



WWW.MIDSOUTHLINK.NET



WIDE AREA
COVERAGE



COMMUNITY
FOCUSED



RELIABLE
CONNECTIONS



EMERGENCY
READY



LINKED
TOGETHER



Raise your hand if you keyed up and talked on
a repeater today?

Keep your hand up if no one came back to
you.



Goals of the System

- To get operators using the repeaters again.
 - Too many repeaters just ID every 10 mins and that's it.
- Provide a communication system to relay information to and from the Memphis NWS office to their forecast area.
- Provide local emergency management additional communication options in the event of a disaster.
- Provide amateur radio operators a LOW COST option to talk to other operators that are not within the reach of their local repeater.

Overview of the system

- 25 Analog repeaters make up the system from various clubs and individuals.
 - 13 Club/Organization Owned Repeaters
 - Helena ARC, Crowley's Ridge ARC, Cross Co ARC, Ken-Tenn ARA, Tristate Repeater Assoc, Delta ARC, Mid South Amateur Communications
 - 12 Privately Owned Repeaters
 - 6 private owners
- Nets
 - 4 Weekly Nets operate through the repeaters on the system
 - 4 Monthly Nets
 - Memphis NWS Skywarn Net
 - Midsouth Regional EmComm Net
 - Arkansas Auxcom
 - Nashoba Amateur Radio Club Net

Overview of the system

- Other adhoc nets for weather events or local needs.
 - Recently we used the system for a Boy Scout event for the Amateur Radio Merit Badge.
- ARRL News plays on the system on Monday's at noon.
- Any repeater is free to link and unlink from the system based on local needs or choices.
- Broadcastify is available to those that want to listen.

History

2014

- K5TW repeaters in Harrisburg, AR connect with NI5A machines in Trumann, AR.

2015

- WB4KOG 145.450 in downtown Memphis joins the connection.

2017

- K5TW and NI5A found KK4IOH traveling down I-55 to the Capital City Hamfest in Jackson, MS. A brief contact was made on 146.520 MHz, and a meeting was arranged at the hamfest. That meeting turned into a friendship that remains today.

History

2022

- **AllStar Node Integration:** In 2022, the 146.610 repeater in Jonesboro, AR connected to AllStar, forming the anchor of the Crowley's Ridge Link System.
- By the end of 2022, the Crowley's Ridge Amateur Radio Club (CRARC) repeater network consisted of:
 - 146.610 MHz
 - 145.450 MHz
 - 146.955 MHz
 - 146.835 MHz
 - 443.500 MHz
 - 444.525 MHz
- **New Year's Eve Buildout** - On December 31, 2022, N5ALN and KK4IOH worked into the new year building out the AllStar node for the 147.150 repeater in Crawfordsville, AR.

History

2023

- February 2023 - after initial net-only linking, 147.150 became full-time connected in FM mode.
 - This catalyzed collaborations among Crowley's Ridge, Cross County, and Crittenden County clubs.
- June: Michael and Allen built and deployed the 442.150 MHz Marion AR repeater.
- September: The 444.950 MHz Hughes, AR repeater was added to the network.

History

2024

- November - Allen and Michael worked in conjunction with the Delta Club to make improvements to the 146.625 MHz Germantown, TN repeater. The Delta Club determined that the machine would be a great candidate for connection to the system.
 - This addition helped provide coverage across most of the Memphis metropolitan area and its suburbs, with two repeaters in Shelby County connected to the system.
- December - Ben, K04LFZ, made contact with the Mid-South Skywarn team, and a collaboration began, initially through DMR.

History

- **January 2025** — The 145.310 MHz Wynne, AR repeater was connected to the system.
- **April 2025** — The 443.450 MHz KD5DF repeater in Forrest City, AR was first connected.
- **May 2025** — The K4JTM 442.950 MHz repeater in Union City, TN was connected.
- **July 2025** — The K4CAY 145.270 MHz repeater in Cayce, KY was connected.

