



Baofeng UV-5R

The Love It Or Hate It
HT In The Ham Radio World

Baofeng UV-5R History

Baofeng is associated with many names, Po Fung, Fujian Nan'an Baofeng. American companies like Radioddity, BTech, Retevis, TidRadio may contract Baofeng to make radios to their specifications. Then there are Chinese industries that the UV-5R with the Baofeng label and are not associated with Baofeng at all. The UV-5R was first released in 2012 and rapidly gained recognition as a very low cost reliable dual band radio. I could not find the number of UV-5R's produced but it must be in the millions. It and its variants are produced for a global market and are very popular worldwide.



The UV-5R Dual Band Handheld Radio Features

Features:

1. Frequency Range: Tx 144-148 MHz, 420-450 MHz

Rx 136-174 MHz, 400-480 MHz

Rx Broadcast FM 65-108 MHz ??

2. Dual Display, Dual-Standby

3. Output Power: 4 / 1 Watts

4. 128 Memory Channels 50 CTCSS and 104 DCS

5. Flashlight, Roger beep And Alarm!!!



UV-5R RX/TX Frequency Range

Frequency Ranges Tx: USA 144-148 MHz, 420-450 MHz

UV-5R 136-174 MHz, 400-520 MHz

Unlocked UV-5R 128-176 MHz, 384-524 MHz

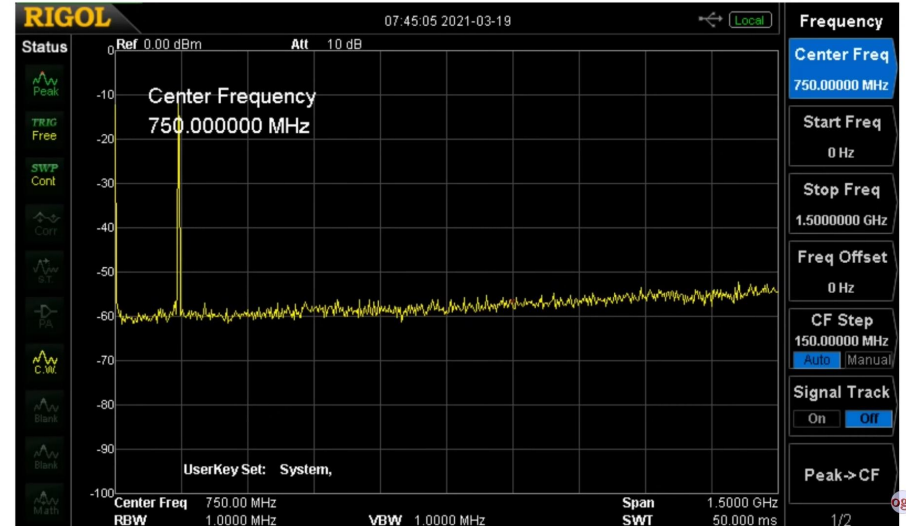
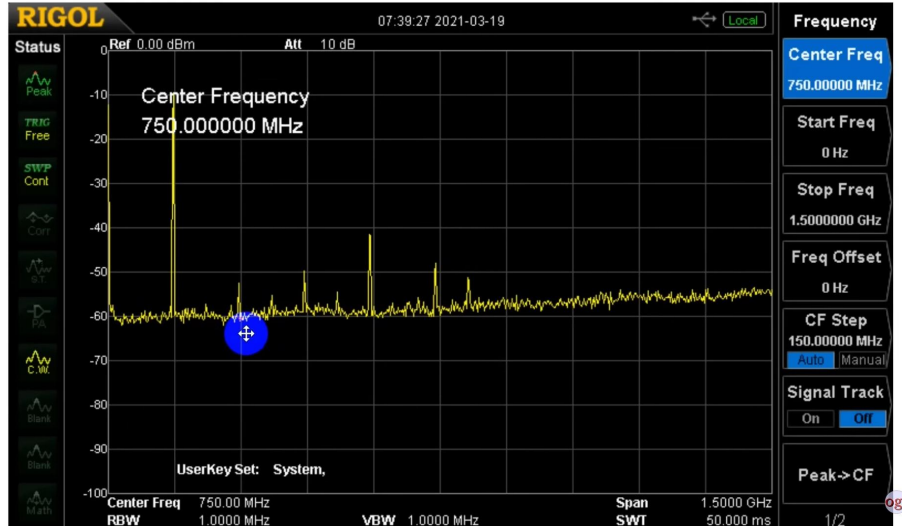
~~XX~~ Tx ~~XX~~ FRS 462-467 MHz

