil or something like that on it. After the usual comment about trying to fix something that wasn't broke, they found a broken N fitting connection, re-soldered it, went airborne and viola!, great video. There's a message here I won't repeat any more. The digital video from the airborne helicopter was the greatest interest point of the night (better than the fireworks in my opinion). In any case, the police commanders and the city mayor loved it! Case closed. Many thanks to Bob, W8RWR, Tom, KA8ZNY and Bob, N8OCQ who helped set up but leg problems prevented help during the event.

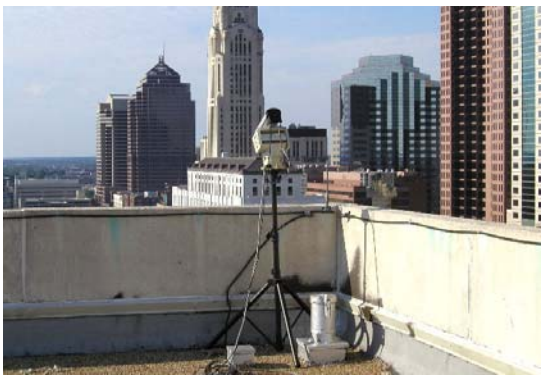
Above is our "hangout during the fireworks. W8RWR is shown.

To the left is the helicopter communicating with us as they flew overhead.



The right picture is a screen shot of the helicopter digital video. This picture does not do it justice. It was much better than this.

The camera at the left is pointing toward Front and Town streets.



The camera on the right is pointing North toward the International Parkway, Scioto river and to the Police building.

The left camera is pointing to Centenial Park.

The "mess" on the right is the 2398 MHz loop yagi, Wavecom transmitter and stand for our link to the Police headquarters.

THE PRIDE OF BEING A HAM

I found this on the www.wx1der.com web site.
…Tom wu8o

"The Pride of being a Ham" Written by Daryl Stout, N5VLZ

It all began years ago; and who'd have ever thought
The changes that took place since Morse telegraphed "What hath God Wrought?".
From home brewed rigs, and keyers, to repeaters across the land...
The heritage; the history; The Pride of being a Ham.

Sending code across the bands, to places far and near.
Anytime day or night, the signal weak or clear.
Across the street, around the world, along the many bands...
The many friends you'd meet who had The Pride of being a Ham.

Disaster strikes, and they are there, providing needed help.
Vital information sent; gladly giving of themselves.
Unselfishly and tireless, doing all they can
In service to their fellow man; The Pride of being a Ham.

They help with parades, bike-a-thons, and other events, you see.
Coordinating safety for the public, doing it all for free.
Demonstrations, classes too, so they can proudly stand;
And show the public what we are, The Pride of being a Ham.

A fascinating hobby, yes; but fun, yet serious, too.
Policing and protecting ourselves with the FCC rules.
Gladly serving without receiving money in our hands;
The Amateur Radio Licensee; The Pride of being a Ham.

Novice, Technician, General, Advanced, and Amateur Extra too.
Licensed Hams across this Earth, proud of what they do.
One big family together, as they work and plan
To better both the hobby, and The Pride of being a Ham.

>From Morse Code to Repeaters to Amateur TV.
Satellites & Packet, Q signals, and 73.
QSL cards, log books, the spectrum, it is grand.
I'm glad to be, and that I have, The Pride of being a Ham.

LOCAL HAMFEST SCHEDULE

This section is reserved for upcoming hamfests. They are limited to Ohio and vicinity easily accessible in one day. Anyone aware of an event incorrectly or not listed here, notify me so it can be corrected. This list will be amended, as further information becomes available. WA8RMC.