As the system continued to expand beyond the original Crowley's Ridge area, discussions began about renaming the growing network the **Mid-South Link System**.

History

2026

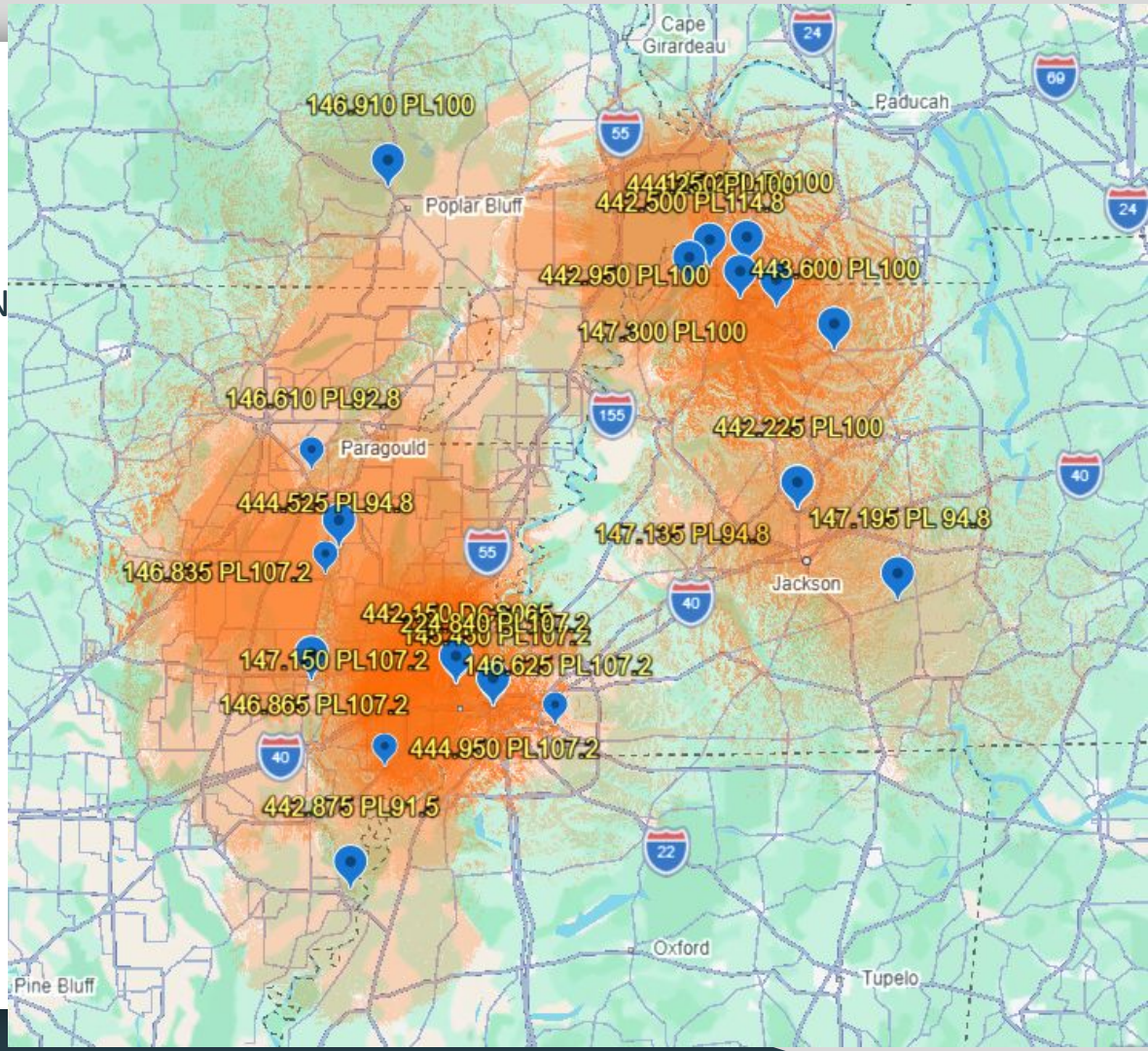
- **January** — The 442.875 MHz Helena, MS repeater was put on the air and connected to the system.
- **January** — Repeaters in Dresden, TN and Hickman, KY were connected to the network.
- **March** — The 146.910 MHz repeater located in Poplar Bluff, MO was connected.
- **April** — The K4JTM 147.300 MHz repeater in Union City, TN was connected.
- **April** — The KN4KAN 147.195 MHz repeater in Enville, TN was connected.
- **June** — The 147.135 MHz and 442.225 MHz repeaters in Three Way, TN were put on the air and connected.
- **June** — The Reelfoot Lake repeater was connected to the system.
- **July** — The Wynne, AR connection was moved from 145.310 MHz to the 146.865 MHz machine, providing wider coverage.
- **August** — The 443.450 MHz repeater in Forrest City, AR was deployed to a new site, providing significantly wider-area coverage.

