



BVARC BEACON



Newsletter of the Brazos Valley Amateur Radio Club
AMATEUR RADIO FOR SOUTHWEST HOUSTON AND FORT BEND COUNTY

AUGUST 2018

VOLUME 42 ISSUE 8

BVARC AUGUST GENERAL MEMBERSHIP MEETING **ANNUAL ICE CREAM SOCIAL**

Mmmmmmmm - Blue Bell, Hagen Daz, HEB, who knows?
What we do know is that it will be goooooood!!!!

“Significant others” are highly encouraged to come - - It’s the Ice Cream **SOCIAL!**

For the meeting “split the pot” raffle, there is an additional special prize for a lucky Skeeter’s fan:
Scott will bring a team autographed baseball as part of the meeting raffle.

Step up and help. Contact Scott Medbury, KD5FBA to lend a hand. Check the roster on the BVARC website for contact info.



Report on the July General Membership Meeting

Kyle Brewer, KE5IJ, of NASA was the featured speaker at the July meeting. He updated us on the different communications systems on the Space Station. Kyle has always been available on coming out to let us know what is new for the ISS as well as a little insight to NASA.



Highlighting some upcoming events of special interest to BVARC members.

- Austin Summerfest, Friday & Saturday, August 3 & 4.
- Ice Cream Social / Monthly General Membership Meeting, Thursday, August 9.
- Balloon Launch, BLT-50, Saturday, August 25. See the article in this issue.
- BVARC Night at a Skeeter’s game, Saturday, August 25. See the article in this issue.

See the article herein about a “Station In A Box.” Get your tickets to sell or buy.



Prez Says

Hopefully everyone is surviving the cold weather and staying indoors where it is warm and comfortable.....sorry wishful thinking.

DA..! It's hot out there! With the temperature running in the high 100's in Dallas, I am really missing that "cooler" weather in Houston! I cannot wait to get back home this weekend and cool off. During this heat wave, remember the three safety precautions that you need to follow:

1. Stay indoors out of the Sun
2. Stay hydrated
3. Make contacts on your favorite bands

With summer definitely here, that only means one thing – **BVARC Ice Cream Social!** So on Thursday, August 9th, BVARC will have their annual event at the Sugar Land Masonic Lodge. Putting it together this year will be the highly skilled hospitality group of – Scott, Luanne, Kelli and Daphne. They are planning to have a great selection of ice cream so everyone needs to bring their appetite. I believe there will also be a little surprise that Daphne has put together so make sure come out to the Ice Cream Social. I want to thank Scott, Louann, Kelli and Daphne for putting the Ice Cream social together. Without their help, the Ice Cream social would not happen this year.

Don't forget to buy your raffle tickets for a "station in box" We still have lots of tickets to sell so come out to the Ice Social and buy a ticket or two or twenty!

Since there is an article elsewhere in the newsletter on the 2018 Quad Club Field Day, I will keep this short. The event was a wonderful success and I believe everyone is ready to do it again (minus the heat though!). The wrap-up meeting brought out a few issues that need to be addressed but none were anything near major or critical. The event was truly a success no matter what anyone is saying. **I want to thank everyone again for the great turnout of both volunteers and operators, both of which are needed for a successful event.** Since Field Day was a great success, I have invited the other participating clubs to come and join us at the Ice Cream social. So come out and welcome our guests and partners at the Ice Cream social. If you want to know more about the Field Day score, check out Rick's article elsewhere in the newsletter.

Museum Ships went well and Mark Janzer, K5MJZ is getting ready for next year. Mark said there will be a few "training days" this year so keep your eye on the web site and newsletter for more info. I know for 2019 we will be working on a better antenna for the USS Cavalla and, hopefully, an air conditioner for the USS Stewart.

For those who missed the Texas City Hamfest, it had a good turn-out and even had yours truly selling a few items. The Texas City ham club continues to put together a great event and it is always a pleasure to attend. If you didn't make it this year, put it on your calendar for 2019.

I want to thank Kyle Brewer, KE5IJ, of NASA for coming to the July meeting to update us on the different communications system on the Space Station. Kyle has always been available on coming out to let us know what is new for the ISS as well as a little insight to NASA.

Next month I will be heading to the land of Oz, also known as the "land down under". I will be sending a few pictures to the BVARC Facebook page as well as the BVARC web site. Who knows, I might even be heard on 14.343 a few times.

73,
N5VCX



EDITOR'S NOTE: This edition of the BVARC BEACON had so many article submissions that some regular articles and one special article got bumped. We are limited to 12 pages (6 double sided printed sheets) because another sheet would make the BEACON to be over 1 oz. and therefore almost double our postage.