4 Aug 2007+ **(Saturday)** Columbus Hamfest & Electronics Show Voice of Aladdin **Talk-In:** 147.21 **Contact:** Jim Morton, KB8KPJ
6070 Northgap Drive.Columbus, OH 43229 Phone: 614-846-7790 Email: kb8kpj@cs.com Columbus, OH Aladdin Shrine Center 3850 Stelzer Road

19 Aug 2007+ 50th Annual Warren ARA Hamfest Warren Amateur Radio Association http://www.w8vtd.org **Talk-In:** 146.970 **Contact:** Jacqueline Cassidy, KD8DNE 293 Maplewood Drive, Apt. 307 Cortland, OH 44410 Phone: 330-240-1824 Email: kd8dne@yahoo.com Warren, OH Trumbull Country Fairgrounds 899 Everett Hull Road Cortland, OH 44410

9 Sep 2007+ Findlay Radio Club http://www.findlayradioclub.org **Talk-In:** 147.15/.75 **Contact:** Dean Calvin, N8RMF 141 Olive Street Findlay, OH 45840 Phone: 419-423-3402 Email: n8rmf@arrl.net Findlay, OH Hancock County Fairgrounds 1017 East Sandusky Street

4 Aug 2007+Columbus Hamfest & Electronics Show Voice of Aladdin ARC Talk-In: 147.21 Contact: Jim Morton, KB8KPJ 6070 Northgap Drive Columbus, OH 43229 Phone: 614-846-7790 Email: kb8kpj@cs.com Columbus, OH Aladdin Shrine Center 3850 Stelzer Road

19 Aug 2007+ 50th Annual Warren ARA Hamfest Warren Amateur Radio Association http://www.w8vtd.org Talk-In: 146.970 Contact: Christopher Brister, KD8BHR 125 Argali Place Cortland, OH 44410 Phone: 330-240-6015 Email: kd8bhr@yahoo.com Warren, OH Trumbull County Fairgrounds 899 Everett Hill Road

9 Sep 2007+ Findlay Radio Club http://www.findlayradioclub.org Talk-In: 147.15/.75 Contact: Dean Calvin, N8RMF 141 Olive Street Findlay, OH 45840 Phone: 419-423-3402 Email: n8rmf@arrl.net Findlay, OH Hancock County Fairgrounds 1017 East Sandusky Street

16 Sep 2007+ Greater Cincinnati ARA http://gcara.org. Talk-In: 145.37 (-600), 146.88 (-600) Contact: Stan Cohen, W8QDQ 2301 Royal Oak Court Cincinnati, OH 45237-2939 Phone: 513-531-1011 or 513-531-3834 Fax: 513-531-3834 Email: stanco49@aol.com Cincinnati, OH Diamond Oaks Career Development Center 6375 Harrison Avenue

21-22 Sep 2007** Great Lakes Division Convention Cleveland ARA, Lake Erie ARA, & Northern Ohio DX Assn. http://www.2007gldc.org Contact: Tina Check, W8HBI c/o Cuyahoga ARS PO Box 31264 Independence, OH 44131-0264 Phone: 216-524-7711 Email: treasurer@2cars.org Independence, OH Sheraton Independence Hotel 5300 Rockside Road

23 Sep 2007+ Cleveland Hamfest & Computer Show Hamfest Association of Cleveland, Inc. http://www.hac.org Talk-In: 146.73 MHz (PL 110.9) Contact: William Beckman, N8LXY Hamfest Association of Cleveland, Inc. PO Box 81252 Cleveland, OH 44181-0252 Phone: 800-CLE-FEST Email: on Web site click on e-mail Berea, OH Cuyahoga County Fairgrounds 164 Eastland Road

28 Oct 2007+ Massillon Hamfest and Auction Massillon Amateur Radio Club http://www.marcradio.org Talk-In: 147.180+ (PL 110.9) Contact: Terry Russ, N8ATZ 3420 Briardale Circle NW Massillon, OH 44646 Phone: 330-837-3091 Email: truss@sssnet.com Massillon, OH Massillon Boys and Girls Club 730 Duncan Street SW

NEW MEMBER(S)

Let's welcome the new members to our group! If any of you know anyone who might be interested, let one of us know so we can flood him or her with information. New members are our group's lifeblood. It's important that we actively recruit new faces aggressively.

