



April 2017

**The Newsletter of the Alford
Memorial Radio Club**



Lightning Protection for the Amateur Station

Identifying the Components of Your Station that Need Protection.



April Issue Content

- President's Notes
- Meeting Information
- Membership Page & Birthdays
- Famous HAM of the Month
- Upcoming Events
- Tip of the Month
- Lightning Protection for the Amateur Station
- Calendar for April
- Totr Explosion Results
- Atl Science Festival



President's Message

March was packed full of things for members to do. Top of the Rock Explosion Contest, using your radio in support of the Publix Marathon, and demonstrating ham radio at the Atlanta Science Festival, (see pictures in this issue).

April is such a fun month, no presser, right? Taxes, pollen, spring break, burnt up interstate bridges made impassable and adapting to the new norm of traffic in our area. Need I mention the weather? If you don't like the weather in Atlanta, wait an hour it will change.

Tom Roderick, WA4GIM will present our April program by sharing his experience with the work he did in his shack this past year.

Save the Date: Color Vibe 5K Run, May 20th Stone Mountain. The Color Vibe 5K Run is a fun, quick event where our club members provide communication for the smooth operation of the run, safety for the runners, as well as coordination for the traffic congestion within the city of Stone Mountain. It's a wonderful chance for you to use your HT, communication skills, and public relations skills to promote the hobby and our club. Click [here](#) to read more about the Color Vibe Run.

Save the Date: Field Day, June 24-25, Stone Mountain Park-Events Meadow. A special ARRL event, includes camping, picnic, games and fun. Remember to mark your calendar for all three days, Friday to help setup, Saturday to finish setting up and start the festivities, and Sunday to finish the fun and pack up/clear out. Click [here](#) to read more about ARRL Field Day.

Save the Date: July 4th the 48th Annual Peachtree Road Race, Atlanta. It takes more than 3,500 volunteers to support the AJC Peachtree Road Race and its 60,000 participants! They will need many ham radio volunteers this year. Click [here](#) to read more about the Peachtree.

Many of you travel daily to work or have other appointments, and must face the windshield for quite a while. I empathize with you. My truck 2m 440 Yaesu ft880 helps me break the frustration. Ok so I'm sitting in traffic. I can listen to WSB traffic reports for just so long until I just must change stations, the news pundits and talking heads have their one agenda which most of the time isn't mine. So, then I turn on my ham radio, hit the scan button where I have most of the metro Atlanta club stations programmed. Most of the time there is some conversation going, from commuters as frustrated as I am. Hams are sharing recipes of how to BBQ the best chicken wings, with details on recipes and comparing which smoker is the best, kind of like which

radio is the best. We all have our own opinions.

Reading the mail as it's called. Listening in on other hams conversations is fun. On a recent camping trip with my wife, we were driving through north Georgia into western North Carolina. We had covered the satellite stations, covered our plans for the week, and she said, "you can listen to your ham radio if you like". There it was, I had permission to turn on my radio! So, I did. We listened to one guy out of Blue Ridge describe how excited he was about his birthday gift from his son. His son had given him a gift certificate for a 30-min ride in a plane over the Blue Ridge mountains and he was cashing it in that very afternoon. As he described his plans to his ham friend we heard his excitement building like the highpoint in an orchestra performance. That conversation lead to another guy jumping in and telling his story of his first flight years ago as a forest service spotter out west spotting forest fires. I could go on, maybe later on the Turnip Truck....

The first rule in ham radio is to listen, so is the first rule in having a productive conversation. Listening is the hardest of lessons we try to teach our children as parents. Listening is an elementary school teacher's toughest daily chore to teach her students. Failure to listen can cause some of the worst misunderstandings we have in family or work relationships. Um....me thinks whoever wrote the rule of listening first in ham radio, knew what they were talking about.

If you're not signed up to receive messages through the Alford Memorial Radio Club Yahoo Group, you should click [here](#) to stay informed and post your response. Our TOTR newsletter, Club meeting minutes, pictures, club financial reports, as well as some presentations will be available under "Files and Attachments".

We'll see you at the club meeting!

