



# NARS NEWS

July 2015

The Northwest Amateur Radio Society  
an ARRL Special Services Club #2120

## Important Dates

### Monthly club meeting:

Third Friday of each month, 7:30 pm.  
Cypress Creek Christian Community  
Ctr. 6823 Cypresswood Drive

### Board of Directors Meeting

Tuesday, June 30, 7:30 pm.  
Ponderosa Fire Station  
17061 Rolling Creek Drive

### VE License Exam:

Saturday, July 25 at 10:15 am.  
Lone Star College Tomball Library  
located at the south entrance to the  
College. Official address is:  
30555 St. Hwy 249.

### Lunch Break—North

July 15, Gianna's  
July 22, Spring Creek BBQ  
July 29, Pei Wei  
Aug 5, Panera Bread  
Aug 12, Jason's Deli

### Lunch Break—Medical Center

July 15, Morningside Thai  
July 22, Pronto Cucinino  
July 29, Jason's Deli  
Aug 5, Buffalo Grille  
Aug 12, Southwell's hamburger Grill

### Tail Dragger's Lunch Bunch -

Mondays, 11 am.  
Aviator's Grill, Hooks Aerodrome

Notice: NARS membership dues are  
\$20 per year, renewable on anniversary  
date.



July 17th.

This month's program will feature  
Kenneth G. Ransom N5VHO,  
Inter Space Station Radio Manager for the  
National Aeronautics and Space Administration.

## 146.660 Repeater News

NARS now has a backup repeater in operation. The frequency, 146.660, will remain the same as before, only the tone has been changed to 100.

Anyone wishing to help defray the cost of replacing the repeater, antenna, connectors, etc. can make a donation to the Repeater Fund by making checks payable to NARS and designate "Repeater Fund" in the Memo field.

NARS, P.O. Box 90387, Houston, TX 77290-0387

The cost of this equipment is considerable and will be done in stages as we go along. Some equipment, material, and technical assistance has already been donated, but we have a long way to go towards completion of this massive project.

**Breakfast  
at Denny's  
7720 Louetta Road  
Saturdays 7 am.**

## Amateur Radio Becomes Primary on 1900-2000 kHz on August 6

Amateur Radio will be upgraded on August 6 from secondary to primary in the 1900-2000 kHz segment of 160 meters in the US. That's the effective date of the WRC-07 implementation *Report and Order* and WRC-12 *Order* portions of a lengthy FCC document released on April 27. Both portions appeared on July 7 in the *Federal Register*; the *Notice of Proposed Rule Making (NPRM)* of the same proceeding was published in the *Federal Register* on July 2. The FCC also made a secondary allocation of 135.7-137.8 kHz to the Amateur Service, but this band will not be available until service rules have been adopted.

"The FCC action with respect to 1900-2000 kHz reduces the possibility that we might suffer in the future from new radiolocation deployments," said ARRL CEO David Sumner, K1ZZ. "On the other hand, we will have to put up with radio buoys that have been operating illegally in the band but that now have been 'regularized' by the Commission."

The FCC said that while it had believed there was no non-Federal RLS use of the 1900-2000 kHz band, the record indicated there are maritime users, including the US "high seas" migratory species fishing fleets, making use of radio buoys in the Atlantic and Pacific oceans as well as within 200 nautical miles of the coast. It did not identify these users in the WRC-07 proceeding, however, "because they did not appear in its licensing database," it said.

The FCC also concluded that it is in the public interest to establish a secondary Amateur Radio allocation at 135.7-137.8 kHz — 2200 meters, although the new band is not yet authorized for amateur use. "In accordance with the WRC-07 *Final Acts*, the Commission also restricted use of this secondary Amateur Service allocation to amateur stations transmitting a maximum equivalent isotropically radiated power (EIRP) of 1 W." The Commission is inviting comments until August 31 on how it should structure operational rules for that allocation as well as for a proposed 472-479 kHz allocation, 630 meters.

## President's corner

Electromagnetic wave communication (radio waves) has only been developed over the last 150 years. The first Amateur Radio licenses were issued in the year 1912. What a wonderful opportunity we have today to participate in this great hobby. I cannot conceive any possible way that the Space program could possibly succeed without radio communications. We might send spacecraft up, but could not control them or receive reports back from them. We now have the possibility of voice communication with manned spacecraft like the International Space Station (ISS) with equipment as simple as a 2 meter transceiver listening on 145.800 MHz and transmitting on 145.200 MHz with a simple ¼ wavelength ground plane antenna.