WB8UGV Bruce Jaquish Lawrenceburg, IN
N8COO Mark Cring Groveport, Oh

…WA8RMC

LOCAL HAM CLUB LISTING

Club/Organization	Web Site	In Person Meetings See the Club's Web Site for Location	Nets	ARRL Affliated ?
ARC OF OHIO STATE UNIVERSITY	http://arc.org.ohio-state.edu/	2nd Mon of the month at 18:00		Y
ATCO-AMATEUR TELEVISION IN CENTRAL OHIO	http://www.atco.tv/homepage/index.htm	Last Sun in October First Sun in May	Tue's at 21:00 on 147.450 with Repeat Audio on 446.350	
BUCKEYE BELLES-OHIO LADIES AMATEUR RADIO CLUB	http://geocities.com/kc4iyd		Mon's at 09:00 on 3.945 Mon's at 21:00 on 147.060 Tue's at 20:00 on 3.972 Tue's at 20:30 on 7.236	
CCRA-CAPITAL CITY REPEATER ASSN	http://www.qsl.net/ccra/	2nd Sat of the month at 19:30	Mon's at 20:30, the Swap'n'shop Net on 147.24; followed by a Discussion Net	
CENTRAL OHIO SLOW SCAN TV	http://www.qsl.net/n8tut/sstv/		1st Sun at 19:00 on 145.490	
COARES-CENTRAL OHIO ARES	http://www.coares.org/	3rd Wed of the month at 20:00	Wed's at 20:00 on 147.060 except the 3rd Wed of the month.	Y
COLUMBUS FOX HUNTERS	http://www.qsl.net/cfh/			
COOKEN-CENTRAL OHIO OPERATORS KLUB EXTRA TO NOVICE	http://www.cooken.org/	2nd Sat of the month at 12:00	Wed's at 20:30. See web site for details on fregs.	Y
CORC-CENTRAL OHIO RADIO CLUB	http://www.corc.us/	Check web site		
COSHOCTON COUNTY AMATEUR RADIO ASSOC.	http://www.w8cca.org/	1st Tue of the month at 19:00	Sun's at 21:00 on 147.045	
COSWN-CENTRAL OH SEVERE WEATHER NET	http://www.severe-weather.org/		Tue's at 19:30 on 146.76 PL of 123.0hz Spring & Summer; 3rd Tue's Fall & Winter	Y
COTN-CENTRAL OHIO TRAFFIC NET	http://www.technology-corner.com/cotn/		Daily at 19:15 on 147.240	
CQRP-COLUMBUS QRP CLUB	http://www.qsl.net/cqrp/	1st Sat of the month at 10:30		
CRES-ARC	http://www.qsl.net/w8zpf	Check web site	Sun's at 21:00 on 146.070	Y
DELARA-DELAWARE AMATEUR RADIO ASSOCIATION	http://www.k8es.org/Home.html	3rd Wed of the month at 19:30	Mon's at 20:00 on 145.17	Y
LANCASTER & FAIRFIELD CTY ARC	http://www.k8qik.org/	1st Thu of the month at 19:30	Mon's at 21:00 on 147.030 Thu's at 18:30 on 147.030 is Radio Night.	Y
LICKING COUNTY ARES	http://www.licking-ares.org/		1st & 3rd Wed of the month at 21:00 on 146.88	
MOUNT VERNON ARC	http://mvarc.net/	2nd Mon of the month at 19:00		Y
NARA-NEWARK AMATEUR RADIO ASSOCIATION	http://nara.eqth.org/	2nd Sat of the month at 19:00	Tue's at 21:00 on 146.88	Y
OHIO NAVY-MARINE CORPS MARS	http://www.ohionavymars.org/			N/A
QCWA MID-OHIO CHAPTER	http://www.qcwa.org/qcwa212/	Check web site	Thu's at 20:30 on 146.76	
RUSTY ZIPPER HF & DX CONTEST CLUB	http://www.qsl.net/na8kd/			
SOUTH WEST COLUMBUS HAM RADIO CLUB	http://swchrc.com/		Fri's at 20:00 on 145.230 or 53.550	Y
VOICE OF ALADDIN ARC	http://www.qsl.net/w8fez/			Y
ZARC-ZANESVILLE AMATEUR RADIO CLUB	http://zarc.eqth.org/	1st Tue of the month at 19:00	Wed's at 21:00 on 146.610	Y

INTERNET ATV HOME PAGES (list verified 04/15/06)

If you have access to the INTERNET, you may be interested to know of some of the HAM related information that is available. Most addresses listed below are case sensitive, so type exactly as shown.

