

Tri-State Update

Randy Wilder, WB4LHD

Michael Knight, KK4IOH

Ervin Ables, KU4K

Christmas Dinner



MARA & Tri-State combined
Christmas Dinner at Coletta's

Thursday December 4, 2014 6:30 pm
2850 Appling Rd, Memphis, TN 38133

Also we ask everyone to bring at least one gift for a gift exchange.

Gifts should be under \$10. Non gender specific gifts work best, otherwise write Male or Female on them.

Reservations required Contact

Tony Brignole WA4KHN 901 216-3263 cell
or email at abrigno@comcast.net

Christmas Dinner Menu



Salads and Beverages

Italian or Caesar salad with choice of dressing

Non-Alcoholic beverages, water, coffee, tea, coke, etc

Entrée - Choice of one

Spaghetti with Meatballs

Lasagna

Ravioli

Italian Marinated Chicken

Shrimp Alfredo

Any type of Entre Pizza - BBQ, Round the World etc.

Desert - Choice of one

Cheesecake or ultimate chocolate cake

Cost is \$18.95 Plus tax and 18% gratuity

Those with special diet issues can order off regular menu. Wine and Beer is available for a separate charge.

Financials



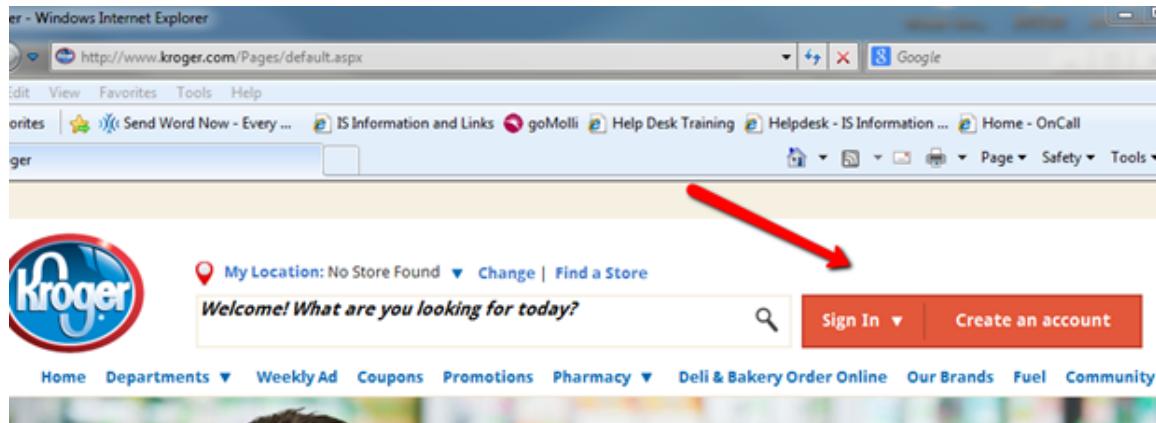
Financials



Kroger Fundraising



Go to <http://www.kroger.com>

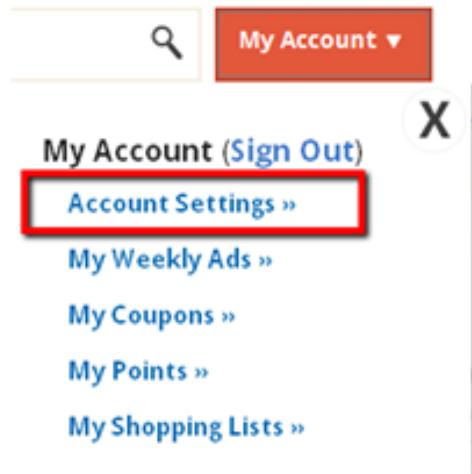


- Create an Account if you have not already done it and link your Kroger Plus Card to it.

Kroger Fundraising



- Click on My Account then click Account Settings



- Under Community Rewards click Edit
- Search for Tri-State Repeater

Kroger Fundraising



Find Your Organization

Enter your organization number or at least 3 letters of your organization's name and click 'Search'.

Tri-State Repeater

Search

View All

Select Your Organization

Select your organization below.

Organization Name

Address

Organization Number

Tri-State Repeater Assn. Inc 319 E. Powell Rd., Collierville, TN 80730

- Place a dot in the Circle (Radio Button)

Kroger Fundraising



You should now see:

Community Rewards

Your enrollment has been cancelled.

Organization Name: Tri-State Repeater Assn. Inc

Organization No.: 80730

Enrollment Date: 07/24/2013

- Use your Kroger Plus Card when you buy Gas and Groceries and Support Tri-State at the same time.
- We currently have 17 households who shopped at **Kroger** between **08/01/2014** and **10/31/2014** (Cycle 2014, Qtr 3) that have contributed to a **\$78.44** donation from Kroger.

Amazon Fundraising



- **What is AmazonSmile?**

Amazon Smile is a simple and automatic way for you to support Tri-State every time you shop, at no cost to you.

- **Which products on AmazonSmile are eligible for charitable donations?**

You will see eligible products marked “Eligible for AmazonSmile donation” on their product detail pages.



TYT TH-9000D 55 Watt 222Mhz Transceiver Amateur Ham
220 Mhz

by [TYT](#)

42 customer reviews | 11 answered questions

List Price: \$249.99

Price: **\$164.00**

You Save: \$85.99 (34%)

Only 1 left in stock.

Sold by [BEST CHOICES](#) and Fulfilled by Amazon. Gift-wrap available.

Eligible for [amazon smile](#) donation.

