

# NORTH ALABAMA REPEATER ASSOCIATION **NARA**

53.21, 145.33, 146.94, 147.18, 223.94, 443.500, 443.800 MHz

**Jan 5, 2018  
Kick Off Meeting**



See our website at:  
<http://www.n4hsv.net>

**FaceBook**

[https://www.facebook.com/NorthAlRepeaterAssociation?ref=tn\\_tnmn](https://www.facebook.com/NorthAlRepeaterAssociation?ref=tn_tnmn)

**Amateur Radio**



# NARA Agenda Jan 2018

- Presidents Opening Remarks
  - Rob: N4WGY
- 2017 Year End Financial Report
  - Stan w/fills from Mark
- 2018 Election of NARA Officers
  - Ron: W4VM Nominating Chair
- 2017 Recap and 2018 Year Ahead Plans
  - Recap – Ron, Mark, Ralph
  - DMR – Mark: W4FMX and Steve: KM4CJ
  - D Star – Ron: W4VM
  - Vision Forward ! Rob: N4WGY



**NARA 2018**

To our beloved sponsors: **THANK YOU FOR YOUR SUPPORT!**  
Our amateur radio community and the community at large benefits from the support you give to NARA in keeping the NARA system modern, healthy and reliable, and we genuinely appreciate all that you've done and continue to do!!



To our amazing volunteers: **THANK YOU FOR YOUR SUPPORT!**

There is a tremendous amount of hard work required in maintaining NARA's infrastructure. These folks in particular have consistently gone above and beyond in their support.

- **Ernie Blair – W4BPS**, Ernie has been selflessly offering his generous support in all aspects of NARA operations for decades. Ernie has given an immeasurable amount of diplomacy, site support, valuable experience on behalf of NARA. Thank you from all of us!
- **Bill Yell – K4IBY**, Bill has very generously put in time, footwork and diplomacy in order to route some very high quality HSV Utilities surplus equipment into NARA's inventory. This has resulted in the upgrade of the 145.33 repeater, replacement of aging link transceivers and the upcoming replacement of the 146.94 repeater. Bill, thank you!