Where in the World is . . .
Baker Island (KH1)
CQ Zone 31 ITU Zone 61
IOTA OC-089

Approaching from a distance the island, barely 26 feet above sea level resembled the back of some fabled sea monster of 15th century sea tales. Covered with low lying scrub vegetation, Baker Island is less than a mile wide and slightly more than a mile long. Its population of seabirds makes their presence known on anything that offers a perch

Its terrain is sandy. Along with its neighbor only 42 miles NNW, Howland Island they form the Baker Island National Wildlife Refuge. Not exactly your favorite bird watching spot, the islands lie almost halfway between Hawaii and Australia. Barely north of the Equator and east of the International Dateline, by this odd quirk of geography, they are last pieces of U.S. territory that experience the new day.

Baker was discovered in the early 19th century by whaling ships that crossed the pacific. The island is named for Capt. Michael Baker of the whaler *Gideon Howland*, who visited the island several times between 1832 and 1839; once to bury one of his crew. Captain Baker claimed the island for the United States in 1855, then he sold his interest to a group who later formed the American Guano Company.



One of the most peculiar pieces of legislation to come out of the Congress in 1856, the Guano Islands Act enabled citizens of the U.S. to take possession of unclaimed islands that contained guano deposits. At the time guano, particularly seabird guano was highly prized as a potent fertilizer and later as a feedstock in the manufacture of gunpowder. Hence bird doo-doo, for a brief period became a strategically important material.

So much so that when the American Guano Company sold its mining rights to a British firm in 1886, the UK government considered the U.S. to have abandoned their claim to the island and claimed it a British Territory. Although they never formally annexed it, the British and Americans exchanged notes and nasty phone calls until 1935 when the Americans decided to settle the matter by announcing their intentions to colonize the two islands.

The American Equatorial Islands Colonization Project did not last long. A total of 130 colonists, comprised of Hawaiian islanders and military personnel were delivered to both Howland and Baker islands aboard the Coast Guard Cutter *Itasca*, in 1935. They built a lighthouse and dwellings. Their efforts at agriculture were ineffective as the island had little rainfall and no natural springs. The dry climate and seabirds, eager for anything upon which to perch, did not give the trees or shrubs much of a chance. The remainder of the civilian population were evacuated in 1942 after [Japanese](#) air and naval attacks. During [World War](#) Baker was occupied by the U.S. military.

One of the greatest puzzles of the modern world took place near Baker in 1937. Famous aviatrix, Amelia Earhart was attempting to complete a round the world flight. Her plane disappeared somewhere near neighboring Howland Island as she was searching for the island's air strip to refuel. Her plane disappeared without a trace and today the mystery is still unsolved.



The 2018 Baker Island Expedition commemorates the 81st anniversary of Amelia Earhart's disappearance on July 2, 1937 near Baker & Howland islands -- as well as the commitment and sacrifices made by the Hui Panalā'au -- a group of brave young men from Hawaii who attempted the colonization of Baker and Howland from 1935-1942.



Operating under a permit from the US Fish and Wildlife Service, fourteen amateurs landed on Baker from June 26th to July 7th. During that time, the team racked up 68,981 contacts worldwide. Baker Island is ranked as the 5th most wanted DX location, according to Clublog's most Wanted List.

Environmental considerations required the team to utilize vertical antennas exclusively. They opted for Steppir verticals and eight Elecraft K3s and Amplifiers. For software, the team relied on the win4k3suite and N1MM for logging.

The photo at left shows the on-island team from the deck of their support ship. They are smiling because they are leaving Baker, where the temperatures over 100 by 10AM and heading for a cold shower.

Reporting from the Dark Side,
Ron Litt, K5HM



KK5W Field Day Numbers and Score Submission by Rick W5RH

Our Field Day score was just submitted yesterday, July 24.....right on time. I had volunteered to do the submission a few weeks before the Field Day event and it was a very interesting exercise for a couple of reasons. 1) it was great to see that all of the hard work performed by everyone was quite beneficial; and 2) the submission process highlighted what actually needs to take place over that 24 hour period. Not only set-up, operation and teardown, but it showed the benefit of doing the bonus tasks such as GOTA, satellite contacts, visitors logs, under 18 on the air and, of course, the marketing aspects of news releases, invites to the media, local EmComm folks and elected officials.