Domestic homepages

http://www.atco.tv	Ohio, Columbus, homepage (ATCO)
http://www.w8bi.org/atv/atvresources.html	Ohio, Dayton ATV group (DARA)
http://www.citynight.com/atv	California, San Francisco ATV
http://www.qsl.net/atn	California, Amateur Television Network in Central / Southern
http://members.tripod.com/silatvg	Illinois, Southern, Amateur Television group
http://www.ussc.com/~uarc/utah_atv/id_atv1.html	Idaho ATV
http://www.kcatv.org	Kansas, Kansas City Amateur TV Group (KCATVG)
www.bratsatv.org.	Maryland, Baltimore Radio Amateur Television Soc. (BRATS)
http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=10991	Michigan, Detroit Amateur Television System (DATS)
http://www.qsl.net/kd2bd/atv.html	New Jersey, Brookdale ARC in Lincroft
http://www.ipass.net/~teara/menu3.html	North Carolina, Triangle Radio Club (TEARA)
http://www.oregonatv.org	Oregon, Portland OATVA Oregon Amateur TV Association
http://www.jones-clan.com/amateur_radio/klamath_amateur_television.htm	Oregon, Southern Oregon ATV
http://www.nettekservices.com/ATV/	Pennsylvania, Pittsburg Amateur Television
http://members.bellatlantic.net/~theojkat	Pennsylvania, Phila. Area ATV
http://www.hats.stevens.com	Texas, Houston ATV (HATS)
http://www.hotarc.org/atv.html	Texas, WACO Amateur TV Society (WATS)
http://www.ussc.com/~uarc/utah_atv/utah_atv.html	Utah ATV
http://www.qsl.net/w7twu	Washington, Western Washington Television Soc. (WWATS)
http://www.shopstop.net/bats/	Wisconsin, Badgerland Amateur Television Society (BATS)

Foreign homepages

http://atv.hamradio.si	Slovenia ATV **(BEST OF FOREIGN ATV HOMEPAGES)**
http://www.batc.org.uk/index.htm	British ATV club (BATC)
http://www.cq-tv.com	British ATV Club and CQ-TV Magazine
http://oh3tr.ele.tut.fi/english/atvindex.html	Finland ATV, OH3TR repeater.
http://www.darc.de/distrikte/g/T_ATV/atv.htm	German ATV

TUESDAY NITE NET ON 147.45 MHz SIMPLEX

Every Tuesday night @ 9:00PM WA8RMC hosts a net for the purpose of ATV topic discussion. There is no need to belong to the club to participate, only a genuine interest in ATV. All are invited. For those who check in, the general rules are as follows: Out-of-town and video check-ins have priority. A list of available check-ins is taken first then a roundtable discussion is hosted by WA8RMC. After all participants have been heard, WA8RMC will give status and news if any. Then a second round follows with periodic checks for late check-ins. We rarely chat for more than an hour so please join us if you can.

ATCO TREASURER'S REPORT - de N8NT

OPENING BALANCE (04/20/07)..... $ 1300.84
RECEIPTS(dues)..... $ 200.00
Dayton Hamfest sales..... $ 26.00
Paypal charges..... $ (1.18)
Spring Event food..... $(129.34)
Jones road electric fee..... $ (48.44)
Hamvention flea market spaces..... $(140.00)
April postage..... $(10.25)
CLOSING BALANCE (07/30/07)..... $ 1197.63

ATCO REPEATER TECHNICAL DATA SUMMARY

Location: Downtown Columbus, Ohio
Coordinates: 82 degrees 59 minutes 53 seconds (longitude) 39 degrees 57 minutes 45 seconds (latitude)
Elevation: 630 feet above average street level (1460 feet above sea level)
Transmitters: 427.25 MHz AM modulation, 1250 MHz FM modulation, 1260 MHz QPSK digital, 2433 MHz FM modulation and 10.350 GHz FM modulation