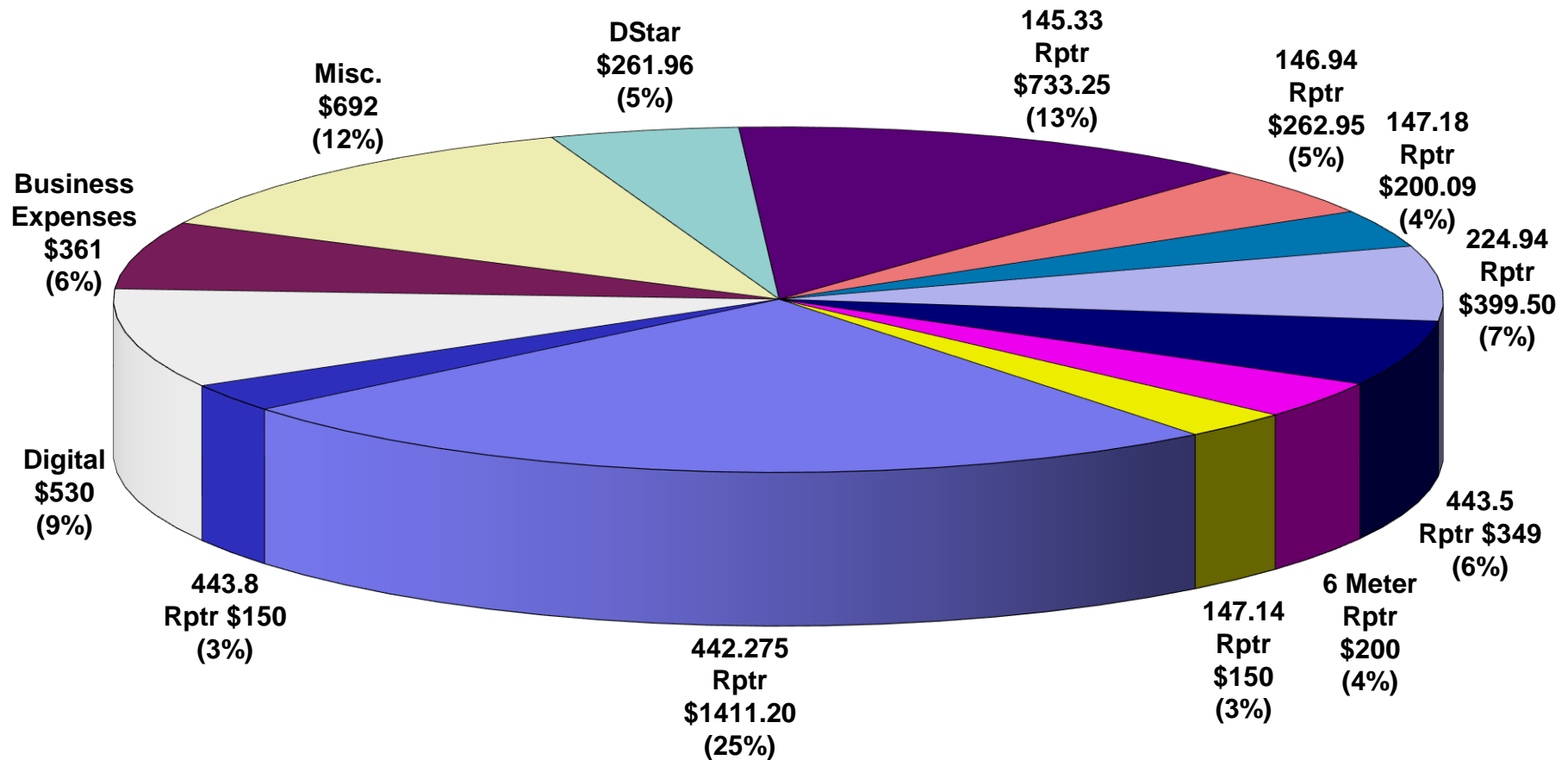
- **Steve Smith– KM4CJ, Steve has been actively supporting the Madison County Amateur Radio community and NARA for decades. Recently Steve has been a primary mover in planning, programming and setup of our DMR capabilities.**
- **Wayne Reed – K4TTZ, Wayne has also been actively supporting the Madison County Amateur Radio community for a long time. For years Wayne has been providing lots of invaluable test support for NARA and does a fabulous job maintaining the NARA website. Thank you Wayne!!**
- **Paul Batiz – W4END, Paul has been lending huge amounts of time and work in testing, installation support, tower climbing and making us think with good questions. Thank you Paul!!**
- **Kelley Vann Johns – W4VPZ, Kelley does the work of the rest of us put together. Keeps us straight and productive. Thank you Kelley!**

# **NARA Election Jan 2018**

## **Nominating Committee Chair: Ron – W4VM**

- President - Rob Conklin: N4WGY (Incumbent)
- Vice President- Ralph Hogan: W4XE (Incumbent)
- Treasurer – Stan Sims: N4PMF (Incumbent)
- Secretary – Kelley Johns: W4VPZ (Incumbent)
- Technical Advisor – Mark Bond: W4FMX (Incumbent)
- Technical Committee Personnel (Not Elected Positions)
  - Ron: W4VM – D-STAR
  - Steve: KM4CJ – DMR and Fusion
  - Paul Batiz: W4END – Test an integration
  - Several Others !! (Your Name Here)

