Wires-X Portable Digital Node (PDN) Function
What is it, how to set it up and use it
April 2023
XARC

Almost 5 years ago!

Setting up a Wires-X node station (May 2018)

History of Wires

- Wide-Coverage Internet Repeater Enhancement System

- Unique System – started out as analog only – developed by Yaesu

- History

  - Wires ==> Wires-II ==> Wires-X

  - Mid '90's using the internet to link repeaters or link radios

  - Node to Node to "sister" groups

  - In Wires-X these are rooms

- HRI-100 ==> HRI-200 (Hardware Radio Interface)

-

- Needed a "donor" radio or repeater with a 6 pin DIN connector (Analog)

- The "atom" button on analog radios. X button or DX button for control in digital

- Digital adds 10 pin DIN connector to HRI-200

- HRI-200 is Digital and Analog plus Cross Modulation

What is
WIRES-X?

- WIRES is an Internet communication system which expands the range of amateur radio communication. The protocol used by Yaesu to transport voice and data over the internet.

- Wires-X added digital – C4FM or Fusion.

- Network is hybrid. Uses a server to find and make peer-to-peer connection.

- Centralized/De-Centralized.

- Gives you a real time view of active nodes and rooms to select from.

- In Japan WIRES-X is used extensively as there are no repeaters on 2M.

Elements of Wires-X
A Typical Local Node (before PDN)

