

Central Ohio Radio Club, Inc.

The Central Ohio Radio Club Newsletter is the Official Journal of The Central Ohio Radio Club, Inc. and is published three (3) times a year. It is mailed or e-mailed to all Full Members. All copy or advertising must be received at least four weeks prior to publication. Articles may be reproduced for other publications as long as prior permission is obtained and source acknowledged. While the Editor makes all reasonable effort to assure the information within is correct, we do not guarantee its contents and disclaim all liability. We reserve the right to edit or reject submitted items for publication. Mail all copy to: Sandy Robeano (KB8CIQ), P.O. Box 166, Sunbury, Ohio 43074-0166. Items can also be e-mailed to newsletter@corc.us.

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Services Club



The Central Ohio Radio Club
January 2020 Newsletter

Web Page at <http://www.corc.us>



Editor, The CORC Repeater Newsletter
Sandy Robeano (KB8CIQ)
P.O. Box 166
Sunbury, OH 43074-0166

Membership application

Central Ohio Radio Club, Inc. (CORC)

Operating Amateur Repeaters Since 1970

CORC operates repeaters with outputs of 52.70, 146.76, 146.97, 147.33, 442.800, 444.200
145.49 D-STAR & 444.000 D-STAR

Some of the features include:

Worldwide linking on our IRLP & D-STAR Repeaters.
Repeaters are used by the Central Ohio Weather Net and Central Ohio Traffic Net.
Multiple receiver sites located in Franklin, Licking, Delaware, Pickaway and Logan Counties
To ensure you excellent coverage throughout Central Ohio.

Membership allows full use of the *CORC* facilities, Operating Manual, subscription to the *CORC* Newsletter,
and a vote at the annual meeting of the corporation.

Family member amateurs at the same address are NO additional charge, (No Vote at annual meeting)

\$18 / 1 year - \$32 / 2 years - \$45 / 3 years Dues Enclosed \$ _____
Optional Donation – CORC is a 501(c)(3) corporation \$ _____
Total \$ _____

Please mark one: ☐ New Application ☐ Renewal Application

Call Sign _____ Name _____ e-mail _____

Call Sign _____ Name _____ e-mail _____

Call Sign _____ Name _____ e-mail _____

Street Address _____

City _____ State _____ Zip _____

Home Phone () _____ Alternate () _____

How many of above are ARRL Members _____ (CORC is an ARRL affiliated club)

Check to Request Newsletter by e-mail (this saves the club mailing cost) _____

Please make check payable to *CORC* and mail application and check to:

Central Ohio Radio Club, PO Box 166, Sunbury, Ohio 43074-0166

For questions call membership chairman John, W8RXX @ 614-579-0522
or visit the *CORC* website at www.corc.us

Thank You for your Membership and Support!

Rev 1/20

The Central Ohio Radio Club Newsletter

January 2020

President

Laura Perone
KA8IWB

Vice-Pres.

Warren Hull
W8WJH

Secretary

Tony Fabro
N8RRB

Treasurer

Steve Robeano
WD8JKX

Newsletter

Editor

Sandy Robeano
KB8CIQ

Membership

Chair

John Perone
W8RXX

FM Repeaters

53.70 /
52.94 / 52.70
52.70 /
W8RRJ

146.16 / 146.76
W8AIC

146.37 / 146.97
W8RRJ

147.93 / 147.33
W8NBA
IRLP Node
8094

449.20 / 444.20
W8AIC

447.80 / 442.80
K8NIO

D-Star Repeater
G3 Gateways

144.89 / 145.49
449.00 / 444.00
W8CMH

The 50th Annual Meeting of the Central Ohio Radio Club, Inc. will be held on Sunday, February 23, 2020 at the Genoa Township Hall. The Pot Luck Dinner starts at 6 PM. A flier is enclosed with this newsletter. The club provides soft drinks, coffee, paper plates and plastic-ware. Please bring a covered dish and serving utensils.

Election of directors whose terms are expiring will take place as well as an overview of the last year's operations. The nominating committee consists of Tony Fabro N8RRB, Joe Hahn W8NBA and John Perone W8RXX. Terms expiring are Steve Robeano WD8JKX, John Hull W8RRJ, Charles Wood WA8KKN. Volunteers for committee positions or chairs will also be taken for later appointment by the President.

