

When All Else Fails . . . Amateur Radio

Main Repeater

146.700
- Offset
PL Tone 107.2

Other Repeaters

444.700
+ Offset
PL Tone 107.2

EchoLink

W5RIN

BARC Weekly Net

Thursdays @ 8 PM on
146.700

Monthly Club Meeting

Date & Time:
Last Monday of
month at 7:30 PM

Location:

North End Baptist
5115 Eastex Freeway
Beaumont, TX

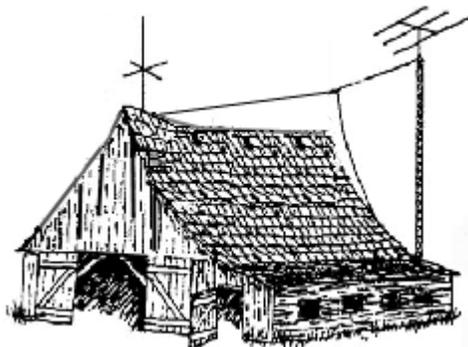
Next Meeting:

April 25, 2016

*Program: Video from
Rocky Wilson*

BARC Website

www.qsl.net/w5rin



Rail Riding Radio

Most of us have multiple hobby interests and it's always fun when we can combine them into a single event. Besides being an Amateur Radio operator, I'm lucky enough to be a locomotive engineer on the [North Shore Scenic Railroad](#) out of Duluth, Minnesota. We use VHF radios for railroad work, which would seem to limit opportunities to combine ham radio with railroads. Not true! Our railroad is part of the Midwest's premier [Lake Superior Railroad Museum](#). While volunteering at the railroad, I've been involved in several radio projects. Recently, several local amateurs helped to design and install a repeater system for the 30 mile rail route. The system is used by train crews to communicate with each other as well as train dispatchers.

In 2011, I became curious as to how an HF station might operate from a moving passenger train. Many ham operators design and test their equipment to operate in harsh emergency conditions. Those operating conditions are never the same and never predictable. Operating "railroad mobile" would be another opportunity to adapt HF gear to an environment that was certainly not designed with long range communications in mind. A modest test involved a simple 20 meter wire attached to some existing insulators on a rail car's roof. A small group of operators made some good contacts and seeded the idea for a railroad mobile club.

Presidential Portable

In 2012, a small group got together and created the North Shore Scenic Railroad Radio Club with call sign NSØSR. Our goal is to sponsor at least one mobile event each fall for an entire day, operating as a special event station. This gives us an opportunity to design and test new antennas while operating in a very temporary and restricting environment. Using backup power for multiple stations in close proximity was also required as only 34 V dc train line power is available.

Rail Riding Radio Continued . . .

These 100 year old 34 V wires didn't run through the entire train and power was only available when the engine was operating. The portable generator allowed us to position our stations wherever it was convenient and to keep them operating when the train was idle.

On October 6, 2012, we operated from the old Duluth Missabe & Iron Range Railway Presidential Support Car W24. This early 20th century Pullman car has a large baggage area perfect for group gatherings. Large doors offer great views and fresh air. There is also a small seating area where operators can relax and soak in the "clickety-clack" of the ride as they enjoy a bygone era. Private state rooms were used for operating both 20 and 40 meter stations. These rooms allowed up to four operators to assist in radio traffic and logging while sitting in 1920s comfort. High back Pullman chairs and large windows transported them back to the era of elegant railroad travel.

The rail car's roof has three heavy-duty steel conduits welded along the length of the 85 foot car. These were installed when the 105 ton passenger car underwent renovations in the beginning of the 20th century to include such amenities as electric lighting. Our group used this conduit to attach an "X" bracing of 2 x 3 inch pine boards. Nine of the X braces were installed along the coach, allowing for both the 20 and 40 meter dipoles. Air choke baluns were placed on both ends of the coax runs, which were dropped down the side of the coach into the radio rooms. Due to height restrictions, our dipoles were limited to being no more than 3 feet off the roof. The total antenna height above the rail head was around 18 feet.

Rolling Radios

Our stations consisted of Icom 7200 and 7000 transceivers, both running off large AGM batteries. A Honda generator was on hand for charging and powering the laptops used in logging and PSK operations. A pair of [Dunestar](#) filters were used for out of band rejection considering our antennas were only a couple of feet apart. The filters worked flawlessly and neither station experienced interference.