Node Radio

WIRES X Interface

Dedicated PC

Router to Internet
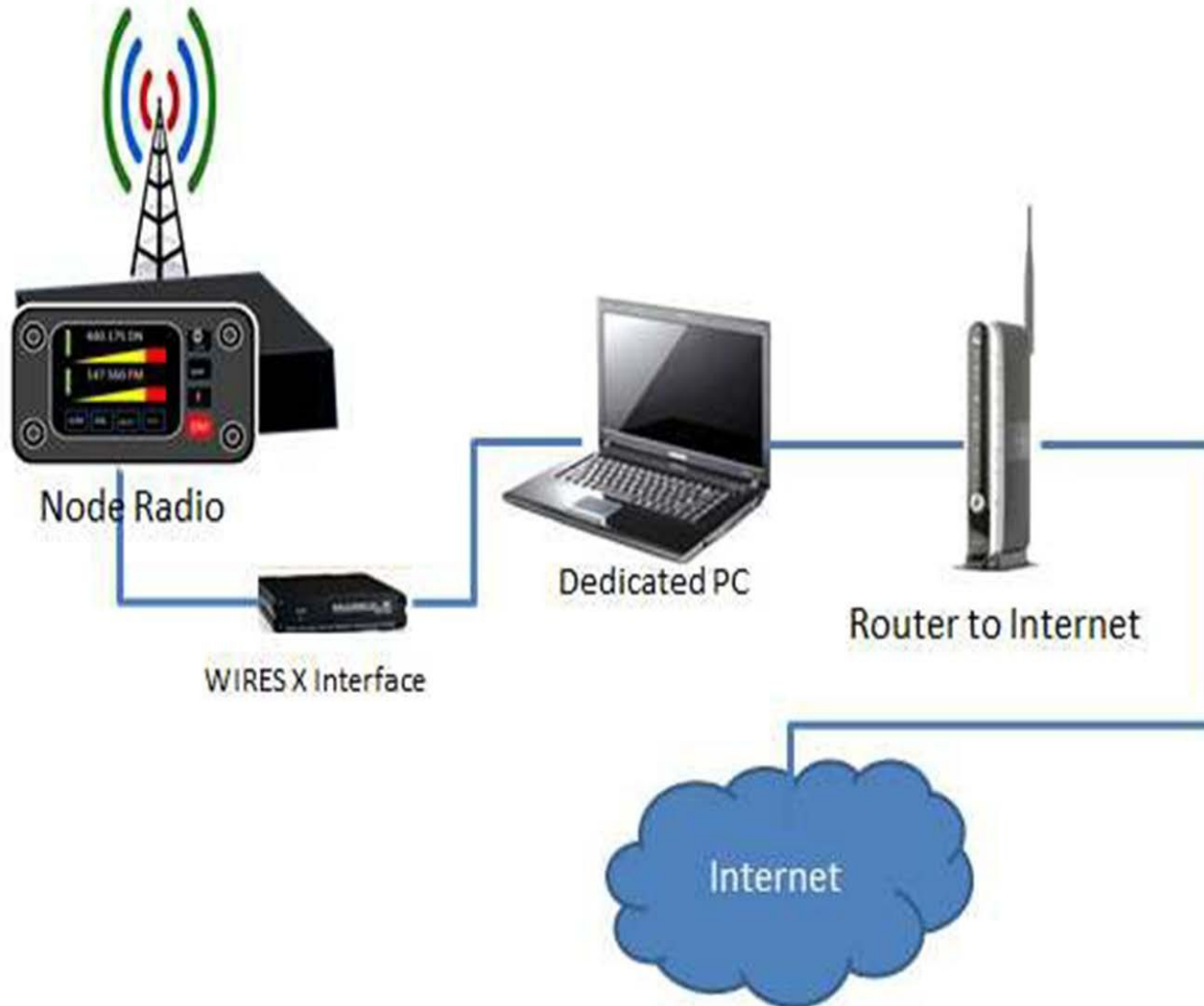
Internet

Wires-X and node connections

Think of this arrangement as multiple telephones connected to a party line.
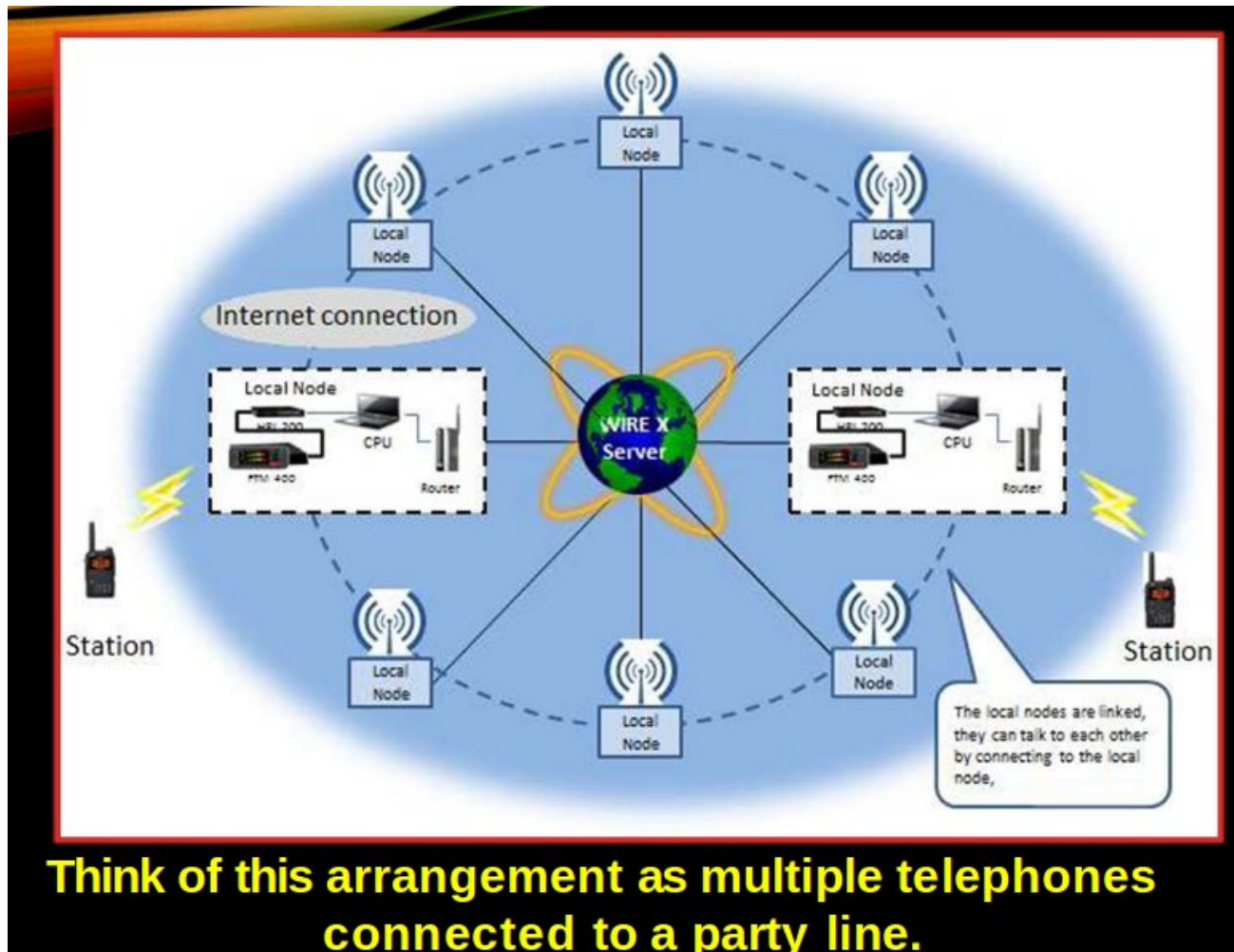
Advantages of Wires-X

- Supports C4FM digital. Repeating digital data via the Internet, users can enjoy clear voice communications

- Automatically connects to nodes and "rooms". Call sign, name, distance between stations included in transmission

- Search active nodes and "rooms"

- Similar to Echolink, IRLP, Allstar but with more features

- Does not require repeater controllers

- No repeater needed – can be simplex

- Can also link repeaters

- Range increased when linked to other repeaters and/or nodes

- News bulletins (messages, images, voice memos) can be freely uploaded to nodes and "rooms"

- Also supports traditional FM users and C4FM users can communicate with analog FM stations

- Digital error correction

New since Sept 2018
Wires-X Portable Digital Node (PDN) Function

- **No** HRI-200 Interface needed ($125)

- No static IP address needed or non NAT'd IP address

- No ports to open

- Works with Handhelds: FT2, FT3, FT5

- Works with mobiles: FTM100, 200, 300, 400, (new 500)

- Need to purchase cables for the radio you intend to use. USB plus audio cables. Two versions one for Windows 10, new cable for Windows 11 (Prolific driver issues with W11) One cable set for handhelds, different one for the mobiles.