Interdigital filters in output line of 427.25, 1250 & 2433 transmitters
Output Power - 427.25 MHz :40 watts average 80 watts sync tip
1250 MHz: 50 watts continuous (Analog ATV)
1260 MHz 2 watts continuous (DVB-S digital ATV - 2 channels)
2433 MHz: 15 watts continuous
10.350 GHz 1 watt continuous
Link transmitter - 446.350 MHz 5 watts NBFM 5 kHz audio

Identification: 427, 1250, 1260, 2433, 10.35 GHz xmitters video identify every 30 min. with ATCO & WR8ATV on 4 different screens
1260 MHz - Continuous transmission of ATCO & WR8ATV with no input signal present

Transmit antennas: 427.25 MHz - Dual slot horizontally polarized "omni" 7 dBd gain major lobe east/west, 5dBd gain north/south
1250 MHz - Diamond vertically polarized 12 dBd gain omni (Analog ATV)
1260 MHz - Diamond vertically polarized 12 dBd gain omni (Digital DVB-S ATV)
2433 MHz - Comet Model GP24 vertically polarized 12 dBd gain omni
10.350 GHz - Commercial 40 slot waveguide horizontally polarized 16 dBd gain omni

Receivers: 147.45 MHz - F1 audio input with touch tone control
439.25 MHz - A5 video input with FM subcarrier audio (**lower sideband**)
449.350 MHz - F1 audio input aux touchtone control
1280 MHz - F5 video input or DVB-S digital (digital input fed direct to 1260 MHz digital output channel 2)
2398 MHz - F5 video input
10.350 GHz - F5 video input (future – not installed yet)

Receive antennas: 147.45 MHz - Vert. polar. Hi Gain 12 dBd dual band (also used for 446.350 MHz output)
439.25 MHz - Horiz. polar. dual slot 7 dBd gain major lobe west
915 MHz - Diamond vertically polarized 12 dBd gain omni (spare ant – not in use at this time)
1280 MHz - Diamond vertically polarized 13 dBd gain omni
2398 MHz - Comet Model GP24 vertically polarized 12 dBd gain omni
10.450 GHz - Commercial 40 slot waveguide horizontally polarized 16 dBd gain omni (not installed yet)

Input control:

Touch Tone	Result (if third digit is * function turns ON, if it is # function turns OFF)
00#	turn transmitters **off** (exit manual mode and return to auto scan mode)
00*	turn transmitters **on** (enter manual mode-keeps xmitters on till 00# sequence is pressed)
264	Select Channel 4 Doppler radar. (Stays up for 5 minutes) Select # to shut down before timeout.
697	Select Time Warner radar. (Stays up till turned off). Select # to shut down.

Manual mode functions:

00* then 1 Ch. 1	Select 439.25 receiver - manual mode (hit 00* then 1 to view 439.25 signal only)
00* then 2 Ch. 2	Unused at this time
00* then 3 Ch. 3	Select 1280 receiver - manual mode
00* then 4 Ch. 4	Select 2411 receiver - manual mode
00* then 5 Ch. 5	Select video ID - manual mode (the 4 identification screens)
01* or 01#	Channel 1 439.25 MHz scan enable (hit 01* to scan this channel & 01# to disable it)
02* or 02#	Channel 2 915 MHz scan enable (not in use at this time)
03* or 03#	Channel 3 1280 MHz scan enable
04* or 04#	Channel 4 2398 MHz & camera video scan enable
A1* or A1#	Manual mode select of 439.25 receiver audio
A2* or A2#	Unused channel at this time
A3* or A3#	Manual mode select of 1280 receiver audio
A4* or A4#	Manual mode select of 2398 receiver audio
C0* or C0#	Beacon mode – transmit ID for twenty seconds every ten minutes
C1* or C1#	449.350MHz link receiver enable / disable
C2* or C2#	2433 transmitter for on/off. (C2* enables transmitter and C2# disables it)