Want it tomorrow, Nov. 21? Order within **49 mins** and choose One-Day Shipping at check

- Frequency Range: VHF:136-174MHz
- Output Power: VHF: 10W/25W/60W
- CTCSS/DCS setting & scanning, Frequency/Channel scanning
- 8 group's of scrambler, 200 Channel Capacity
- High/Mid/Low power selectable

9 new from \$145.22 1 used from \$141.96

Amazon Fundraising



- How do I select Tri-State Repeater for support when shopping on AmazonSmile?

On your first visit to <http://smile.amazon.com>, you need to select Tri-State Repeater Association. Amazon will remember your selection, and then every eligible purchase you make on AmazonSmile will result in a donation.

Choose from almost a million charities, schools, and other nonprofits. We will reach out to the organization you select to ensure it is ready to accept donations from Amazon.

A screenshot of a web search results page. At the top, there is a search bar containing the text "tri-state repeater" and a yellow "Search" button to its right. Below the search bar, a grey header bar displays the text "Showing 1 - 1 of 1 Results" on the left and "Sorted by relevance" on the right. The main content area shows one search result: "Tri-State Repeater Association Inc" with a link to "(About)". Below the name, it says "Recreational and Sporting Camps (Day, Overnight, etc.)". To the right of the result, it shows the location "Collierville, TN" and a yellow "Select" button. The entire screenshot has a light grey background.

- When you shop at Amazon be sure to use the <http://smile.amazon.com> address.

Batteries

HamWAN
MEMPHIS METRO



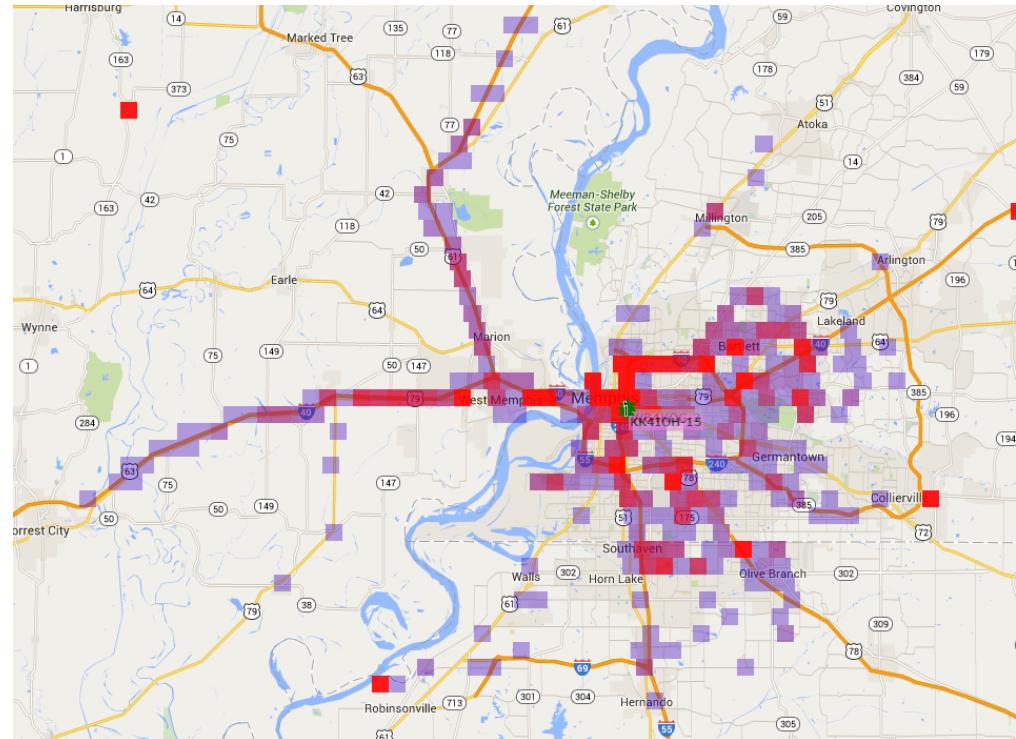
Batteries



APRS Update

WB4KOG-3 at SCO

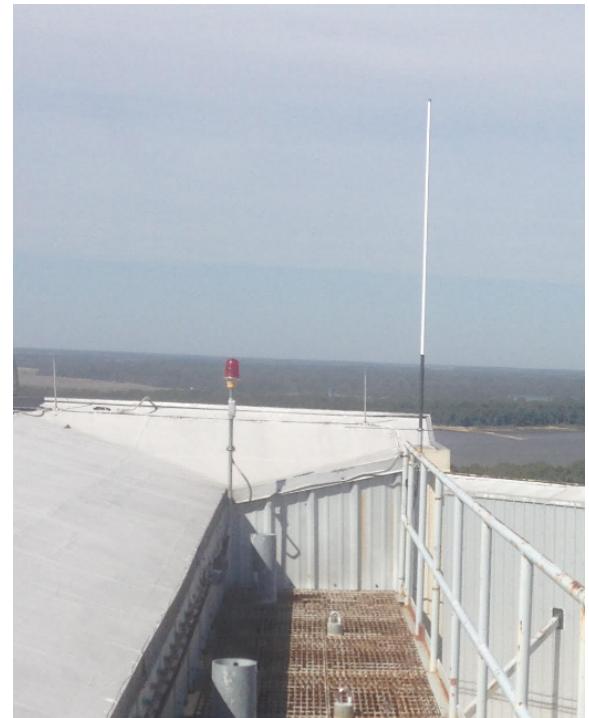
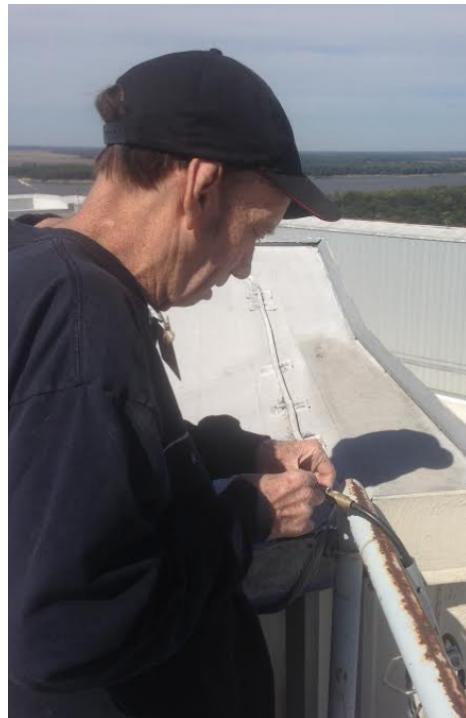
- During maintenance at SCO we determined the WB4KOG-3 had high SWR resulting from water in feedline.
- WB4KOG-3 was later moved to the station master on top of the tower from a yagi pointing WSW resulting in much improved performance.