- Several updates to the Wires-X software

- All the Fusion radios can operate via Wires-X but only certain ones can be operated as a PDN.

- Developed based on user feedback from the 2018 Hamvention

Steps to set up a PDN Station

1. User Registration – for your own node ID
   https://www.yaesu.com/jp/en/wires-x/node/index.php Register the DP-ID of the radio – the "radio id"

2. Purchase connection cables for your radio. Mobile radios come with the USB cable needed. (FT2DR cables are SCU-57. $38.95 from HRO, Mobile cable set is SCU-58 also from HRO)

4. Install Wires-X software on a Windows 10 or 11 PC. Software is under the HRI-200 on the Yaesu website. Auto start option for Wires-X.

5. Install USB Device Driver for the PC connection cable. **Important! Do not plug in your cable until you have installed the cable driver first!** Cable drivers are in file section under the radio model.

6.Make sure the firmware is up-to-date on the radio

7. Connect the radio to the pc.
   Special note on the FT-991a: It can connect via RF only. It cannot be used as a digital node or room but can be set up as an analog node. (has 6 pin DIN vs 10 pin DIN)

What you need to know to get started

THE BASICS – DEFINITIONS

- **System Fusion** = C4FM Digital Mode – 9K36F7W

- **Wires** = Analog FM Internet Connections – With HRI200 box can connect to internet and join rooms

- **Wires–X** = Digital Internet Connections – signal stays digital though the whole connection

- **Node** = A Simplex Radio, Link Radio, or a Repeater on the network – where RF enter/leaves the internet connection

- **Room** = A central location where many different nodes can connect together on Yaesu servers– It is like a repeater on the internet

- **Reflector** = Like a room but on a independent server

THE BASICS – C4FM MODES

What are the different modes for C4FM

DN – Data & Voice – Splits the 12.5KHz bandwidth for voice and data. The data stream that is transmitted along with your voice on some radios that include a GPS and call sign information that will continuously transmit your location

VM – Digital Voice – Uses the full 12.5Khz bandwidth for your voice. You will get better voice quality but lose the GPS data

DATA – Uses the full bandwidth for data only. Currently the main use for this mode is the camera mic's for HT. The radios itself will use this mode when you set up a Wires–X connection for getting node data.

Operating PDN- as applied to FT2D

- Open Wires-X software

- Decide on PDN or Portable HRI mode

- Decide on either "Direct Access" or "Access Point"

- Handshake (sync'd) your radio with the software

- Set to DN (Digital Narrow mode)

- Can toggle between direct and access point with press of A/B switch

- Connect to a Wires-X room

- Then QSO!

- PDN: capable of communicating with digital stations only

- Portable HRI Mode: capable of communicating with both digital and analog stations

- 2 streams – that is why you need the audio cables for HRI

Several Ways to Connect and Use PDN

PDN mode Direct/Access Point
Digital Only
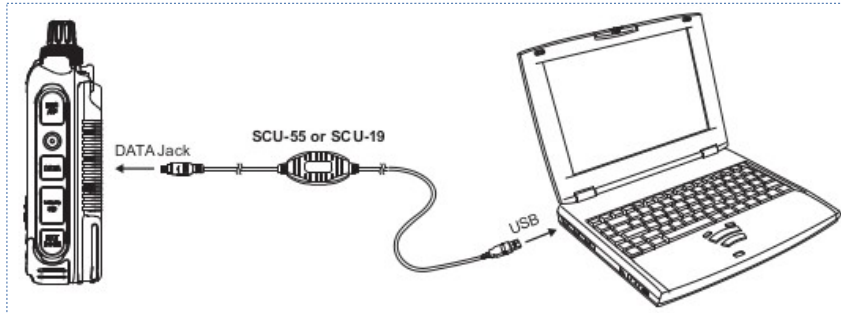
HRI Direct
Digital and Analog
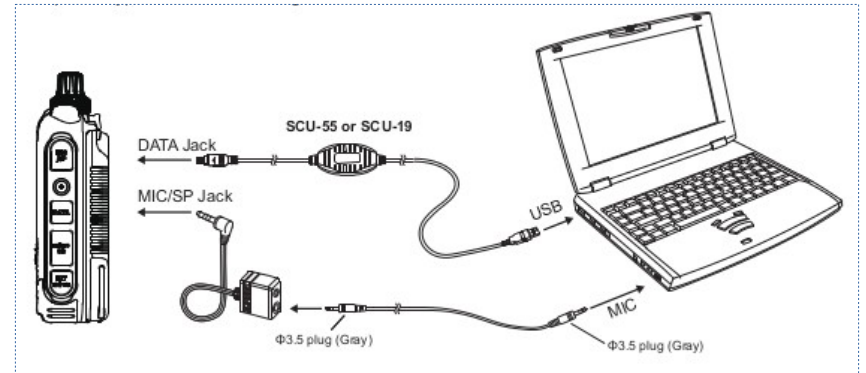
HRI Access Point Mode