Auto scan mode functions:

001	2398 receiver (normal mode - returns to auto scan)
002	Roof camera (select 001 when finished viewing camera so repeater will shut down)
003	Equipment. room camera (select 001 when finished so repeater will shut down**)**

ATCO MEMBERS AS OFJULY 30, 2007

Call	Name	Address	City	St	Zip	Phone
KD8ACU	Robert Vieth	3180 North Star Rd	Upper Arlington	OH	43221	614-457-9511
K8AEH	Wilbur Wollerman	1672 Rosehill Road	Reynoldsburg	OH	43068	614-866-1399
N4AK	Glen Farr	10 Autumn View Ridge	Travelers Rest	SC	29690-8024	
KC8ASD	Bud Nichols	3200 Walker Rd	Hilliard	OH	43026	614-876-6135
KC8ASF	Tom Pallone	3437 Dresden St.	Columbus	OH	43224	614-268-4873
W6CDR	Wynn Rollert	1141 Pursell Ave	Dayton	OH	45420	937-256-1772
N8COO	C Mark Cring	3941 Three Rivers Lane	Groveport	OH	43125	
WB8CJW	Dale & Sharon Elshoff	8904 Winoak Pl	Powell	OH	43065	614-210-0551
N8CXI	Garry Cotter	2367 Northglen Drive	Columbus	OH	43224	
WB8CXO	Mike Young	289 Gaylord Drive	Munroe Falls	OH	44682	
N3DC	William Thompson	6327 Kilmer St	Cheverly	MD	20785	
WA8DNI	John Busic	2700 Bixby Road	Groveport	OH	43125	614-491-8198
W8DMR	Bill Parker	2738 Florbunda Dr	Columbus	OH	43209	
K8DW	Dave Wagner	2045 Maginnis Rd	Oregon	OH	42616	419-691-1625
WA3DTO	Rick White	2771Keystone Dr.	Painsville	Oh	44077-8830	
WB8DZW	Roger McEldowney	5420 Madison St	Hilliard	OH	43026	614-876-6033
KC8EVR	Lester Broadie	108 N Burgess	Columbus	OH	43204	
KB8FLY	Rod Shaner	124 West Walnut St.	Lancaster	OH	43130-4344	740-279-3614
W8FZ	Fred Stutske	8737 Ashford Lane	Pickerington	OH	43147	
KB8GHW	Mike Amirault	11354 Reussner Dr SW	Pataskala	OH	43062	740-927-5005
W8GUC	Reuben Meeks	1345 Helke Rd	Vandalia	OH	45377	937-454-0968
WA8HFK,KC8HIP	Frank, Pat Amore	3630 Dayspring Dr	Hilliard	OH	43026	614-777-4621
WG8I	Chris Vojsak Sr,	3536 W Henderson Rd	Columbus	OH	43220-2232	
WB2IIR	Michael Anthony	370 Georgia Drive	Brick	NJ	08723	
N8IJ	Dick Knowles	1440 Northbrook Dr	Lima	OH	45805	
K8KDR,KC8NKB	Matt & Nancy Gilbert	5167 Drumcliff Ct.	Columbus	OH	43221-5207	614-771-7259
W8KHW	Kevin Walsh	2396 Anson St	Columbus	OH	43220	614-442-7748
N8KQN (sk)	Flo Post	1267 Richter Rd	Columbus	OH	43223	614-276-1820
WA8KQQ	Dale Waymire	225 Riffle Ave	Greenville	OH	45331	937-548-2492
N3KYR	Harry DeVerter Jr	303 Shultz Road	Lancaster	PA	17603-9563	
N8LRG	Phillip Humphries	3226 Deerpath Drive	Grove City	OH	43123	614-871-0751
WB8LGA	Charles Beener	2540 State Route 61	Marengo	OH	43334	
WB2LTS	Manny Diaz	74 Lincoln Rd	Medford	NY	11763	
KA8LWR	Mel Alberty	1645 Olentangy Road	Bucyrus	OH	44820	419-468-2971