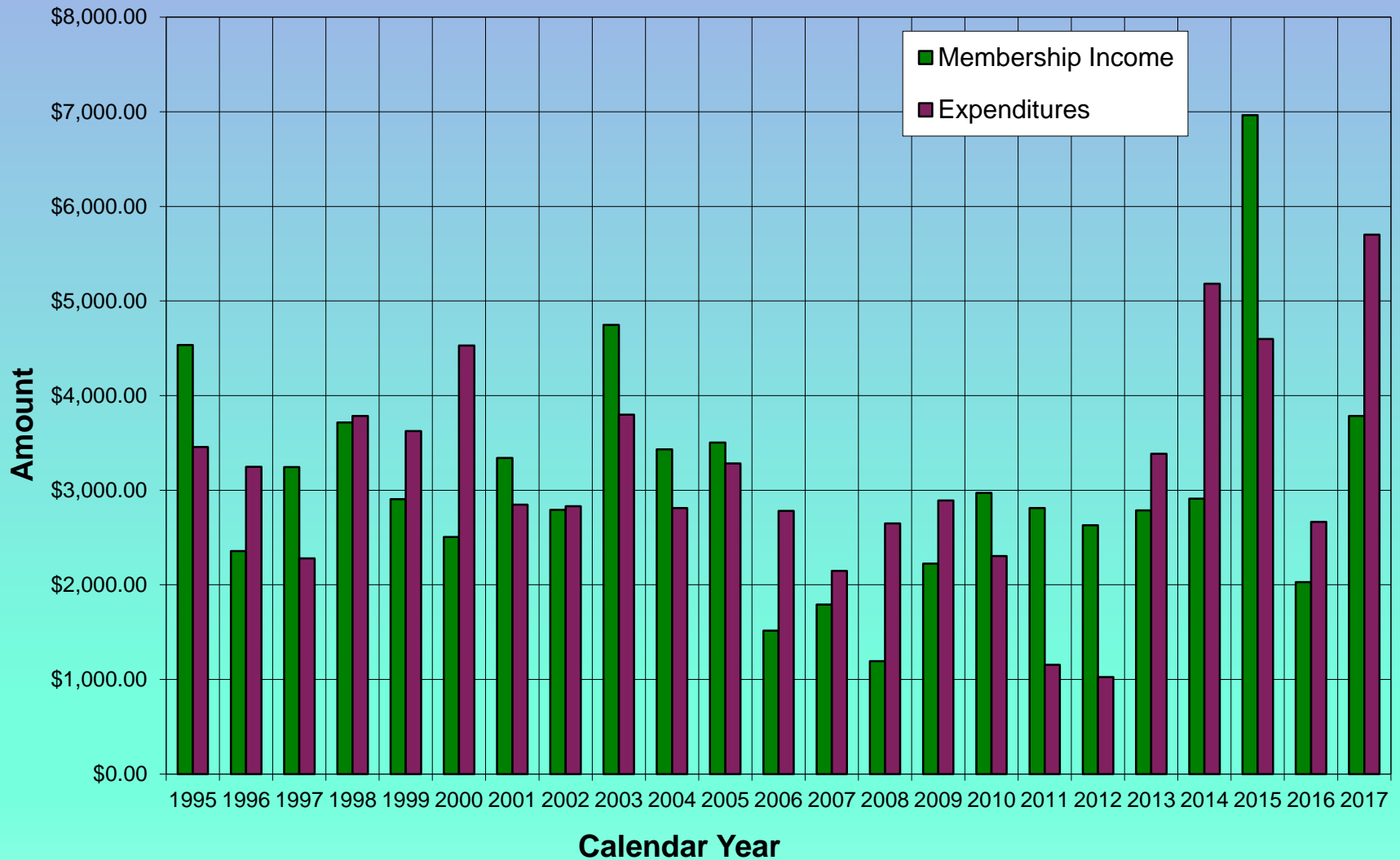
# NARA 2017 Year-End Expenditures Breakdown (\$5701.05)



**Bank Balance Dec 2017: \$8474.18**

# NARA Financial Report Jan 2018

## NARA Income/Expenditures History



**Bank Balance Dec 2018: \$ 8474.18**



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# **MAJOR ACHIEVEMENT 2017**

## **145.33 REPEATER REPLACEMENT**

- Aging GE MASTR II replaced with Motorola MTR2000
- Higher RX sensitivity = greater coverage
- Allstar/Echolink and UHF RF linking to repeaters/nodes near and far.
- Legacy 145.33 GE machine will be cleaned, aligned and put on standby for emergency use.

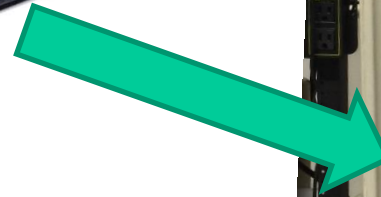


**BEFORE**

1/4/2018



**145.33 MHz  
REPEATER**



**AFTER**

# **MAJOR ACHIEVEMENT 2017**

## **442.275 DMR Repeater**

- Hytera RD982 Tier II DMR Repeater
- Robust FEC = Extraordinary range, especially for UHF operating across our terrain.
- Part of the Brandmeister Network
- Solid operations in town using HT/rubber duck within car – amazing !