Also on our train was a Soo Line Railway caboose in which we installed a CW station consisting of a Yaesu FT-817D transceiver driving a vertical antenna mounted to the roof grab irons. A second roof vertical was used for an Automatic Packet Reporting System (APRS) station. Antennas performed well with the exception of when we entered a tunnel. For that brief moment, the cell phone adage, "Can you hear me now?" applied.

Our rail cars were attached to the morning train from Duluth to Two Harbors, Minnesota. This regularly scheduled tourist trip winds through the woods and along Lake Superior slowing for a few waterfalls and scenic locales. These provided great operating vistas for our purposes.

We left Duluth for the morning excursion and operated for 2 hours during the ride northeast along Lake Superior to Two Harbors. At Two Harbors, we took a lunch break while the excursion train stopped for the passengers to explore the area. After a 2 hour stop at Two Harbors, it was all aboard and another 2 hours of operating as we traveled back to Duluth.

Satellite Explorer Pro App

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Satellite Tracking Made Easy

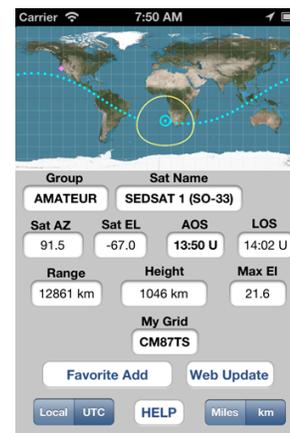
Satellite Explorer Pro' is a free app for the iPhone, iPad and iPod Touch that is available through the iTunes app store. This app is a tool for tracking satellites. It is not a game.

The tracking map shows the current location as a red diamond and the

satellite track as a series of blue dots. The dots are spaced apart equally in time. The satellite location is shown as a blue circle with a blue dot in the middle at the start of the track. The satellite coverage circle is shown as yellow circle.

Check it out and see when the next satellite will be over your head!

Available on the iTunes Store for FREE!



Rail Riding Radio Continued. . .

The evening trip saw us switched onto the local tourist dinner train for another trip up the shore and back. We called our favorite pizzeria and placed an order. We stopped the train next to the eatery and picked up our food for the evening. Not too many amateur field operations can say they've done that!

Eighteen local hams operated over the several hours we were moving. It was great fun explaining to contacts that we were on a moving train. Many contacts mentioned having relatives either working for or retired from various railroads all over the country. We made just under 200 contacts with people from coast to coast as well as Canada, Mexico, and Cuba. Most had never made contact with a railroad mobile HF station. Some were skeptical until they heard the locomotive horn in the background or verified our moving APRS signal.

A Good Match

We are very lucky to have supportive staff at the railroad. It also helps that the general manager has been involved in radio himself for decades. For local hams, our relationship with the museum is a great combination of being able to help out the museum with technical radio work as well as further the HF side of our hobby. It also gives us practice in using the space and conditions given to make an HF station work. Any time that we can practice our abilities to operate in unfamiliar environments we prepare ourselves for unknown situations in the future. Whether those are emergencies or a weekend operating session, they are all good preparation.

Information about our 2014 outings and photos of past events can be found at our QRZ.com page under the NSØSR call. We will announce the dates for our events on that page as well as at the eham.com, QST and CQ websites.



Did you know?

Attenuators

An attenuator diminishes (attenuates) the strength of the received signal. Why use an attenuator? As you near a transmitter, its signal strength will increase until it eventually maxes-out your receiver's S-meter, and provides your receiver with a strong static-free signal. Placing an attenuator in the feedline between your antenna and receiver will knock the signal strength down sufficiently so that your S-meter, or the noise on the received signal, can be used to observe signal strength variations as you proceed with the hunt.

Attenuators can be divided into two broad categories:

Active Attenuators-

Active attenuators make use of active components and thus require a source of power (e.g., a battery) in order to function. The *offset attenuator* is an example of an active attenuator.

Passive Attenuators-

Passive attenuators contain no active components, but inherently impose an absorptive or reflective loss directly to any signal passing through them. The *resistor network attenuator* (or *resistor step attenuator*), and the *waveguide*, are examples of passive attenuators.