So, where do we stand? As a joint effort of BVARC, ECHO, KARS and TDXS, our score was not too shabby. Here are the numbers:

Total number of visitors and active participants: 97
Number of 18 yr. and younger visitors: 11
Cases of water consumed: 15
Cases of soda consumed: 12
Total number of antenna masts/towers: 4
Total number of antennas: 12
Number of Yagi-Uda's used: 7
Number of Yagi-Uda elements: 20
Feet of coaxial feedline used: 2,700

Number of K3's On Air: 10
CW QSO's: 2266
Phone QSO's: 445
Digital QSO's: 291
GOTA Q's: 22
Satellite QSO's: 1
Band with most Q's: 20 (CW had 927)
Bonus Points: 1990
Final Score: 13,154

Final score is determined by the ARRL judges, but 13,154 is close. Check out <http://3830scores.com/> for our 10A LP score and many other station's scores for comparison. Stay tuned for the December 2018 QST for the national results and our nationwide standing. 73.....Rick W5RH



STATION IN A BOX

Special BVARC Raffle

Don't forget this raffle for a complete station as described in last month's newsletter. Get your STATION IN A BOX raffle ticket at the Ice Cream Social and other BVARC gatherings

Are You Ready for BLT-50?

By Andy MacAllister W5ACM

On December 8, 1990, we flew The South Texas Balloon Launch Team's BLT-1. On August 25, 2018, we plan to fly BLT-50. A lot has changed from a technology perspective over the last 28 years. Our current payload list for BLT-50 includes:

Model 8245-H Hwoyee 1600-gram weather balloon

Helium donated by PRAXAIR

Sain Sonic AP510 APRS Trackers - 144.390Mhz - W5ACM-12 and KG5FQX-11 (track via aprs.fi)

KE5GDB Multi-Input - Multi-Output VHF/UHF FM Repeater system

K5WH DMR Repeater on 446.5 MHz Up / 441.000 Down

(Color Code 1, Timeslot 1, Talkgroup 99 - Standard DMR Simplex settings)

Cross-band FM Repeater on 446.000 Up / 147.435 Down

Live DVB-T Digital ATV on 434 MHz

360-degree Down-looking Video camera

Wide-Angle Balloon Burst Video Camera

Two GoPro's

We expect updates and more information as the launch day draws closer. Look for them at <http://www.w5acm.net>. We are also on Facebook as <https://www.facebook.com/SouthTexasBLT/> and Twitter at <https://twitter.com/SouthTexasBLT>. We also have a remailer via <https://groups.io/g/BLT/>.

Our next dinner meeting is set for 5:30 PM on Wednesday, August 8, Buffalo Wild Wings at 9435 Katy Freeway, Houston, TX 77024. The next construction meeting will be 8 PM on Thursday, August 16, 310 Lombardy, Sugar Land, TX 77478. After that, we will be doing any last-minute fixes and getting ready for launch from the Wharton Intergalactic Spaceport (Wharton Regional Airport) at 10 AM on Saturday, August 25th!

Will YOU be there?

W5ACM and WA5TWT at BLT-50 Meeting



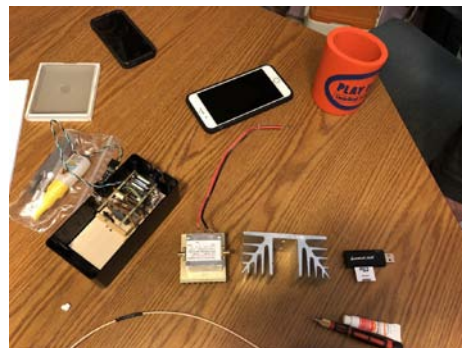
KC5JAR and WA5TWT Adapting Main Payload Box



WA5TWT Paints the main payload



Crossband FM Repeater testing



K5SAF DVB-T ATV Gear in work

The last HAM RADIO NIGHT at the Skeeters for this season is approaching!

Saturday - August 25 is the date! 6:05PM First Pitch The Gates open at 5PM

This is a VERY special date as it helps celebrate 1 year since Hurricane Harvey and a Concert by Jack Ingram following the game.

If you wish to purchase tickets with a food voucher (\$19.00 each), the Skeeters have set up a portal so that you made buy them directly and know exactly where you will be seated. We are trying to put everyone in Section 7 on the First base side.

I am putting step by step instructions for access to the portal and the special ticket pricing with voucher for food (Hotdog, Chips and drink).

If you do NOT want a food voucher you may order tickets directly from me at \$13 each and pay by cash, check or PayPal to my email address. If you want to order using the portal and pay by credit card. You may use the portal without the "special code", but tickets will be \$14 each.

1. Click on Link : <https://www.ticketreturn.com/prod2/BuyNew.asp#.W0zHIVKWzct>
2. Select - Events Near Me - Skeeters vs New Britain Bees- August 25
3. Select - Find
4. Special Event Code - Hamfest
5. Rather than selecting "best available" for seating, select SECTION 7. If there are no more seats in section 7, then we will put everyone else in section 6.
6. Make sure that all of your information is correct.
7. There is a \$1 convenience fee for ordering on line per ticket.
8. Tickets may be printed on your computer, or Picked up at Will Call. There are a couple of options.

If you have any problems, you may call the box office or me. My home number is 281-277-6266. If no answer, please leave a message and I will get back to you.