APRS Update

W4BS-3 at Goldstrike

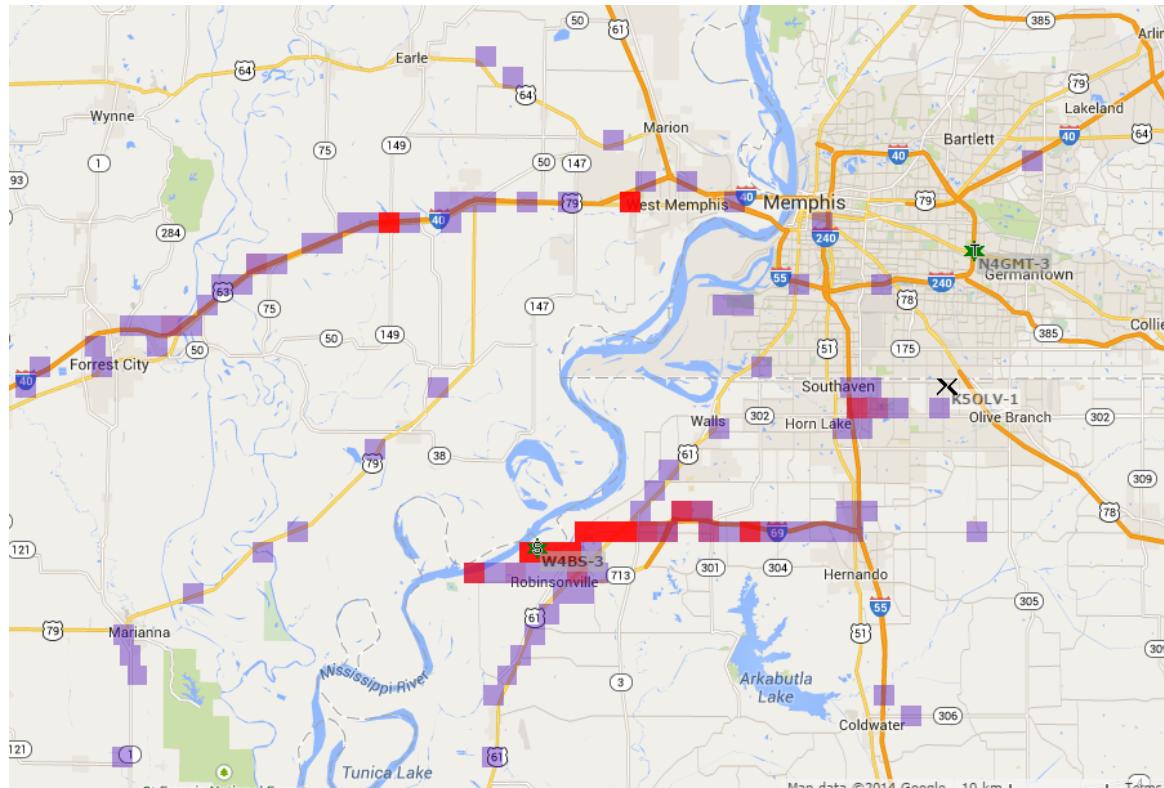
- 10/05/2014 - KD4NOQ & KK4IOH performed an evaluation. It was determined the surge protection saved the digi from a lighting strike. While onsite the antenna was upgraded.
- KD4NOQ, KK4IOH, & KF5QGF - Returned the Digi to air 10/29 by replacing the surge protection.



APRS Update

The Goldstrike Digi is on the second tallest building in the state of MS.

- 317 ft AGL
- Heard 31 unique calls in the first 20 days of November 2014
- Has a range of between 30-50 miles in some directions.
- Has been used to support the MS-150 bike ride



APRS Update



Tri-State operates 3 APRS Digi's in Fayette County

- **WB4KOG-1 - Located in Somerville**
 - Digi may have developed a receive issue during October or late September - Evaluation is pending.
- **WB4KOG-2 - Located at Longtown (I-40 exit 35)**
 - The Longtown Digi covers I-40 from near the I-240 flyover to the Hatchie River near Brownsville
- **WB4KOG-4 - Located in Piperton**
 - Even with low elevation this Digi is a workhorse hearing 1588 packets by November 20.
 - Has an average range of 20 miles.
 - This Digi is responsible for most of traffic from Collierville and covers from Macon Rd south to Hwy 302 well but often hears farther out.
 - The Piperton Digi may later be relocated to a water tower with higher elevation.