73,

Mike, **KK4KHS**



AMRC April Meeting Program

Thursday, April, 13, 2017, at 7:00 pm

Building My Second HF Antenna

by Tom Roderick, WA4GIM

The Alford Memorial Radio Club 76 Repeater is located on top of Stone Mountain, approximately 110 ft. up the TV transmission tower. Echolink is sometimes available on this repeater.



In February of 2015 the old Micor 145 and 444 repeaters and the cabinets associated with that equipment were replaced with brand new Kenwood commercial grade repeater equipment .

Located at Exchange Park, up and running beautifully,

Up and Running at Exchange Park.

May 2017 Meeting Program

Raspberry Pi Applications in Your Ham-Shack

by N4BFR, Jim Reed (President of the Atlanta Radio Club)



AMRC Membership

AMRC Membership

Welcome

**As of April 1, 2017 we have
111 members!**

**Please re-new your membership
for the January– December 2017
year. Please see below for links to
renew.**

AMRC MEMBERSHIP

To become a AMRC member, or to renew your AMRC membership, please visit our website

<http://totr-radio.org/membership/memapp.htm>

To make changes to your AMRC membership (moved, new email address, new phone number, etc.), please email the Membership Chairman-
steve.n4tty@gmail.com

You can **renew or update** your Amateur Radio license information with the FCC at their website for free

<http://wireless.fcc.gov/uls/index.htm?job=home>

To update your ARRL information, please visit their website - <http://www.arrl.org>

Membership Chair: Steve Garrison, N4TTY

**AMRC Club Membership 2017 Dues
Are Due.**

**Club Dues Help Support Our
Repeaters and Club Activities**

HAPPY BIRTHDAY!!

From All of Us at AMRC

Birthdays by, K4GZZ

2. KK4HGL Gabe, Donna Broome
3. WA4GIM– Tom
4. KV4VT– Chuck, WA4P2D– Cooper
4. NX1Q– Don, KK4SKY– Neil
10. KK4ZII– Amy
11. W0DHK– Don, KF4VBR– Robert, Sharon Siegmund
13. KM4LVJ– Jeremy
14. W4HLP– Harvey
16. KJ4NYU Katherine
17. KG4IUM– Andrea
18. KB4vel– Sarah
22. KM4PEH– Jon
28. K9BOG– Matt
29. KM4KGP–Mark



Priscilla Beaulieu Presley– N6YOS/ KC6IWA Famous Ham of the Month



Priscilla Ann Wagner was born May 24, 1945 in Brooklyn, NY. She is an American model, author, and actress, known for Naked Gun movies and the television show Dallas. She is also known as the only wife of Elvis Presley, and the mother-in-law to Michael Jackson.

Ms. Presley's biological father died in a aircraft accident when she was an infant. Her mother Anna remarried, Col. Paul Beaulieu, a pilot in the US Airforce.

Elvis met Priscilla during his U.S. Army stint in Weisbaden, Germany when Priscilla was only 14 years of age. Although he returned to the States without her, he soon sent for her to live at Graceland with the Presley family and finish her schooling.

Today Priscilla Presley promotes Elvis' legacy and successfully builds her own with writing, acting and supervising Graceland.

Ms Presley described ham radio when questioned why she did not stay in the hobby, it "was really addictive!" Due to her busy schedule, she allowed her ham ticket to expire in 2000.

Ms. Presley was listed in the 1990 call book as KC6IWA and N6YOS, under her maiden name, Beaulieu.

It is not really known how Priscilla became interested in amateur radio. Possibly her publicist or perhaps one of her long time friends Marco Garibaldi, a film producer.

UP-COMING PROGRAMS FOR ALFORD MEMORIAL RADIO CLUB

Join us for our weekly
breakfast gathering at
7AM most Saturdays at:
Metro Café Diner

1905 Rockbridge Rd. Stone Mountain, GA 30087

Field Day 2017
June 24-25 Stone
Mountain Events
Meadow



Merchandise from Alford Memorial Radio Club

Stop by the Merchandise table at the next AMRC meeting and order your Ham vest, check out the new AMRC polo shirts with club logo and your call sign.

See Richard Dickson, W4WRD or email him at richie707@aol.com with questions about items, or size and cost.

