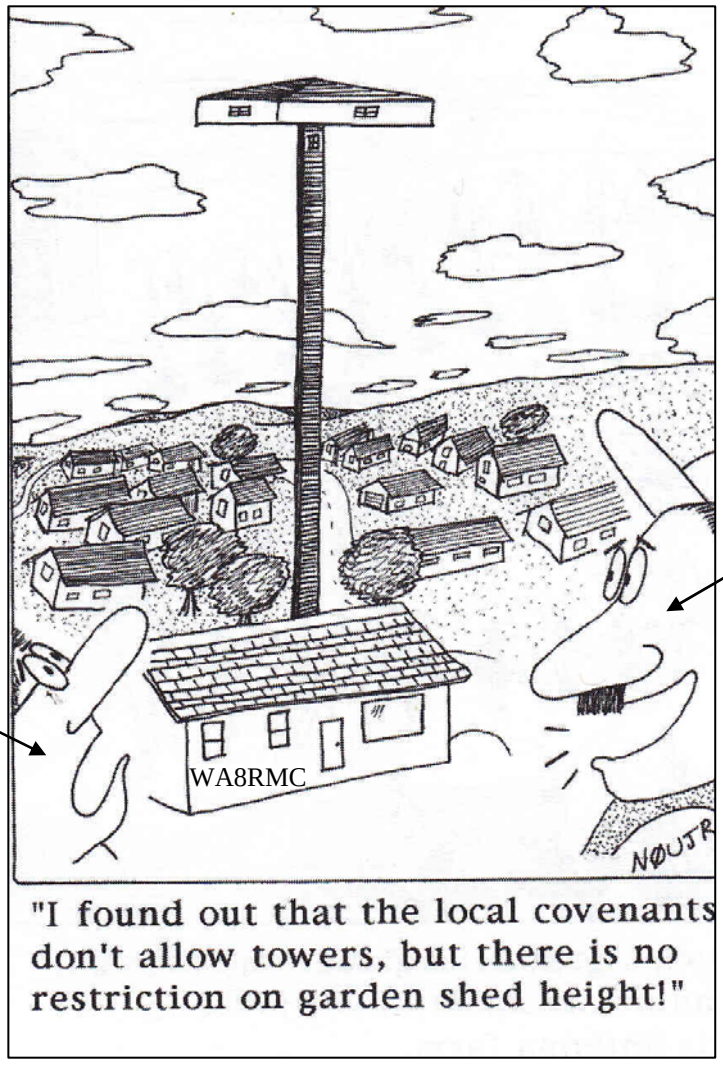
ATCO NEWSLETTER

VOLUME 30 NUMBER 1 **January 2013**

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

Thanks to Greg Trook N0UJR for allowing us to share one of his cartoons. See also http://incolor.inetnebr.com/n0ujr/.



Art
WA8RMC

Westerville
City inspector

ACTIVITIES ... from my "*Not too Crippled*" Workbench

It's Newsletter time again! There is not as much to report as I had hoped but bear with me. Things will perk up in the near future…..I think! I've noticed that with the advances in digital video equipment, fewer people are willing to either commit to expensive equipment or digest the expertise needed to be successful. New less expensive equipment is starting to become available but the expertise needed to implement it is severely lacking. Available DATV equipment is definitely NOT "Plug-and-Play" so that fact alone is a deterrent as well as the scarcity of people with technical expertise. If you fit into any of those categories, you're not alone but hold in there and don't become discouraged. Those of us that are pioneers in this area are willing to share their knowledge so if you don't know the answer, ASK QUESTIONS! The "EXPERTS" are also in the learning process.

Now, let's move on. Our 10.350 GHz transmitter AND 10.450 GHz receiver AND repeater roof camera arefinally installed and "working"! The transmitter and camera is alive and well but we still need someone with 10.450 GHz ATV transmit capabilities to test it. I've proved it works in my basement with both antennas mounted about 30 feet apart but, as we all know, bench testing sometimes falls short of practice in the field! So, I welcome any activity involving building and testing Gunplexers for this frequency. Will a 10mw Gunplexer into a used satellite dish be enough to get a signal into the receiver downtown????? Who will be the first to find out? There are more details about the entire setup later in this issue so read on!

I've spent some time reorganizing things at the repeater needed because of the added space required for the camera and 10 GHz electronics modules. Also, as I've reported before, the video and audio cables are being relocated to the front of the modules leaving only the RF and some control cables in the back. This cleaned up the tangled rats' nest of wiring in the least accessible cabinet back. In addition, we got rid of the "F" connector video cables and replaced them with BNC cables which leave only the audio cables with RCA connectors. That brings me to my next point. In an effort to clean things up even more, I replaced some of the 6 foot standard cables with shorter ones so they didn't drape down the cabinet front. I used RCA connectors I had which have shorter than normal center pins. I bench tested them with a connector jack I had and was satisfied that the shorter pin was long enough to fully engage the receptacle. So, when I installed them at the repeater, I didn't check for proper connections...MISTAKE. Apparently, the 427 transmit module receptacle required a longer pin so it didn't receive any video and necessitated a return trip. (I hate it when that happens! Is that a Murphy Law?) It works OK now but I'll check the pin length at the next Hamfest RCA connector purchase. HINT: DON'T " buy RadioShack RCA connectors! They're JUNK!!!!!!

Next, the Channel 4 radar transmitter quit sometime in early December. I was able to retrieve it just before Christmas and pre-determined I knew exactly the problem. Since they had a lightning strike sometime before that, I figured the 446.350 receiver front end RF amplifier took a hit even though I installed an isolated cavity filter after a similar lightning incident a few years ago. Wrong! Since I use a small RCA "TacTech" receiver from an old 440MHz handheld the size of a pack of cigarettes, it is very difficult to troubleshoot and repair. After about a full morning replacing front end RF transistors, I determined the problem was elsewhere. The problem turned out to be a ceramic coupling capacitor in the local oscillator chain that was SHORTED. I've never seen a ceramic cap short before. In any case, a replacement restored the receiver to 0.5 microvolt sensitivity and was re-installed shortly after Christmas.

Next, I installed a tower camera on the Jones Road site in South Vienna, Ohio. It is not operational yet and needs a controller not yet designed and built. However, I wanted to get it installed before cold weather sets in. We made it just in time. It was a balmy 60 degree day in November during installation that fell to about 30 degrees and windy the next day. The camera purpose is for a good view of the landscape west for weather observation. It also serves as a fun play tool! Remember we must have a new toy every so often so we don't get bored and turn attention elsewhere. When operational, it will operate similar to our Channel 4 radar controls. An added future benefit will be to have the Jones road site restored as a remote 439 MHz input. Also, I'd like to install a low power 427 MHz transmitter there so the Springfield, Ohio Hams could also use the site for weather observation. Who knows, maybe with that feature, we can get someone there interested in ATV.

Next, I'm happy to report that everyone listed as a member has paid their dues at least through 2011. That's great as in past years I've head to send notices to those delinquent on dues, and I hate to do that. It looks like the up-to-date internet home page listing for dues has really helped. "Hats off" to the active members and for Bob, N8NT, for keeping good records. Also, I can't finish without acknowledging the great work of Dale, WB8CJW, with the internet bulletin board. He's added a few things and also increased the bulletin board frequency to the quarter hour. Check it at the 15 and 45 minute mark to see ATCO member pictures of the past. It's quite a showing.

Last, I really need people to help create articles for us as it gets harder and harder to get useful material. If nothing else, just jot down an idea or hand write something. I can take it from there. How about someone creating a crossword puzzle for us or maybe you've seen a good joke to share. During vacation time or while traveling, keep an eye out for a funny ATV related sign, bumper sticker or license plate so keep your camera handy.
…73, WA8RMC

2012 FALL EVENT

This Fall Event produced a rather light turnout. It's too bad as I had prepared for a larger crowd with plenty of pulled pork for lunch. There, that should be enough to encourage a better attendance next time. The top picture shows almost all of the 19 people that attended. Below it is W8RWR's J pole antenna he bought for emergency use.

Secretary's Report ATCO Meeting 10/28/12 – "Fall Event" by C. Mark Cring N8COO.
Weather was rather cool and quite windy and rain had been coming and going. Consequently no one set up for tailgating (mini hamfest) in the parking lot before the meeting. 19 in attendance. Light turnout for event. Art mentioned a lot of door prizes for those who came.
Art mentioned emails bouncing to KC8ASV and N8FRT – he can't get newsletter to them. Does anyone know how to contact these.