Maintenance at Clark Tower

- 6/7/2014 - Damage was noted to the receive antenna for 146.880
- 7/5/2014 - A new receive antenna was installed at Clark Tower by Russ WD4JHD, Wes KA7UEC, Adam KI4GIU, and Michael KK4IOH. (with ground level supervision by Randy WB4LHD and Lionel WA4KOG)
- 7/5/2014 - The crew above also installed hardline to the antenna for 444.775.



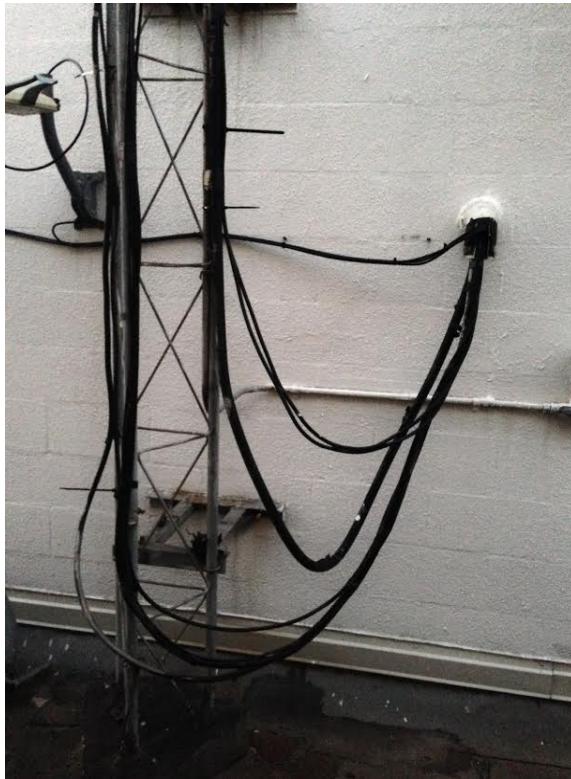
Maintenance at Clark Tower

- Russ teaching the crew how to properly weatherproof connections to the new receive antenna.

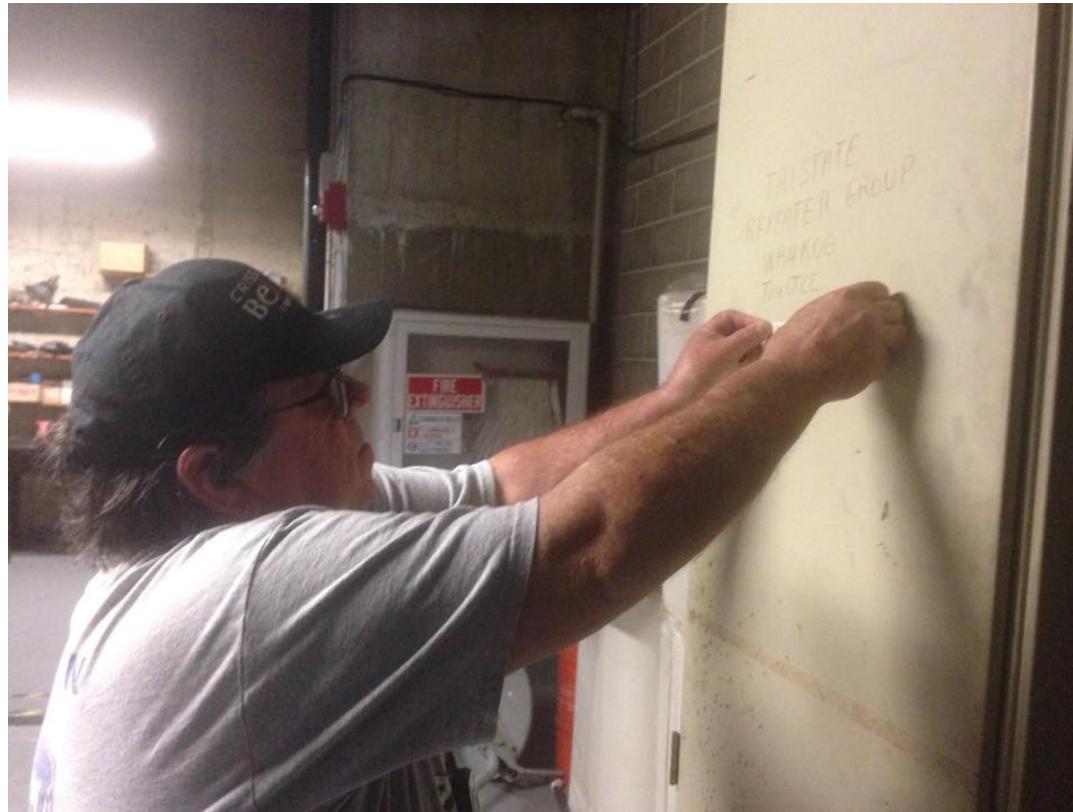


Maintenance at SCO

HamWAN
MEMPHIS METRO

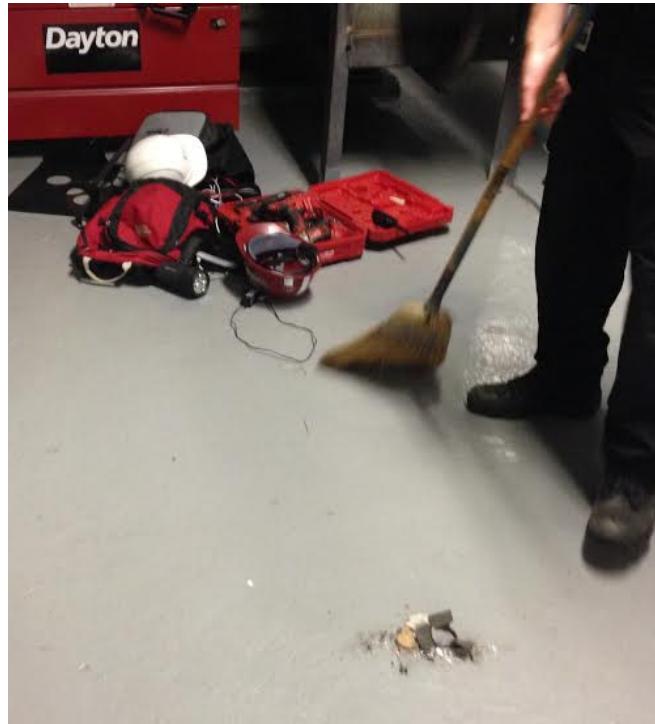


Maintenance at SCO



Maintenance at SCO

Any YL's must look away
or cover those eyes.