Anyone wishing to nominate a member for a board position should contact Tony Fabro Chair of the Nominating Committee in writing at least ten days prior to the meeting. Letters of Intent can be mailed to: CORC Nominating Committee c/o Tony Fabro, PO BOX 166, Sunbury, Ohio 43074-0166 or can be e-mailed to Tony Fabro at: Anthony.fabro@outlook.com.

For your information and in accordance with our by-laws an extract from the current CORC Constitution appears below:

Section 3.10 – Election of the Board

The election of Directors to replace those whose term has expired shall take place at the annual meeting of the members, or at a special meeting called and held for that purpose. At least twenty (20) days prior to the date of which such election is held, the President shall appoint a Nominating Committee consisting of three (3) persons who may but need not be Directors. Such committee shall prepare a list of candidates to fill the Board of Directors and nominate such candidates at the meeting. Other nominations may be made from the general membership; however, any candidate's name so placed in nomination must be submitted in writing and accompanied by written consent of the nominee to the Nominating Committee at least ten (10) days prior to the annual meeting.

If nominating someone to the Board, be sure to check CORC Constitution Section 3.01 on WWW.CORC.US for the minimum qualifications of Directors which were changed in 2018.

As required by our by-laws, all members were notified of the Annual Meeting by postal card even if they requested newsletters by e-mail only. For many members, dues are now due. Check the label on the postcard for your expiration date. We are trying to make sure we have everyone's up-to-date home address. If everything is correct, just mail in the label page with your payment. Please fill out the application in full only if anything has changed from what's printed on the label. If you want to receive the newsletter electronically, we will also need an e-mail address. Please use an address that is not forwarded as those e-mails are usually bounced or lost. Thank You!

The Central Ohio Radio Club Newsletter

From the Desk the President:

Greetings,

CORC's Annual Business Meeting and Potluck dinner is approaching quickly. It will be **Sunday, February 23rd** at 6PM., The ARRL Ohio Section Emergency Coordinator Stan Broadway N8BHL will be our guest speaker. I hope you can make it as we always have a good time, great food, and wonderful conversations.

This year CORC is going to celebrate the **50th birthday** of the club's first repeater. The party will be on **Sunday, June 7th**. We're still in the planning stages. The next newsletter will have additional details.

At our last pot luck ARRL Ohio Section Manager Scott Yonally N8SY spoke and shared some statistics with us. These are approximate numbers but they are still very interesting. In the U.S. there are 760,000 licensed hams. Of those 155,000 are ARRL members or about 20%. Ohio has 28,000 licensed hams with 5,800 ARRL members or about 21%. There are 71 ARRL sections in the U.S. Ohio is the largest.

Whatever you do enjoy...

73,

Laura, KA8IWB
CORC President

[Stan Broadway is one speaker you won't want to miss. Older hams first knew him as a popular Central Ohio broadcast radio personality. Stan was a long time volunteer firefighter, EMT, Weather Net Control Operator and operator/spotter trainer. He also served many years as a CORC Director. Bottom line: Stan is probably one of the best qualified of the ARRL's 71 SECs in the country and we got him!. – Editor]

Membership News

by CORC Membership Chair John Perone, W8RXX

**Many thanks to the following who have donated their time, talent, money, printing, etc. since the last newsletter was printed.
This all helps keep CORC financially sound.**

K8CYA	W8RRJ	W8NBA	N8RRB	K8XYZ	WA3UOO	WD8JKX
KB8CIQ	W8WJH	WA8KKN	WJ8B	WA8IWB	KD8UTU	W8RXX
W8III	KE8BWI	KD8UNT	KE8BVO	KROGER	AMAZON	KD8KBX
WX8U	N8SY					

**Please welcome the following who have joined CORC since the last newsletter was printed.
Thank them for joining when you hear them on the air.**

KE8FUR – Don and KE8MNV – Terrence

Last meeting's door prize winners (October 20th, 2019)

Gift Cards (3): KB8CIQ Sandy, KB8Z Neil and N8FES Linda
ARRL Handbook: WA8RMC Art
50/50 Drawing: K8CYA Ross

The Central Ohio Radio Club Newsletter

Travelin' Tony's Timetables - by Anthony "Tony" Fabro N8RRB

Greetings and welcome to the year 2020 (that's "twenty twenty")! To me it seems a little weird to say we are in the year 2020. 2019 sounded normal, but 2020 sounds like we're in a completely different era.

