

A.R.A.T.S

Coherer

The official Newsletter of The Amateur Radio Association of The Tonawandas, Inc. - since 1954

January 2021

Volume 3 Issue 1

EDITOR'S MESSAGE

Hello Members, a lot of things have been going on behind the scenes. This month's Coherer is going to catch you up with most of it, if not all of it. We are not having any meetings at City Hall, as the City of Tonawanda Mayor has closed City Hall after work programs and special happenings which we fall under. We are using Virtual meetings. Stay safe and healthy.

Here are some locations you can take a VE Exam in place of ARATS.

Lancaster ARC: John H. Maxwell
(716) 404-9256 or
maxwell@acsu.buffalo.edu

South Towns AMS (WB2ELW)
Robert A. Koster (716)649-7272
Rkoster53@roadrunner.com

Lockport Amt. Radio Assoc.



Remember NO meeting's the 3rd. Wednesday at City Hall, City of Tonawanda 200 Niagara Street, Tonawanda, NY.

Unfortunately, several setbacks in the recovery from the COVID-19 pandemic make necessary the difficult decision to cancel Hamvention 2021. Hundreds of volunteers have been working to do everything necessary to bring this Hamvention to the many amateur radio enthusiasts and vendors who support the Dayton Hamvention.

Vaccine distribution both in the United States and around the world is lagging behind what was planned. In addition, the emergence of more communicable form of COVID-19 virus increases the potential for further public health problems in the next few months. We make this difficult decision for the safety of our guests and vendors.

President's Message

Good by 2020! Welcome 2021 Cheers to the new year that it will be a better one! when the ball came down at midnight, I think I could almost hear a sigh of relief that the year was coming to an end.

I have taken over the ARATS website and after looking at many different web hosting sites I have decided on one, I also redesigned the ARATS web page.

W2VCI.com is now up and running and you can access it by either going to the ARATS Facebook page or by going directly to W2VCI.com, I hope you will find this page especially useful as it has a lot of information and many pictures from our last picnic and field day.

Bill N2WUT received some used ham equipment from a member who became a silent key and after giving the radios a once over checking to see if all the equipment is in good working order, I will be posting the items for sale in the Facebook Items page.

If you have any used ham equipment that you want to sell, please send me an email with pictures and contact number and I will post it on the items page for you.

Do not forget that for January's meeting on Wednesday 20th at 7pm Paul W1SEX will be hosting a zoom meeting, his topic on that night will be Oscilloscopes.

One week prior to the meeting I will send out the meeting ID number and a Password for easy access to zoom, Paul will have the zoom meeting up and running.

If you do not get an email from me on the Wednesday, the 13th. Send me yours at bobkc2szq@yahoo.com so I can add it to my list.

In conclusion I would like to wish you a Happy Healthy and Safe New Year, and I hope to see everyone soon when we get to do an in-person ARATS meeting.

Just a reminder that all ARATS board meetings are on hold for now!

Dues are due you can download and print out the new application from the ARATS web page.

73's See you on zoom.

Stay Safe,

Your ARATS President.

Bob Fleischauer. KC2SZQ.

FCC to Require Email Address on Applications Starting on June 29, 2021

12/31/2020

Effective on June 29, 2021, amateur radio licensees and candidates must provide the FCC with an email address on all applications. If no email address is included, the FCC may dismiss the application as “defective.”

On September 16, the FCC adopted a *Report and Order* ([R&O](#)) in WT Docket 19-212 on “Completing the Transition to Electronic Filing, Licenses and Authorizations, and Correspondence in the Wireless Radio Services.” The *R&O* was [published](#) on December 29 in the *Federal Register*. The FCC has already begun strongly encouraging applicants to provide an email address. Once an email address is provided, the FCC will email a link to an official electronic copy of the license grant. An official copy will also be available at any time by accessing the licensee’s password-protected Universal Licensing System (ULS) account.

Licensees can log into the ULS [License Manager System](#) with their FRN and password at any time and update anything in their FCC license record, including adding an email address. For questions or password issues, call the CORES/FRN Help Line, (877) 480-3201 (Monday – Friday, 1300 – 2300 UTC) or [reset the password](#) on the FCC website.

The only way to refrain from providing an email address on an application would be to submit a request to waive the new rule, providing justification for the request. (The FCC would not be obliged to grant such a request.)