Introductions done around the room by all. Sign-in list passed around:

1. KD8KDM – Mike, St. Paris, OH
2. W8RVH- Dick, Springfield, OH
3. W4HTB & XYL – Hank, Bowling Green, KY
3. KB8GUE – Ron, Leesburg, OH
5. W8ARE – Terry, Westerville, OH
6. W8RWR – Bob, Columbus, OH
7. AA8XA – Stan, Columbus, OH
8. N8OCQ – Bob, Columbus, OH
9. KB8YMQ – Jay, Plain City, OH
10. KC8YPD – Joe, Columbus, OH
11. KD8TIZ – Robert, Alexandria, OH
12. WB8DZW – Roger, Hilliard, OH
13. W8RUT – Ken, Galena, OH
14. WA8UZP – Jim, Grandview Heights, OH
15. N8COO – Mark, Groveport, OH
16. KD8ACU – Bob, Upper Arlington, OH
17. W8MA – Phil, Westerville, OH
18. WA8RMC – Art, Westerville, OH
19. WB8LGA – Charlie, Marengo, OH

Those in attendance gave by show of hands (all hands raised) for approval of the present slate of officers. Tom Bloomer is now the Statutory Agent for the club. Mark Cring is now the Secretary.

Jones Rd. link @ South Vienna – 147.45 131.8pl input. Spoke w/Glen, owner of site, mentioned WX8U has put up a new repeater at site, 444.6375MHz. Not enough people in Dayton interested in re-establishing (video) link back to Columbus. Want to install camera @ Jones Rd pointing towards west to send video back to Columbus on 1200. Lukewarm response from Springfield folks on a low power 70cm. 10GHz unit down, rework/add receiver, 10.35 tx, 10.45 rx, hope to reinstall soon. Want to plug in the rooftop cam @ repeater site into the 10GHz unit. 1200 Digital antennas were swapped around.

Discussion about receiving the 1200 digital. Mention was made of using FTA (free to air) receivers. Need 3.125 symbol rate/4 MHz BW. Roger mentioned he had receiver that would only do 3.250 and higher, understand from discussion that is because the receiver is set up for standard satellite BW of 5 MHz instead of 4MHz. Apparently some receivers will do all...further discussion stated that symbol rate could be looked at in the future - and, some info would be provided (?) about where to get the receiver that apparently is universal. (Ken – W8RUT?)

Dick, W8RVH expressed interest in getting the link back up @ Jones Rd for benefit of Springfield folks – Art said that will be re-established, would be 439 in/1200 out. (presume 1200 would go back to Columbus).

…Mark N8COO
(PS: Great job Mark. It's good to have a secretary report now which has not been realized in the past. WA8RMC)

10GHz Tx/Rx AND ROOF CAM IS OPERATIONAL!

It took a number of years to implement but the 10GHz receiver and repeater roof camera is now operational. I think it was back in 2005 or 2006 that I had an idea of how to create a roof camera design that doesn't involve rotating it to see 360 degrees. My idea involved making a fixed vertical camera that points up with a rotating 45 degree mirror. Well, the fixed camera part didn't work but the rotating mirror was OK so an implemented design was installed shortly thereafter. After a short time I found it wouldn't function when applied to the various weather elements so it was removed and diverted my attention to other "more important" things.

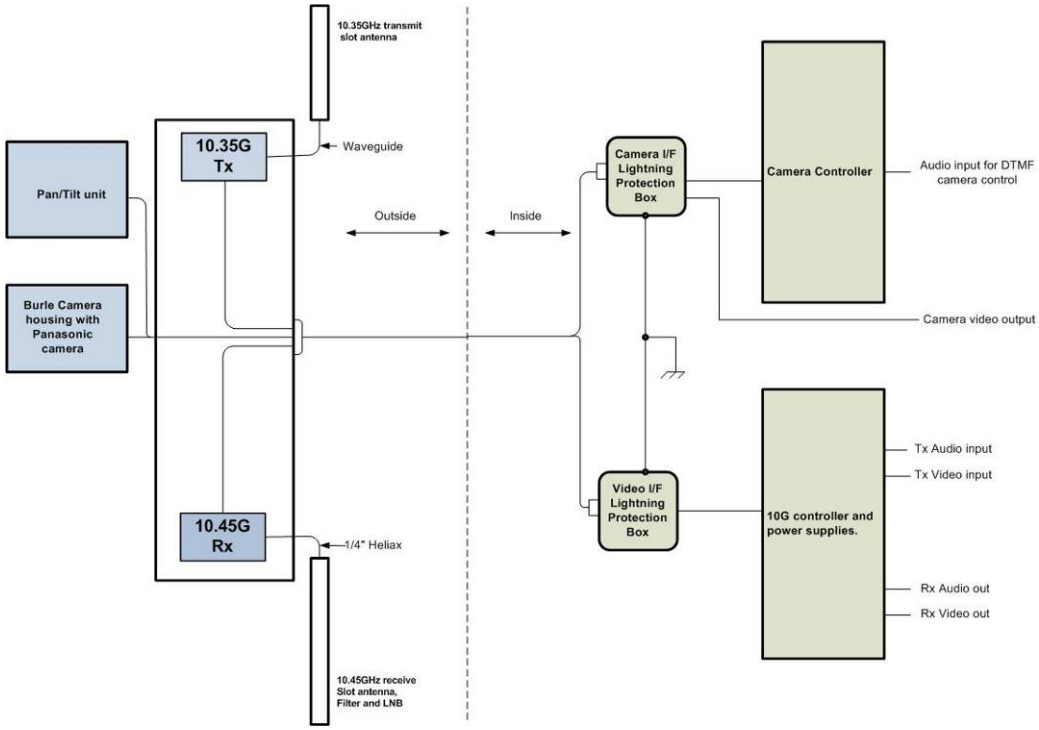
Fast forward to 2012. This time I used a proven rotator, camera and controller so things progressed much more rapidly. However, its implementation involved integrating it with the existing 10GHz transmitter control box, operational in a temporary roof location since 2006, and moving the combination to the uppermost part of the roof up and away from most viewable objects. The 10GHz receiver was planned to house that box also but was never implemented so it too was included in this "renovation". As you can imagine, it was not as simple a task as at first thought. The completed and installed design incorporates a 10.350GHz transmit module feeding a waveguide antenna mounted directly to the stainless enclosure, a 10.450GHz receive antenna, waveguide bandpass filter and LNB module inside a common 3" plastic tube connected to the stainless enclosure with ¼" Heliax to a 1345MHz Comtech module located inside the stainless enclosure.

Yes, I could have mounted the Comtech module in the warm repeater cabinet below but decided to trust the electronics will survive the warm/cold elements topside. Besides, it's a 65' run to the repeater below and 1345MHz RF losses in the coax would exceed the limits of a good preamp so it's a Comtech board topside with only video making the 65 foot run instead. We'll see how long the combination lasts.

The wiring/cabling was difficult to say the least because I had installed a multiwire cable going to the 10GHz transmitter years ago with the intention of adding a camera and 10GHz receiver later. The cable run through the roof-to-room seals were in place and sealed so it was not a reasonable option to break the seal, revise the cabling and re-seal it. I was cautioned about this as the City technicians have had water leakage before and finally got it so it wouldn't leak. I REALLY didn't want to be responsible for water in the City communications room also housing ALL City fire, police, traffic light NOAA and agency transmitter/receiver equipment units (28 transmitters total). I value our position there so, enough said! As a result, I had to work around existing wiring. Fortunately, there were enough wires and coax runs to make it possible. In 2006 I figured out how many coax runs I may need along with enough communications and power wires and put them inside a 65 foot run of ½" polyethylene tubing. To get them all in there, I had to use RG141 type coax (about 1/8" dia) which explains the video vs RF run decision.

Added complexity involved adding lightning protection boxes in series with the 65 foot cable run before entering the cabinet below. The stainless box housing the 10GHz transmitter, receiver and associated controls is mounted at the highest point atop the 650 foot building and about 2 feet above the beacon light so needless to say, lightning considerations MUST be taken into account. So far, no problems but just saying that has caused lightning strike issues in the past, no pun intended!

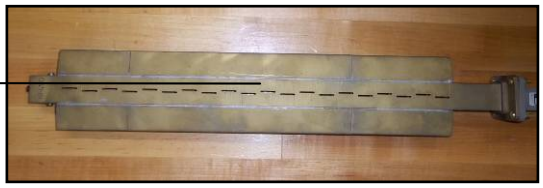
A block diagram of the total combination is shown below. Individual schematics are not included because they would not be that helpful in my sketch form. (I usually get it working first then clean it up with documentation sometime later). The 10.35GHz transmitter is very straight forward: repeater video up the coax to the Kuhne 1 watt 10.35GHz transmitter in the outside stainless box with a coax to waveguide transition going through the box side to a 40 slot waveguide antenna mounted to it. Total "feedline" length about 6 inches. The 10.45GHz received RF goes into a 40 slot waveguide antenna, through a waveguide bandpass filter and directly to a 10.45GHz to 1350MHz LNB module then via about 10 feet of ¼" Heliax to a Comtech module in the stainless box. The video output from the Comtech module makes the 65 foot trip to the repeater controls below completing the transmit to receive "loop". The camera is electrically divorced from the Tx/Rx functions and only shares the enclosure and 65 foot cable run.