There is equipment more suited to the task that might include circular polarized directional antennas on a motorized alt/azimuth controller controlled by a computer program. You do need to know when the ISS is scheduled to come over your location and there has to be an astronaut with free time and willingness to make contacts with amateur operators down below on earth.

There are sites on "The Internet" that give detailed information on what you need to make contacts with the ISS on voice, packet, or slow scan. I have not made a personal contact with the ISS yet, but I can think of few other aspects of Ham Radio that would give me more of a thrill.

With these thoughts in mind I am anxiously awaiting Kenneth G. Ransom, N5VHO, ISS Ham Radio Project Engineer's presentation about Amateur Radio and the International Space Station at the NARS general meeting on July 17, 2015. Ken coordinates the Ham Radio training of the astronauts. If you enjoy Ham Radio or are an armchair astronaut like me, you will not want to miss this meeting.

Brad Nelson, WD5GNI



4721 Watonga Blvd.  
Houston, TX 77092  
[www.ofarc.org](http://www.ofarc.org)

V.E. Exams every 4th Saturday  
of the month at 9:30 a.m.  
Contact: John Westerlage'  
N5DWI@oafrc.org for further  
info.

## HOUSTON AMATEUR RADIO SUPPLY, INC.

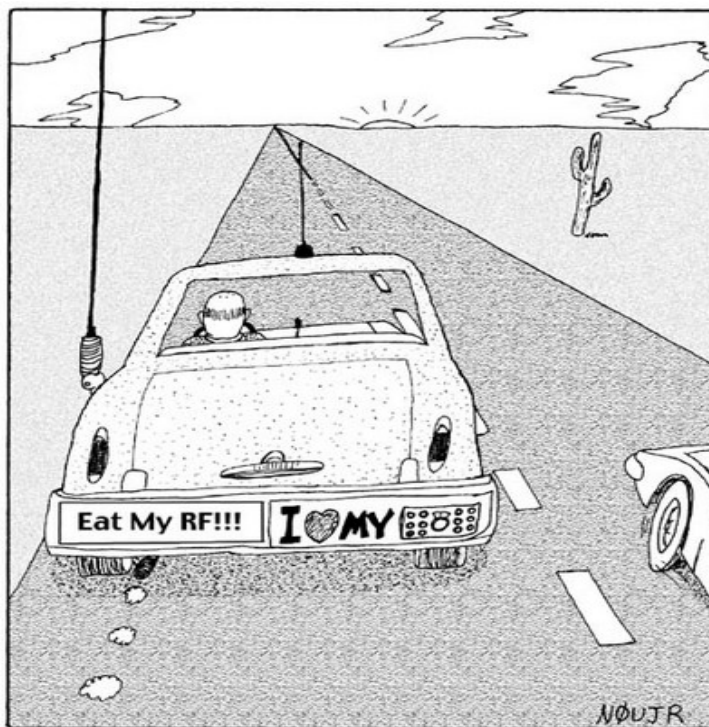
HAM | CB | COMMERCIAL | DIGITAL SCANNERS | ELECTRONICS  
RETAIL | REPAIR | CONSIGNMENT | INSTALLATION

[houstonamateurradiosupply.com](http://houstonamateurradiosupply.com)

**Dave McCombs, NA5CW**  
Owner

281-355-7373  
[contact@harsradio.com](mailto:contact@harsradio.com)

2558 E. FM 1960 Rd.  
Houston, TX 77073



QCWA members with an attitude...

## *NARS in rewind...*

*October, 1995*

Max Huff KF5FZ was our featured speaker then and enlightened us on the exciting subject of *GPS, the differential options*.

“GPS is fast becoming a ubiquitous appliance that is showing up in applications such as vehicle tracking, mapping, asset management and a lot of recreational activities. Recent product announcements offer GPS receivers with simple graphics for as little as \$200,” said Max.

“With *Selective Availability* still turned on, stand alone GPS may be in error by as much as 100 meters. The answer for those more demanding requirements is *Differential GPS*. Then, choices must be made on the type of DGPS. And which GPS receiver best fits your needs....”