## **NARA 442.275 MHz HYTERA RD-982 DMR/ANALOG REPEATER INSTALLATION**



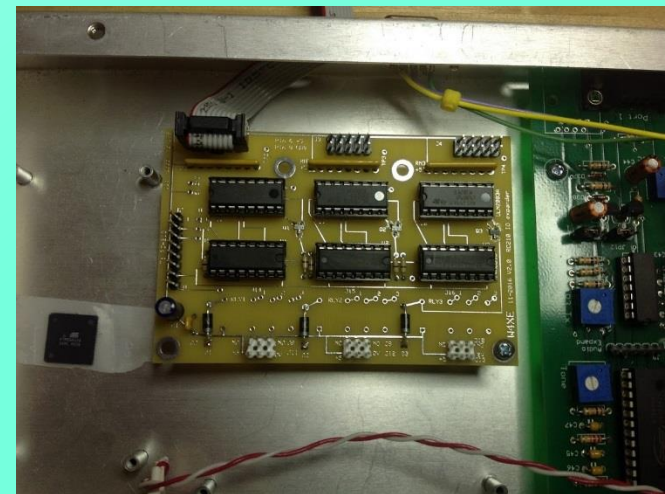
# Proliferation of Allstar nodes

- Private Allstar nodes on many of our repeaters allows great agility for us to link repeaters from within a single repeater site, or across the world with analog FM quality.



# GPIO extension added to NARA Arcom RC-210 Repeater controllers

- Ralph, W4XE has designed a 24 port IO extender for our RC-210 controllers.
- Allows greater remote operational agility, IE: Link radio channel steering



# W4XE Six Meter 53.21 MHz Repeater On The Air

- First ran the 6 mtr system as a split site many years ago with half of it on Green Mtn and half on Monte Sano
- Then went single site on Monte Sano with home brew duplexer which has been the configuration for years.... It always seemed to have worked better before as a split site.

# W4XE Six Meter 53.21 MHz Repeater On The Air

- Back to a split system, both halves on Montesano
- Maratrac 100W Tx idled down to 60W, Motorola CDM UHF link RX. Also new is a UHF remote base GM300 32 channel agile via aux dtmf decoder. An RC1000 controller for now. No more stuck to just one channel on the UHF remote base.

# W4XE/NARA

## “MAGIC BAND” REPEATER HARDWARE



**53.21 MHz 6m TX**



**52.21 MHz 6m RX**

# NARA D★Star Status

- **Gateway Server Upgraded from G2 to G3 in 2017**
  - New Hardware Accompanies the Software Upgrade
  - New and more secure Linux (CENTOS 5 to CENTOS 7)
  - New Capabilities in D-PLUS and Monlink for Linking
- **Nets on Sunday, Tuesday and More**
- **2 Meter Module Default Linked to AL Reflector**
- **440 Module Default Linked to Atlanta Reflector**
- **Feel Free to Re-Link to your Favorite Reflector !**
- **Nov 15, 2017 D-STAR Program to HARC had more detail – Questions ? – Ask Ron or Steve**



# NARA - W4WBC D★Star Installation

ISP Courtesy of:



FIBER INTERNET

70cm AND 23cm CAVITY SETS

23cm DV MODULE  
70cm DV MODULE  
23cm DD MODULE  
2m DV MODULE  
SERVER PC

2m CAVITIES

POWER SUPPLY  
UNDERNEITH



## Addition of Scheduled Content

- ARRL news Mon 8:00pm
- Tech Net Tue 7:00pm
- MSFC Net Tue 9:00pm
- ARN News Wed 7:30pm
- Alabama Friends Net Wed 8:00pm
- UA ARC Net Thurs 8:00pm
- Requests? Email us!

## PLANS FOR 2018

- Replace 145.94 GE MASTR II repeater with Motorola MSF5000 repeater
- User Friendly Echolink Operation & Level 2 control op recruiting & training
- Construct and install VHF Winlink 2000 Radio E-mail 1200 Baud packet mode gateway for wide coverage Monte Sano installation. Will likely operate on 145.050 MHz as N4HSV-10



**Back Up**

**BACKUP**  
*Hello Backup*