2017 AMRC Officers, Committee Chairs

Mike Smith, KK4KHS
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smithrm71@yahoo.com

Pat De Loe, N4MPC
Vice President
patdeloe@gmail.com

Allison Lynch, AB4YL
Secretary
allison48fan@yahoo.com

Greg Mann, KM4RKT
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km4rkt.greg@gmail.com

Gene Blackburn, N4UJ
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Richard Dickson, W4WRD
Apparel Coordinator
richie707@aol.com

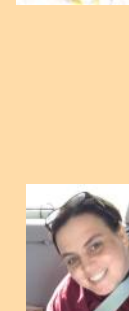
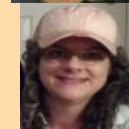
Steve Garrison, N4TTY
Membership Chairman
Steve.n4tty@gmail.com

Jim Penland, N4RAR
Counsel

Al Hughes, NZ4A
Field Day Chair

Frank Haynes, KV4SP
VE Team Chair

Gretchen Mann, W1MKW
TOTR Editor
gretchelby@gmail.com

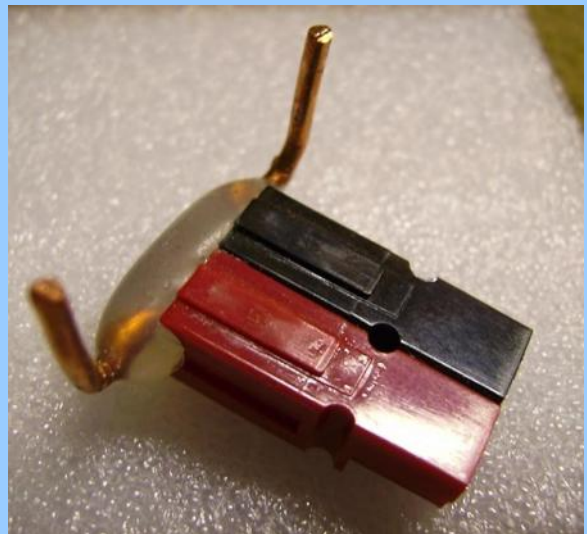


AMRC TIP OF THE MONTH BY

Pat Deloe N4MPC

Add Power Pole

- 1. Solder 12 gauge solid cooper wire to power pole.**
- 2. Adjust the wires to fit into the holes behind banana plug terminals.**
- 3. Keep the wires as short as possible. Now remove the power pole with wires and add a little hot glue to the back of the power pole making sure not to get any glue in the contact area of the power pole. The glue will add stiffness to the power pole.**
- 4. Place the power pole wires back into the holes in the banana plugs and tighten the lugs.**



Ares State Net Listings:

Georgia State SECTION HF NETS!!!!

- Georgia ARES Statewide 3975 KHz 2200 UTC Sunday K4GK Net Manager
- Georgia ARES Digital 3583 KHz 2100 UTC Sunday K4GO Net Manager
- Georgia Single Sideband Net 3975 KHz 7 PM Daily KE4VPD Net Manager
- Georgia Traffic & Emergency Net 3982.5 KHz 7:15 Daily KI4NGD Net Manager
- Georgia Cracker Net 3995 KHz 7 AM M-Sa & 8 AM Sun AF4XZ Net Manager
- Georgia Traffic Net 7287.5 KHz (3587.5 Alt) Mon-Sat; WA0CGZ Net Manager
- Georgia Training (CW) Net 3549 KHz slow speed CW; 9 PM Daily; KG4FXG Net Manager
- Georgia State Net (GSN) 3549 KHz 7 PM & 10 PM Daily; K4GK Net Manager

Georgia ARES Web Site, Check it out!!!