73 Scott, KD5FBA smedbury@windstream.net



BVARC Rag Chew Net

Below is the BVARC Rag Chew Net check-in information:

06/20/18, K5LKJ (NCS), W5TKZ, W5TOM, W5VOM, K5LJ, W5RH, K2MPP.
(7 Check-Ins) / Band Rpt: Good Solar Cycle 24: SFI = 80, SN = 41, A = 6, K = 1

06/27/18, K5LKJ (NCS), K5JPP, W5TOM, KF5TFJ, K5LJ, W5TKZ, K5IZO, W5RH, AA0ST (Dickinson) (M)(R), W5VOM/5 (Port Oconnor). (10 Check-Ins) / Band Rpt: Good / Solar Cycle 24: SFI = 71, SN = 12, A = 20, K = 2

07/11/18, K5LKJ (NCS), K5IZO, W5TKZ, W5TOM, W5RH, KF5TFJ, K5LJ, W5HFF, AA5OA (Ft. Smith, AR)(R), KJ5Y (RCS)(W5FMH/club)(Angleton), WA5CYI. (11 Check-Ins) / Band Rpt: Good
Solar Cycle 24: SFI = 73, SN = 0, A = 7, K = 2

07/18/18, K5LKJ (NCS), W5TKZ, KJ5Y (RCS)(W5FMH/club)(Angleton), K5JPP, K5IZO/5 (Jasper), W5TOM, W5VOM (Port Oconnor), W5RH, K5LJ, WW5PA, AA5OA (Ft. Smith, AR). (11 Check-Ins) / Band Rpt: Good
Solar Cycle 24: SFI = 71, SN = 0, A = 8, K = 1 -

(M) = mobile (P) = Portable (R) = Relay (RCS) = remote controlled station (T) = telephone check-in

Net conditions have been fair to good this month. Check out your station.
Come join in the conversation each Wednesday evening. Regards. John K5LK

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Net conditions have been fair to good this month. Check out your station.
Come join in the conversation each Wednesday evening.

Regards. John K5LKJ

MINUTES
Board of Directors Meeting
Brazos Valley Amateur Radio Club
July 21, 2018 11:00 AM
Bayland Park Community Center
6400 Bissonnet, Houston, Texas

Board Members Present:

Mike Hardwick N5VCX (President)
Mark Janzer K5MGJ (Vice President)
Jon Noxon KF5TFJ (Rec. Secretary)
Donovan Balli KG5BDZ (Treasurer)
Scott Medbury KD5FBA (2yr @ Lg Dir)

Visitors:

Mike Monsour AC0TX
Pete Sauermilch KE5JKQ
Cam Mitchel K5CAM
Jimmy Vance W5ZTX

Recorded by Jon Noxon, KF5TFJ Recording Secretary

- 1) Call to Order: The President called the meeting to order at 11:04 AM.
 - 2) Emergency Business: None
 - 3) Establishment of Quorum: A business quorum was established.
 - 4) Approval of Agenda: A motion made and seconded to approve the agenda.
 - 5) Club President's Opening Statement: The President thanked those present for attending the meeting.
 - 6) Approval of Minutes from Previous BOD Meeting: The Board approved the minutes for the May 2018 BoD meeting. No minutes from June as the BoD Meeting was canceled.
 - 7) Approval of Treasurer's Report: The Treasurer's Report was approved. Treasure was requested to analyze cash outflow. Suggestion was made to move Club Certificate of Deposit to Allied Bank for higher yield. Suggestion was made to find a meeting place we can use for free; Mark Janzer will lead effort.
 - 8) Old Business:
 - 8a. General Membership Meetings scheduled as follows, with topics not listed to be determined:
 - August 9, 2018 – Ice cream social and 40th anniversary of BVARC to be celebrated. (Medbury and friends)
 - September 13, 2018 TBD
 - October 11, 2018 TBD
 - November 8, 2018 Chili Supper and Elections (Rick Hiller)
 - December 13, 2018 Home Brew Night (host TBD)
- For September and October meetings, possible activities include a "road trip" and "maker's information" such as 3D printing and laser cutting.
- 8b. Mark Janzer reported on successful Museum Ships Week End activities and results. Need to be more accessible to the public. Relationship with Under Sea Warfare Center are excellent, and accommodating. A group of non-ham Navy guys with interest in Destroyer Escorts are interested in participating with us on the air conditioning of the radio room. The A/C and electrical are high priority, along with the Cavalla antenna. Selma was activated and pileups occurred!
 - 8c. FD Wi-Fi setup planned. Some kind of construction activity taking place on the site. Antennas have been confirmed. Planning meeting was scheduled for FD planning to be after this meeting, but will be deferred to May 26 at the FD location. Food not yet finalized. Alan to cover operator scheduling.
 - 8d. Scott Medbury reported highlights from ARRL Field Day. (Details discussed in meeting following the BoD meeting.)
 - 8e. Additional solder stations for club and GHHF activities discussed. Noxon to report on previously approved budget amount. Balli to determine the product to purchase.
 - 8f. Ham Radio 2.0 advertising is on-going. Need to feed info to Jason for inclusion in his "broadcasts".
- 9) New Business:
 - 10) Next BOD meeting date: August 4
- Future BoD dates: September 8 , October 6, November 3, December 1* NOTE: date changed from December 8, for which a room was not available.
- 11) Comments: Nothing of substance.
 - 12) Adjournment: The meeting was adjourned at 12:21.