One I use/recommend ==>

Wires-X Software Screenshot

WIRES-X

File(F) View(V) Connect(C) Tool(T) Help(H)

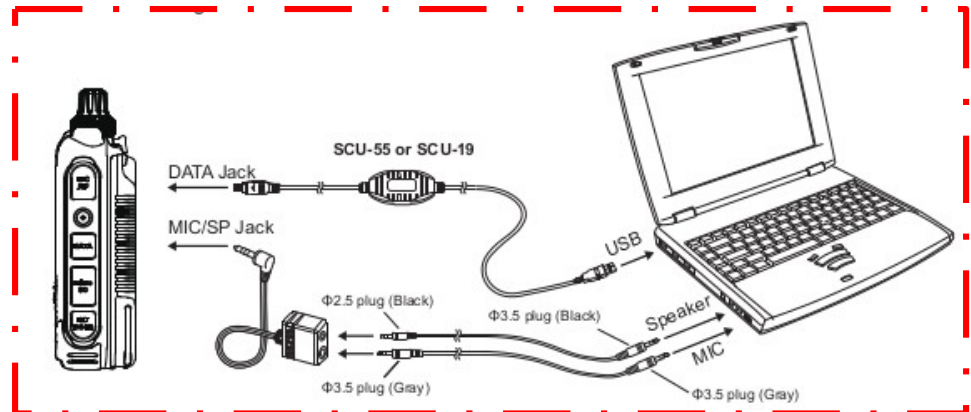| G.User ID	+DT...	Act	Call/R...	City	State	Co...	Freq(M...	SQL	Lat	Lon	Comment
CQ-AMERICA	21000	001	CQ AM...	Shin...	Tokyo	Jap...					CQ Room for America...
CQ-AMERICA-DIGI	21003	000	CQ AM...	Shin...	Tokyo	Jap...					CQ Room for America...
----AMERICA-LINK	21080	108	Americ...	Bea...	Texas	USA					America Link Network...
N9RIM-ROOM	21424	013	Southe...	Ca...	New Y...	USA					
MNWIS-BKUP	21493	021	MNWis	Lino...	Minne...	USA					Fusion Technical Net ...
TEXAS-NEXUS	21636	036	TEXAS...	Aust...	Texas	USA					
AMERICA-KC-WIDE	28054	056	Americ...	KA...	Missouri	USA					"Welcome to the Cent...
MVARC-IDAHO	43210	014	MVAR...	Twi...	Idaho	USA					www.k7mva.org WIRE...

+A.User ID	DT...	CallSign	City	State	Co...	Freq(M...	SQL	Lat	Lon	Comment
---NWRA...	18284	AE7JG	Phoenix	Arizona	USA	442.900...	DG-ID:0...	N:...	W:1...	Welcome To th...
--9Z4RG--	30199	9Z4RG	Port-of-Spain	Trinidad	Tri...	147.850...	TSQ:131...	N:...	W:0...	9Z4RG Wires-X...
--JE1UDL--	16671	JE1UDL	Takasaki-city	Gunma	Jap...					
-IWAKUN...	15403	JH4VIZ	Iwakuni-city	Yamag...	Jap...	144.560...	TSQ:118...			
-KYOTO-	19414	JL3ZGV	Kyoto-city	Kyoto	Jap...	430.820...	DG-ID:0...	N:...	E:13...	OPEN NODE/F...
-TOYAM...	12344	JH9YXY	Toyama-city	Toyama	Jap...	144.560...	DG-ID:0...			
-TOYAM...	12751	JF9NHG	Toyama-city	Toyama	Jap...	430.900...	DG-ID:0...			
1ST-RIG-...	12556	JH8IKV	Sapporo-city	Hokkai...	Jap...	430.940...	DG-ID:0...	N:...	E:14...	
2531-KD...	14935	JL3ZMX	Higashiosak...	Osaka	Jap...	144.560...	DG-ID:0...			
29158RO...	14886	JG1ZUH	Itabashi-ku	Tokyo	Jap...	430.840...	TSQ:123...			9158ROOM·¹Ý...
2E0FBF-N...	56158	2E0FBF	nottingham	Nottin...	UK			N:...	E:00...	sherwood forest
2E0XVX-...	34941	2E0XVX	Market Harb...	Leicest...	UK	144.827...	DG-ID:0...	N:...	W:0...	UK-Cluster Wir...
4CODME...	57482	4L4GEO	Tbilisi	Tbilisi	Ge...					
4F7FDM-...	14078	4F7FDM	Mandaue City	Cebu	Phi...	431.900...	DG-ID:0...	N:...	E:12...	Node at the Q...