<https://gaares.org/index.php>

1. Color Vibe 5K Run Stone Mountain, May 20th

2. ARRL Field Day (Alford Memorial Radio Club) June 24th, 25th (set up 23rd) - Stone Mountain Park Events Meadow.

3. The Peachtree Road Race, July 4th, Atlanta, GA.



- ♦ Monthly club meeting is the 2nd Thursday of the month at 7:00pm
- ♦ Every Sunday at 7:00 pm: AMRC Sunday Night Net on the 146.760 repeater.
- ♦ Every Sunday at 8:00 pm: DeKalb ARES Net on the 145.450 repeater.
- ♦ Every Saturday at 7:00 am: AMRC Weekly Breakfast, Metro Café Diner, Stone Mtn, Ga.
- ♦ Turnip Truck Net at 11pm Saturday Night



Lightning Protection for the Amateur Station

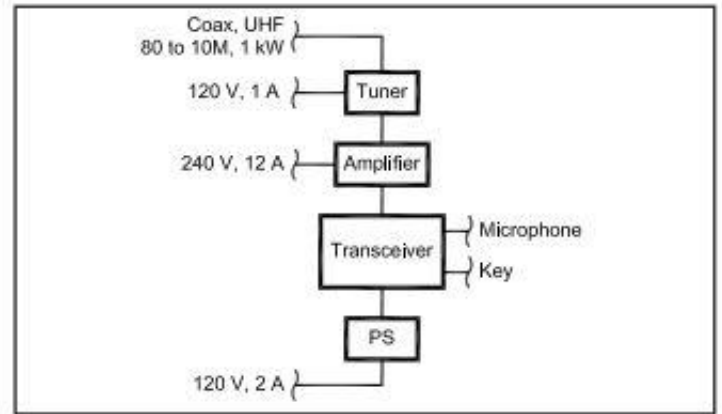
From the June 2002 QST—by Ron Block KB2UYT

The Challenge

The amateur is challenged to assemble the best radio station possible, enjoy the benefits of the hobby, and have the station operable during times of need. This can be a significant challenge especially considering the awesome capabilities of Mother Nature's lightning strikes. While she may have the upper hand as far as when and how much energy she delivers, you have the ability to influence how that energy is diverted into the earth. Said another way, you can implement a lightning protection plan that will protect your Amateur Radio station, even from a direct strike! The commercial radio folks have done this for years; many of them have critical installations located on hills or mountaintops that are great lightning strike targets. They do survive direct strikes and continue to provide important services to the communities that they serve. While this type of solution is possible for the Amateur Radio station, it does cost money and it does take a significant amount of resourcefulness, ingenuity, and effort to implement and maintain.

Identify What is to Be Protected

The goal of the planning process is to establish a "zone of protection" within the radio room, as opposed to the whole house or building. Additional zones may be considered separately. The first step in the process is to identify what you want to protect. The immediate answer is, well, everything. While you can come close, you may run out of money, time, or energy. So let's create a priority list and work the list from high to low priority. Probably first on the list are the more expensive items associated with your radio station, usually the transmitting and receiving equipment. Viewed another way, without these there is no radio station, so they should be very near the top of the list. What follows on the list depends on just how you enjoy the hobby—the antenna tuner, linear amplifier, terminal node controller, or computer. Further down the list might be the antenna, rotor and transmission line. Each person's list and priority ordering will be different. Pause here and mentally construct your priority list, being sure to include all the elements of your radio station. We will then work through the process of developing your protection plan.



The first step is to construct a complete block diagram of the equipment in your radio room starting with the top priority item. (You will make a separate plan for other areas needing protection.) This is usually simple and straightforward. In some installations it may be necessary to look behind the equipment to determine precisely the connections between each element. The accuracy of the diagram is important in determining the nature and effectiveness of the protection plan. I would imagine that the list's top priority items are your transmitter and receiver (or transceiver). If you have multiples of either, then they are probably listed in order of value. These are the heart of your radio station, so make them the starting point of protection plan which will in turn examine and diagram each element of the station. Assuming your primary item is a transceiver, represent it in the block diagram as a single rectangle. Label it with the manufacturer's name and model number. If your primary equipment is a transmitter/receiver pair, then represent them as individual single rectangles. Next, think about the antenna connection to the primary transceiver, transmitter, or receiver. If the connection goes directly to the external antenna, simply draw a line from the rectangle to the edge of the paper. However, if the antenna is connected to the equipment via a linear amplifier, antenna tuner, or a multi-position coax switch, add this (these) as separate rectangle(s) interconnected with the primary radio equipment. The feed line going to the antenna should still go to the edge of the paper. Label the feed line's lowest and highest frequency (MHz or band name), the maximum transmit power in watts (rounded up), and the type of connector and gender (UHF/PL-259 male or N-series male, for example).