Adapter waveguide sections needed to use the special bandpass filter we were able to find.

Waveguide 7 pole 50 MHz bandpass filter.

Rectangular to circular waveguide transition.



This is a 40 slot omni horizontally polarized waveguide slot antenna with about 16dBd gain. An equal number of slots are on the opposite side.

This is a 10.45GHz LNB with a 1450MHz output supplied by Bob Platts G8OZP. It's no longer available as far as I know. It has an impressive 0.7dB noise figure.

This photo shows the 10.45GHz receive antenna, filter and LNB combination before installation into the plastic pipe "radome". The transmit combination is similar except there is no filter or adapter waveguides needed. The adapter waveguides are necessary only because the filter we found had special size requirements. The LNB also required an adapter because its waveguide input is circular.

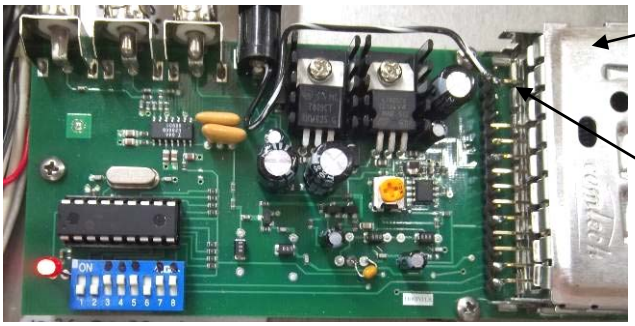
At left is the bottom of the receive waveguide antenna mounted within a section of 3" plastic drain pipe. Caps were placed on each end with the coax extending out the top. The antenna part shown is the bottom and rests on the bottom cap. Important but not shown is a small drain hole in the bottom cap to allow the antenna to breathe. Experience has taught me well that it is almost impossible to completely seal items like this from moisture entry so the small "breathe vent" hole works great!

This is a view inside the stainless control box.

The Kuhne 1 watt transmitter is toward the top with the coax and waveguide transition at top right. The waveguide connects to a right angle section on the outside with the antenna directly above.

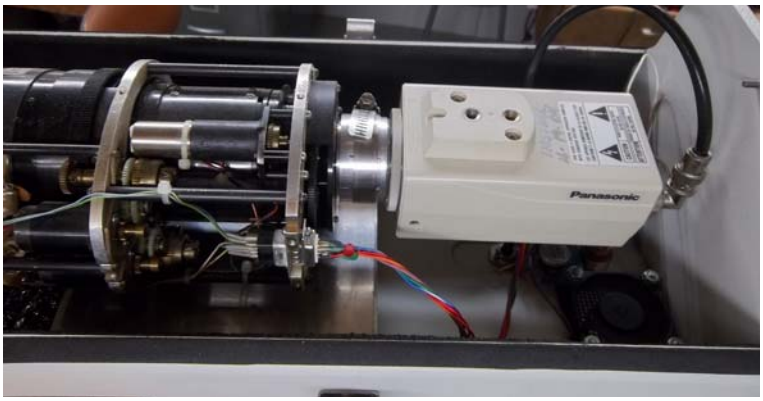
The receive Comtech board is below with the receive LNB output signal connection at the bottom right side.

The picture on the right illustrates the box mounted on the stainless mast section with mounting clamps. The antenna and top vent is partially shown on the top of the box.



This is a standard FM1200RTIM Comtech board software modified to receive 1340 to 1467MHz so it can receive the 1450MHz output from the LNB. Also, since the LNB RF output has inverted video, the zero ohm resistor located near the gain pot must switch positions.

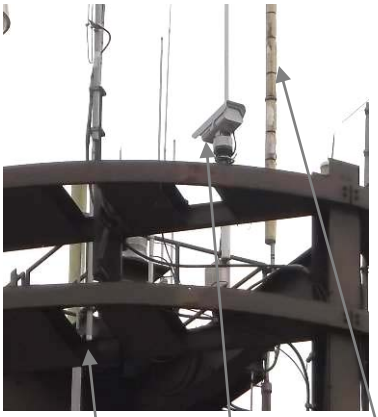
Since the LNB requires +12VDC for operation, a jumper was added to the module pin 1 to the +12V source so +12VDC can be fed in the coax from Comtech to LNB. (The standard Comtech module has provisions for this but is unconnected).

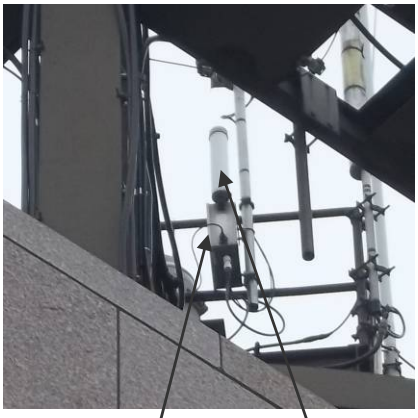


Above is a view of the complete roof camera integrated into the total system along with detailed views of the internal camera and lens arrangement. It's a standard Panasonic camera with a surplus 30 to 165mm motor operated lens. Since the lens was intended for use with a 1" vidicon, the effective zoom range with a 1/3" CCD imager is over 300mm! It's quite impressive scanning over the downtown Columbus, Ohio skyline and building tops! (Excuse the cluttered workshop background).

Below is a view of the 10GHz transmitter and receiver power supply and controller (top) and camera controller modules (bottom). They're not "pretty" but I didn't want to clean up the appearance because no one will see them when mounted. I stopped designing when they both worked and we all know what happens when, "It works as is but really could be made to look better".

Finally, below are views of the camera and 10GHz units mounted, in operation 650 feet above street level and above everything else in the city. It will be a great asset for weather observation and police crowd observation during the 4th of July fireworks festivities. At least now I won't have to temporarily install another camera just for the "Red-White-Boom" observance this year!





Rx antenna Camera 427MHz Tx ant. control box Tx ant. Repeater location, antennas above & control room below (partially hidden)

ROOF CAMERA OPERATION CODES

The below codes will operate the roof camera once it is selected in **automatic** mode only. Enter 003 then 002. There is a 5 second delay after 003 entry before the room camera appears. When it does, enter 002 for the roof camera. When finished with the camera, enter 001 so system will go back into auto scan mode. Then it will shut down if no other video is present.

If an attempt is made to select the camera in manual mode, the first time you hit a function button, the controller thinks you want another input and shuts it down.

PLEASE DO NOT SCAN THE SKYLINE WHERE THE SUN MAY BE DIRECTLY VIEWED OR LEAVE CAMERA IN A POSITION WHERE IT COULD OCCUR AT A LATER TIME!

CAMERA CONTROLLER KEYPAD FUNCTIONS

FOCUS Near 1	**FOCUS** Far 2	**TILT** Down 3	A
ZOOM In 4	**ZOOM** Out 5	**TILT** Up 6	B
PAN Right 7	**PAN** Left 8	**APERATURE** f 2.8 9	C
* 	**APERATURE** f 22 0	# 	D

HAM RADIO NEW LICENCES ON THE UPSWING!

From the ARRL Letter January 17, 2013

2012 Marks All-Time High for Amateur Radio Licenses

As 2012 came to a close, ARRL VEC Manager Maria Somma, AB1FM, had a good reason to cheer: The number of radio amateurs in the US reached an all-time high of almost 710,000. "2012 was definitely a banner year for the number of Amateur Radio operators here in the US," she said. "It is amazing to see these new numbers and to know that Amateur Radio is experiencing such a healthy trend."

In looking at new and upgraded licenses, as well as licensees per ARRL Division, Somma also crunched the numbers looking for growth within each license class -- and all of Amateur Radio -- over the last 40 years. "This is an all-time high for Technician, General and Amateur Extra class licensees," she said. "When looking at the three current license classes, the number of Technicians, Generals and Amateur Extras peaked in December at 345,369, 163,370 and 130,736, respectively."

Somma explained that the total number of US amateurs in the FCC database also continues to grow each year: "As of December 31, 2012, the number of licensees reached an all-time high of 709,575; year-end totals were 702,056 for 2011 and 696,041 for 2010. The number of licensees increased at an average rate of 21 per day, while the number of US licensees has increased by 7 percent since 2008!" More than 3000 new licenses were issued in 2012 than in 2011, while upgraded license activity remained steady in 2012. To Read more CTL click on the hyperlink here.