The Radio Hotel – The Impedance of Space

by Rick W5RH

At first, more questions than answers.

Bet you a dollar that you have never even thought about it. Me too. But recently I have been looking into the subject of the impedance of space with wide eyes and wild anticipation of finding out how to improve my antenna system. Possibly matching the antenna's output impedance to the impedance of space—(forcing Jacobi's Law -- the Maximum Power Transfer Theorem). During this short period of due diligence, what I ran into was a quagmire of factual discovery and analysis on my part that led me to, not a breakthrough, but a realization that there *ain't nuttin* I could do about it. The pathway to this knowledge was arduous, but fun. What follows is a cursory guide through the gory details.

My hypothesis: The electro-magnetic radiation from our antennas has some impedance (z) that matches, to some degree, the characteristic impedance of space. I was also asking these questions: 1) does space actually have an impedance? If so, why? 2) does the impedance of space affect our antennas performance? 3) can we design an antenna to be more effective for matching to the impedance of space? But, to be truthful, what I really wanted to know was: "What is the output impedance (z) of an antenna?"

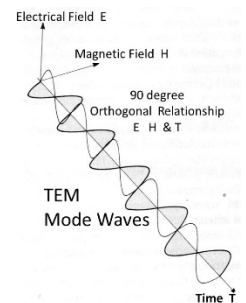
In my 30 or so years of mostly empirical HF antenna interest, I have never read about the output Z of an antenna. Input Z , feed point Z , Radiation Resistance – Yes; but nothing on the business side of the antenna transducer. So, with my typical, "I don't know squat about this" outlook, I ventured off into a land of new books, new terms, theories, and maybe, just maybe, a discovery that I could use to improve my antenna systems at the house.

The adventure starts here.

You do know that an antenna is a transducer, right? A *Transducer* – a device that transforms one type of energy into another. Like a toaster, which uses electrical voltage and resistance to generate a current flow in a heating element. This produces heat, which radiates thru the air and toasts our 'near field' breakfast treats.

Kind of a strange analogy for a transducer, but one that is quite relevant to an antenna -- electrical on the input and radiation on the output.

An antenna, as a transducer, does two things for us. 1), it converts a varying AC voltage at RF frequencies to **Transverse Electromagnetic** mode waves -- **TEM**. And 2), it is an impedance matching device transposing the Antenna's Radiation Resistance to the impedance of space. **TEM** waves are orthogonal waves (90 degrees out from each other) of E and H (charge and flux) electromagnetic radiation traveling in the direction of propagation down a transmission line or through the medium of air or space.



Another fact that must be considered is that of the "void of space". *Ain't no "void" out there, Batman.* Out in space, in the antenna's Far Field (Fraunhofer Zone), the TEM waves spread out so much that they become a plane wave; literally, thousands of thin sheets within each wavelength cycle of homogenous E and H charges traveling away from the antenna at the speed of light. But, what causes these waves to travel?

Space may not have any air, a vacuum, but it exhibits many other characteristics that can be advantageous. Like permittivity (capacitance) and permeability (inductance) – the ability to store electrical charge and magnetic flux, respectively. These are two very good, and necessary, characteristics to have when you want your RF energy to 1) travel down your coax to your antenna or 2) radiate from your antenna to the other side of

the globe. Just like the toaster's heat needs air to get to the toast, our TEM waves need space's permittivity and permeability to travel within the medium of space.

If you remember your transmission line theory, all transmission lines have the properties of permittivity ϵ and permeability μ . These 2 values are used to calculate the characteristic impedance of the coax you are using. So, if a coax transmission line's surge impedance can be calculated with these two values, and space also has these 2 characteristics, then the impedance of space can be calculated. The Square Root of Permeability-- μ_0 in space divided by the Permittivity-- ϵ_0 in space calculates to 120π or 377 ohms -- the Impedance of Space. (factoid -- the Greek letter 'eta' or ' η ' is used for the impedance of space, to avoid confusion with electrical impedance letter Z) So, now we know, the impedance of space ' η ' is 377 ohms.