Add a rectangle to the diagram for each additional transceiver, transmitter, amplifier, and receivers in your radio room. Be sure to show all interconnections and antenna connections for each of these secondary rectangles. If any of the secondary radio equipment has a direct connection to an antenna, show the feed line going to the edge of the page. Be sure to label each rectangle with the manufacturer's name and model number and each feed line with connector type and gender, frequency range, and maximum transmit power. Figure 4 shows a block diagram for a simple station. The block diagram should now have a rectangle representing each piece of radio equipment and accessories in the radio room. Each of the rectangles should have lines representing the interconnecting cables and feed lines. Each feed line that leaves the radio room and goes to an antenna or some tower-mounted electronics should be drawn to the edge of the page and labeled.

A Close Look

Now it is time to examine each of the rectangles, one at a time, and to add to the diagram any other electronic devices (as rectangles), complete with the electrical connections and interconnections between them. Some of these will be easy and intuitive, while others will require a little more crawling around behind the equipment. Every connection must be included—this is important to the integrity of the solution. The only exception is a non-conductive fiber-optic connection. To complete the diagram in an orderly fashion, pick a rectangle and answer all of the following questions for that rectangle. Then, pick another rectangle and do the same until all of the rectangles have been examined. Is there a connection between this rectangle and any other rectangle? If so, add a line between the respective rectangles and label it function. Is there a connection between this rectangle and a device not yet included on the block diagram? This can include standalone amplifiers, power supplies, computers, terminal node controllers, modems, network routers, network hubs, and the like. If so, add the new device to the diagram as a rectangle and label it. Then add and label the connections. Repeat this step until all connections from this rectangle to new devices have been completed. Is there an ac power connection required for this rectangle? If so, draw a line to the edge of the page and label it with the voltage and current required. Is there a requirement to supply ac or dc power through a feed line to operate remote switches or electronics? If so, label the feed line at the edge of the page with the peak voltage and current requirements.

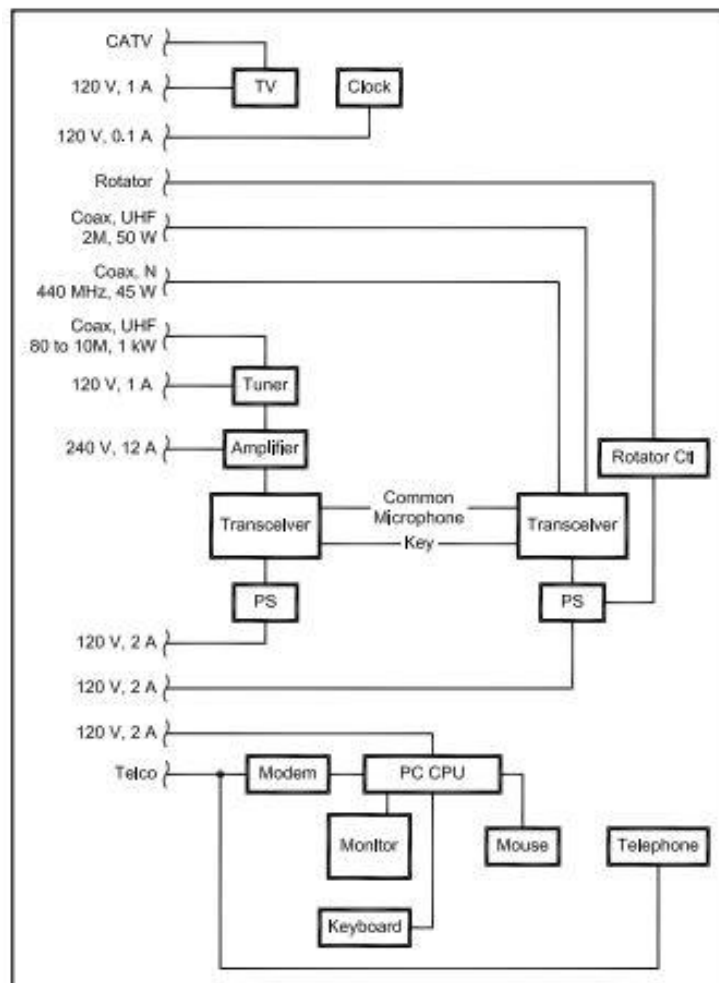


Figure 5—Block diagram of a typical more-complex radio station.