...WA8RMC ***(Ok, where are all of those potential ATVers?)***

COMPARE AMATEURS PER FCC CALL SIGN REGION		
CALL SIGN REGION	2008	2012
1	33,000	35,000
2	39,000	42,000
3	34,000	36,500
4	130,000	140,000
5	80,000	86,000
6	93,000	100,000
7	88,000	93,500
8	53,000	57,000
9	44,500	47,500
0	56,000	60,000
KL7 - Alaska	3,100	3,500
KP4 - Caribbean	4,200	4,000
KH6 - Pacific	4,200	4,500
Total US Amateurs	**662,000**	**709,500**

This chart shows the distribution of license holders by call sign region, comparing 2008 to 2012. The number of US licensees has increased by 7 percent since 2008.

ATV REPORT FROM THE LAND DOWN UNDER

Hi all,
Here in New Zealand we don't have a lot spectrum in UHF range left for wide band modes like ATV. Without going into all of the history of why we have ended up like this. Basically the only band we have here for ATV is 23cm 1240 to 1300MHz as you can see it make a cross-band ATV repeater impossible to put together. This is why we have been lobbying here for greater access to the UHF spectrum.

With the change over from analog to digital Television at the end of 2013 our 50cm ATV band from 614 to 622MHz (E39) will come part of the new UHF commercial TV band. Therefore the Amateur users of this band have indirectly been caught up in this process of digital switch over. This has all come about due New Zealand not having standard UHF Amateur bands like in other parts of world. With all the planning that gone into digital switch over and the ZL amateurs having an existing interest we have a new ATV band to use at 60cm 502 to 510MHz (E25). This new band must conform to the New Zealand digital transmission standards for digital Television. This gives us any 8MHz mode within the DVB-T/T2 COFDM modulation system that can be used for a DATV repeater output.
…Grant ZL1WTT

Thanks Grant for the clarification,
502-510 MHz sounds like a cool band. Small antennas, but still has some guts in the way of propagation. Feed line loss goes down and amplifier efficiency goes up. Building precautions for microwave construction does not apply so much. Plus, broadcast transmission equipment could be used directly without modification as well as receiving equipment. That is bound to attract non-amateurs to the hobby by ease of reception. It also frees up the 23 and 13 cm band for inputs. Cool!!!
…Dan KE7TBB

Hi Dan,
All ZL ATV repeater inputs are on 23cm we have two 18MHz wide channels, one is at 1249MHz and the other at 1282MHz. Currently we use two modes, analog FM with 6 & 6.5MHz sound offsets for stereo and for digital DVB-S QPSK, that can be set up to a maximum bandwidth of 18MHz.

All ZL ATV repeaters use horizontal polarization for both input and output bands. Unless the ATV repeater output is in a vertical polarized UHF TV coverage area then we do same to make it easer to be received. This is also done this way to make the engineering easer between wide band ATV users and narrow band users on the same band, such FM voice and packet/APRS who are on vertical polarization.

The new 60cm band is for a digital repeater outputs only using DVB-T/T2 standards. Our only real major problem we have is finding the funding to make this change over possible. ATV here in New Zealand is very different from how ATV is done in the USA. For example:

1. We do not have a 70cm or a 33cm bands in this part of the world. As for the 13cm band it is unusable due to the WiFi interference and other noise generators found there.

2. Since we no longer have a 70cm ATV band we have phased out all AM/VSB transmissions about 15 years ago.

3. You also will find here it's not about faces on camera, more based around programming and the technical aspects of ATV. You see a lot of NASA TV transmissions, You-tube videos being played out and test cards.

I hope this give you a better understanding of how ATV works in ZL.
…Grant ZL1WTT

Grant,
Do you still come under the limitation of not "broadcasting", leaving the TV transmitter on all the time without a two way QSO? This is sometimes a grey line as no one is in QSO most of the time in ATV.
…Dan KE7TBB

Hi Dan,
It's not a problem here as long as you display a call sign once in every 15 minutes or a call sign logo. You need to remember that ATV is basically a simplex mode, that you are receiving or you are transmitting. This is unlike FM voice on 2m for example, where by you have one minute overs or so this becomes half duplex communications.

With DATV you don't even need to display a call sign; you can just place a call sign as your network identification, within the DVB transport stream. If you use your info button on your remote control on any digital TV or set top box this should display the network identification of the broadcast service that is been viewed.
…Grant ZL1WTT

ROD NEWKIRK, W9BRD - SK

From ARRL Headquarters Newington CT November 21, 2012

Rod Newkirk, W9BRD/VA3ZBB, of Ottawa, Ontario, Canada -- who penned the QST column "How's DX?" from 1947-1978 -- passed away on Monday, November 19 after a long illness. Newkirk was credited with coining the term "Elmer," as well as for his humorous take on DX in his column, especially with limericks in his DX Hoggery and Poetry Depreciation Society and the accompanying cartoons of Jeeves by Phil "Gil" Gildersleeve, W1CJD (SK).

In March 1991, QST Associate Editor Jim Cain, K1TN, profiled Newkirk in "How's Rod?" in the pages of QST. "Newkirk wrote 'How's DX?' through the Korean War, through the Fabulous '50s, the Vietnam war, incentive licensing and the W9WNV DXpedition controversy," Cain wrote. "While six American presidents moved in and out of the White House, 'How's DX?' documented the rise of SSB in Amateur Radio and DXing, saw the birth of DX lists and nets and the growing number of 2 meter spotting groups."

The term "Elmer" -- meaning someone who provides personal guidance and assistance to would-be hams -- first appeared in QST in Newkirk's March 1971 "How's DX?" column, where he wrote that "too frequently one hears a sad story in this little nutshell: 'Oh, I almost got a ticket, too, but Elmer, W9XYZ, moved away and I kind of lost interest.' Sure, the guy could have burned through on his own, maybe, but he, like others, wound up an almost-ham. No more Elmer. We need those Elmers. All the Elmers, including the ham who took the most time and trouble to give you a push toward your license, are the birds who keep this great game young and fresh." Newkirk was probably not trying to coin a term at the time, but the name stuck, becoming a general term for the mentors Newkirk called "the unsung fathers of ham radio."

Beginning in May 1951 (and appearing each May after that), Newkirk wrote about the annual meeting of the DX Hoggery and Poetry Depreciation Society. The DXHPDS featured such notables as Noyes E. Tester, Loda Watts, Harry Uppensign, Lotta Chassis and Hal R. Lauder -- as well as limericks that skewered deserving lids:

Splashy-voiced Boomboom MacSwine When told that his gain's out of line, Is prompt to reply, If '8' is too high then why is it numbered to '9'? (May 1970)

First licensed in 1937 as W9BRD at 14, Newkirk was involved with radio all his life. After graduating from high school, he became a civilian radio operator in Washington, DC with station WAR; when World War II broke out, he joined the US Army as a member of the Army Signal Corps where he served in Florida, Papua-New Guinea and the Philippines. He remembered these times in his first QST article, "Christmas, 1944," which recounted a "heart-warming yarn involving the combination of the Amateur and the Christmas Spirit in far-off Hollandia."

After a stint as a radio operator with the Illinois State Police, Newkirk moved to Connecticut in 1947 where he worked at ARRL Headquarters as a W1AW Station Operator with a new call sign, W1VMW. It was while Newkirk was in Newington that then ARRL Communications Manager Ed Handy, W1BDI, asked Newkirk to take over the "How's DX?" from Byron Goodman, W1JPE. A few years later, Newkirk returned to his home state of Illinois to go to college. While in Illinois, he regained his W9BRD call sign and resumed his job with the Illinois State Police. He continued to write "How's DX?" from Illinois. Newkirk's last "How's DX?" column was published in February 1978. Newkirk retired from the State Police in 1986. In 1984, he was inducted into the CQ DX Hall of Fame as its 23rd member, and in 2002, he was the 87th inductee into the CQ Hall of Fame.

Newkirk was a former member of the ARRL and a member of the Radio Amateurs of Canada, the Ottawa Valley Mobile Radio Club, FISTS, the Morse Telegraph Club and the Quarter Century Wireless Association and QCWA Chapter 70. In May 2007, he was presented with the QCWA "70 Years Licensed" Golden Certificate and lapel pin, and in May 2010, with the QCWA Century Certificate.

In 1997, Newkirk married Betty, VE3ZBB, and moved to Canada, where he got the matching Canadian call sign VA3ZBB. A private family funeral will be held. Friends are invited to join the Newkirk Family at the Garden Chapel of Tubman Funeral Homes on Thursday November 22 from 2-4 PM for a celebration of Newkirk's life.

SCARCE ANTENNA GREASE IS AGAIN AVAILABLE!

rochester, NY craigslist > for sale / wanted > electronics email this posting to a friend

Avoid scams and fraud by dealing locally! Beware any deal involving Western Union, Moneygram, wire transfer, cashier check, money order, shipping, escrow, or any promise of transaction protection/certification/guarantee. *More info*

please flag with care:
miscategorized
prohibited
spam/overpost
best of craigslist

One tube of rare cb antenna grease - $250 (rochester)

Date: 2010-05-27, 3:37AM EDT
Reply to: sale-kebcm-1761777850@craigslist.org [Errors when replying to ads?]