~~XX~~ Tx ~~XX~~ MURS 151-154 MHz

~~XX~~ Tx ~~XX~~ GMRS 462-467 MHz

Spurious Emissions

Harmonics may interfere with other frequency bands. The FCC requires that there be at least a 40dB suppression of the fundamental frequency. Harmonics occur at intervals of the fundamental frequency. For instance 150 MHz: 300, 450, 600, etc.



Status

Peak

TRIG
FreeSWP
Cont

Corr

S.T.

PA

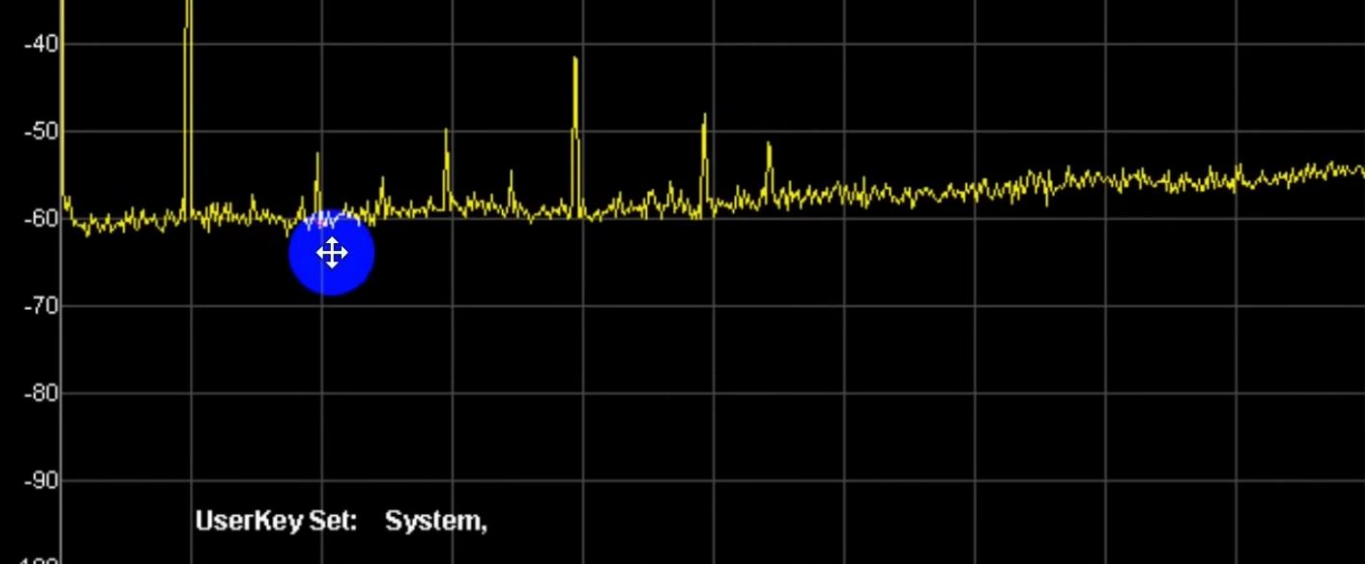
C.W.

Blank

Blank

Math

Ref 0.00 dBm Att 10 dB

Center Frequency
750.000000 MHz

Center Freq 750.00 MHz

RBW 1.0000 MHz

VBW 1.0000 MHz

Span 1.5000 GHz

SWT 50.000 ms

Frequency

Center Freq

750.00000 MHz

Start Freq

0 Hz

Stop Freq

1.5000000 GHz

Freq Offset

0 Hz

CF Step

150.00000 MHz

Auto Manual

Signal Track

On Off

Peak → CF

1/2

Status

Peak

TRIG
FreeSWP
Cont

Corr

S.T.