Are there control lines leaving the rectangle going to remote electronics, relays, or rotors? If so, draw a line to the edge of the page and label it appropriately. Is there ac power leaving the rectangle going to the tower for safety lighting, convenience outlets, crank-up motors, or high-power rotors? If so, draw a line to the edge of the page and label it with the voltage and current required. Is there a connection to a telephone line, ISDN telephone circuit, DSL telephone circuit, or cable connection (RF, video or data) for this rectangle? If so, draw a line to the edge of the page and label it appropriately. Is there a connection to another antenna system such as for GPS, broadcast or cable TV, or DBS dish for this rectangle? If so, draw a line to the edge of the page and label it appropriately. Is there a connection to other equipment elsewhere in the house or building, such as network or intercom cabling? If so, draw a line to the edge of the page and label it appropriately. Once you have completed the process for each of the rectangles, including all of the new ones that were added, you should have an accurate block diagram of your radio station. It may be prudent to review each rectangle to verify that nothing was left out. Your block diagram should look something like Figure 5.

Now step back and physically look at the equipment in the radio room. Has every piece of equipment been reflected in the block diagram? Every metallic item within four feet (in all directions) of the radio equipment must be considered as a part of the radio equipment even if it is not electrically connected to it. If there is such an item that has not been included, we need to carefully examine it. An example of such a device could be a simple stand-alone telephone on the operating desk or a computer system (CPU, monitor, keyboard and mouse) some part of which is sitting on or near the radio desk. Nearby devices (telephone and or computer), while electrically not a part of the radio station, are within a spark-gap of the radio station equipment and therefore considered proximally connected to the radio station and must be added to the block diagram. Follow the same procedure that you used to add equipment to the block diagram. As an example, Figure 5 also shows a computer that is included in the protection plan, but not directly connected to radio equipment. Now that the diagram is accurate and complete, draw a circle around all of the rectangles allowing each of the lines that extend to the edge of the page to cross the circle as shown in Figure 6. The equipment represented by the rectangles within the circle is to be protected. All of the lines going from the circle to the edge of the page are called I/O (Input/Output) lines or circuits.

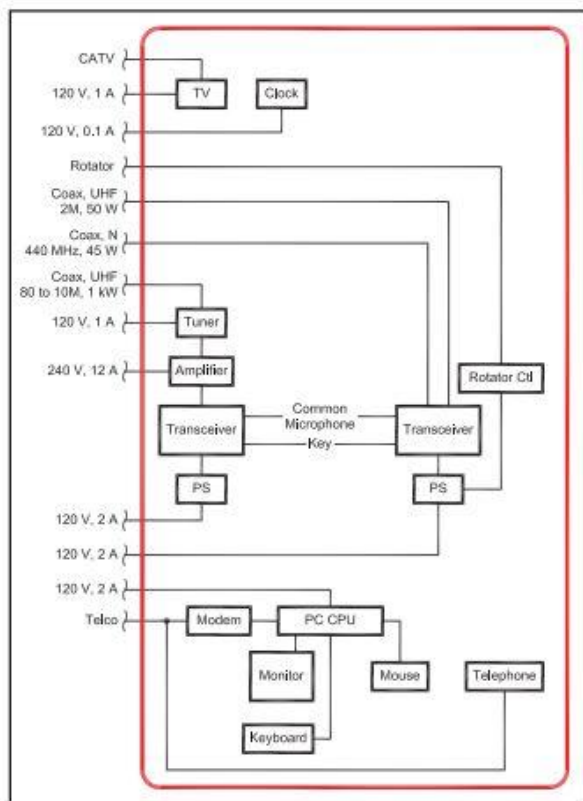


Figure 6—Lines that penetrate the circle are the radio station I/O circuits that must be protected.