Other Maintenance



A Crew will return to finish work at Clark Tower when weather permits.

A Crew will begin a clean up, cable management, and improvement for 146.85 at Hilton.

The Tower at SCO badly needs painting as soon as this can be done.

We need to determine the noise source at 145.450.

Add a notch filter on the receive at 444.775.

What's next in Fayette Co?

- Ervin KU4K



D-Star Status

Cliff Gurlen, NS4B

Michael Knight, KK4IOH

Where are we now?

- 440 Repeater is installed at Hilton E Mem and working well.
- Next step is to extend HamWAN to Hilton.
- Install a gateway computer (furnished by Cliff NS4B)

D-Star

WB4KOG B-Module
and Controller
442.0375 DV mode



D-Star



The 2 meter D-Star isn't on yet

We need the following:

- Locate and purchase a good set of 2 meter Cavities
- 2 meter antenna
- Feedline

D-Star

We now have a local reflector for the Mid-South Region - Reflector 67

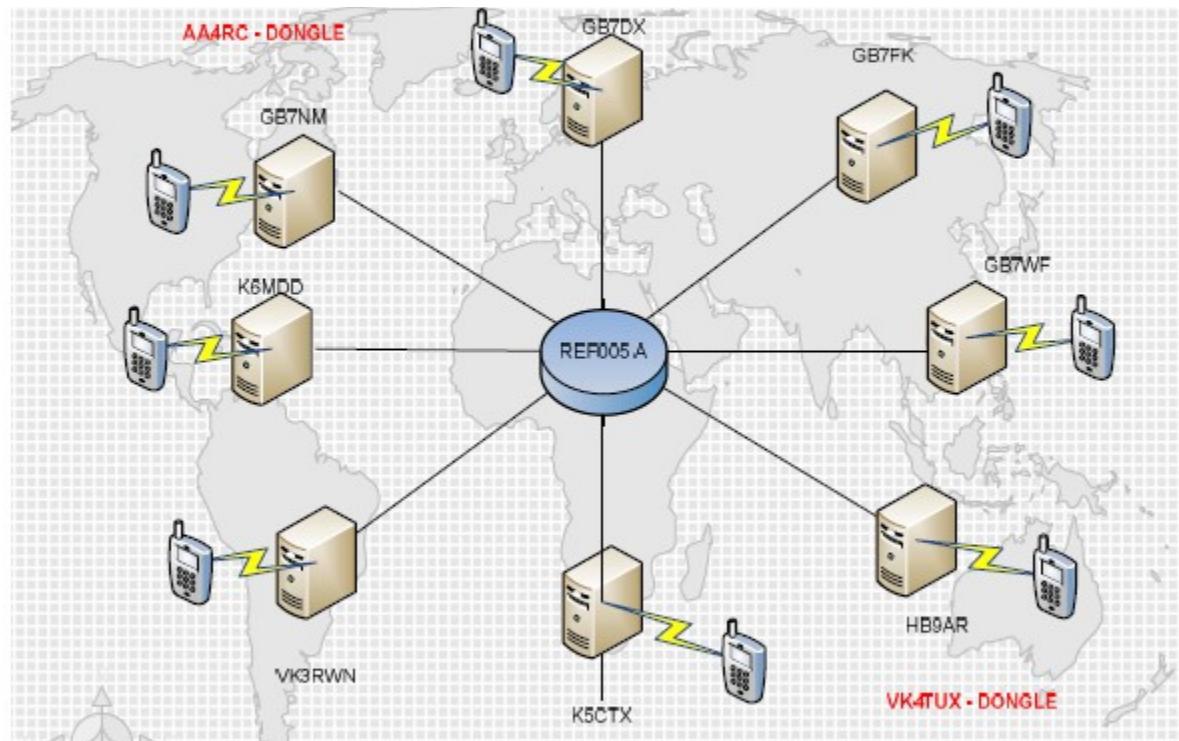
REF067A	HamWAN discussion and activities	Memphis, Tennessee, United States
REF067B	Mid-South Nets	Memphis, Tennessee, United States
REF067C	General use	Memphis, Tennessee, United States
REF067D	Digital data use (D-RATS)	Memphis, Tennessee, United States