But, I still want to know, what is the output Z or η of an antenna? Here is the simple answer -- As the E and H TEM waves from our antenna are radiated from the wire into the antenna's Near Field (Fresnel Zone) and then into the Far Field (Fraunhofer Zone), they literally conform to the impedance caused by the permittivity and permeability of space. Another analogy here: Sort of like water flowing from a large pipe to a smaller pipe. The large pipe's water will conform to the smaller pipes diameter, but while doing so will change the volume of flow and the pressure, based on the small pipe's dimensions. For the antenna, the E and H wave impedance takes on the value of 377 ohms, as the waves conform to the Far Field medium of space. This conforming action causes an exact match of the antennas radiated output impedance to the impedance of space (η). Exactly what I wanted to know. Sweet! *[Note that a significant amount of wave mechanics and E/H interaction happens in the Near Field. More on this in a later column]*

Now we know, the impedance of space; plus, how it affects our antenna's output characteristics. Know too that **all** antennas generate TEM wave output that conforms to this 377 ohm impedance. But, what about terrestrial RF traveling through air, you ask? Rest easy, my friends, as the Permittivity and Permeability of the atmosphere we breathe is very close in value to that of space. No disruptive impedance bump will be encountered when your RF is traveling from your backyard antenna to the hinterlands of the galaxy.

So, what about our antenna designs? Can they be improved? Output impedance wise....the answer is no. Of course, realize that the output impedance of an antenna "transducer" has an inherent influence on the antenna's Radiation Resistance and therefore also, on the Feed Point impedance. But η -- 377 ohms is what it is, a constant....always has been, always will be. Our best efforts should instead be put towards designing antennas with improved gain, beam width, front to back ratio, capture area and efficiency. No need to even think about trying to control the output impedance, it's a useless exercise.

Summary

Looking back at this whole space/antenna output impedance discovery process, although interesting and informative, the most I can say is that it gives us one less antenna system characteristic to worry about during the design or concept phases. There is no data to use and improve a Ham Radio station's antenna performance. No pushing the envelope, state of the art, break thru, wiz bang, antenna output Z design implementations to utilize. Sorry. So, the only other advantage is in the realm of trivia. Your knowledge of some esoteric radio theory fact. Keep it safely tucked away in the back of your mind, so that the next time we play Ham Radio Trivia at a club meeting and we ask "What is the Impedance of Free Space?". You can be Johnny-on-the-spot with the answer -- 377 ohms.

Enjoy your hobby.

73...Rick -- W5RH

Next time.... The Illusive "Wet Noodle" and 200 Degrees

*The purpose of **The Radio Hotel** is to give you a practical kickstart into exploring the workings of antenna systems. Google the buzz words and find out what they mean. Read up on antenna system theory to see how it all works together. You will be glad you did.*

MELVIN G. “Mel” THATCHER, KB5ION (sk) – A Reflection 30 Years of International HF Friendship

by Maurie Milani, VK3CWB



I first met Melvin Thatcher, KB5ION, in the mid-1980s just after the WARC bands were opened up to hams. In order to explore the WARC bands I borrowed Yaesu FT 707 as I did not have a radio with the WARC bands. I recall encountering Mel on 17mx sideband. He was there with Bill Todd Brown, N5MPN, who was calling “CQ Propagation Study.” I have never heard a CQ call like it since then. To this very day, I was never sure whether this so called propagation study was genuine or just another means of getting DX to answer him. Needless to say, I was one of those who answered with an inquiring mind.

Mel was using a TS440S and a Cushcraft R5 vertical. One was never sure what Bill, N5MPN, was using. Part of this so called “study” entailed him not telling the other person on the other what power and antenna he was using. For whatever reason, his signal was always significantly better than Mel’s. After answering Bill’s CQ, he would give stations a report then pass to KB5ION who would do likewise. At the time, I was very much a CW op, but I was quickly captured by Mel’s humour and honesty on the air. He quickly made me appreciate SSB. Mel used to say, forget the propagation study; “Let’s just talk!” Which we did, and Bill would become frustrated and go up the band and keep CQ’ing, while Mel and I talked on 17mx.

Over time, we became regulars on the 17 mx band. It was seldom used by others. They were short path contacts around the time of 0500Z to 0600 Z, which was late in the Texan evening. Soon Doug Holly, KE5SR, joined us on 17 meters. Doug was using a 40mx rotatable dipole at about 100 feet fed via an ATU. He always had a great signal. Hence Mel, Bill and Doug we became buddies via some sort of “propagation study.”

In regards to the Propagation study I remember the following: Bill, N5MPN, believing that 1) a band can be opened up by pumping RF into the ionosphere, and 2) that antennas don’t always do what you think they do. (Something which is true today.)