What does it take for an operator to use the system?



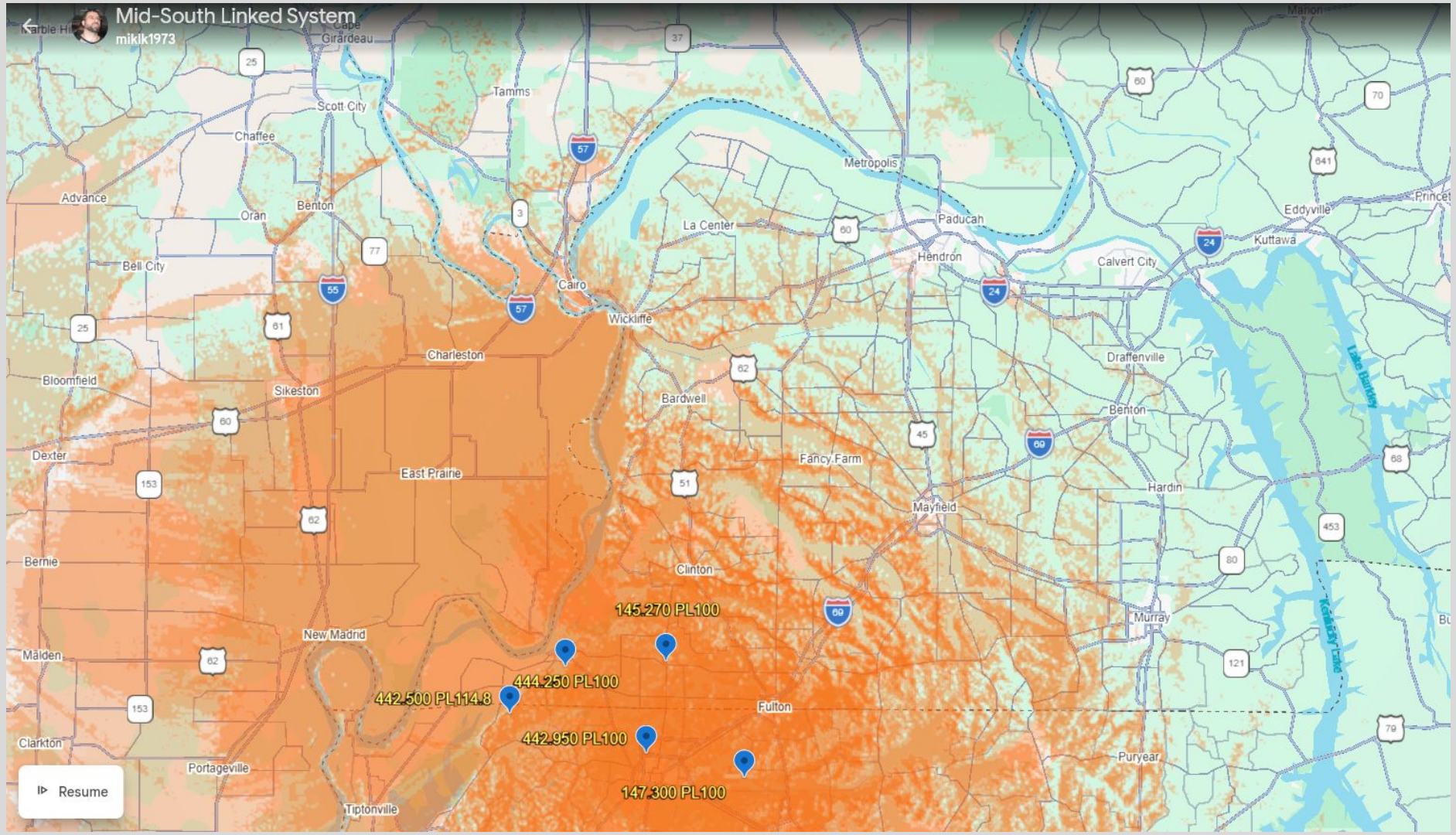
Coverage

- Memphis NWS Forecast Area
 - SEMO, NW AR, N MS, West TN
- Kentucky
 - Fulton Co