For sale one tube of rare cb antenna grease. This stuff came out in the 60's.
It was developed by the Department of Defense for the armed services.
It was mainly used in the field on hand held units, tripling their range.
It is a closely guarded secret by technicians & HAM's. When the FCC found out
some amateur radio supply outlets had purchased a sizable quantity of the RF grease
through US Army & Navy surplus auctions, the FCC outlawed the sale of it in the US.
What the RF grease does is make your signal slide out your antenna faster and with less friction.
Because of this you get less RF friction (hysteresis). The results are:
lower SWR readings & increased power handling, the faster moving RF signal builds up a tremendous RF inertia,
resulting a higher DB gain on your signal, (like a slingshot effect throwing a faster & larger signal)
(typically 3.8-4.7 db gain) and 4x the power handling capacity. Modulation & SSB benefit a whopping 6 db gain.
over an untreated isotropic dipole antenna
lasts for about 6 mounths then, just wipe off any old grease and put some new on.
This is probably the best kept secret in amateur radio!
The guys at the shoot-out's wont tell you about this amazing secret!
Triple the RF output of a 200 watt box to 600 ERP, etc... (effective radiated power)
This RF grease also causes a very cool side efect if you feed over 100 watts into a treated antenna
you will see a cool purpleish-pink halo glowing around your antenna on key up at night, pulsating with your modulation !
(not to cool for the military, this is why they stopped using it!)
For now all I have is one 16oz. tube.
$250.00 FIRM

NEW ZEALAND ATV HOPEFULS WITH COFDM MODULATION

Here in New Zealand we don't have a lot spectrum in UHF range left for wide band modes like ATV. Without going into all of the history of why we have ended up like this. Basically the only band we have here for ATV is 23cm 1240 to 1300MHz as you can see it make a cross-band ATV repeater impossible to put together. This is why we have been lobbying here for greater access to the UHF spectrum.

With the change over from analog to digital Television at the end of 2013 our 50cm ATV band from 614 to 622MHz ,(E39) will come part of the new UHF commercial TV band. Therefore the Amateur users of this band have indirectly been caught up in this process of digital switch over. This has all come about due New Zealand not having standard UHF Amateur bands like in other parts of world. With all the planning that gone into digital switch over and the ZL amateurs having an existing interest we have a new ATV band to use at 60cm 502 to 510MHz (E25). This new band must conform to the New Zealand digital transmission standards for digital Television. This gives us any 8MHz mode within the DVB-T/T2 COFDM modulation system that can be used for a DATV repeater output.
…Grant ZL1WTT

I can understand why you need COFDM where you are but we have not been so lucky here in the UK. The "Digital Bonanza" has been sold off to the mobile phone companies for their 4G service.
…Mike G8ASI

Hi Mike,

As part of getting access to our new 60cm 502 to 510MHz, we need to use the New Zealand transmission standards for UHF digital TV channels, which is DVB-T/T2. This is the restriction that we need to work within as part getting a license to operate there.

We have had same happen here in NZ over the last 30 years, more and more spectrum taken from us. The only ATV band we have here below 1GHz is this new 60cm band with it restrictions. This is why it so important to bring all microwave bands above 1GHz into alignment world wide to stop this from happening.

As part of this we should be looking at world wide ATV DX band from 54 to 70MHz. With analog TV closing down in many countries the VHF low band is no longer required. Discussions are well underway here to get access to this spectrum. When this happens we can use any ATV modulation system we want here. I am planning on experimenting more with analog FM TV system as an ATV DX mode. I have had very good success here with FM TV on the 23cm band, easily out performing AM/VSB and digital QPSK. I would like to do these same tests on a 5m DX band and I'm sure I would get the same results but over a longer distance.

The problem we have had in the past as ATVers world wide has been doing our own thing. We need to look ATV as one group with common voice on issues that affect all of us. There is no way of getting around the fact that ATV is a wide band mode and we need make sure we can operate without any problems from other users.

Grant
ZL1WTT

DATV REFLECTOR REMINDER

Digital ATVers -

Help DATV by participating in the Digital ATV group.

If you're using or experimenting with DATV technologies currently, let the group know how you're using DATV
by sending a message to the group, adding a Link in the Links area and/or Uploading a File to the Files area.

There are already dozens of messages in the group's message log and
numerous files & links in the Files & Links areas available for review.

Please also let other ATVers, both Analog & Digital, who aren't members of the group know about the DATV group.

To join the group CTRL click on the following link http://groups.yahoo.com/group/DigitalATV/ and then click on the “JOIN THE GROUP” box.

LIGHTNING PROTECTION PROCESS: [PART I OF IV] INTRODUCTION

Reprinted from the Orange County Amateur Radio Club Inc. OARC Newsletter www.w6ze.org by permission.

This is a very interesting and informative article for all Hams, ATV and otherwise. Its remaining 3 parts will be in subsequent issues of the ATCO Newsletter. Suggestion: PolyPhasers new are about $62 as stated but if you can wait for the Dayton Hamvention, you can pick up used tested ones at the Polyphaser booth for about $30 each. Also, I have purchased used ones in the outside flea market for $15-20. WA8RMC.

Tech Talk #105 ***by Corey Miller - KE6YHX***

After attending the interesting lecture by Dennis Kidder, W6DQ, on grounding and lightning protection at the OCARC, I looked into grounding my rig and installing some lightning protection. The single-point-common-ground recommended by Dennis was easy enough; I already had an aluminum plate screwed to the bottom of my rig table for shelter purposes. I simply crimped tongue-rings onto some ground wires, screwed them to the plate, and ran a cable through to the ground on my new air conditioner; it runs straight back to the house breaker panel. The lightning protection took a while longer...almost two years...at a cost of $764.70 ($706.45 for materials and supplies, and $58.25 for extra tools). The following describes the making of the PolyPhaser panel, the driving of the ground rod, the CadWeld process, and the attachment of PL-259s to shorten the feed lines. Due to its length, I divided it into four sections for the coming months... **Making the PolyPhaser Panel**: It is recommended to place the lightning protectors outdoors. However, for convenience and organization, and to protect it from the elements, I located the PolyPhaser panel indoors, next to the wall pass-through to the outside. In making the PolyPhaser panel, bought first were six IS-50UX-C0 PolyPhasers (Figure I.1), seeing as there are six feed-lines; the aluminum was already on hand. Bought next was 20 feet of No. 4 welding cable from McFadden- Dale, enough to reach the proposed ground rod location. Next, the space on the wall was measured including the stud location, and the distance to the wall pass-through to the outside, where the cables were to come through. There was enough space above the bookcase for eight PolyPhasers. The metal used was .150 aircraft aluminum, and the lines were laid out allowing for a 1-inch border around the outside of the PolyPhasers including the SO-239 connectors, and a further 1-inch for a tab for the welding cable solder lug. Next, the aluminum was marked and the PolyPhasers were laid out, one below another, orienting them according to the **"ANTENNA"** and **"EQUIPMENT"** markings. In my configuration, the bolt-hole tabs are pointing upwards. Then, the first (top) bolt-hole was marked for, and drilled. To keep a practical bolt-hole drilling method, each one was marked with the previous PolyPhaser bolted down, and the next one positioned below it. To allow for two future PolyPhasers, I proceeded in this fashion for all eight positions. After the holes were drilled, the PolyPhasers were removed and the aluminum was cut with a jigsaw and a metal cutting bit. The angles were cut for the solder lug tab with a Dremel and a cutoff wheel. After the piece was cut, four holes for the wall-mounting screws were drilled—three along the left for the stud, a fourth in the upper right corner--and a fifth for the solder lug. Then, to finish-off the piece, the aluminum was scrubbed with a wire brush until the surface had a bright-white sheen, and the sharp edges were sanded down. After the metal was cut, the welding cable was ready to be attached to the copper solder lug. I made a few inquiries and found that an anvil/ die crimper was needed; this had to be ordered from Orvac because they were out-of-stock at the time. To make the crimp, the crimper anvil was put on another larger anvil, the welding cable was positioned in the solder lug, and the spring loaded die was snapped down. Then the top of the die was given a couple solid blows with a hammer, and the crimp was made. This particular die left a little "+" sign on the crimp. When all the pieces were ready, the PolyPhasers were bolted down, starting from the top, and a little dab of conductive silver grease was used between the PolyPhasers and the aluminum panel. The bolts were placed in from the back so only the thickness of the head would space the panel from the wall. Lastly, the solder lug was bolted down to the front surface with a dab of conductive grease, and the panel was screwed to the wall. The hex-head sheet metal screws used to attach the panel to the wall provides better torque than Phillips. With the PolyPhaser panel in place, I then started the process of re-routing the feed lines through the wall pass-through, and connecting them to the PolyPhasers. I bought some custom-length feed lines from CableXperts to keep things neat and organized. (See Figure I.2).