There is also a Tennessee Reflector - Reflector 60

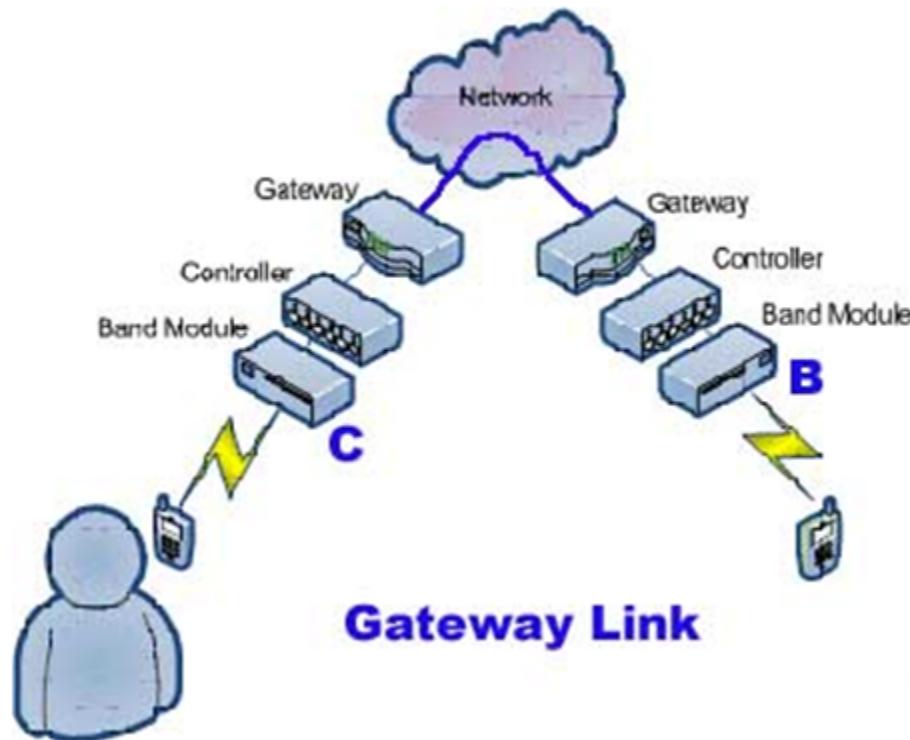
REF060A	Tennessee EmComm/ARES Use	Nashville, TN, United States
REF060B	Tennessee/Southeast repeaters	Nashville, TN, United States
REF060C	Tennessee/Southeast repeaters	Nashville, TN, United States
REF060D	Tennessee digital data use (D-RATS)	Nashville, TN, United States

- Each reflector has 4 modules

D-Star Reflectors



D-Star Rptr to Rptr Linking



Design



D-Star is Proprietary

- ☐ Connect systems CS7000.
- ☐ DMR + D-Star
- Sub \$200 Radio

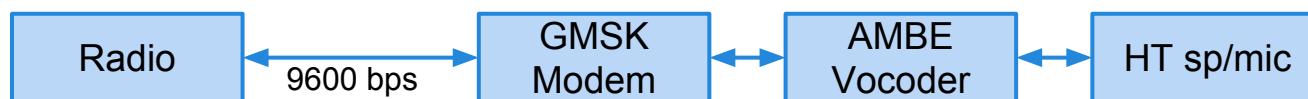
Capable of doing DMR, NXDN, dPMR, P25, ANALOG, D-STAR, AND FUSION Protocols. This radio is built to commercial standards and will cover commercial frequencies. The first version will ship with Analog, DMR, and D-STAR protocols with future firmware updates allowing other protocols.

Expected Delivery is January 2014

Any new orders won't ship until March due to the backlog of orders.



D-Star Demo



D-Star

- DVAP (DV Access Point Dongle)
- 2m or 70cm
- Use you're your D-Star radio without a repeater



- □ DV-Dongle
- □ Get on D-star without a radio



D-Rats



□ D-RATS is a FREE full function data communications tool for D-STAR

- □ Utilizes D-STAR low-speed data mode (~1200 baud)
- □ PC connects directly to D-STAR radio (No TNC required)
- □ Windows, Linux and Mac versions available
- □ D-Rats can be used without radio over Internet or with DV Dongle
- □ Provides chat, messaging, email, forms, file transfer (unattended), mapping

D-Rats



D-RATS: WB4QDX-4

File View Help

Messages Chat Files Event Log

Add Filter Remove Filter Join Channel Open Private Chat

[10:18:07] N1SO: Now Online: Online (D-RATS) (Port RAT)

[10:18:08] ONOTHN: Now Online: Online (D-RATS) (Port RAT)

[10:18:08] OE1OWA: Now Online: Online (D-RATS) (Port RAT)

[10:18:09] VE7AAT: Now Unattended: Online (D-RATS) (Port RAT)

[10:18:09] ON2AAV: Now Online: on2aaV online D-rats (Port RAT)

[10:18:09] IW2OHX-L: Now Online: Online (D-RATS) (Port RAT)

[10:18:10] N1RCW: Now Unattended: Online (D-RATS) (Port RAT)

[10:18:10] 9Y4PJ: Now Online: Online (D-RATS) (Port RAT)

[10:18:10] IK5PWA-L: Now Online: Online (D-RATS) (Port RAT)

[10:18:10] LA2MQ: Now Online: Online (D-RATS) (Port RAT)

[10:18:11] 9Z4CG-1: Now Online: Online (D-RATS) (Port RAT)

[10:18:11] W4KTJ: Now Online: Online (D-RATS) (Port RAT)

[10:18:11] KG4Q: Now Unattended: Online (D-RATS) (Port RAT)

[10:18:11] N1KXJ: Now Unattended: Online (D-RATS) (Port RAT)

[10:18:13] 9A6AIB-5: Now Unattended: Robert in Zagreb - Croatia - JN85AT (Port RAT)

[10:19:34] IW5BVM: Now Online: Online (D-RATS) (Port RAT)

[10:20:36] [RAT] ONOTHN: [QST] ONOTHN Radio club Thuin relai Dstar sur 439.4875 shift -7600 centre formation on3 - Harec

[10:22:21] [RAT] N1RCW: [QST] Cape Cod Area D-Rat's open server, Connect to n1rcw.org Port 9000

[10:24:40] [RAT] N1SO: D: [QST] Belfast, Maine

[10:25:17] [RAT] IW2OHX-L: IW2OHX D-Rats Rat Flector net:ref.iw2ohx.net:9000 - Authorization required