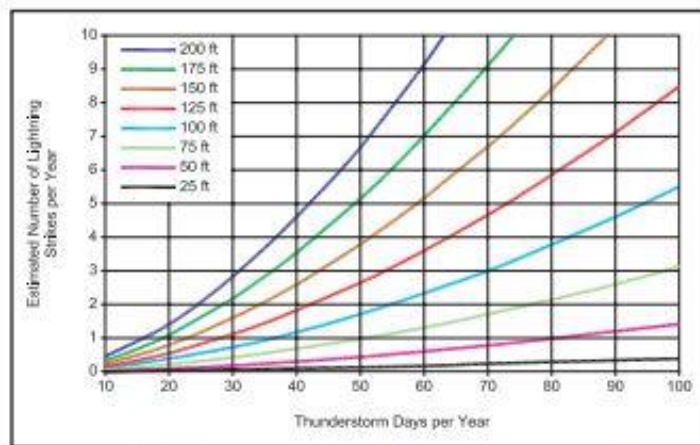


Figure 3—Estimated number of lightning strikes per year based on the number of thunderstorm days in your area and the height of your antenna. Based on information from *Living with Lightning*, Seminar Notes #ECP-826B Version F, GE Mobile Radio Technical Training, © GE 1985.

All or Nothing

One word of caution regarding the accuracy and attention to detail; the protection is all or nothing. If an I/O line is inadvertently missed then the protection plan is flawed and the damage could be worse than having no protection at all. Please note: Just because equipment may survive a direct lightning strike, does not mean that you can. You cannot operate (touch) the equipment during a strike because you breach the protected equipment circle to the outside world. You are conductive, and it could hurt both you and your equipment. Now that you have identified all of the I/O lines for the station, each must be protected and each of the I/O line protectors must be grounded and mounted in common.

Ron Block, KB2UYT, has been a distributor and consultant for PolyPhaser, a vendor of lightning protection systems, since 1989 and has completed The Lightning Protection Course by PolyPhaser. He is the chairman of the Amateur Radio Station Grounding forum at the Dayton Hamvention and has been a guest speaker at various Amateur Radio club meetings.

If you would like to read more on protecting your station, see parts 2 and 3 hyperlinks below.

Lightning Protection for the amateur Station

Part 2. Click [here](#)

Part 3. Click [here](#)

PolyPhaser

\$\$ Buy Sell or Swap \$\$

Used Grundig Satellite 750 Receiver, Never has had batteries installed, always used indoors. AM/FM/SW/LW/SSB/AIR bands.\$175 Greg Mann, KM4RKT

Please send your listings for Buy Sell or Swap to Gretchen, W1MKW
gretchelby@gmail.com

WTH is it? Contest



Closest guess by April 30th wins this thingamajig!

Email gretchelby@gmail.com with your guess!

Good Luck!

March NETS REPORT

AMRC		DeKalb ARES			Turnip Truck	
Sunday Night Net			RF	Winlink/DRats		
March 5	30	March 5	14	8/6	March 4	19
March 12	27	March 12	15	7/8	March 11	19
March 19	22	March 19	13	6/4	March 18	15
March 26	31	March 26	13	8/6	March 25	16

AMRC CALENDAR OF EVENTS FOR April 2017

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1. 7am Breakfast at Metro Café Diner 11pm Turnip Truck Net
2. 7pm AMRC Sunday Night Net 8pm DeKalb ARES NET	3.	4.	5.	6.	7.	8.. 7am Breakfast at Metro Café Diner 11pm Turnip Truck Net
9. 7pm AMRC Sunday Night Net 8pm DeKalb ARES NET	10.	11.	12.	13. Alford Memorial Radio Club Meeting 7pm	14.	15. 7am Breakfast at Metro Café Diner 11pm Turnip Truck Net
16. 7pm AMRC Sunday Night Net 8pm DeKalb ARES NET	17.	18.	19.	20.	21.	22. 7am Breakfast at Metro Café Diner 11pm Turnip Truck Net
23./ 30. 7pm AMRC Sunday Night Net 8pm DeKalb ARES NET	24.	25.	26.	27.	28.	29. 7am Breakfast at Metro Café Diner 11pm Turnip Truck Net