 - Hickman Co
 - Parts of Carlisle
 - Parts of Graves
 - Parts of Calloway



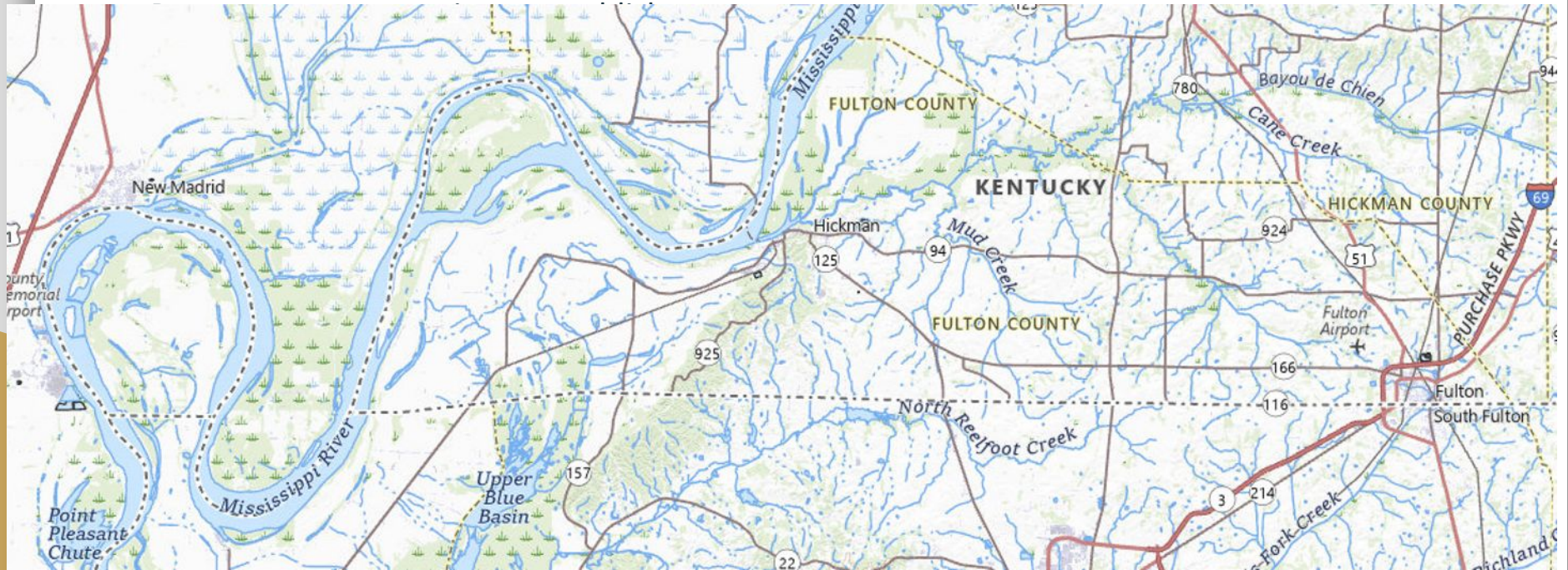
Mid-South Linked System

← Karle H... mikik1973



▶ Resume

Why Link Repeaters?