Main #ARES

RAT

Quick Messages

QSTs

Send

My Status

Online

Online (D-RATS)

WB4QDX-4

Stations (16)

- IW2OHX-L
- N1SO D
- N1RCW (2m)
- ONOTHN (4m)
- IW5BVM (5m)
- 9A6AIB-5 (7m)
- 9Z4CG-1 (7m)
- W4KTJ (7m)
- KG4Q (7m)
- N1KXJ (7m)
- 9Y4PJ (7m)
- IK5PWA-L (7m)
- LA2MQ (7m)
- VE7AAT (7m)
- ON2AAV (7m)
- OE1OWA (7m)

D-Rats



You can get on D-Rats without a D-Star Radio

TNC:

KPC3+ (any of the Kantronics line with KISS mode should work)

PK232

Or by using Radios with internal TNCs:

Alinco DR-135T with EJ-41U option installed.

Kenwood TH-D7A

Kenwood TM-710D

Kenwood TS-2000





HamWAN: High-Speed Data for Hams

Ryan Turner, K0RET

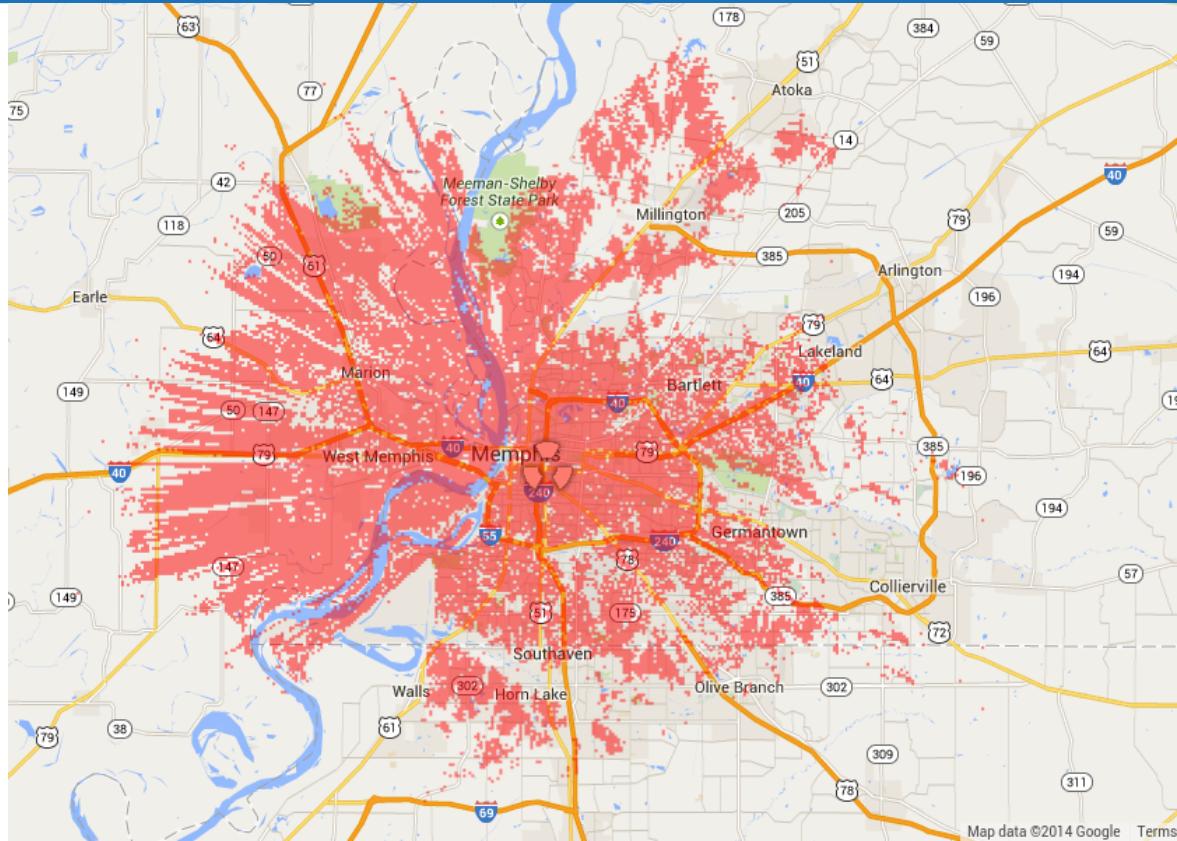


What is it?

- A modern microwave network on and for amateur radio
- Connects computers together
- Currently deployed here in Memphis!
- Cellular design *not* mobile ad-hoc like Broadband-Hamnet™

The Network

- 1 cell site at SCO
- Next targets:
 - Collierville
 - Millington
 - Olive Branch
 - East memphis



Supports Existing Projects



Broadband-Hamnet™
HSMM-MESH™



New Services in Ham Radio



How do I connect?