The number 2020 brings to mind a couple things. For those of you older than 50, you probably remember when the TV news show *20/20* came on the air in the late 1970s. That show was one of the early investigative news shows and focused in depth on a couple of topics in each episode. The show continues to air today.

The number 2020 is also often mentioned in relation to a person's vision. People with "20/20 vision" have "normal vision" and this is the standard that people rate their vision against. If the second number is higher (20/40), you have worse vision than the standard. If it's lower (20/15), you have better vision.

Both of these examples touch on the idea of vision, focus, or viewpoint. I think this is very applicable to our great ham radio hobby.

Over the past five years, there have been a number of changes in the leadership at the ARRL. Whenever there are several changes in a short period of time, it often means there is a shift in the direction of the organization. Sometimes the shifts mean some support staff leaves, other times it means the leader leaves. Sometimes both leave and the organization starts over.

Why change direction in the first place? Perhaps the people leading felt that the *focus* of the ARRL needed to change in order to better support its members and the hobby in general. I'm not here to offer an opinion either way on whether the ARRL's changes have been good, bad, or indifferent. My point is to illustrate the concept of refocusing on an idea, or in this case, the hobby of ham radio.

There's no doubt that ham radio is changing. I've written about it several times in past articles. How we communicate has changed, from Morse Code (the original "digital" communications), to analog voice, and now digitally either via voice or computer. We can communicate with digital modes using far less bandwidth and with better reliability than even Morse Code.

The radios themselves have changed. HF radios which used to be the size of a large microwave oven now are the size of a small book. The advent of software defined radios means we now have radios without physical knobs and displays. Everything is now displayed on your computer monitor.

Ham radio's role as communicator continues to change. While we continue to be there "when all else fails", the duration of times when we are the sole source of communication is often shorter than what it used to be. Government and commercial communications systems have become more reliable over time as their networks have improved.

So, in the year 2020, can we say that ham radio's vision is 20/20? Does our main advocate, the ARRL, have 20/20 vision on the hobby? If the TV show *20/20* did an in-depth report on the hobby, would they find it to be a hobby focused on sustaining itself for the future?

I ask these questions to get you thinking more about the hobby. If you think we need to refocus, make your voice heard and get involved. Submit your ideas to the ARRL or to your CORC Board of Directors. Your ideas might be what are needed to adjust the lens so that the hobby can stay focused and have a strong future.

Have a safe day.

The Central Ohio Radio Club Newsletter

Tech Committee News

by CORC Technical Committee Charles "Chuck" Wood, WA8KKN

Our DSTAR systems lost their Internet connections on December 23, 2019 due to onsite technical difficulties. All DSTAR features that used the Internet became unavailable.

Nevertheless, both DSTAR repeater systems were always useable locally in standard repeater mode. The repeaters themselves were never off the air.

On January 17, 2020, the Internet difficulties were fixed and all DSTAR Internet access services were restored. This included new registrations, user account editing, and DSTAR linking capabilities to other systems and reflectors. Other co-located systems *not* affiliated with either CORC or DSTAR experienced some difficulty at the same time.

CORC is looking into installing an automated system to remotely restore/re-access Internet service should this happen again. Our downtown sites while both highly efficient and effective from an RF standpoint can often be quite difficult to physically access and service.

There were no other significant problems in our five county system since the last newsletter.

Tune-In and Check-In on CORC TechNet

Nets begin 7:30p on the 146.76 repeater and last about an hour. PL tone of 123 Hz is required to access the repeater. You do *not* need to be a member of CORC to participate.

We're always looking for new topics, SME's and a few more volunteers to help with net control duties. The net is informal and prior net control experience is *not* required. If you have a topic suggestion or would like to volunteer as a net control station, send an email to technet@corc.us.

Upcoming nets and topics are announced on CORC's repeaters. The '19-'20 TechNet season runs through April.