*Editor's note: And today, Twenty years later, GPS has changed our lives forever!*

### *Colton Ragsdale, 5 years old, passed (March, 2015) the test missing only three questions!*



Colton plans to use his license for community service as a voluntary, noncommercial communication service, particularly by providing communications to assist in an emergency. His license identifier, known as a “call sign” is KE0CRD. Congratulations and way to go Colton!”  
John Theofilopoulos SV3AQR”

*“And, your excuse? Next candidate, please....”*

### *Repeater fund continues its growth...*

The repeater fund now totals \$525 towards the upgrading of the 146.66 repeater. The team headed up by Keith Dutson is making progress, and in fact have placed into operation a backup unit that is now operational. The backup unit utilizes the same 146.66/06 frequency but now requires a *tone of 100*.

## *Field Day 2015*

Well, another Field Day exercise has come and gone. What does Field Day mean to those in the communities we live in? Field Day, ARRL’s largest operating event is the opportunity for getting on the air and communicating with other Hams throughout the world. It provides Amateur Radio a way to tell its story to our friends, neighbors, communities, and the leaders of our communities while practicing our ability to communicate during local and national disasters, hurricanes, flooding, et-al.

Field Day Coordinators, Keith Dutson NM5G and Ron Horton KF5LFL assisted by George Edwards K5VUU, Antenna Captain did a super job of getting things going this year. “Murphy” didn’t have a chance to foul things up with this team in charge. A few days before, they surveyed Burroughs Park with the idea of keeping it simple. No more towers to put up and take down, just one multiband antenna for each of the three stations.

All antennas were tested for proper operation prior the field day event. “I am a firm believer in keeping things simple and whenever possible, to minimize variables in the process,” said George Edwards. And it worked flawlessly. Oh, the weather did its usual thing and tried to dampen our esteem but when the heavy rains came during the late hours, our night crew just tossed a tarp over the stations and continued operating, albeit a little damp around the edges.... Isn’t this what emergency communications is all about?

Saturday afternoon, Dr. David Woolweaver K5RAV, ARRL Director of the West Gulf Division, showed up and got the grand tour of our Field Day ops. And, of course, we schmoozed him with some of Beth Madry’s brownies just to make sure he didn’t leave hungry.



Our very own Tom Atkins KD5EIHJ performed the magic of BBQ throughout the wee hours and delivered his ribs, brisket and sausage to a waiting crowd. Other side dishes were provided by a variety of members to make this a most satisfying feast any Texan can brag upon!

The Salvation Army made their usual Field Day appearance helping with the feeding of the hungry crew. Major Gary Feeser and his staff kept the hot dogs and fixing’s going until all had their fill.

A special thanks to Gary Hefner, unit director and Beverly Leday, Area Community Coordinator of the HEB food stores for providing the soft drinks required to hydrate our Field Day participants. Community support is so important in the event disaster strikes and HEB has stood by us when needed.

And then, there were the staff of Burroughs Park that allowed NARS to do Field Day year after year. To all of you, a heartfelt thanks from our 140 members for another successful Field Day. You guys are the best!

*More Field Day photos, page 4*

*Field Day 2015 at a glance.*



*L to R: Beth Madry KF5IOU, Sheree Horton KF5LMJ, & Joe Sokolowski KD5KR*



*L to R: Keith Dutson NM5G, Chris Brown KE5IOR, Joey Lamond KC3DYY, & Peter Brown KE5IOV manning the GOTA Station.*



*Preparations prior Field Day kickoff! Keith gives the crew a few pointers on logging the contacts.*



*Michael Panico KG5BBJ holding the frequency....*



*Our Salvation Army volunteers, Major David Freeser and crew, serving hot dogs and chips during the early Saturday afternoon activities.*