Room ID	+DT...	Act	Room name	City	State	Co...	Comment
JL3YSD-ROOM	20997	000	KASAI QSO ROO...	Kasai-city	Hyogo	Jap...	
CQ-AMERICA	21000	001	CQ AMERICA	Shinagawa-ku	Tokyo	Jap...	CQ Room for America by YAE...
YAESU-TEST-R...	21001	000	YAESU USA TEST	Cypress	Califor...	USA	TEST ROOM
CYPRESS-FUSION	21002	000	Cypress Fusion	Cypress	Califor...	USA	Yaesu USA Amateur Radio Club
CQ-AMERICA-D...	21003	000	CQ AMERICA DI...	Shinagawa-ku	Tokyo	Jap...	CQ Room for America DIGITA...
AB2HM-ROOM	21011	000	AB2HM-ROOM	Woodbury	New J...	USA	Pat In South Jersey
CQ-LOUISVILLE	21014	005	CQ Kentucky	Louisville	Kentuc...	USA	Welcome to CQLouisville
NJ2AR-ROOM	21020	000	JSARS	Toms River	New J...	USA	JERSEY SHORE AMATEUR RA...
N4DLW-ROOM	21036	000		Brandon	Florida	USA	

Ready

IDLE DIGITAL   ON-AIR   LOCAL   FT2D RADIO 1

-- : --

User   = KA1CNF   > ********* (DW:FT2D)
Uplink   = KA1CNF   (35195)
Downlink =   (   )
Room   = (   )

2023/03/06 19:40:12 Bookmark list added : CQ-AMERICA-DIGI(21003)
2023/03/06 19:40:35 Bookmark list added : CQ-AMERICA(21000)
2023/03/06 19:40:44 *-*-* Canceled call in PDN standby *-*-*
2023/03/06 19:40:58 Station info TX to V-CH.
2023/03/06 19:41:08 *-*-* Call Start No.28054 *-*-*
2023/03/06 19:41:09 Room Member 55 Nodes.
2023/03/06 19:41:09 Connected to AMERICA-KC-WIDE(28054).
2023/03/06 19:41:15 KU0MED-RPT(90163) IN. 57 Nodes.
2023/03/06 19:41:17 9K5MO-ND(79935) OUT. 56 Nodes.
2023/03/06 19:41:21 9K5MO-ND(79935) IN. 57 Nodes.
2023/03/06 19:41:23 IU4PCW-ND4(95480) IN. 58 Nodes.
2023/03/06 19:41:28 End-key(#99999/*) detected.
2023/03/06 19:41:28 * Disconnected *

SEND   CLR

News   GM

Ver-1.540   ONLINE

FT2/FT3 Wires-X Screens
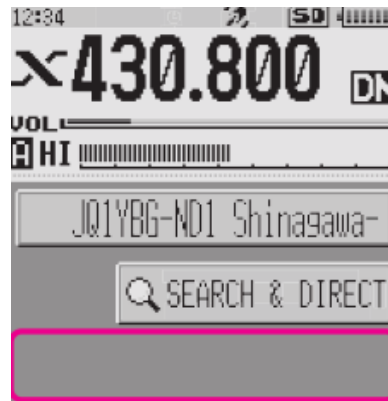
FT2/FT3 Button settings for Wires-X use

☐ **FT3D or FT2D**

On the frequency setting screen, you can set and operate the following with the transceivers key and DIAL knob settings.

Function	Key or Dial
Switches between the Access Point and the Direct Operation	Press the **A/B** key
Starts operation for the Portable Digital Node	Press the **X** key
Sets the operation frequency	Rotate the DIAL knob or press the Numeric keypad input screen
Switches between the VFO mode and the Memory Channel mode	Press the **V/M** key
Moves operation to the next-highest frequency band	Press the **BAND** key
Sets the transmit and receive DG-ID number	Press and hold the **GM** key
Displays the Function Menu Screen	Touch [**F MW**]
Selects the Transmission Power Level	Touch [**TXPWR**] on the Function Menu Screen
TX/BUSY LED turn OFF/ON	**V/M** key (Press and hold)
Enters the Set mode*	Press and hold the **DISP** key
Enters the BACKTRACK screen	Press the **DISP** key
Registering to Memory Channel	Touch and hold [**F MW**]
Recalls the "HOME" channel	Touch [**HOME**] on the Function Menu Screen
Squelch OFF	While **MONI** key is pressed
Adjusts the squelch level	Press the **SQL** key, then rotate the **VOL** knob (FT3D) or the **DIAL** knob (FT2D)
Reverses the transmit and receive frequencies	Touch [**REV**] on the Function Menu Screen
Switches Busy detection between "Noise squelch" and "DG-ID number match".	Press and hold the **A/B** key

*Some setting items in the set mode are automatically set for the Portable Digital Node function, so these settings cannot be used.

WIRES-X

G.User ID	+DT...	Act	Call/R...	City	State	Co...	Freq(M...	SQL	Lat	Lon	Comment
CQ-AMERICA	21000	001	CQ AM...	Shin...	Tokyo	Jap...					CQ Room for America...
CQ-AMERICA-DIGI	21003	000	CQ AM...	Shin...	Tokyo	Jap...					CQ Room for America...