Topic of Net	Date of Net	Net Control	Subject Matter Expert
COMPLETED: Roundtable - Open Forum	01/12/20	WA3UOO	
COMPLETED: Wire Antennas	01/26/20	N8RRB	Chuck Wood WA8KKN
COSWN / NWS Overview	02/09/20	WA3UOO	John Montgomery N8PVC
To Be Determined	03/08/20	N8RRB	
Generators	03/22/20	N8RRB	Rick Tressler WA3UOO
To Be Determined	04/05/20		
Dayton Hamvention/Hamfests - Preparation for Newbies	04/19/20	WA3UOO	Chuck Wood WA8KKN

A Peculiar Technical Anagram

submitted by CORC Technical Committee Chair John Perone W8RXX
(original source unknown)

If you rearrange the 12 letters on the left side you will get the text on the right side.

THE MORSE CODE = HERE COME DOTS

The Central Ohio Radio Club Newsletter

Good Operating Tips

from the CORC Repeater Operating Manual

DO KEEP TRANSMISSIONS SHORT...

Emergencies wait not for monologues to end.

DO THINK - BEFORE YOU TRANSMIT...

If you can't think of anything to say, please just listen...

DO PAUSE BETWEEN EXCHANGES...

Let the courtesy beep do its job. This is needed to let the controller reset the timer. Also, someone with a high priority message may need to break in or use the machine.

DO IDENTIFY PROPERLY...

ID with your call **CLEARLY** (so control operators can understand it) at ten (10) minute intervals. There is **no need** to over identify your station.

DO BE COURTEOUS...

A repeater is like a large telephone party line, and the same type of cooperation is needed.

DO USE SIMPLEX WHEN POSSIBLE...

Leave the repeaters available for those who need them. Also use the **least amount of power** needed to keep you in contact with the other station. This is an FCC rule.

DO SUPPORT YOUR REPEATERS....

Maintaining a good repeater system is an expensive undertaking. Please do your "fair share" by contributing to the systems you use. **Encourage others to become members.**

DON'T BREAK INTO A CONTACT...

Unless you have something of importance to add. Interrupting on the air is no more polite than it is in person.

DON'T FORGET THAT WHAT YOU SAY OVER A REPEATER CAN BE HEARD OVER THOUSANDS OF SQUARE MILES...

You can be heard by anyone with an inexpensive public service band receiver. Some are potential amateur operators. If they like what they hear, they will want to get licenses. **Don't leave a bad impression by making thoughtless or off-color remarks.**

DON'T GIVE SPECIFIC LOCATIONS, TIMES OR DATES...

When talking about going on vacation or when your house or car may be unattended. Hamburglers may be listening, and **you** may be your own worst enemy.

DON'T USE HANDHELDS IN A CAR WITHOUT AN EXTERNAL ANTENNA...

Even with the good coverage of the CORC system repeaters, in some cases your signal could be unreadable. This ties up the repeater with useless noise.

DON'T CONTINUALLY KEY UP THE REPEATERS WITHOUT IDENTIFYING...

It is both illegal & annoying.

FINALLY... DON'T FORGET: AMATEUR RADIO EXISTS BECAUSE IT IS A SERVICE...

It is not just a hobby. Help contribute to the "public service" aspects of FM repeater operations.

Central Ohio Radio Club, Inc Sponsored ARRL VE License Exam Session

Sunday February 23rd 2020 1:00 PM EST

(Same day and same place as the CORC Annual Meeting!)



**Genoa Township Hall
5111 Old 3C Highway
Westerville, OH 43082**



Good News!! Old 3C Hwy is now OPEN between
Ohio Route 3 & Big Walnut Road

Pre-Registration is Required

To register or for more info: www.hamtestco.org

Test fee for 2020 is still \$15.00

VEC: ARRL / VEC

Contact: Frank Piper KI8GW (614) 589-4641 eMail: ki8gw@arrl.net

Put this notice on your refrigerator as a reminder or tie some RG-8 around your finger.

Coax–Your Radio’s Pathway to the Antenna

Rick Tressler - WA3UOO

Introduction

Coaxial cable, also called “coax”, is a common method used to get the RF energy from your transmitter to your antenna. There are several types based on impedance, loss characteristics, durability, physical size, etc. This article will present information on commonly used coax in amateur radio to help you understand their fundamentals and how to select and use a suitable transmission line for your antenna. I will cover the frequencies that include HF through 450 MHz.