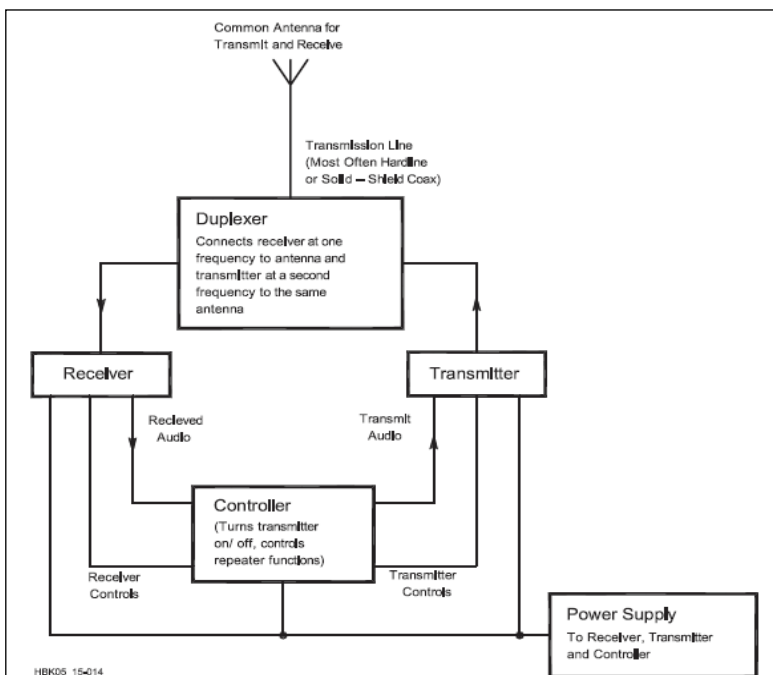


*A few Narsians enjoying some BBQ courtesy of our very own Grill Master, Tom Atkins KD5EIJ*

## Repeaters revisited....

Much discussion has been made about the NARS repeater being placed back in operation, and for many of our seasoned members, this may be “old hat,” but for some of our new members, a little review of repeater technology may be in order. So, let’s start with the basics:

Repeaters consist of a receiver and transmitter plus a couple more special devices. One is a *controller* that routes the audio between the receiver and transmitter, keys the transmitter and provides remote control for the repeater licensee or designated control operators. The second device is the *duplexer* that lets the repeater transmit and receive on the same antenna. A high power transmitter and a sensitive receiver, operating in close proximity within the same band, using the same antenna, present a serious technical challenge. You might think the transmitter would just blow the receiver away. But the duplexer keeps the transmit



energy out of the receiver with a series of tuned circuits. Without a duplexer, the receiver and transmitter would need separate antennas, and those antennas would need to be 100 or more feet apart on a tower. Some repeaters do just that, but most use duplexers. A 2 meter duplexer is about the size of a two-drawer filing cabinet. Receiver, transmitter, controller, and duplexer, the basic components of most repeaters. After this, the sky is the limit on imagination. As an example, a remote receiver site can be used to extend coverage. The two sites can be linked either by telephone (“hard wire”) or a VHF or UHF link. Once you have one remote receiver site, it is natural to consider a second site to better hear those “weak mobiles” on the other side of town. Some of the stations using the repeater are on 2 meters while others are on 70 cm? Just link the two repeaters! For even greater flexibility, you can add an auxiliary receiver, perhaps for a NOAA weather channel. The list goes on and on. Perhaps that is why so many hams have put up repeaters.

There are almost as many operating procedures in use on repeaters as there are repeaters. Only by listening can you determine the customary procedures on a particular machine. A number of common operating

techniques are found on many repeaters, however. One such common technique is the transmission of *courtesy tones*. Suppose several stations are talking in rotation — one following another. The repeater detects the end of a transmission of one user, waits a few seconds, and then transmits a short tone or beep. The next station in the rotation waits until the beep before transmitting, thus giving any other station wanting to join in a brief period to transmit their call sign. Thus the term *courtesy tone* — you are politely pausing to allow other stations to join in the conversation.

Another common repeater feature that encourages polite operation is the *repeater timer*. A 3-minute timer is actually designed to comply with an FCC rule for remotely controlled stations, but in practice the timer serves a more social function. Since repeater operation is channelized — allowing many stations to use the same frequency — it is polite to keep your transmissions short. If you forget this little politeness many repeaters simply cut off your transmission after 2 or 3 minutes of continuous talking. If the repeater “times out,” it remains off the air until the station on the input frequency stops transmitting. A general rule, in fact law — both internationally and in areas regulated by the FCC — is that emergency transmissions always have priority. These are defined as relating to life, safety and property damage. Many repeaters are voluntarily set up to give mobile stations seniority, at least in checking into the repeater. If there is going to be a problem requiring help, the request will usually come from a mobile station. This is particularly true during rush hours; some repeater owners request that fixed stations limit their use of the repeater during these hours.