His first assumption used to raise my hackles, as I would argue that the minimal RF we pump into the ionosphere has absolutely no impact on the layer we were affecting. The comparison signal report between himself and Mel’s vertical always had me wondering what it achieved. As the years progressed that solar cycle came to an end, and 17mx became almost impossible for reliable contacts. I received notice from Mel via regular mail that Bill Todd Brown had died, and I recall sending his wife a letter.

I remember calling Mel on the phone in the late 1980s at his work place. He was then working in an engineering firm. I vividly remember his awe at hearing an “aussie” accent, calling him at work. In these pre-internet days, setting up a sked was done via landline, via post, or via phone patch if you could find one. Over the phone, I asked Mel to get on 40mx SSB, as during this time I was having great success with a Bobtail vertical Curtain array, which was three, quarter wave vertical elements in phase.

Our first 40mx sked was a wash out! Mel had a low slung 40mx inverted V dipole and was pumping out a kilowatt. I could barely hear him and vice versa. I was using the Bobtail and about 400w. (Our legal limit.) I knew we had to do something about Mel’s antenna. I sent Mel the paperwork for a Bobtail and asked him to erect one. Mel was living in Missouri City at the time and had a spacious back yard. He did build that Bobtail, and it was a tight fit. Eventually the time of testing his new 40 mx antenna arrived. This test became engrained in my ham radio psyche for ever after. This test proved the point of the importance of low angle radiation for DX. I use this test as a practical example of the importance of appropriate antennas for DX work until this very day.

The results were as follows; 1) Mel’s dipole at 35 feet with 1kw was inaudible. Zero copy! 2) Mel’s Bobtail with 100w was easy copy. It was a no brainer! Hence, the adage became; “To improve Dx performance, would you spend many thousands on an amplifier, or ten bucks on some wire?”

Given that Mel lived in a city lot, he had “bacon frying noises” emanating from power lines. Hence he’d swap between antennas for receiving as the Bobtail was terrible for picking up local electrical noise which was vertically radiated. So, in time Mel had the Bobtail curtain array connected to the classic kilowatt, and he became easy copy. We would get on 40 meters three times a week, and talk about anything and everything. Most of it was not ham radio related, but more akin to a phone conversation.

In time, other local Houston hams would join in. Notable was one KF5NU, Rick who was later to become W5RH. Rick had a wonderful set up of Drakes, a delta loop, and was a microphone and antenna aficionado, and we were forever making comment on which microphone was best for Rick. He had a rich melodious radio voice which continues to this day. Others soon joined in, AA2NN, Carrol, from New York; W7MAD, Ed, from Helena, Montana; KG5GH, Dave, from Arkansas; K1IED, Larry, and K1YZW, Walter from Connecticut. Stragglers would always pop-in, so the list became almost endless.

In time the 40meter gathering place became a renowned regular round table between the USA and VK. It lasted some ten years then petered out as life got in the way. It made a resurrection in the late 1990s. In that time, we laughed, we cried, we said some funny stuff, we helped each other out, we talked technical, we talked antennas, we talked no so technical stuff, we talked families, and we heard everyone’s trials and tribulations. It was the perfect opportunity to check DX performance of one’s antennas on 40mx. In all, it became a vital part of our weekly lives, and the camaraderie was wonderful.

KB5ION was the glue that kept this group together. He was that quaint southern boy (and I say that respectfully) who usually had us in stitches and laughing with some comment he would make. Notable comments from Mel were “Dub ya nuthin”..when he got a call sign wrong. Or...“I can’t chew gum and walk at the same time!” Another was; “I can see ya mouth moving but I can’t hear you.” (he had poor hearing by that time.) Mel eventually had a work place injury, severely affecting his hand, but he continued with ham radio. His voice was distinctive, not melodious, but classic southern.

In the late 1990's ham radio equipment was expensive and hard to get in Australia. I recall I was using an old TS930s, and it broke down. I was off the air. Before I knew it, I had a postal notice that there was a parcel to pick up. Mel had sent his Icom IC-746 to me! Incredible. I was back on air, and back with the gang within weeks. His generosity was something I had never experienced before. In the year 2002, Mel and Mary and his granddaughter came to Australia and we eventually met in person. He stayed in my very humble abode at the time, and we got to know each other even better. I reciprocated and went to the USA with my daughter in 2006 and that's where I met Mel and his family again, as well as Rick and a whole host of others. While there, Mel and Mary had put on a lunch and invited a whole bunch of local hams. What a great day. I still have that photo in my office today! They were both life changing events. His generosity, warmth and friendship is something that left a vast indelible impression upon me.



Maurie, VK3CWB, and his daughter, Bianca, were hosted in Houston recently by Mel, KB5ION, and his wife, Mary. BVARC Hams attending an open house in their honor were (L to R) VK3CWB, W5RH, KE5SR, KB5Q, KB5ION and K5CEK

Eventually, 40mx became difficult to manage both in group size and in terms of DX reliability, so we would congregate as much as we could on either 12 or 17meters.