W8MA	Phil Morrison	154 Llewellyn Ave	Westerville	OH	43081	
KA8MID	Bill Dean	2630 Green Ridge Rd	Peebles	OH	45660	
WB8MMR	Mike Knies	1715 Winding Hollow Dr.	Columbus	OH	43223	614-875-4236
K4NQV	Dean Maggard	1612 Benson Ave	Bowling Green	KY	42104	
N8NT	Bob Tournoux	3569 Oarlock Ct	Hilliard	OH	43026	614-876-2127
WD8OBT	Tom Camm	63 Goings Lane	Reynoldsburg	OH	43068	740-964-6881
WU8O	Tom Walter	15704 St Rt 161 West	Plain City	OH	43064	614-733-0722
N8OCQ	Bob Hodge Sr.	3750 Dort Place	Columbus	OH	43227-2022	
KB8OFF	Jess Nicely	742 Carlisle Ave	Dayton	OH	45410	
N8OPB	Chris Huhn	1667 Pickering Court	Reynoldsburg	OH	43068	
W6ORG,WB6YSS	Tom & Maryann O'Hara	2522 Paxson Lane	Arcadia	CA	91007-8537	626-447-4565
KC8OZV	George Biundo	3675 Inverary Drive	Columbus	OH	43228	614-274-7261
K2PMS	Paul Schmitter	57 East Main Street	Springville	NY	14141	
KE8PN	James Easley	1507 Michigan Ave	Columbus	OH	43201	614-421-1492
W8PGP,WD8BGG	Richard, Roger Burggraf	5701 Winchester So. Rd	Stoutsville	OH	43154	740-474-3884
WB8PJZ	Dave Morris	12025 Wapak-Buckland Rd	Wapakoneta	OH	45895	
AE6QU	Ron Phillips	10858 W. Kaibab Dr.	Sun City	AZ	85373	602-369-4242
WA8RMC	Art Towslee	180 Fairdale Ave	Westerville	OH	43081	614-891-9273
W8RRF	Paul Zangmeister	10365 Salem Church Rd	Canal Winchester	OH	43110	
W8RRJ	John Hull	580 E. Walnut St.	Westerville	OH	43081	614-882-6527
W8RUT,N8KCB	Ken & Chris Morris	3181 Gerbert Rd	Columbus	OH	43224	614-261-8583
W8RVH	Richard Goode	9391 Ballentine Rd	New Carlisle	OH	45334	937-964-1185
W8RQI	Ray Zeh	2263 Heysler Rd	Toledo	OH	43617	
KB8RVI	David Jenkins	1941 Red Forest Lane	Galloway	OH	43119	614-878-0575
W8RWR	Bob Rector	135 S. Algonquin Ave	Columbus	OH	43204-1904	614-276-1689
W8RXX,KA8IWB	John & Laura Perone	3477 Africa Road	Galena	OH	43021	740-548-7707
W8SJV, KA8LTG	John & Linda Beal	5001 State Rt. 37 East	Delaware	OH	43015	740-369-5856
N8SNG	Terry Rankin	414 Walnut Street	Findlay	OH	45840	
KB8SSH	Mike Cotts	3424 Homecroft Dr	Columbus	OH	43224	614-268-8497
W3SST	John Shaffer	1635 Haft Dr.	Reynoldsburg	OH	43068	614-751-0029
K8TPY, K8FRB	Jeff & Dianna Patton	3886 Agler Road	Columbus	OH	43219	
NR8TV	Dave Kibler	243 Dwyer Rd	Greenfield	OH	45123	937-981-1392
KB8UGH	Steve Caruso	6463 Blacks Rd. SW	Pataskala	OH	43062-7756	
WB8UGV	Bruce Jaquish	22375 Montanna Drive	Lawrenceburg	IN	47025-7447	812-637-3805
W8URI	William Heiden	5898 Township Rd #103	Mount Gilead	OH	43338	419-947-1121
KB8UWI	Milton McFarland	115 N. Walnut St.	New Castle	PA	16101	
WA8UZP	James R. Reed	818 Northwest Blvd	Columbus	OH	43212	614-297-1328
KB8WBK	David Hunter	45 Sheppard Dr	Pataskala	OH	43062	740-927-3883