Figure I.1: IS-50UX-C0 PolyPhasor.
Range:
1.5 – 50 MHz 2000 W
50 – 220 MHz 375 W
220 – 400 MHz 125 W
Insertion Loss: 0.1 dB.
SWR 1.2/1.5 : 1
Connectors: SO-239.
Typical Price: $62

Figure I.2: The PolyPhaser panel and wall pass-through.

Next time: Driving the Ground Rod...
…Corey Miller KE6YHX - corwinv@socal.rr.com

STREAMING ATV TO THE BATC WEBSITE

The interest in streaming ATV video to BATC has increased. Therefore, the following examples illustrate how to achieve this. First, join BATC at https://www.batc.org.uk/shop/ . The cost is about $6.00 per year (It varies with US to Pound conversion) and you get their CQ ATV quarterly Newsletter Emailed to you as a bonus. Then set up a user name and password to login. They will need a valid E-Mail address which will take you to the following login page. https://www.batc.org.uk

- ***Home***
- ***Online shop***
- ***Reset Password***
- ***Register***
- ***Login***
- ***Contact us***

Login

Please enter your login details

Username

Password

If you have forgotten your login details, please Click Here to be emailed a new password.

After login, this page will appear.

You are logged in as: your user name

Welcome (your first Name), you last logged in (date and time)

Your membership number is: XXXX
Please select an option from the menu on the left

- ***Home***
- ***Main Menu***
- ***Edit account***
- ***Orders***
- ***Online shop***
- ***Download CQ-TV***
- ***SMS Services***
- ***Email Services***
- ***Certificate***
- ***Membership***
- ***Manage Chat***
- ***Manage Streams***
- ***Upload Videos***
- ***Logout***
- ***Contact us***

After you have selected “Manage Streams” this page will appear.

- ***Home***

- ***Main Menu***
- ***- List Streams***
- ***- Add new Stream***
- ***Logout***
- ***Contact us***

List of your streams
You currently have 0 stream configured from a maximum of 1

Select “Add new Stream” from the list. This page will appear.

You are logged in as: Your User Name

batc

- ***Home***
- ***Main Menu***
- ***- List Streams***
- ***- Add new Stream***
- ***Logout***
- ***Contact us***

Your stream details

Enter valid details then click Save

Stream : xxxxxxxx
Type : Live
Chat life : 28 ***Days***
Restrict chat :

Title : your call
Short url :

Description
Live Home
:

Active :

Un-tick to temporarily remove from public view
In order to broadcast on this live stream, please install the latest version of Adobe's Flash Media Encoder at
http://www.adobe.com/products/flash-media-encoder.html and enter the following settings:

FMS URL: rtmp://fms.batc.tv/live/xxxxxxxx
Backup URL:
Stream: xxxxxxxx

The “ Stream” is an 8 character string given to you by BATC. It appears in the Stream box when you create your new stream. Replace the “xxxxxxxx” above with this string.
Click on CONNECT , then click on START and you’re streaming video to the BATC server.
…N8OCQ

CONSTRUCTION ARTICLE INDEX

The following list is an index of all construction related material that has appeared in the ATCO Newsletter since its inception in the early '80's. This is a handy reference for that particular construction article that you knew existed but didn't want to wade through each issue to find it. All Newsletters below are also listed in order in the ATCO homepage under "Newsletters". CTRL Click on www.atco.tv. Once you locate the Newsletter section, the displayed list can then be re-sorted as needed by clicking on the "date" in the header.
…Bob N8OCQ

Issue	Page(s)	Article
Vol 1 II	5	439 Beam
Vol 2 I	4	439 Beam
Vol 2 II	8,9	439 Parabolic Ant
Vol 2 II	9	Video Modulator
Vol 2 III	7	1296 Ant 45 Ele loop yagi
Vol 2 III	10	RF Power Indicator (in-line) for 1296 MHZ
Vol 2 SE	2,3	Diode Multiplier for 23 CM
Vol 2 SE	4,5	1296 MHZ 10 Watt Solid State Linear Amp
Vol 4 I	3	RF/Video Line Sampler
Vol 4 II	3	P-Unit Meter
Vol 4 II	7,10,11	UHF Gated Noise Source
Vol 4 II	12	420 – 450 Broom Handle Rhombic Ant
Vol 4 III	4,8	25 Element 1.26 Loop Yagi
Vol 4 IIII	6	Video Modulator (Tube Type)
Vol 5 I	3	Video Modulator One Transistor
Vol 5 II	4,7	900 MHZ Yagi Ant
Vol 5 II	6	Video Modulator for 2C39 Final
Vol 5 III	3	440 MHZ Hidden Transmitter Finder
Vol 6 I	3	Video Line Amp
Vol 6 I	8	25 Ele 910 MHz Loop Yagi
Vol 6 II	4,6,7	Microwave Oven ATV Xmiter
Vol 6 II	5	Matching a Quad Driven Ele
Vol 6 II	8	Power Divider for 33CM
Vol 9 IIII	5,7	16 Ele Loop Yagi for 439.25 MHz
Vol 10		No Articles
Vol 11 II	4,5,6	439 48 Ele Collinear Ant
Vol 11 IIII	7	1280 MHZ Cavity Filter
Vol 12 I	6,7,8	439 & 1200 Horz Polarized Mobile Ant
Vol 12 II	5,6,7	ATV Line Sampler
Vol 12 II	10	439 & 1280 Interdigital Filter(s)
Vol 12 III	6,7,8	439 Cheap Attic Ant
Vol 13 I	9, 10	High Level Modulator for ATV
Vol 13 II	5	VGA to NTSC Converter for Computer
Vol 13 III	9, 10	AM Video Modulator
Vol 13 IIII	4	1200 MHZ Transistor Linear Amp
Vol 13 IIII	6	900 & 1200 MHz Loop Yagis
Vol 14 IIII	8	439 31 EleYagi
Vol 14 IIII	12, 13	1250 MHZ FM ATV 3 Watt Xmiter
Vol 15 I	16	427.25 Horz J-Pole Ant
Vol 15 II	14	2400 MHZ Loop Yagi
Vol 15 III	8	Wavecom Modification
Vol 15 III	12,13,14	2.4 Gig Antenna's
Vol 16 II	20	2.4 Gig Helix Ant
Vol 16 IIII	4	1280 MHZ Loop Yagi
Vol 17 I	14, 15	Video Amp (Multi Output)
Vol 18		No Articles
Vol 19 IIII	4	Pwr Supply for 28 Volt Ant Relay
Vol 20 III	9, 10	Video Sampler
Vol 21 II	4	RF Pwr Amp for 900/1200 MHZ
Vol 21 II	14	10-14 Volt Doubler for 28 Volt Ant Relays
Vol 21 III	5	S-Video To Composite Adaptor
Vol 21 IIII	3,4	Video Noise Rejection Amp
Vol 21 IIII	14,15,16 ,17	"S" Meter For Comtech Boards
Vol 22 I		No Articles
Vol 22 II	10	1260 MHZ Cavity Filter
Vol 22 III		No Articles
Vol 22 IIII		No Articles
Vol 23 I		No Articles
Vol 23 II	5,6	Linear 60 Watt For 70CM
Vol 23 II	8,9	Video Modulator Update
Vol 23 III		No Articles
Vol 23 IIII		No Articles
Vol 24 I	13	RF Sniffer For 2.4 GIG
Vol 24 II		No Articles
Vol 24 III	3	Quantum 1500 Rec Tuner Mod
Vol 24 IIII	9	Battery Recharge Ckt
Vol 25 I		No Articles
Vol 25 II	6,7	Comtech TX Module Improvement
Vol 25 III	11	Comtech TX Module Improvement Correction
Vol 26 I	6	Isolator (Circulator) Mod. 850 To 1260 MHz
Vol 26 II	5,6	Comtech 1200 MHz rec. module improvements
Vol 26 III		No Articles
Vol 26 IIII	9	Remote Touch Tone Decoder For Your Shack
Vol 27 I	10	ATV Low Pass Filter (427 Mhz)
Vol 27 II	15	PictureTel Camera Data Cable Wiring
Vol 27 II	10	ATV Low Pass Filter (427 Mhz)
Vol 27 II	15	PictureTel Camera Data Cable Wiring
Vol 27 III		No articles
Vol 27 IIII		No articles
Vol 28 I	11	Super 1280 MHz amplifier
Vol 28 II		No articles
Vol 28 III		No articles
Vol 28 IIII		WB8LGA Antenna switching system
Vol 29 I		No articles
Vol 29 II		1280 MHz Hi Gain Panel Antenna
Vol 29 III		No articles
Vol 29 IIII		No articles

This is the complete list for construction articles shown in past ATCO newsletters. The page numbers listed may not match the actual page in the Newsletter. They are the numbers shown in the PDF file. Some early issues are missing. Art did not have a copy of every year. This list is complete through Volume 29 IIII.
…Bob N8OCQ

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 them with information. New members are our group's lifeblood so it's important we aggressively recruit new faces.