Description

Coax typically consists of two conductors insulated from each other using an insulating medium called the dielectric. The dielectric can be made of several materials including a cellular foam-like material or solid Teflon for example. These are

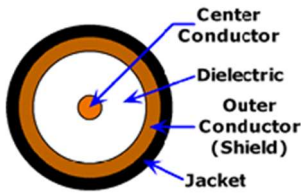


Figure 1
Cross section of typical coax

popular for the coax cables we use in amateur radio. Regarding the conductors, one is called the center conductor and the other is the shield. The center conductor may be stranded, solid or tubular copper wire. The shield is usually braided copper wire, but it can be solid corrugated copper. The coax used for most of the CORC repeater antennas is called “hard line”. It’s expensive, requires special tools for connector termination and is difficult to work with compared to the coax most hams use, but the payback is a very durable and low loss transmission line. Hard line can even be pressurized with nitrogen to keep moisture from getting inside the cable, thus reducing the likelihood of arcing at high power operation. Hard line is expensive and complicated, so hams generally don’t use this type of coax in their home station.

Applications



Figure 2
Rear panel of typical
HF/50MHz transceiver

We hams use coax to feed the RF from the transmitter to our antennas. It’s commonly used to feed dipoles, verticals and beams. You’ve probably read about the characteristic impedance (Z) of various transmission lines and that it is important to know the impedance when purchasing. **50 ohms** is by far the most common impedance of the coax we use. Using coax with an impedance other than this results in a mismatch between the radio, coax and the antenna. Your radio will not function properly and could be damaged. This is to be avoided. We must connect the coax directly to the output of transmitter equipped with a SO-239 connector, among the most common in the industry. See Figure 2.

Coax Connectors

Based on Figure 2 above, it’s clear we need a specific *kind* of connector to terminate the coax to the radio, the antenna and other related station accessories like an SWR bridge, power meter, antenna tuner, etc. The mating connector for the SO-239 (female) is the PL-259 (male) which also has an impedance of – you guessed it – **50 ohms**. They have been in use for many years. It is used from the HF bands all the way up to and including UHF. That said, the Type N connector is a lower loss connector for the UHF band and is preferred by some. This connector requires a solid connection to the coax. Generally, the cable is prepared specific to the connector requirements. It is terminated either by soldering the connector on the coax, or you



Figure 3
Solder-type PL-259 (left)
Crimp type PL-259

can take the easy way out by either purchasing pre-terminated coax or by buying a connector crimping kit. See Figure 3. If you want to do it the old-fashioned way, you can refer to the ARRL Antenna Book for cutting, stripping lengths and assembly technique. Despite the notion by many that soldering is better, from what I have read, the crimping method, when properly executed, is superior. After more than 45 years as a ham, I’ve *never* crimped any of my RF connectors. That said, I *have* used pre-manufactured cables. Your choice.

Through the Window



Figure 4

There are numerous ways to get your coax from inside the shack to the outside world. In the WA3UOO shack, I popped out a glass pane in a basement window and installed a Lexan replacement. Holes were drilled and SO-239 double female barrel connectors installed. See Figure 4 for the required connector which is available in varying lengths up to about 12”. Mine are 3”.

Do NOT mash your coax between the windowsill and sash! When you do that anywhere else in the run, the coax impedance changes at that point and if distorted enough, will create operational issues such as unacceptable SWR and, if mashed enough, the coax may arc over between the conductors during high power operation. Figure 5 shows a commercially available product to properly feed coax through a window opening.

Coax—Your Radio's Pathway to the Antenna (continued)



Figure 5
Window
feed-through

Coax Line and Connector Loss

There's no free lunch, and RF loss (attenuation) in the coax *will* occur even with the best coax even at low HF frequencies. Basically, the higher the operating frequency, the higher the loss will be for a given type of coax. Figure 6 is the same table I used for the article I wrote for the May 2019 newsletter. It's worth noting here as well. For every 3db of signal loss at the antenna, the RF from the transmitter is cut in half. As an example, using 100' of RG-58U at 50 MHz with 50 watts output at the transmitter results in only 25 watts input to the antenna. If you want less loss you must use a lower loss cable. Be prepared to pay more. Coaxial cable such as LMR-400 and Belden 9913 are shown in Figure 6 and compared to RG-58/U are clearly lower loss.