OK, there’s more to it than discussed, but at least you can get the idea of what goes on when we key up 146.660 with a tone of 100. And now you can appreciate the amount of work and cost involved in just putting one of these into operation. We now have our repeater temporarily located in Pinehurst just north of Tomball and will be moving it to a more permanent location within the next few months. Why the move? Well, many of you are aware of the intermod problems we had with our old location in the Galleria area. Hey, nice location but unfortunately, as *resident pro gratis*, we were competing with other paying customers and guess who comes out on top? So, for now, we’ll just disable operations there until the climate changes and utilize our new location for the duration.

### **NARS 2 meter net ....**

Held every Wednesday night at 8 pm. We are now using the NARS backup repeater. The frequency, 146.66/06, will remain the same as before, but the tone has been changed to 100.

All are welcome, members or not!

# Welcome, Congratulations and Condolences

Welcome new members,  
Matthew Haws KB5MKO

## NARS Resource list

### General help:

Allen Majeski WA5REJ  
281 528-0673 wa5rej@yahoo.com

Deral Kent K5WNO  
281 548-7476 k5wno@juno.com

Al Manard N6VQO  
281 292-3113 almanard@gmail.com

### Digital modes:

Marty Fitzgerald W5MF  
281 251-4301 fitz6@swball.net

### VHF/UHF:

Brian Derx N5BA  
281 251-4301

### PC Programming & Ops:

Keith Dutson NM5G  
281 516-1466 keith1@dutson.net

### Building Electronics & kits:

Mark Tyler K5GQ  
281 587-0256 k5gq@juno.com

### Interference (Basic advice):

Terry Myers KQ5U  
281 443-6042 tmyers1031@sbcglobal.net

### Card checking for awards:

Bob Walworth N5ET—DXCC  
281 292-2221 rwalworth@charter.net

Brian Derx N5BA—WAS, VUCC  
281 894-5942

Bob Walworth N5ET—WAZ

281 292-2221 rwalworth@charter.net

### NARS Public Info. Officer

Joe Sokolowski KD5KR  
281 353-2196 kd5kr@arrl.net

## NARS Information

### President & Board Chairman

Brad Nelson WD5GNI  
281 370-0934  
wd5gni@swbell.net

### Vice President

*To be announced*

### Treasurer

Sheree Horton KF5LMJ  
281 890-4038  
sher5456@gmail.com

### Secretary

Martin Rogoff N5GPS  
281 890-4538  
N5gps.tx@gmail.com

### Directors

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almanard@gmail.com

Ron Horton KF5LFL  
281 890-4038  
ron.horton88@gmail.com

Deral Kent K5WNO  
281 548-7476  
k5wno@juno.com

Mike Bowen N8ILU  
mike5664g@yahoo.com

### Administrative & General Info.

Joe Sokolowski KD5KR  
281 353-2196  
kd5kr@arrl.net

Send changes in address, phone, or email to:  
NARS  
P.O. Box 90387  
Houston, TX 77290-0387

### Nets

2 meter Wed. 8 pm. 146.660, tone 100  
Coordinator: Jerry Whiting KB5VGD  
g\_whiting@sbcglobal.net

### Web site

URL: <http://www.w5nc.net>  
Web Master: Bill Buoy N5BIA  
281 370-3510 n5bia@arrl.net

### NARS Reflector

NARS@mailman.qth.net  
Coordinator: Keith Dutson NM5G  
281 516-1466 keith1@dutson.net

### Texas QSO Party

Co-coordinator: Chuck Sanders NO5W  
832 657-4832  
no5w.chuck@gmail.com

Co-coordinator: Keith Dutson NM5G  
281 516-1466 keith1@dutson.net

### VE Session (ARRL) Manager

Keith Dutson NM5G  
281 516-1466 keith1@dutson.net

### Meetings

Monthly General Membership 3rd. Friday  
each month (except January) at 7:30 pm.  
Cypress Creek Christian Community Ctr.  
6823 Cypresswood Drive

### Saturday Breakfast

Denny's 7720 Louetta Rd. 7 am.

### Wednesday Lunch-11 am.

Various places. Info on front page.

**NARS News** is published monthly by the Northwest Amateur Radio Society. Send all articles and materials for the newsletter to:  
Editor, Joe Sokolowski KD5KR, 281 353-2196 kd5kr@arrl.net Deadline for articles to appear in the next newsletter is the last day of  
each month.

Northwest Amateur Radio Society is a Special Services Club affiliated with the American Radio Relay League, ARRL Club No. 2120.