KD8TIZ Bob Holden, Alexandria, Ohio
KD8KDM Mike Bowlus, St Paris, Ohio
…WA8RMC

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. To see additional details for each Hamfest, Control Click on the blue title and the magic of the Internet will give you the details complete with a map! To search the ARRL Hamfest database for more details, CTL click ARRLWeb: Hamfest and Convention Calendar .
…WA8RMC.

01/27/2013 | Tusco ARC Hamfest

Location: Strasburg, OH
Type: ARRL Hamfest
Sponsor: Tusco Amateur Radio Club
Website: http://www.tuscoarc.org

02/03/2013 | Winter Hamfest at NEW LOCATION!

Location: Elyria, OH
Type: ARRL Hamfest
Sponsor: Northern Ohio Amateur Radio Society
Website: http://www.NOARS.net

02/17/2013 | Mansfield Mid Winter Hamfest

Location: Mansfield, OH
Type: ARRL Hamfest
Sponsor: InterCity Amateur Radio Club
Website: http://www.w8we.org

02/23/2013 | IBRO Hamfest & Computer Show

Location: Brookville, OH
Type: non-ARRL Hamfest
Sponsor: International Brotherhood of Radio Operators
Website: http://www.kd8knx.org

03/17/2013 | TMRA Radio/Computer/Electronics Hamfest

Location: Perrysburg, OH
Type: ARRL Hamfest
Sponsor: Toledo Mobile Radio Association
Website: http://www.tmrahamradio.org

03/23/2013 | MOVARC HamFest

Location: Gallipolis, OH
Type: ARRL Hamfest
Sponsor: Mid-Ohio Valley Amateur Radio Club
Website: http://sites.google.com/site/midohiovalleyarc

04/13/2013 | 59th Annual Hamfest

Location: Cuyahoga Falls, OH
Type: ARRL Hamfest
Sponsor: Cuyahoga Falls Amateur Radio Club
Website: http://www.cfarc.org/hamfest2013.html

04/20/2013 | Jackson County ARC Hamfest

Location: Jackson, OH
Type: ARRL Hamfest
Sponsor: Jackson County ARC

04/28/2013 | Athens Hamfest

Location: Athens, OH
Type: ARRL Hamfest
Sponsor: Athens County Amateur Radio Association
Website: http://ac-ara.org/

INTERNET ATV HOME PAGES (list verified 01/21/12)

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://atn-tv.org/ATN.htm	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
www.bratsatv.org.	Maryland, Baltimore Radio Amateur Television Soc. (BRATS)
www.qsl.net/k7atv/	Salem, Oregon Amateur Television Associations-Salem
http://www.qsl.net/kd2bd/atv.html	New Jersey, Brookdale ARC N2SMT/R repeater
http://www.ipass.net/~teara/menu3.html	North Carolina, Triangle Radio Club (TEARA)
http://www.oregonatv.org	Oregon, Portland OATVA ATV Association W7AMQ/R repeater
http://members.bellatlantic.net/~theojkat/	Pennsylvania, Phila. Area ATV W3PHL repeater
http://www.hotarc.org/atv.html	Texas, WACO Amateur TV Society (WATS)
www.qsl.net/ww7ats	Washington, Western Washington Television Soc. (WWATS)
http://www.shopstop.net/bats/	Wisconsin, Badgerland Amateur Television Society (BATS)
http://www.kcatvg.org	Kansas, Kansas City ATV Group WR0ATV repeater (KCATVG)

Foreign homepages

http://atv.hamradio.si	Slovenia ATV
http://www.batc.tv.	British ATV club (BATC)
http://www.**batc.org.uk/cq-tv**	British ATV Club and CQ-TV Magazine

Misc other ATV related sites

http://www.atv-tv.org	The Amateur Television Directory
http://www.atn-tv.org	Amateur Television Network
http://www.atvquarterly.com	Amateur Television Quarterly Magazine
http://gb3lo.camstreams.com	"GB3LO" Repeater Camstream westoft, UK
http://www.ham-radio.com/sbms	"SBMS" San Bernardino Microwave Society
http://www.qsl.net/kc6ccc/	"METS" Microwave Experimenters Television System
http://www.icircuits.com/store/index.html	Intuitive Circuits ATV products
http://www.atvresearch.com/	ATV Research Co, cameras & related security products
http://www.downeastmicrowave.com/	Down East Microwave, UHF/Microwave parts
http://www.directivesystems.com/	Directive Systems, UHF/VHF/Microwave antennas
http://www.m2inc.com/	M2 Antenna Systems
http://www.hamtv.com/	PC Electronics, ATV equipment

TUESDAY NITE NET ON 147.48 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 followed by late checkin requests or comments. We rarely chat for more than an hour so please join us if you can.

ATCO TREASURER'S REPORT - de N8NT

OPENING BALANCE (10/20/12)…….$2101.43
RECEIPTS(dues)…. ..$ 140.00
Fall Event expenses……$ (216.88)
Paypal fee……..$ (1.47)
CLOSING BALANCE (01/18/13)…… $2023.08

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)

TV Transmitters: 427.25 MHz VSB AM mod, 1258 MHz FM mod, 1268 MHz QPSK digital, 2433 MHz FM mod, and 10.350 GHz FM mod.
(multipole filters in output lines of all transmitters)
Output Power - 427.25 MHz: 50 watts average 100 watts sync tip
1258 MHz: 40 watts continuous (Analog ATV)
1268 MHz 20 watts continuous DVB-S (QPSK) DATV SR=3.125Msps, FEC=3/4 , 2 video channels.
(PMT PID:32, Video PID:162, Teletext PID:304, PCR PID:133, Audio PID:88, Service ID:5004)
2433 MHz: 15 watts continuous
10.350 GHz: 1 watt continuous
Link transmitter - 446.350 MHz: 5 watts NBFM 5 kHz audio

Identification: 427, 1258, 1268, 2433, 10.350 GHz transmitters video identify every 15 min. with ATCO & WR8ATV on 6 different screens.
1268 MHz digital & 10.350 GHz analog - 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
1258 MHz - Diamond vertically polarized 12 dBd gain omni (Analog ATV)
1268 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: 147.480 MHz - F1 audio input with touch tone control. (Input here = output on 446.350)
439.250 MHz - A5 NTSC video with FM subcarrier audio, lower sideband. (Input here = output on all TV transmitters)
449.975 MHz - F1 audio input aux touch tone control. 131.8 Hz PL tone. (Input here = output on 446.350).
1280.00 MHz - F5 video analog NTSC. (Input here = output on all TV transmitters)
1280.00 MHz - DVB-S (QPSK) digital SR=4.167Msps, FEC=7/8, PCR PID:33, Video PID:33, Audio PID:49
This input feeds all transmitters and also directly to 1268 MHz digital output channel 2. Therefore, 1280 DATV input and 439 or 2398 can be ON at the same time. (Input here = output on all TV transmitters)
2398.00 MHz - F5 video analog NTSC. (Input here = output on all TV transmitters)
10.45 GHz - F5 video analog NTSC

Receive antennas: 147.480 MHz - Vert. polar. Diamond 6dBd dual band (also used for 446.350 MHz link output)
439.250 MHz - Horizontally polarized dual slot 7 dBd gain major lobe west
1280.00 MHz - Diamond vertically polarized 12 dBd gain omni
2398.00 MHz - Comet Model GP24 vertically polarized 12 dBd gain omni
10.45 GHz - Commercial 40 slot waveguide horizontally polarized 16 dBd gain omni

Auto mode Input control:

Touch Tone	Result (if third digit is * function turns ON, if it is # function turns OFF)
00*	turn transmitters **on** (enter manual mode-keeps transmitters on till 00# sequence is pressed)
00#	turn transmitters **off** (exit manual mode and return to auto scan mode)
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.
003	Select room camera (**Always exit by selecting 001**)
002	Select roof camera. Select room cam first then 002 for roof cam. (**Always exit by selecting 001**)
001	Select 2398 MHz receiver for auto scan to continue

Manual mode Functions:

00* then 1 for Ch. 1 Select 439.25 receiver
00* then 2 for Ch. 2 Select 1280 digital receiver
00* then 3 for Ch. 3 Select 1280 analog receiver
00* then 4 for Ch. 4 Select 2398 receiver
00* then 5 for Ch. 5 Select video ID (6 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 1280 MHz digital receiver scan enable
03* or 03#	Channel 3 1280 MHz analog receiver scan enable
04* or 04#	Channel 4 2398 MHz scan enable
A1* or A1#	Manual mode select of 439.25 receiver audio
A2* or A2#	Manual mode select of 1280 digital receiver audio
A3* or A3#	Manual mode select of 1280 analog 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#	C1* to disable 427 MHz transmitter, C1# to enable it
C2* or C2#	C2* to disable 1268 MHz digital transmitter, C2# to enable it