For what it's worth there *is* insertion loss in the coax connectors we use. The good news is that, based on a bit of research I did in preparation of this article, it ranges from less than .5db at HF to 1.0db at 450 Mhz. Based on this, it's a good idea to minimize the number of connectors to those actually needed. To overcome line losses effectively, you can use an antenna with gain (over a dipole) and/or increase your transmit power. For example, if your losses in the coax are 3db, half the power will make it to the antenna. But, if the antenna gain is 3db over a dipole, you're recovered the loss in the coax using a gain antenna.

	LMR-1200	LMR-900	LMR-600	1/2" Superflex	LMR-400	Belden 9913F7	9914	RG214 RG213	LMR-240	Belden RG8X	LMR-200	LMR-195	RG-58/U
Frequency/Size	1.200"	0.870"	0.590"	0.520"	0.405"	0.405"	0.400"	0.405"	0.240"	0.242"	0.195"	0.195"	0.195"
30 MHz	0.209	0.288	0.421	0.561	0.7	0.8	0.8	1.2	1.3	2.0	1.8	1.8	2.5
50 MHz	0.272	0.374	0.547	0.730	0.9	1.1	1.1	1.6	1.7	2.5	2.3	2.3	3.1
150 MHz	0.481	0.658	0.964	1.29	1.5	1.7	1.7	2.8	3.0	4.7	3.9	4.0	6.2
220 MHz	0.589	0.803	1.18	1.58	1.8	2.1	2.1	3.5	3.7	6.0	4.8	4.8	7.4
450 MHz	0.864	1.17	1.72	2.32	2.7	3.1	3.1	5.2	5.3	8.6	6.9	7.0	10.6
900 MHz	1.27	1.70	2.50	3.41	3.9	4.4	4.5	8.0	7.6	12.8	9.9	9.9	16.5
1,500 MHz	1.69	2.24	3.31	4.57	5.1	6.0			9.9		12.7	12.9	

Figure 6
RF Loss for Coax
Transmission Lines
Loss per 100'
1MHz to 1Ghz

Cable Selection

Now for the fun part. What coax should you use? There are several considerations to undertake before you go out and spend your hard-earned money. Consider the bulleted list below and answer these questions before buying. When calculating just how much you'll need, give yourself some latitude and figure that more (to a degree) is less. It's much better to have some extra than not enough. Coax does not stretch!

What is the operating frequency? *Higher frequencies result in more loss (db)*

What is the specified gain of the antenna (db)? *Gain can make up for coax loss*

How much RF power will be used? *You might not be as negatively affected as you think*

How much coax is needed from the rig to the antenna? *Longer runs mean more loss in the coax*

Will the coax be buried or used above ground? *Be sure coax you buy is designed to be direct buried if that's your aim*

How much does the cable cost? *The lower the loss, the more the coax costs per foot*

I hope this article sheds some light on this sometimes confusing topic. Your fellow club members are a great resource for help on this and other topics as is the ARRL and its vast selection of reference books available on their website at www.arrl.org/shop.

73... Rick

CORC Annual Meeting & Potluck

Sunday February 23rd 2020 6:00 PM EST

Genoa Township Hall (See Map on Back)

**GOOD NEWS!!! S OLD 3C HWY is now OPEN between
OH RT 3 & BIG WALNUT RD**

Bring a Covered Dish (with Serving Spoon)

CORC will Provide

High Quality Plastic-ware, Soft Drinks, Coffee, Tea
Cups and Plates, Napkins and Ice

Program Speaker

Stan Broadway, N8BHL

ARRL Ohio Section Emergency Coordinator
Amateur Radio Emergency Service



“What’s Coming Up in Amateur Emergency Radio”

But Wait There’s More!