Room AMERICA-KC-WIDE (28054) member 56 nodes   Refresh Close

Send Node : W8MRC-RPT (74898) / Mobile : W8BEI

W8MRC-RPT	W8BEI					
K3UCB-ND	KC4MHH-RPT	W0JD-HV1L	K0GBW-SHWN	KC0KW-OP	WB0WXS-ND	KA0JTI-RPT	N0EG-SPRNG	TY-JE9BHE	KD0CNC-RPT
NB3Y-ND	KC0HJG-ND	KE0HWK-LOJ	W4ADZ-BOB	LA4YKA	KA1CNF-ND3	ECHOLINK	W3YXZ-ND3	K0SEK-RPT	WA0RE-ND
KB0TLL-ND2	WA0QFJ-T1F	KA1CNF-GW	KW7EET-ND	K0HAM-LSW	KC0KW-SMTH	KB0LSM-STJ	K0LBR-ODES	VE1LV-ND2	KC0KW-KC-N
KE8RLO-ND2	W0FH/GW/1	KC0KW-LS-E	KC0KW-KCK	W0OFK	N0WW-PLAZA	K0GQ-RYTWN	WB6EFW-RPT	W9MT-ND4	W9DWP-RPT
STPTR-RPTR	KC0KW-ZOOO	KG2CV-ND	N9INK/R	9K5MO-ND	KU0MED-RPT	K9KSU-ND	WN5J-ND	KC8GYP-200	KO4MHC-ND
K0HAM-OLTH	KC0KW/ND45	KB2IDX-ND	KD0ETV-ND						

+A.User ID	DT...	CallSign	City	State	Co...	Freq(M...	SQL	Lat	Lon	Comment
---NWRA...	18284	AE7JG	Phoenix	Arizona	USA	442.900...	DG-ID:0...	N:...	W:1...	Welcome To th...
---NWRA...	72033	AE7JG	Black Canyo...	Arizona	USA	449.975...	DG-ID:0...	N:...	W:1...	Welcome to th...
--9Z4RG--	30199	9Z4RG	Port-of-Spain	Trini...						74RG Wires-X...
-JE1UDL--	16671	JE1UDL	Takasaki-city	Gun...						
-IWAKUN...	15403	JH4VIZ	Iwakuni-city	Yam...						
-KYOTO-	19414	JL3ZGV	Kyoto-city	Kyo...						PEN NODE/F...
-TOYAM...	12344	JH9YXY	Toyama-city	Toy...						
-TOYAM...	12751	JF9NHG	Toyama-city	Toy...						
0303USMC	74631	K6EFC	Carlsbad	Cali...						
1ST-RIG-...	12556	JH8IKV	Sapporo-city	Hok...						
2531-KD...	14935	JL3ZMX	Higashiosak...	Osa...						
29158RO...	14886	JG1ZUH	Itabashi-ku	Tok...						58ROOM·¹Ý...
2E0EJA-N...	78865	2E0EJA	Uffington	Oxf...						
2E0FBF-N...	56158	2E0FBF	nottingham	Not...						erwood forest

Room ID	+DT...	Act	Room name		
CQ-AMERICA	21000	001	CQ AMERICA		
YAESU-TEST-R...	21001	000	YAESU USA TEST		america by YAE...
CYPRESS-FUSION	21002	000	Cypress Fusion		
CQ-AMERICA-D...	21003	000	CQ AMERICA DI...		merica DIGITA...
AB2HM-ROOM	21011	000	AB2HM-ROOM		sey
CQ-LOUISVILLE	21014	004	CQ Kentucky		Louisville
NJ2AR-ROOM	21020	000	JSARS		AMATEUR RA...
N4DLW-ROOM	21036	000			if.
LA-REPEATER	21042	019	SoCal Link Netw...		

View QSL de KA1CNF (ID:KA1CNF-ND3)

WIRES-X

Linking the World via VoIP
WIRES

DTMF ID: 28054 2023/03/06 19:42:59

America's "KC-WIDE"

< AMERICA-KC-WIDE #28054 >
Connecting middle America to the
World via Wires-X! See
kansascitywide.com for a list of
RF connections and daily nets.

HardCopy   Save   Close

NET DIGITAL   ON-AIR   LOCAL   FT2D   RADIO 1

AMERICA-KC-WIDE   2:53

User   = W8BEI   > ********* (DN:FTM-100D)
Uplink   = W8MRC   (74898)
Downlink = KA1CNF   (35195)
Room   = (28054)
Position = N:39 11' 34" / W:084 15' 06"

2023/03/06 19:41:28   End-key(#99999/*) detected.
2023/03/06 19:41:28   * Disconnected *
2023/03/06 19:42:57   *-*-* Call Start No.28054 *-*-*
2023/03/06 19:42:59   Connected to AMERICA-KC-WIDE(28054).
2023/03/06 19:42:59   Room Member 55 Nodes.
2023/03/06 19:43:28   9K5MO-ND(79935) OUT. 55 Nodes.
2023/03/06 19:43:31   *-*-* Canceled call to Analog Node or Analog & Digital
Room *-*-*
2023/03/06 19:43:32   9K5MO-ND(79935) IN. 56 Nodes.
2023/03/06 19:43:33   JA1WLQ-300(15173) OUT. 55 Nodes.
2023/03/06 19:43:42   K0LBR-ODES(58997) OUT. 54 Nodes.
2023/03/06 19:43:49   K0LBR-ODES(58997) IN. 55 Nodes.