- ~\$167 for radio and antenna
 - 31 dBi, 1.3W; **1,636 watts EIRP**
- Connects to your existing home network

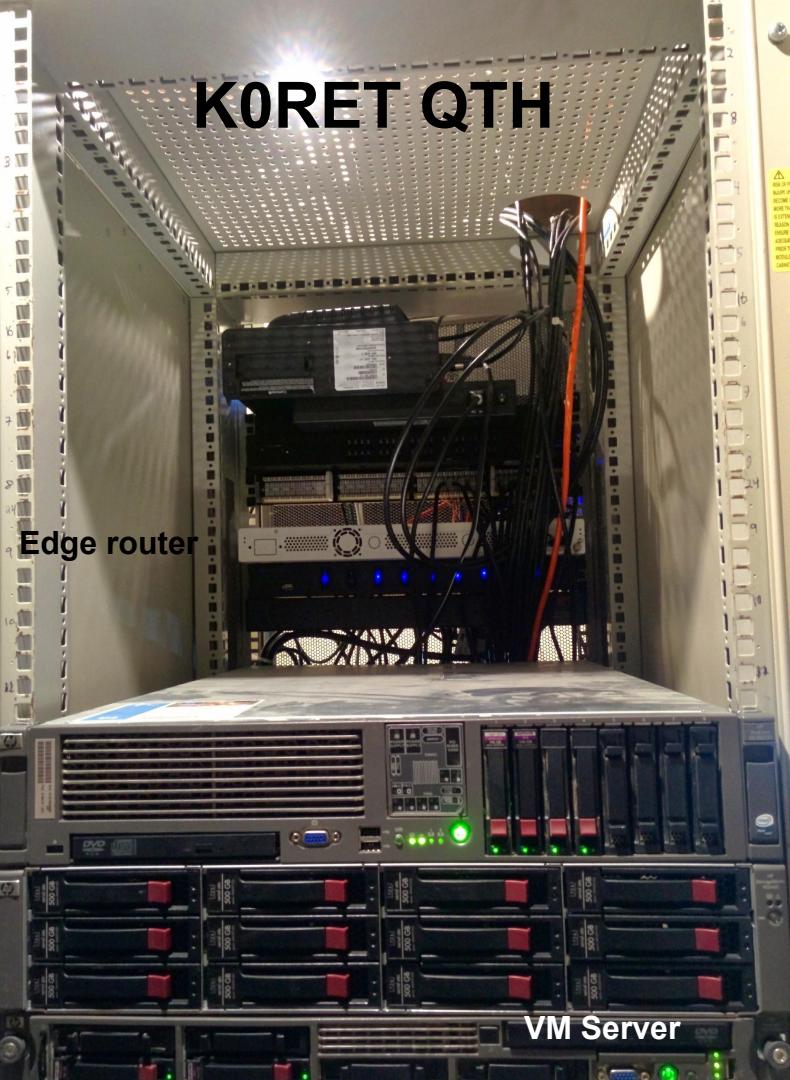


Network Services



- High availability, high performance, low maintenance
- We welcome you to introduce services!!

Southern College of Optometry



K0RET QTH

How does it compare

HamWAN

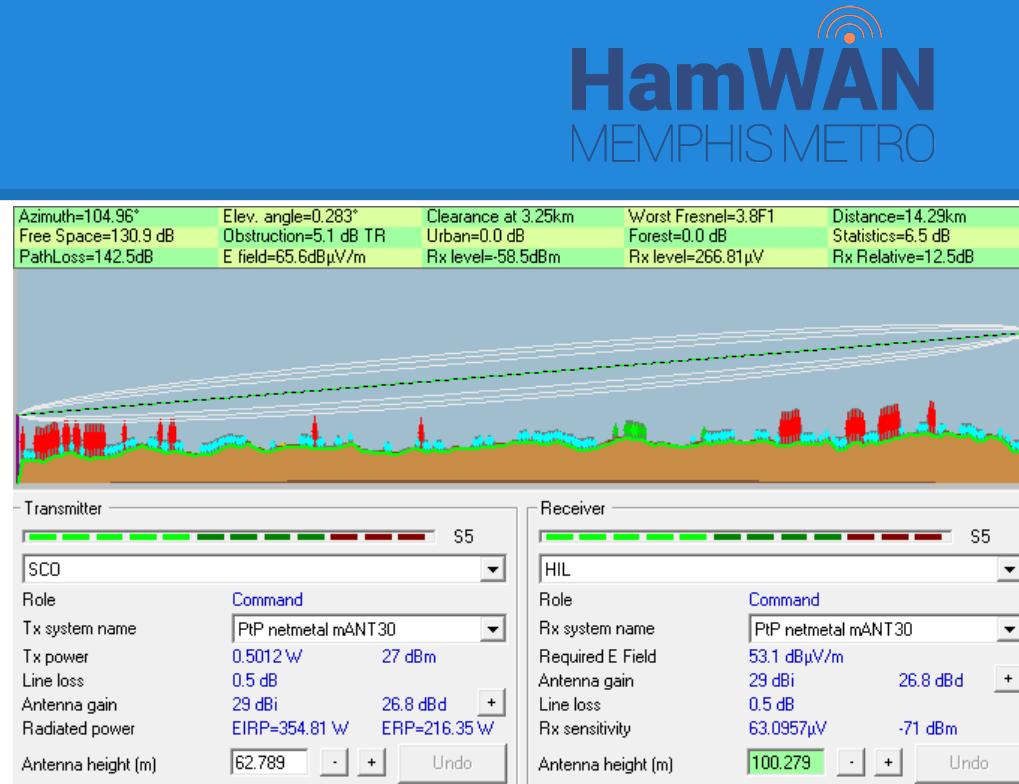
- TDMA via NV2
- 5.9 GHz (soon 900 MHz)
- Cellular, infrastructure
- IPsec
- Public address space
- QoS for prioritization
- Wide range of supported user densities

Broadband-Hamnet™

- Regular WiFi
- 2.4 GHz (+ 5.8 & 900)
- MANET
- Security by obscurity
- “Random”, private space
- All traffic equal
- Critical user density window

Next Actions

- PTP to Hilton for D-Star repeater
 - Solid dishes, dual-chain radios, 80 mhz bandwidth
 - Probably 300-400 Mbps throughput
- Cell site at Hilton?



Questions?



Thanks for your support!
www.memhamwan.org