Traditional 50-50 Drawing

Drawing for a 1 Year Stewardship of the *Rock Bound Rig*

Drawings of Several Door Prizes

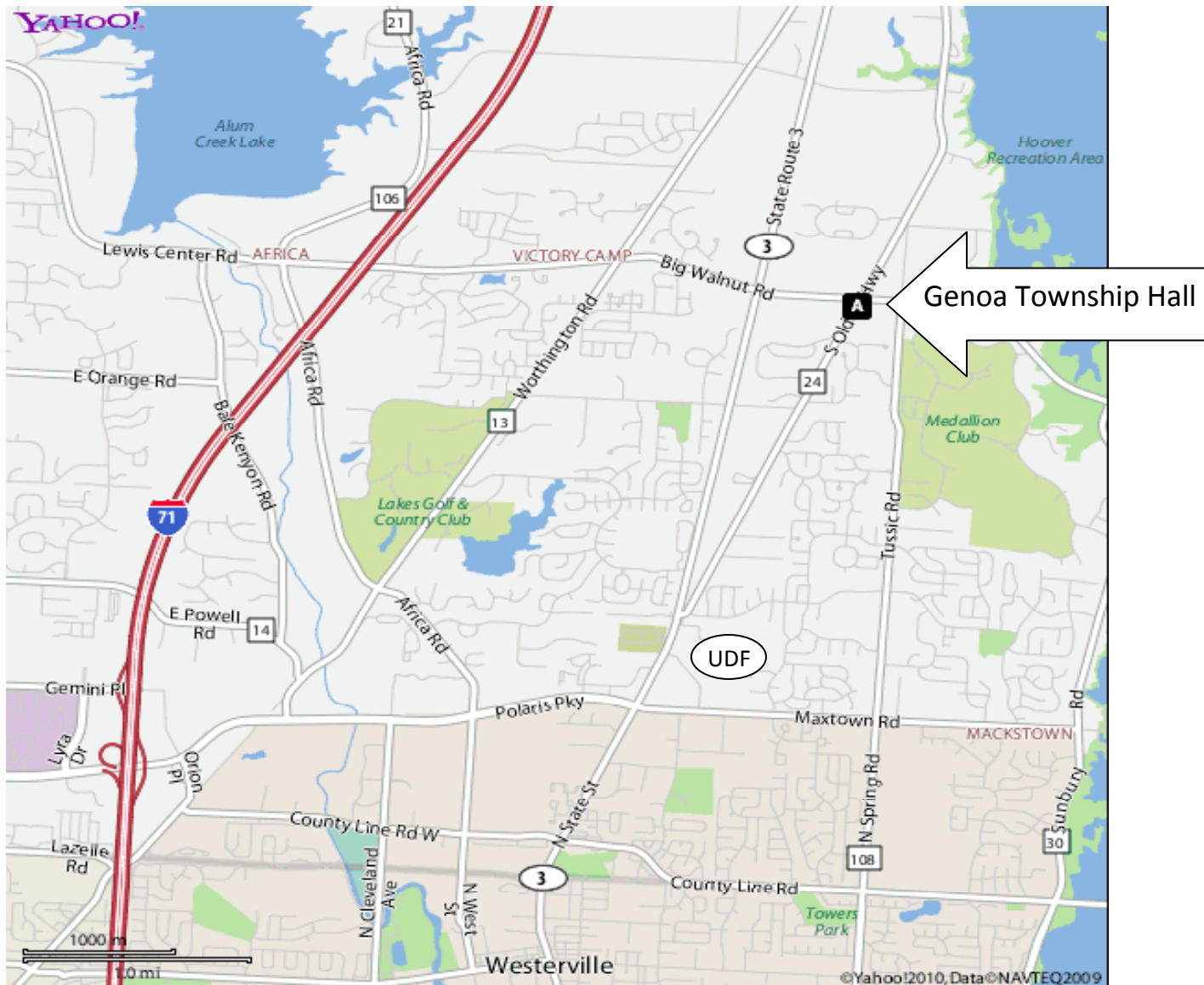
(No Virginia, you get to keep the door prizes, not just a drawing of it!)

Put this notice on your refrigerator as a reminder or tie some RG-8X* around your finger

***Note:** WA3UOO recommends LMR-240 in lieu of RG-8X as it is less lossy and bends around your finger better.
For more information on selecting coax for your finger, see his article in the June 2019 CORC Newsletter
or his article in the January 2020 CORC Newsletter. (This one!!!)

And now that you know about it...

Here is how you get there!



From 71 take Polaris Pkwy east. Turn left onto N State Route 3. Turn right onto S Old 3C Hwy.

Go north to the Genoa Township Hall on your right at Big Walnut Road.

From 270, exit at State Route 3/Westerville Road and turn right onto S Old 3C Highway.

Go north to the Genoa Township Hall on your right at Big Walnut Road.

Genoa Township Hall is on the SE corner of Big Walnut Road & S Old 3C Highway.

5111 S Old 3C Highway

Westerville, OH 43082

GPS: 40.178632, -82.902903

Revised January 2017