ATCO MEMBERS as of January 2013

Call	Name	Address	City	St	Zip	Phone
KD8ACU	Robert Vieth	3180 North Star Rd	Upper Arlington	OH	43221	614-457-9511
KC3AM	Dave Stepnowski	735 W Birchtree Ln	Claymont	DE	19703	
AH2AR	Dave Pelaez	1348 Leaf Tree Lane	Vandalia	OH	45377	
W8ARE	Larry Meredith III	6070 Langton Circle	Westerville	OH	43082-8964	
KC8ASF	Tom Pallone	3437 Dresden St.	Columbus	OH	43224	614-268-4873
WB4ATV	Don Coy	489 Crystal Lake Drive	Melbourn	FL	32940	
NN8B	Don Kemp	6384 Camp Blvd.	Hanoverton	OH	44423	
KC8BTX	Dudley Field	357 N. Ridge Heights Dr	Howard	OH	43028	
W6CDR	Wynn Rollert	1141 Pursell Ave	Dayton	OH	45420	937-256-1772
WB8CJW	Dale Elshoff	8904 Winoak Pl	Powell	OH	43065	614-210-0551
N8COO	C Mark Cring	3941 Three Rivers Lane	Groveport	OH	43125	614-836-2521
N8CXI	Garry Cotter	2367 Northglen Drive	Columbus	OH	43224	
N9CX	Bill Erwin	231 Gateside Ct.	Gahanna	OH	43230	
WB8CXO	Mike Young	289 Gayloard Dr	Munroe Falls	OH	44262	
N8CZO	Mike Flaharty	1025 Josiah Morris Road	London	OH	43140	
N3DC	William Thompson	6327 Kilmer St	Cheverly	MD	20785	301-772-7382
WA8DNI	John Busic	2700 Bixby Road	Groveport	OH	43125	614-491-8198
K8DMR	Ron Fredricks	8900 Stonepoint Ct	Jennison	MI	49428-8641	
K8DW	Dave Wagner	2045 Maginnis Rd	Oregon	OH	42616	419-691-1625
WB8DZW	Roger McEldowney	5420 Madison St	Hilliard	OH	43026	614-876-6033
KC8EVR	Lester Broadie	108 N Burgess	Columbus	OH	43204	
WA8FLY	Rod Shaner	16012 London Rd.	Orient	OH	43146	740-279-3614
N8FRT	Tom Flanagan	1751 N Eastfield Dr.	Columbus	OH	43223	
W8FTX	George Biundo	3675 Inverary Drive	Columbus	OH	43228	614-274-7261
WB2FVE	Craig Blaine	1195 Hooverview Drive	Westerville	OH	43082	614-891-5378
W8FZ	Fred Stutske	8737 Ashford Lane	Pickerington	OH	43147	
KB8GHW	Mike Amirault	5560 Refugee Rd.	Baltimore	OH	43105	614-859-7005
WA8HFK,KC8HIP	Frank & Pat Amore	3630 Dayspring Dr	Hilliard	OH	43026	614-777-4621
W4HTB	Henry Cantrell	905 Wrenwood Dr.	Bowling Green	KY	42103	270-781-9624
WG8I	Chris Vojsak Sr,	3536 W Henderson Rd	Columbus	OH	43220-2232	614-203-6000
WB2IIR	Michael Anthony	370 Georgia Drive	Brick	NJ	08723	
N8IJ	Dick Knowles	1799 Homeward Ave	Lima	OH	45805	
W8KHP	Allan Vinegar	2043 Treetop Lane	Hebron	Ky	41048	
WA8KQQ	Dale Waymire	225 Riffle Ave	Greenville	OH	45331	937-548-2492
N8LRG	Phillip Humphries	3226 Deerpath Drive	Grove City	OH	43123	614-871-0751
WB8LGA	Charles Beener	2540 State Route 61	Marengo	OH	43334	
KA8LWR	Mel Alberty	1645 Olentangy Road	Bucyrus	OH	44820	419-468-2971
KD8KDM	Mike Bowlus	127 W. Plum St. PO box 221	Saint Paris	OH	43072	
W8MA	Phil Morrison	154 Llewellyn Ave	Westerville	OH	43081	
KA8MFD	Ross McCoy	227 S Boundary St PO Box 9	Edison	OH	43320	
KA8MID	Bill Dean	2630 Green Ridge Rd	Peebles	OH	45660	
W0MNE	Mike Doty	4300 Winchester Southern Rd	Circleville	OH	43113	740-420-9060
N8NT	Bob Tournoux	3569 Oarlock Ct	Hilliard	OH	43026	614-876-2127
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	
W6ORG,WB6YSS	Tom, Maryann O'Hara	2522 Paxson Lane	Arcadia	CA	91007-8537	626-447-4565
KE8PN	James Easley	1507 Michigan Ave	Columbus	OH	43201	614-421-1492
W8PU	Gary Poland	3347 S.R. 28	Midland	OH	45148	
W3RCJ	Thomas Farrell	1912 Burnwood Road	Baltimore	MD	21239	
WA6RCW	Ed Mersich	34401 Columbine Trl W	Elizabeth	CO	80107-7866	
WA8RMC	Art Towslee	438 Maplebrooke Dr W	Westerville	OH	43082	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	2895 Sunbury Rd	Galina	OH	43021	
W8RVH	Richard Goode	9 Master Street Apt A	Springfield	OH	45504	937-478-6488
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	614-579-0522
W8SJQ	Rocky Eramo	795 Riverbend Ave	Powell	OH	43065	614-207-2740
W8SJV, KA8LTG	John & Linda Beal	5001 State Rt. 37 East	Delaware	OH	43015	740-369-5856
KB8SSH	Mike Cotts	3424 Homecroft Dr	Columbus	OH	43224	614-371-7380
W3SST	John Shaffer	6706 Gilette Dr	Reynoldsburg	OH	43068	614-751-0029
W8TIP	Gene Hawkins	1720 Liberty Street	Toledo	OH	43605	
KD8TIZ	Bob Holden	5161 Goose Lane Rd	Alexandria	OH	43001-9730	614-562-8441
K8TPY, K8FRB	Jeff & Dianna Patton	3886 Agler Road	Columbus	OH	43219	
NR8TV	Dave Kibler	243 Dwyer Rd	Greenfield	OH	45123	937-981-1392
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
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	

Call	Name	Address	City	St	Zip	Phone
KB8YMQ	Jay Caldwell	4740 Timmons Dr	Plain City	OH	43064	
KC8YPD	Joe Ebright	3497 Ontario St	Columbus	OH	43224	
N8YZ	DaveTkach	2063 Torchwood Loop S	Columbus	OH	43229	614-882-0771
W8ZCF	Ferrel Winder	6686 Hitching Post Ln.	Cincinnati	OH	45230	

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. All Newsletters are sent via Email unless the member does not have an internet connection.

The membership period is from January 1ST to December 31ST. New members joining before August 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. For those joining after August 1ST, they can elect to receive a complementary October issue with the membership commencing the following year or get the previous (3) Newsletters. Your support of ATCO is welcomed and encouraged.

Membership expiration notices will be sent out in January in lieu of Newsletters for those with an expired membership.

NOTE: Dues records on your individual portion of the ATCO website are listed as the date money is received and shows due one year from that date. The actual expiration is on January of the following year so we can keep the dues clock consistent with the beginning of each year.

ATCO CLUB OFFICERS

President: Art Towslee WA8RMC
V. President: Ken Morris W8RUT
Treasurer: Bob Tournoux N8NT
Secretary: Mark Cring N8COO
Corporate trustees: Same as officers

Repeater trustees: Art Towslee WA8RMC
Ken Morris W8RUT
Dale Elshoff WB8CJW
Statutory agent: Tom Bloomer KC8WRI
Newsletter editor: Art Towslee WA8RMC

ATCO MEMBERSHIP APPLICATION

RENEWAL ○ NEW MEMBER ○ DATE _____
CALL _____
OK TO PUBLISH PHONE # IN NEWSLETTER YES ○ NO ○
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 ○ MONEY ORDER ○

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 and fill out the “pay ATCO dues” section. Alternately, you can use the ATCO web site www.atco.tv/PayDues.aspx directly. Credit card 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
438 Maplebrooke Dr. W
Westerville, Ohio 43082

FIRST CLASS MAIL

REMEMBER...CLUB DUES ARE NEEDED.
CHECK THE
MEMBERS PAGE OF ATCO WEBSITE FOR THE EXPIRATION DATE.
SEND N8NT A CHECK OR USE PAYPAL IF EXPIRED.