ARES & RACES 2016 Upcoming Public Service Dates

DATE	EVENT
February 26-27	X Orange Hamfest
February 27	X Gusher Marathon - Beaumont
March TBA	X Big Thicket Bike Tour
Apr 23	X Texas ARES/RACES/MARS Drill
May 7	March of Dimes, March for Babies
May 21	Don Allen Sports Day - Wildwood
June 4	Spindletop Spin Bike Tour
June 25-26	ARRL Field Day
August 19	Gusher - 5K Pleasure Island
September 10	Big Thicket Neches Canoe Trek
September TBA	CCA Kids Fishing Rodeo - Laporte
October 1	Beaumont Fire Family Fire Safety Fair
October 14,15,16	BSA Jamboree on the Air
October TBA	Texas ARES/RACES/MARS Drill
November 5	Gusher Pleasure Island Half Marathon
December 2,3	SkyWarn Recognition Day
December 13	HAM Christmas Party - Brazos Cattle Company

For more information on ARES / RACES, please contact Kirk (N5WKM).

Jefferson County

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For those of "us" old enough to remember the "three hour tour"!

The **Jefferson County Club** will have their next meeting on **May 10, 2016** at 7:00 PM. This club meets the second Tuesday of each month.

The **Jefferson County ARES Club** meets the third Thursday of the month. The next meeting will be **May**

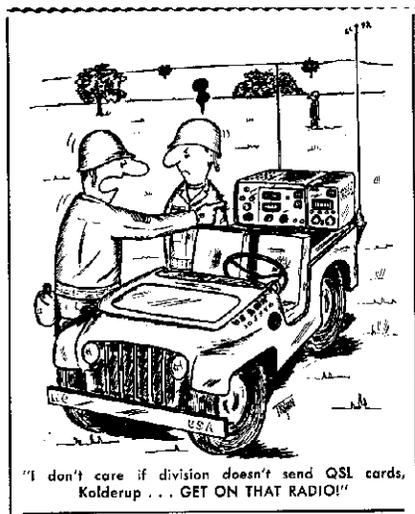
19, 2016.

The **Club Net** is on Wednesdays at 8:00 PM on 145.470 with a negative offset and PL tone of 103.5. The ARES net follows immediately.

Sign up to "call a net"!

www.w5ssv.com

Orange County



The **Orange County Club** will have their next meeting on **Friday, May 6, 2016** at 7:30 PM. This club meets the first Friday of each month. *No, this is not an "April Fools" joke. ☺*

The **Orange County ARES Club** meeting is also on the first Friday

of each month at 6:30 PM. Next meeting is **May 6, 2016.**

The **Club Net** is daily at 6:30 PM on 147.180 with a positive offset and PL tone of 103.5.

www.qsl/net/w5nd

Executive Board Meeting

There will **NOT** be an Executive Board meeting will be on **Monday, April 25, 2016.** Normally we meet at 6:30 PM at Rao's Bakery on Dowlen Road. Any

members may attend and bring any ideas or concerns to the Executive Board.

You may also email any suggestions or concerns to any

Board member and it will be taken into consideration at our meeting.

This is your club, so help us out with ideas!



Radio Amateurs & America's Secret Submarine

Groton Connecticut, 1966: The keel was laid for a radically new US Navy nuclear submarine. She was to be small, dive deeper than any other, and roll along on the very bottom of the ocean using large tandem sand tires. Propelled by the world's smallest naval nuclear reactor, she would have extraordinary mission duration. She was to be built and to be operated in great secrecy. This was "Submarine NR-1," also known as "Admiral Rickover's Deep Thing." When she began her sea trials in 1969, NR-1 was manned by a crew of 12 hand-selected officers and men of the US Navy, joined by three highly trained civilian engineers. Not unlike the Astronaut Corps, these explorers of "inner space" included two Amateur Radio operators. I was one of the lucky civilians (then W4BIE). My shipmate and good friend to this day was ET1 Robert T. Lunt, WA8LBY (now N3IFF and a retired Lieutenant Commander).

In the following 33 years, NR-1 has carried out operations that were at times so secret even many of the Navy's senior officers were only dimly aware of her existence and capabilities. Following declassification of some aspects of the small sub a few years ago (for example, a depth capability of 3000 feet), an exciting new book has been published: *Dark Waters (An Insider's Account of the NR-1, the Cold War's Undercover Nuclear Sub)*. The book is co-authored by Lee H.

Vyborny, another of the original Navy crew, and Don Davis. It is published by Penguin Putnam, Inc.

Dark Waters does a fine job of capturing the excitement and intrigue, the challenges and dangers of those Cold War times aboard NR-1. However, it doesn't go into some of the fun Bob Lunt and I had trying to mix our hobby in with our responsibilities. Despite having the most advanced nuclear technology, NR-1 was equipped with a relatively low-tech (by today's standards) 100 W MF/HF SSB transceiver. Bob and I always drew the short straw when it came to making emergency repairs on the balky and bulky transceiver in a heaving sea.