- Connection scheduling to other nodes

Why Link Repeaters?

- Repeaters are expensive to establish.
- Some locations are difficult for one repeater to provide adequate coverage.
- We are in a hobby to communicate with others, but:
 - Some areas only have a small number of operators.
 - We get tired of talking to the same people.
 - Large percentage of operators that have restrictions, HOA, License Class, Financial, etc.
- We want to connect to other groups for various purposes:
 - Ragchew Nets
 - Preparedness/Testing Net
 - Emergency Communications
 - DX - We have had several connect to the system just wanting to have a contact from the state, county, grid square, etc
- When configured, Allstar allows for other addons:
 - Announcements
 - Weather Alerts
 - Broadcastify feeds
 - Connection scheduling to other nodes

How is the Midsouth Link Repeater System Managed?

- We have 3 primary rules:
 - Analog only connections.
 - Be nice.
 - Have a willingness to promote the hobby.
- We have 5 primary operators with access into the dashboard for managing linked connections
 - Repeater Owners/Clubs are free to manage their own system or it can be managed thru these 5 operators.
- Repeaters connect to one of 3 zones: (Memphis & AR; NWTN & KY; SWTN,MS & AL)
- Geographical zones or individual repeaters can link and unlink based on needs at any time.

65196 - K4JTM Master Hub Midsouth Link System

Transmit - Idle

Node	Description	Last Rcvr	Conn Time	Direction
654785	KN4KAN Zone 3 Regional Hub Midsouth Link System	00:13:17	2600:1:00	OUT
41741	K5TW K5TW System Hub Trumann, AR	00:31:49	23:43:59	OUT
41908	KK4IOH Zone 1 Regional Hub Memphis, TN	01:15:20	2600:1:48	OUT
667195	K4JTM Zone 2 Regional Hub Midsouth Link System	10:45:00	66:40:54	IN
61456	KJ4QVC 438.250 Charlotte Tennessee	Never	23:43:54	IN

41908 - KK4IOH Zone 1 Regional Hub Memphis, TN

Transmit - Idle

Node	Description	Last Rcvr	Conn Time	Direction
65196	K4JTM Master Hub Midsouth Link System	00:13:17	2600:1:48	IN
63870	N5MSC 443.450 Forrest City, AR	01:15:21	23:43:52	IN
591490	WASCC 146.865 Wynne, AR	01:52:38	05:06:08	IN
46060	N5MSC 444.950 Hughes, AR	03:51:17	25:41:40	OUT
58252	N5MSC 442.150 Marion, AR	04:38:17	52:24:40	IN
41614	WB4KDG 224.840 Memphis, TN	24:00:47	00:24:36	OUT
58251	N5MSC 147.150 Marion, AR	Never	01:22:03	IN

667195 - K4JTM Zone 2 Regional Hub Midsouth Link System

Transmit - Idle

Node	Description	Last Rcvr	Conn Time	Direction
65196	K4JTM Master Hub Midsouth Link System	00:13:17	66:40:54	OUT
667197	K4JTM 442.250 Jackson, TN	10:45:00	39:19:01	IN
667192	K4JTM 443.600 Dresden, TN	26:50:52	39:18:59	IN
667194	K4JTM 147.300 VHF South Fulton, TN	27:11:23	39:18:57	IN
65030	K4CAY 145.270 Cayce, Ky	Never	03:17:18	IN
667191	K4JTM 442.950 UHF Union City, TN	Never	23:43:51	IN
682060	K4CAY 444.250 Hickman, Ky	Never	39:19:03	IN