Call	Name	Address	City	St	Zip	Phone
KC8WRI	Tom Bloomer	PO Box 595	Grove City	OH	43123	
AA8XA	Stan Diggs	2825 Southridge Dr	Columbus	OH	43224-3011	
N8XYJ	Dan Baughman	4269 Hanging Rock Ct.	Gahanna	OH	43230	
N5XZS	Tim Johnson	1629 Speakman Dr SE	Albuquerque	NM	87123	
KB8YMN	Mark Griggs	2160 Autumn Place	Columbus	OH	43223	614-272-8266
KB8YMQ	Jay Caldwell	4740 Timmons Dr	Plain City	OH	43064	
KC8YPD	Joe Ebright	3497 Ontario St	Columbus	OH	43224	
N8YHY	Chris Scott	1145Rural Ave SE#5	Salem	OH	97302	
N8YZ	DaveTkach	2063 Torchwood Loop S	Columbus	OH	43229	614-882-0771
AB5ZJ	Tom Phillips	6712 Hickory Pl. Ct.	No. Richland Hills	TX	76180	
KA8ZNY,N8OOY	Tom & Cheryl Taft	386 Cherry Street	Groveport	OH	43125	614-202-9042

ATCO MEMBERSHIP INFORMATION

Membership in ATCO (Amateur Television in Central Ohio) is open to any licensed radio amateur who has an interest in amateur television. The annual dues are $10.00 per person payable on January 1 of each year. Additional members within an immediate family and at the same address are included at no extra cost.

ATCO publishes this newsletter quarterly in January, April, July, and October. It is sent to each member without additional cost.

The membership period is from January 1ST to December 31ST. New Members will receive all ATCO newsletters published during the current year prior to the date they join ATCO. For example, a new member joining in June will receive the January and April issues in addition to the July and October issues. As an option for those joining after mid July, they can elect to receive a complementary October issue with the membership commencing the following year Your support of ATCO is welcomed and encouraged.

ATCO CLUB OFFICERS

President: Art Towslee WA8RMC
V. President: Ken Morris W8RUT
Treasurer: Bob Tournoux N8NT
Secretary: Frank Amore WA8HFK
Corporate trustees: Same as officers

Repeater trustees: Art Towslee WA8RMC
Ken Morris W8RUT
Dale Elshoff WB8CJW
Statutory agent: Frank Amore WA8HFK
Newsletter editor: Art Towslee WA8RMC

ATCO MEMBERSHIP APPLICATION

RENEWAL O NEW MEMBER O DATE _____
CALL _____
OK TO PUBLISH PHONE # IN NEWSLETTER YES O NO O
HOME PHONE _____
NAME_____
INTERNET Email ADDRESS_____
ADDRESS _____
CITY _____ STATE _____ ZIP _____-_____
FCC LICENSED OPERATORS IN THE IMMEDIATE FAMILY
_____
COMMENTS_____
_____
_____
ANNUAL DUES PAYMENT OF $10.00 ENCLOSED CHECK O MONEY ORDER O
Make check payable to ATCO or Bob Tournoux & mail to: Bob Tournoux N8NT 3569 Oarlock CT Hilliard, Ohio 43026. Or, if you prefer, pay dues via the Internet with your credit card. Go to **www.atco.tv/paydues** and fill out the form. Payment is made through "PayPal" but you DO NOT need to join PayPal to send your dues. Simply DO NOT fill out the password details and there will be no PayPal involvement.

ATCO Newsletter
c/o Art Towslee-WA8RMC
180 Fairdale Ave
Westerville, Ohio 43081

FIRST CLASS MAIL

REMEMBER...CLUB DUES ARE NEEDED.
CHECK THE RIGHT CORNER OF THE MAILING LABEL
OR
MEMBERS PAGE OF ATCO WEBSITE FOR THE EXPIRATION DATE.
SEND N8NT A CHECK IF EXPIRED.