SEND   CLR

News   GM

Ready   Ver-1.540   ONLINE

Considerations…

- Communication over the Internet can have delays, packet loss, interruptions. Recommend wired over WiFi.

- Setup and maintaining Windows PCs can be frustrating. Follow advice in Wires-X Bible, hamoperator.com website and consider a dedicated PC

- All Yaesu Tranceivers have a separate Wires-X manual you can download from Yaesu in the files section

- HRI-200 is still needed to host a room and to work with repeaters

- If there is a Wires-X capable repeater nearby you do not need your own PDN. **Hint: 145.29 – W2XRX-Room 21704**

Hotspots vs. Wires-X

- Wires-X node software allows operator to set many parameters

  - Access (open, closed, DP-ID, DG-ID, GM-group mode)

  - Analog or digital modes

  - VHF/UHF frequencies

  - Simplex or connected to a repeater

  - Power output – variable up to 50 watts

  - ID/Timers – individual setup

  - News, messages, pictures, info on other stations, who is connected and log history

  - Connect and disconnect options, restrict access. Return to "room"

  - All YSF radios allow for control of Wires-X but how this is done varies from radio to radio

  - X button also works with hotspots

WIRES-X Tips

- Leave pauses between transmissions (2-3 seconds)

- Listen before you talk

- ID with your call sign every 10 minutes

- If you "kerchunk", your call sign will be displayed!

- Just say your call sign

- Restart your computer and radio after updates, change of settings and upgrades

- You OWN your node and can change the name or user ID to anything you want.

- Be mindful that you are representing all hams and that you might be heard across the county or the world

- Watch for heating/duty cycle. Low power on HT will be ok.

- Switching rooms/nodes: If you are not the repeater or node owner, please call on the radio and ask for permission before changing the node or room linking. You might not receive an answer.

- Then return it to the original node or room when you are done

- Most communication is done with DG-ID: 00

- Check your mic gain – lower it if you get reports that you are "too hot or distorted".

Wires-X capable Repeaters

Frequency	Offset	Tone Up / Down	Location	County	Call	Node	Use	Modes	
145.2900	-0.6 MHz	110.9 / 110.9	Canadice, Bald Hill	Ontario	W2XRX	11704	OPEN	FM Fusion WIRES-X	➕
146.7300	-0.6 MHz	88.5 / CSQ	Brooklyn, Brooklyn Bridge	Kings	KC2RC	40821	OPEN	FM WIRES-X	➕
147.1950	+0.6 MHz		Brooklyn	Kings	KB2NGU	18377	OPEN	Fusion WIRES-X	➕
147.2700	+0.6 MHz	100.0 / 100.0	Campbell	Steuben	N9RIM	11424	OPEN	Fusion WIRES-X	➕
147.3900	+0.6 MHz		Fulton	Oswego	WN8Z	11199	OPEN	FM Fusion WIRES-X	➕
440.3500	+5 MHz	173.8 / 173.8	Bronx, Echolink Allstar	New York	KD2SPF	82708	OPEN	FM EchoLink Fusion WIRES-X	➕
440.3500	+5 MHz	173.8 / 173.8	Bronx, South	New York	KD2SPF	28377	OPEN	FM Fusion WIRES-X	➕
440.3500	+5 MHz	173.8 / 173.8	Bronx, The Hub	New York	KD2SPF	82708	OPEN	FM AllStar EchoLink Fusion WIRES-X	➕
440.3500	+5 MHz	173.8 / 173.8	Bronx, The Hub	New York	KD2SPF	82708	OPEN	FM AllStar EchoLink Fusion WIRES-X	➕
442.3000	+5 MHz	100.0	Elmira, Harris Hill	Chemung	N2EUS	30963	OPEN	FM Fusion WIRES-X	➕
442.8000	+5 MHz	100.0 / 100.0	Binghamton/Endicott	Broome	AC2YS	wires	OPEN	FM	➕
444.7500	+5 MHz	110.9 / 110.9	Arcadia, Brantling Hill	Wayne	WA2EMO	WA2EM	OPEN	FM AllStar DSTAR Fusion	➕
444.7750	+5 MHz		Macedon	Wayne	KA1CNF	55545	OPEN	Fusion WIRES-X	➕
444.8250	+5 MHz	110.9	North Chili	Monroe	W2XRX	30445	OPEN	FM DSTAR Fusion WIRES-X	➕
444.9000	+5 MHz	225.7	Whitestone, Whitestone Bridge	Queens	W2BAT	21577	OPEN	FM Fusion WIRES-X	➕
448.6750	-5 MHz	114.8 / 114.8	Hauppauge	Suffolk	WR2ABA	21846	OPEN	FM WIRES-X	➕
449.1875	-5 MHz	114.8 / 114.8	Thiells, Rosman Center	Rockland	W2LGB	11340	OPEN	FM Fusion WIRES-X	➕