While operation on the ham bands would have been strictly forbidden at sea, Bob and I made repeated attempts to establish outside contact while dockside. NR-1's whip antenna just wasn't making the grade. At one point, we strung a not-so-stealthy long-wire between NR-1's sail and her rudder. This required both ingenuity and subterfuge. "The Old Man," our 33-year-old captain, would surely have disapproved of our activities. The wire had to go up when he left the boat (subs are "boats," not ships) late at night and be taken down by dawn. Plagued by the static of shipyard arc-welders, we had minimal success on the ham bands. However, our

design for the antenna eventually replaced the whip and remains a part of the sub's equipment suite.

The tradition of hams on NR-1 continued over the decades, culminating with the assignment of Commander Charles A. Richard, W4HFZ, as skipper from 1996-1999. "Chas," who is well-known in the AMSAT and APRS community, is currently the commanding officer of USS Parche (SSN 683). In 1999, he took me aboard NR-1 for a "ship down memory lane" — 3 days under the sea in the North Atlantic, nearly 30 years after my last voyage. As I traveled to meet the boat, ham radio was used for talk-in purposes. After all those years, I couldn't remember how to find the New London Submarine Base!

Dark Waters is peopled with legendary characters like Admiral Hyman G. Rickover and Robert Ballard, the undersea explorer who found the gravesites of Titanic, Bismarck, and PT-109. Now, should you read it, you'll know there is also some ham radio tradition riding along with her.

Brian F. Wruble, W3BW
ARRL



Two hams were among the small crew of a super-secret Cold War era submarine.

**Beaumont Amateur
Radio Club**

PO Box 7073
Beaumont, TX 77706

E-mail

Beaumontarc@gmail.com

Editor's Notes

It's never too early to start planning for your participation in Field Day. The Beaumont Radio Club will be setting up for **your** FIELD DAY at a soon to be disclosed location!

Field Day is part educational event, part

June 25-26, 2016



operating event, part public relations event – and ALL about FUN!

Don't miss out on the fun – spend one hour or 24 hours.

Club Officers

Please feel free to contact any club officer with questions or suggestions. This is YOUR club!

President	LB Little	WB5YDA	782-3115
Vice President	Lynn Sandell	KF5LNZ	454-3812
Secretary	Debby Martin	Kf5LOA	673-8628
Treasurer	Brenda Frazier	N5EKG	385-5187
Director	Ronnie Frazier	KX5C	385-5187
Director	Jody LaPoint	KG5GTF	
Director	Roger Dillon	K5PE	755-4589
Director	Randy Leftwich	K5RWL	466-5828

BEAUMONT AMATEUR RADIO CLUB
PO BOX 7073
BEAUMONT, TX 77726



We're on the Web!

See us at:
www.qsl.net/w5rin

2016 BARC Club Members & Call Sign

Abraham	Luke	KF5HCK
Adams	Matt	KF5EGL
Barnett	Rodney	KG5DDB
Bartlett	Evelyn	WA5MPW
Batchelor	Richard	KA5IQX
Boyett	Robert	WU5Q
Breaux	Gil	W5GBX
Burkhalter	Jimmy	KB5WIO
Dillon	Roger	K5PE
Domino	Joe	WA5KFQ
Faucheaux	Mike	N5KBW
Fielder	Wayne	WB5VDC
Fournerat	David	KF5CAE
Frazier	Brenda	N5EKG
Frazier	Caleb	W5GOW
Frazier	Michael	N5LYH
Frazier	Ronnie	KX5C
Harrington	John	W5EME
Heisler	Charles	KG5MCT
Heisler	Delores	KG5MNF
Hill	John	W5HX
Hudgins	Richard	N5ALE
King	Kathryn	KC5PQA
Kubenska	Joe	KF5LW
LaPoint	Jody	KG5GTF

LeDee	Nelson	KC5YZC
Leftwich	Randy	K5RWL
Little	L.B.	WB5YDA
Lombard	JoAnn	KD5RRW
Lombard	Walt	W5CPH
Mahney	Kirk	N5WKM
Manshack	Mike	AD5OG
Martin	Debby	KF5LOA
McLaughlin	Jimmy	KD5WJF
Ritchie	Maurice	WB5MR
Sandell	Lynn	KF5LNZ
Sonnier	Wayne	KF5SRG
Starr	Adam	KF5EAX
Starr	Melissa	KF5EAW
Stewart	Paul	WA5NUJ
Stockholm	Jerry	WA5NRG
Stone	Bonnie	KK4KIA
Stuart	Grant	N5YX
Thompson	Tom	KF5TT
Webb	Claude	KG5BBD
Wilson	Rocky	N5MTX
Youngblood	Bennie	KE5RTI