At that time 12 meters was the band of choice in the early 2000s. The band was quiet, QRM was almost non-existent, and contacts proved to be easy. The 40mx group continued, but Mel largely became an upper HF operator. When Mel and Mary moved to Rosenberg, he was ably helped by Rick, W5RH, to erect some antennas for 12 and 17 meters. Soon even these bands became unreliable, and so we returned to the ever reliable 40mx again, and by 2012 the big bunch was back on 7.180.

But as time progressed, Mel found the mornings difficult to manage, and his lung capacity was clearly compromised. His voice by then had become debilitated and much weaker. We relied upon email and phone calls to keep in contact.

No demand was too much for Mel. During the early e-bay years, I accumulated a lot of ham radio related stuff with the hope of making some pocket money. I bought a lot of junk and had it all sent to Mel's place. He had cupboards full of the stuff. Each day he'd report about what had arrived. He was meticulous. In retrospect, it was a ridiculous thing for me to do. Mel never complained once, but that was the calibre of the man. In the end, with a shipping agent, we had 10 huge 30 kg boxes sent out to Australia. Mel hand packed each item! Unfortunately, I never made the fortune I thought I would from all the radio junk imported from the states! Mel and Mary were an amazing couple. Mary was blind from birth and a Special Education teacher. She was a southern girl from Mississippi. Mel's hearing was always poor, (he put it down to industrial deafness) but Mary's hearing was acute as was Mel's vision. Together they were an indefatigable team. Mel would tell Mary what he was seeing, and Mary would tell Mel what she was hearing. Mary affectionately known as "Mamma" would sometimes say hello on 12mx when band conditions were good. She was always interested in the families and the children she had come to know.

Through Mel, I have developed some other lifelong friendships; namely Rick, W5RH, and Carrol, AA2NN; friendships that continue to this very day. Like all of us, Mel spent countless hours on radio. As ham radio operators we cannot be in two places at once, hence our respective families must be accepting of our hobbies, as we try to balance our lives. Mary always supported Mel's radio activities and my involvement in his life. We created a friendship that traversed international boundaries. This continued for over 30 years.

Every time I contacted Mel; he made my day.

Mel, KB5ION, was unique, proudly Texan, and a great ham! Vale, Melvin Thatcher-- KB5ION (sk)

Note: Mel was an active member of BVARC for many years. Awarded the Loop and Zepp and other awards.

Submitted by Rick Hiller, W5RH, on behalf of Maurie Milani, VK3CWB



Hamfests

(typically within 200 miles of Houston)

Hamfest info for the next few months. More information at:
<http://www.arrl.org/hamfests.html#listing>

08/03-04/2018 | Texas State Convention (Austin Summerfest 2018)

Location: Austin, TX
Type: ARRL Convention
Sponsor: Austin ARC & Texas VHF-FM Society
Website: <http://www.austinsummerfest.org>

10/06/2018 | HamEXPO

Location: Belton, TX
Type: ARRL Hamfest
Sponsor: Temple Amateur Radio Club
Website: <http://TARC.org/hamexpo/>

10/20/2018 | South Texas Hamfest & Electronics Expo

Location: Sinton, TX
Type: ARRL Hamfest
Sponsor: South Texas Hamfest Association
Website: <http://www.southtexashamfest.org>

BRAZOS VALLEY AMATEUR RADIO CLUB

This newsletter, the **BVARC BEACON**, is a monthly publication of the Brazos Valley Amateur Radio Club. For a full listing of officers and information about BVARC, please go to www.bvarc.org. Detailed information will be published in the BEACON every 3 or 4 months. Similarly, the "Eating Schedule" will be published every 3 or 4 months unless there is a change.

General membership dues are \$25.00 per year, with student dues \$10.00 per year, additional family members \$5.00 per member per year.

Club meetings are normally held on the 2nd Thursday of each month at 7:30 p.m. at the Sugar Land Masonic Lodge, 421 Eldridge Rd, Sugar Land, 77478. Check the above website for any possible changes.

BVARC amateur radio testing is being reorganized. Check upcoming newsletters or the BVARC website for developments.

A Public Service Net is held each Monday at 8 p.m. on the 146.94 (minus offset, PL 167.9 tone) repeater.

A rag chew net is held each Wednesday at 7 p.m. on 3910 KHz +/- 3 KHz.

To obtain information about joining **BVARC** or its activities, contact the club's "Elmer," Ross Lawler, W5HFF at 281-701-7602 or see the BVARC website: www.bvarc.org

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NOTE: Officers, advertising and eating schedule are on the website. They will only be published in the Newsletter every few months.


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**BRAZOS VALLEY
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BVARC Annual Ice Cream Social – Thursday, August 9



If your mailing label is highlighted in color, it's time to renew your membership!