Link to check for active nodes

https://www.yaesu.com/jp/en/wires-x/id/active_node.php

KA1BZE-ND	30797	KA1BZE-ND	Digital	N Dartmouth	Massachusetts	USA	446.100MHz	DG-ID:00-00		
KA1CNF-GW	52391	KA1CNF	Digital(M)	Macedon	New York	USA	147.425MHz	DG-ID:00-00	N:43 09' 17"	W:077 21' 17"
KA1CNF-RPT	30128	KA1CNF	Digital	Macedon	New York	USA	444.775MHz+5.000MHz	DG-ID:00-00	N:43 09' 16"	W:077 21' 17"	West Walworth, NY Coverage western Wayne eastern Monroe northern Ontario counties
KA1GJU-ND	91610	KA1GJU	Digital	KENSINGTON	New Hampshire	USA	443.450MHz+5.000MHz	DG-ID:00-00	N:42 55' 04"	W:070 57' 20"
KA1JFB-ND	75051	KA1JFB	Digital(M)	Eastanollee	Georgia	USA			N:34 33' 01"	W:083 17' 01"
KA1VT-ND	30921	KA1VT	Digital	Plantsville	Connecticut	USA	444.250MHz+5.000MHz	DG-ID:00-00		

Link to check active rooms

https://www.yaesu.com/jp/en/wires-x/id/active_room.php

LATEST WIRES-X ACTIVE ROOM ID LIST

ROOM ID	DTMF ID	Act▼	Room Name	City	State	Country	Comment
ALLJA-CQ-ROOM-D	20610	121	ALL JA CQ ROOM D	Komoro-city	Nagano	Japan	ALL JA CQ ROOM Digital & PDN - https://cqwires.com
AMERICA-KC-WIDE	28054	074	America's "KC-WIDE"	KANSAS CITY	Missouri	USA	"Welcome to the Center of America". See: www.kansascitywide.com for nets and connections. Stop by to chat or join one of our Midwest friendly Nets. Connecting Middle America in the USA to the world.
-PHILIPPINE-LINK	43534	055	PHILIPPINES ROOM D	Rancho Palos Verdes	California	USA	PHILIPPINE-LINK [DIGITAL C4FM ONLY] A WA6GM NETWORK
TEXAS-NEXUS	21636	044	TEXAS-NEXUS	Austin	Texas	USA	
ALLJA-CQ-ROOM	20510	043	ALL JA CQ ROOM A	Komoro-city	Nagano	Japan	ALL JA CQ ROOM FM & Digital - https://cqwires.com
ITALY	27003	036	WIRES-X ITALIA	Cassolnovo	Lombardy	Italy	WIRES-X ITALIA - http://www.wires-x-italia.it
OHIO-LNK	40557	030	Ohio Link	Columbus	Ohio	USA	Ohio Link Net Sunday at 8:30 PM Eastern.
SKYHUBLINK	46361	028	SkyHubLink	Wheat Ridge	Colorado	USA	www.skyhublink.com
POLAND-ROOM	27784	026	POLAND-room	Lodz	Lodzkie	Poland	POLAND-room, BM-TG260042, YSF PL-POLAND
WM-CONNECT	21335	026	WM-Connect	Norton Shores	Michigan	USA	Linked West Michigan repeater system accessible via FCS004-034 and YSF US WM-Connect N8UKF Repeater Grp. Web: www.wm-connect.net
NWFG	41755	025	NWFG	Fleetwood	Lancashire	UK	Friendly and Welcoming
RUSSIA	24184	024	WiRES-X RUSSIA	Rostov-on-Don	Rostov	Russia	
----------CQ-UK	27793	023	CQ-UK	ABERDEEN	Aberdeenshire	UK	World Wide Room

Web Links

- Fusion Help : http://www.hamoperator.com/Hamoperator/Fusion_Help.html
- Youtube on setting up FT3DR for Wires-X PDN: https://www.youtube.com/watch?v=RVug3gpth9U
- Yaesu Wires-X Info: http://systemfusion.yaesu.com/wires-x/
- Yaesu Education System (youtube) - https://www.youtube.com/@YaesuUSAOfficial
- System Fusion groups.io:

 https://groups.io/g/SystemFusion

- Getting started with Wires-X:

- https://www.yaesu.com/jp/en/wires-x/node/index.php

- Wires-X Facebook page:

https://www.facebook.com/groups/wiresx.fusion/

- Map of active nodes:

http://wires-x.xyz/wires-x-map.php

- How to:

https://c4fm.hamradio.ph/pdn.html (First slide graphic and more details)

Questions?

My contact
info below:

Thank you!

KA1CNF- April 2023