Frequencies

52.525 6 Meter FM National Calling Frequency
 53.150/52.150 Groves Repeater (pl 100.0)
 144.390 APRS
 145.010 WB5YDA-10 RMS Packet
 145.010 BPT (W5SSV) Packet
 145.010 W5SSV-10 RMS Packet
 145.050 KC5YSM-10 RMS Packet
 145.210- S.W.L.A.R.C. (W5BII, pl 103.5)*
 145.230- B.T.A.R.C. (N5BTC, pl 103.5)*#
 145.330- Anahuac (KK5XQ, pl 123.0)
 145.470- J.C.A.R.C. (W5SSV, pl 103.5*)
 145.350- Sulphur A.R.C. (KC5PNH, pl 103.5)*
 145.560 Simplex-Jeff Co ARES Secondary
 146.450 Mid County Simplex
 146.520 National Simplex
 146.560 Simplex Tyler Co ARES Prim
 146.580 Simplex Jeff Co ARES Prim & Special Event
 146.640- Beaumont Repeater (KW5C, 103.5 pl) #
 146.680-Tyler Co Amateur Radio Assoc. (100.0 pl) **DOWN**
 146.700- B.A.R.C. (W5RIN, pl 107.2)*#
 146.730- S.W.L.A.R.C. (W5BII, pl 173.8)#
146.760- B.A.R.C. (W5RIN, pl 107.2) BACK ONLINE

* Denotes transmitted PL tone.

146.860- Port Arthur (WD5GJP) pl 103.5
 146.980- H.A.M.S. (Devers, N5FJX, pl 103.5)*#
 147.000- Jasper (W5JAS, pl 118.8)*#

147.060+ DuPont (AA5P, pl 103.5)
 147.180+ Orange A.R.C. (W5ND, pl 103.5)*
 147.200+ Port Arthur (KC5YSM) (pl 118.8)*#
 147.220+ Tyler Co ARA (pl 100.0)* **NEW**
 147.300+ Mobil Oil (W5XOM) (pl 103.5)*
 147.420 Simplex-Orange ARES Primary
 147.460 Simplex-Orange ARES Secondary
 147.570 Simplex-Hardin Co ARES Secondary
 223.800 Beaumont (KA5QDG) (pl 123.0) **DOWN**
 224.200-Vidor (KD5UNK) (no CTCSS) **NEW**
 224.920 Devers (KA5QDG) (pl 123.0)
 440.725+ Jefferson Co D-Star Repeater **NEW**
 442.575 Devers (KA5QDG, pl 103.5)
 444.700 B.A.R.C. (W5RIN, pl 107.2)
 444.900 Mobil Oil (W5XOM, pl 103.5)
 446.000 National Simplex UHF

Denotes echo link.

Nets

BARC Net Thurs Night 8:00pm 146.700
JCARC Net Wed Night 8:00pm 145.470
BTARC Net Thurs Night 7:00pm 145.230
ORG ARC Net Nightly 6:30pm 147.180
LAARC (Jasper) Tues Night 8:00pm 147.000
TCARA (Tyler CO) 1st Mon Night 7:00pm 147.220
2M SSB Gathering* Tues Night 8:30pm 144.270
2M CW Net Wed Night 7:30pm 144.160
10M CW Net Fri Night 7:45pm 28.970
10M LAARC Ph Net Wed 8:00pm 28.325 USB

*No longer a net, but a QSO gathering.

Daytime Texas Traffic Net Daily 8:30am 7.285
7290 Traffic Net M-Sat 10am-12N, 1-2pm 7.290
Texas Traffic Net Daily 6:30pm 3.873
Gulf Coast SSB Net Daily 6:30pm 3.925
Delta SSB Net M-Sat 7:00pm 3.905
Ctn Gulf Cst Hurricane Net Daily 8:00pm 3.935
Southwest Traffic Net Daily 9:30pm 3.935
Central Tx Emerg Net Sunday 8:00am 3.910
Louisiana ARES HF Net Sunday 7:30pm 3.873
Texas ARES HF Net Monday 7:30pm 3.873
Texas RACES HF Net 2nd & 4th Sun 2pm 7.255