Under Section 97.21 of the new rules, a person holding a valid amateur radio station license “must apply to the FCC for a modification of the license grant as necessary to show the correct mailing and email address, licensee name, club name, license trustee name, or license custodian name.” For a club or military recreation station license, the application must be presented in document form to a club station call sign administrator who must submit the information to the FCC in an electronic batch file.

Under new Section 97.23, each license must show the grantee’s correct name, mailing address, and email address. “The email address must be an address where the grantee can receive electronic correspondence,” the amended rule will state. “Revocation of the station license or suspension of the operator license may result when correspondence from the FCC is returned as undeliverable because the grantee failed to provide the correct email address.”

Yes, All My Coax Cables Are 75 Ohms (and everything works OK!)

CO2KK exposes some myths about using 75-ohm feedline with 50-ohm rigs and shows us how to build a "cotangent transformer," a simple matching device to make it all work.

By Arnie Coro, CO2KK*

How many times have you heard that 50-ohm cable is a must? Equipment instruction manuals, advice from the experts, and antenna handbooks all seem to agree that present-day amateur radio technology is all set for 50-ohm impedance devices *only*.

Of course, you probably haven't had the opportunity to actually *measure* your transceiver's real output impedance, with really professional instruments. But if you ever do, be ready for quite surprising numbers coming out of those dials! I'll give you a hint—the reading probably won't be 50 ohms.

The 50-Ohm Myth

But let's go back to the myth: "50-ohm cable or nothing!" Now, reading that last

**Arnie Coro, CO2KK, is a professor at the University of Havana and broadcasts two weekly radio shows on Radio Havana's shortwave service—"DXers Unlimited," devoted to SWLs and other radio hobbyists; and "Breakthrough," a science and technology program. A licensed ham since age 17, Arnie's main interests are VHF/UHF, HF propagation research and promoting amateur radio among young people.*

line, maybe your mind went to that tail end of low-loss, 75-ohm CATV cable that the technician at the local cable company offered just for the asking not too long ago. Or perhaps you remembered what you paid for the latest run of 50-ohm coax for your new 2-meter antenna, and you hurriedly compared it to what an equivalent run of 75-ohm TV-type cable would have cost. And maybe, you're now thinking how many newcomers to the hobby could get started at substantial savings by using lower cost 75-ohm TV cable for their rigs.

Keep thinking about possible sources of 75-ohm coaxial cable, and I'll happily show you how to use it in many applications, *without the slightest chance of damaging your transmitting equipment.*

No Difference on Receive

Thorough testing of 75-ohm coax used in place of 50-ohm cables for receiving applications shows practically *no detectable difference*, even at frequencies as high as 150 MHz. Try it yourself. Measure a length of 75-ohm cable to replace an equal length of 50-ohm coax, use the same type of connectors, arrange your setup so that you may switch cables easily, and watch your results.

If the 75-ohm cable has the same kind of dielectric and the shield or braid coverage is equivalent to that of the 50-ohm coax it replaces, signals from 100 kHz to 150 MHz will show practically no measurable difference.

I've conducted this experiment time and again to show my friends what actually happens. My test bed is a typical receiving setup for SWLing (shortwave listening), using a broadband Terminated Folded Dipole (TTFD) antenna covering 6 to 30 MHz. The antenna is located about 100 feet (approximately 30 meters) from the receiver.

Changing the 50-ohm coaxial cable for an equal length of 75-ohm cable, of the same average quality, produces no measurable difference on signals received.

For those really tough-to-convince guys, I use a very low power signal source located about 10 wavelengths away from the antenna. The solid-state, crystal-controlled 10-meter source is installed at my closest ham neighbor's shack (about a city block away) so I can run the tests around 28.5 MHz with the 10-meter band closed and have a very stable signal at the receiving antenna. Again, changing from the 50-ohm RG-213 to a 75-ohm RG-11/U makes no difference on any of the receivers I've tried.

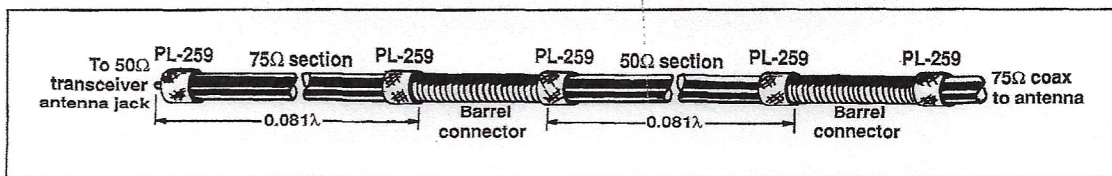


Figure 1. The cotangent transformer. Two .081-wavelength pieces of coax, one 50-ohm and the other 75-ohm, connected as shown, allow you to use lower-cost 75-ohm feedline with no loss in signal strength.