KM4YMI Takes the TOTR Explosion



Yeeeeee Haw! (Insert the General Lee Horn)
(Top 10):

1. KM4YMI	BEAU BRUCE	57
2. KK4KHS	MIKE SMITH	55
3. K4GZZ	KARL PHILLIPS	47
4. WA4GIM	TOM RODERICK	43
5. KW4WP	STEVE SMITH	41
6. N4TTY	STEVE GARRISON	34 TIE
7. KM4RKT	GREG MANN	34 TIE
8. AB4YL	ALLISON LYNCH	26
9. W1MKW	GRETCHEN MANN	23
10. KK4SKY	NEIL MARTIN	22

ATLANTA SCIENCE FESTIVAL





ATLANTA, GA:

Store Hours:

10AM-5:30PM Mon - Sat

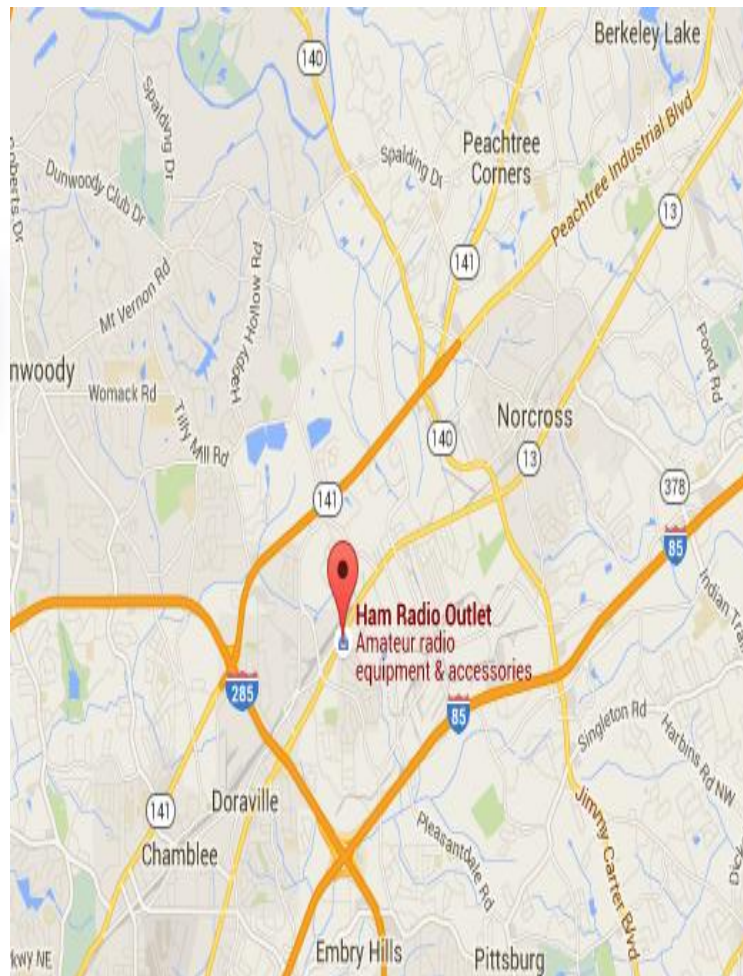
Telephone hours:

9:30AM-5:30PM Mon-Sat

LOCAL: 770-263-0700

FAX: 770-263-9548

EMAIL: atlanta@hamradio.com



A special thanks to Watt and his HT
for appearing in the April Totr. Pg 3.
Watt resides with Allison, AB4YL, in
Lawrenceville.

**From ARRL Contest
Calendar For more infor-
mation: Click [here](#)**

April 16, 2017

Rookie Roundup – Phone Click [Here](#) for more infor-
mation

May 2017– nothing scheduled

June 2017: **June 2017**

10-12 **June VHF**

18 **Kids Day**

24-25 **Field Day**

Hamtoons™
CARTOON QSLs
-- AND MORE!

Jim Massara,
N2EST
n2est@hamtoons.net

Robert (Mike) Smith
5191 La Paloma Dr.
Lilburn, GA 30047
Phone (404)-509-3104
Smithrm71@gmail.com

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