

BARC Tech Night on Hotspots



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Why Hotspot?



- New to Ham Radio and new in Dayton
- Computer Geek
- DMR was newest HAM Craze at the time
- Needed Hotspot because no DMR repeaters at the time
- Saw neat Rpi Hotspot at....HAMVENTION!

Zum-Spot Hotspot



- Purchased as a kit which included:
 - ZumSpot- Rpi UHF board rev. 0.4
 - Raspberry Pi Zero Wireless
 - Micro SD Card Programmed with Pi-Star
 - Cost \$129.95 (2017)
- Case to hold it an additional \$14.95
- Inexpensive Baofeng DMR Radio RD-5R
 - Cost \$85



FT-991A



- Second Hamvention - Needed real base/portable radio
- Chose new Yaesu FT-991
 - Gave me HF/VHF/ and UHF bands
 - Also additional digital mode of Yaesu Fusion



Configure YSF2DMR



- Cross-band Mode
- Yaesu Fusion to DMR
- Simple to do



Configuration YSF and YSF2DMR



Pi-Star:3.4.17 / Dashboard: 20200706

Pi-Star Digital Voice - Configuration

Dashboard | Admin | Expert | Power | Update | Backup/Restore | Factory Reset

Gateway Hardware Information

Hostname	Kernel	Platform	CPU Load	CPU Temp
pi-star-ke0czv	4.9.35+	Pi Zero W Rev 1.1 (512MB)	0.14 / 0.86 / 1.14	40.1°C / 104.2°F

Control Software

Setting	Value
Controller Software:	<input type="radio"/> DStarRepeater <input checked="" type="radio"/> MMDVMHost (DV-Mega Minimum Firmware 3.07 Required)
Controller Mode:	<input checked="" type="radio"/> Simplex Node <input type="radio"/> Duplex Repeater (or Half-Duplex on Hotspots)

MMDVMHost Configuration

Setting	Value
DMR Mode:	<input type="checkbox"/> RF Hangtime: 20 Net Hangtime: 20
D-Star Mode:	<input type="checkbox"/> RF Hangtime: 20 Net Hangtime: 20
YSF Mode:	<input checked="" type="checkbox"/> RF Hangtime: 20 Net Hangtime: 20
P25 Mode:	<input type="checkbox"/> RF Hangtime: 20 Net Hangtime: 20
NXDN Mode:	<input type="checkbox"/> RF Hangtime: 20 Net Hangtime: 20
YSF2DMR:	<input checked="" type="checkbox"/>
YSF2NXDN:	<input type="checkbox"/>
YSF2P25:	<input type="checkbox"/>
DMR2YSF:	<input type="checkbox"/> Uses 7 prefix on DMRGateway
DMR2NXDN:	<input type="checkbox"/> Uses 7 prefix on DMRGateway
POCSAG:	<input type="checkbox"/> POCSAG Paging Features
MMDVM Display Type:	None <input type="button" value="v"/> Port: /dev/ttyAMA0 <input type="button" value="v"/> Nextion Layout: G4KLX <input type="button" value="v"/>

Configure YSF2DMR cont'd



Setting	Value
Hostname:	pi-star-ke0czv <small>Do not add suffixes such as .local</small>
Node Callsign:	KE0CZV
CCS7/DMR ID:	3103118
Radio Frequency:	431.075.000 MHz
Latitude:	50.000 <small>degrees (positive value for North, negative for South)</small>
Longitude:	0.000 <small>degrees (positive value for East, negative for West)</small>
Town:	Beavercreek, EM79xr
Country:	Ohio, USA
URL:	http://www.qrz.com/db/KE0CZV <input checked="" type="radio"/> Auto <input type="radio"/> Manual
Radio/Modem Type:	ZUMspot - Single Band Raspberry Pi Hat (GPIO) ▼
Node Type:	<input type="radio"/> Private <input checked="" type="radio"/> Public
APRS Host:	noam.aprs2.net ▼
System Time Zone:	America/New_York ▼
Dashboard Language:	english_us ▼

Apply Changes

Setting	Value
YSF Startup Host:	YSF00002 - Link YSF2DMR ▼
UPPERCASE Hostfiles:	<input checked="" type="checkbox"/> <small>Note: Update Required if changed</small>
WiresX Passthrough:	<input checked="" type="checkbox"/>
(YSF2DMR)CCS7/DMR ID:	3103118 None ▼
DMR Master:	BM_United_States_3103 ▼
Hotspot Security:	*****
DMR TG:	310557

Apply Changes

Demo



- Live Demo
- Questions?