REMINDERS

Membership is open to anyone interested in Amateur Radio. Regular dues are \$20 a year. An additional one-time fee of \$8 exists for new membership, which includes an ARATS name badge. Other rates are also available. Applications are available at any ARATS Meeting. For more information, please contact any ARATS member.

As of right now the ARATS website is up and running, at w2vci.com

ARATS WEEKLY

NETS

2Meter Net Every Thursday at 8:30 pm
146.955Mhz - offset PL 151.4
Net Controllers many

6Meter Net Every Monday at 8 pm
50.200 MHz
Net Controller K2LEH

10Meter Net Every Tuesday at 8pm
28.330 MHz
Net Controller N2UHJ

Bulletins 2m Saturday 9pm

The 6 meter is not an ARATS Net

The Amateur's Code

The Radio Amateur is:

Considerate: Never knowingly operating in such a way as to lessen the pleasure of others.

Loyal: Offering loyalty, encouragement and support to other amateurs, local club and the American Radio Relay league, through which Amateur Radio in the United States is represented nationally and internationally.

Progressive: With knowledge abreast of Science, a well built and efficient station and operation beyond reproach.

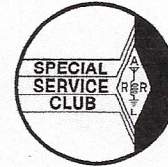
Friendly: With slow and patient operation when requested friendly advice and counsel to the beginner, kindly assistance co-operation and consideration for the interests of others. These are the hallmarks of the amateur spirit.

Balanced: Radio is an avocation, never interfering with duties owed to family, job, school or community.

Patriotic: With station and skilled always ready for service to country and community.



ARATS Membership Application



Amateur Radio Association of the Tonawandas
P.O. Box 430, North Tonawanda, New York 14120-0430

As a paid member, you will receive an electronic copy of the ARATS Coherer Newsletter

Dues are payable at the time of application. The following dues schedule applies:

1. **New Member:** \$20.00 per year, plus \$8 new member fee which includes ARATS ID badge.
2. **Renewal Member:** \$20 per year (Dues paid in Nov. or Dec. will carry through the next calendar year.
3. **Family Membership:** \$2 per year per person. (Immediate family members living at the same address).
4. **Out of Town Membership:** (Perm., 75+ miles from North Tonawanda, voting privileges by mail)
5. **Student Membership:** \$10 per year. (full time students up 12th grade. Includes new membership fee. If applicable.
6. **Special membership:** Varies (Only for qualifying memberships, i.e.VE session new hams, life members, others)

Personal Information

Name on Badge: _____ **DOB:** _____

Name: _____ **Call:** _____

Street Address: _____

City: _____ **State:** _____ **ZIP:** _____

Email _____ **Phone:** () _____

Other: () _____

Application Type

- New \$20*
- Renewal \$20*
- Family \$2*
- Out of Town \$12 (no fee if new)
- Student \$10*
- Change of Information*
- Special** (Circle) VE, Life, Other

License Class

- Novice
- Technician
- General
- Advanced
- Extra
- None (New Ham)*
- None (Non Ham)

Other

- ARRL Member
- ARES/RACES Member
- Contesting
- Volunteer Examiner
- Other

* Please add \$8 New Member Fee if new member or requesting a new ARATS badge. If new ham, we'll hold your badge until you get your call
 ** Special applications cannot be submitted online.

Additional:

Would you consider assisting ARATS in any of the following:

<input type="checkbox"/> Holiday Party Committee	<input type="checkbox"/> Program Committee
<input type="checkbox"/> Picnic Committee	<input type="checkbox"/> Field Day Committee

Amount Enclosed

Dues-Jan 1, ____ Through Dec.31, _____	\$ _____
New Member Fee (\$8-one time)	\$ _____
Maintenance Donation	\$ _____
(Your donation will assist maintaining and upgrading club equipment)	
Total	\$ _____

New Members Only:

Sponsor _____

Co-Sponsor _____

Official Use Only

App Review Date	_____
Status	_____
VE Session	_____
Notes	_____