654785 - KN4KAN Zone 3 Regional Hub Midsouth Link System

Transmit - Idle

Node	Description	Last Rcvr	Conn Time	Direction
52955	N6AQ 434.34000 Dennis/Mississippi	00:13:17	00:13:17	IN
65196	K4JTM Master Hub Midsouth Link System	00:31:49	2600:1:00	IN
55834	W4AJC 143.135 Three Way, TN	01:31:05	39:18:53	IN
654783	KN4KAN 147.195 Enville, TN	03:57:27	10:12:50	IN

41907 - WX4MEM DMR TG314431 Memphis, TN

Transmit - Idle

Node	Description	Last Rcvr	Conn Time	Direction	Conn
No Connections - Repeat Only					

65196 - K4JTM Master Hub Midsouth Link System

Conns: 5 Up: 20d 23:50:36



Transmit - Idle

	Node	Description	Last Recv	Conn Time	Direction	Connect State	Mode
	41741	K5TW K5TW System Hub Trumann, AR	00:08:35	44:46:12	OUT	ESTABLISHED	Transceive
	41908	KK4IOH Zone 1 Regional Hub Memphis, TN	00:20:19	80:51:06	OUT	ESTABLISHED	Transceive
	667195	K4JTM Zone 2 Regional Hub Midsouth Link System	00:26:16	305:14:28	IN	ESTABLISHED	Transceive
	654785	KN4KAN Zone 3 Regional Hub Midsouth Link System	03:03:34	498:34:35	OUT	ESTABLISHED	Transceive
	61456	KJ4QXC 438.250 Charlotte Tennessee	15:41:01	20:12:18	IN	ESTABLISHED	Transceive

667195 - K4JTM Zone 2 Regional Hub Midsouth Link System

Conns: 8 Up: 110d 21:49:54



Transmit - Idle

	Node	Description	Last Recv	Conn Time	Direction	Connect State	Mode
	65196	K4JTM Master Hub Midsouth Link System	00:07:49	305:13:42	OUT	ESTABLISHED	Transceive
	667191	K4JTM 442.950 UHF Union City, Tn	00:25:30	38:32:07	IN	ESTABLISHED	Transceive
	667197	K4JTM 442.2250 Jackson, Tn	04:00:03	277:51:49	IN	ESTABLISHED	Transceive
	682060	K4CAY 444.250 Hickman, Ky	13:02:34	277:51:51	IN	ESTABLISHED	Transceive
	667194	K4JTM 147.300 VHF South Fulton, Tn	22:42:26	40:56:30	IN	ESTABLISHED	Transceive
	65030	K4CAY 145.270 Cayce, Ky	28:56:05	200:05:29	IN	ESTABLISHED	Transceive
	667192	K4JTM 443.6000 Dresden, Tn	64:04:57	277:51:47	IN	ESTABLISHED	Transceive
	667196	W4NWT 442.500 Reelfoot Lake, Tn	Never	00:55:09	IN	ESTABLISHED	Transceive

What does it take to link a repeater?

With Onsite Internet

- Repeater with interfacing capabilities
- Repeater Builder RIM-Lite V2 and cable
- Raspberry Pi 4 with Hamvoip or ASL3 loaded and configured.

The repeater will have to be configured for squelch tail and ID turned off.

Internet options: Starlink in standby mode, Cellular Routers, Fiber-Internet

No Onsite Internet Option

- Location with internet within strong range of the repeater.
- Power Supply
- Mounted Antenna with Coax
- Interfaceable Radio
- Repeater Builder RIM-Lite V2 and cable
- Raspberry Pi 4 with Hamvoip or ASL3 loaded and configured.

The repeater will have to be configured for squelch tail and ID turned off.

In all cases the data load is very low, and does not require extremely high speed.



What began as a few radio operators making connections over the air has developed into the **Mid-South Link System**, built on friendships, cooperation, and a shared commitment to keeping amateur radio connected across the Mid-South!



QUESTIONS??

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