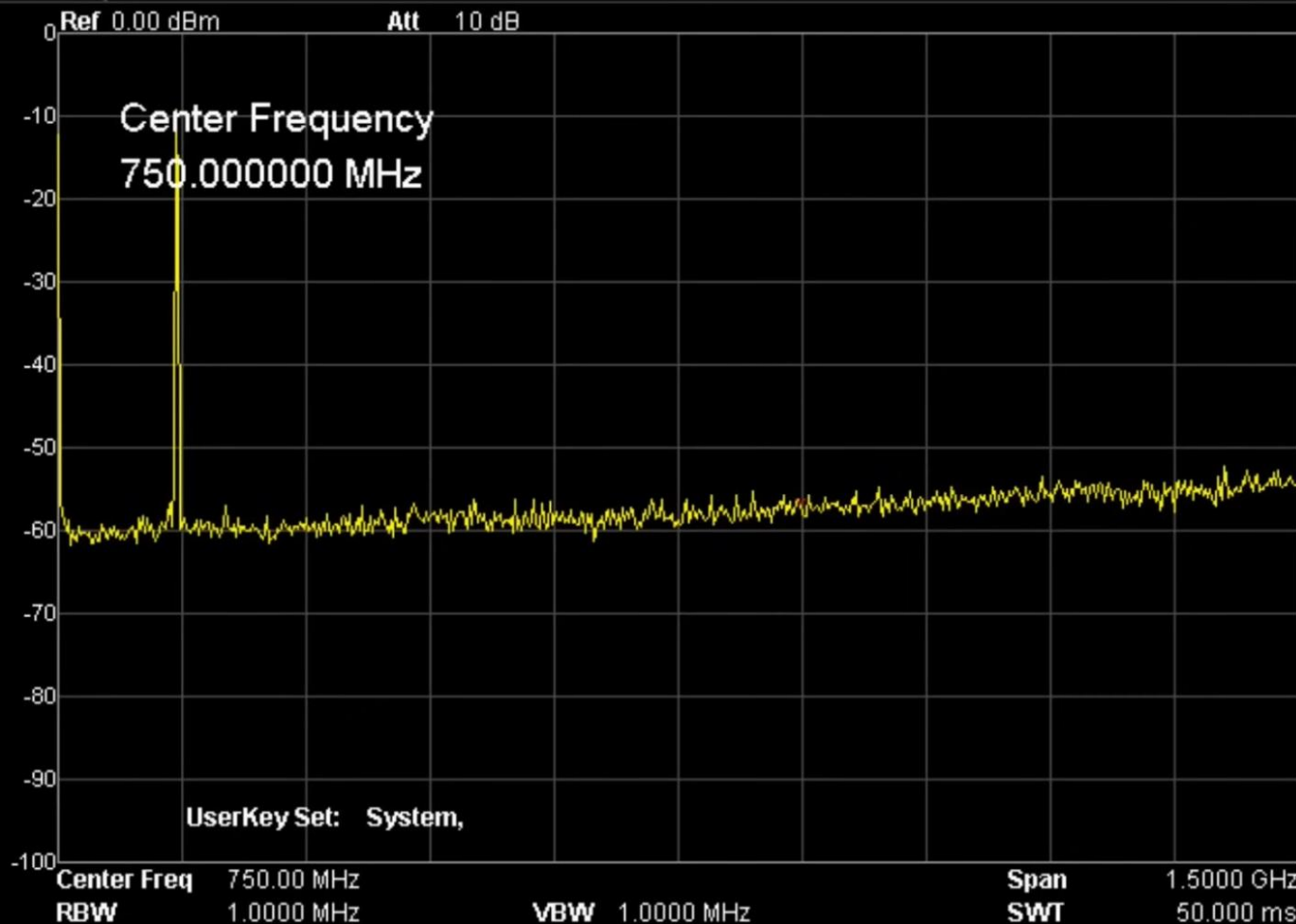
PA

C.W.

Blank

Blank

Math



Frequency

Center Freq

750.00000 MHz

Start Freq

0 Hz

Stop Freq

1.5000000 GHz

Freq Offset

0 Hz

CF Step

150.00000 MHz

Auto

Manual

Signal Track

On

Off

Peak → CF

1/2



Roll over image to zoom in



Baofeng UV-5R Two Way Radio Dual Band 144-148/420-450Mhz Walkie Talkie 1800mAh Li-ion Battery(Black)

[Visit the BAOFENG Store](#)

4.5 ★★★★★ ▾ 7,547 ratings | 295 answered questions

-33% \$18⁷²

List Price: \$27.99 ⓘ

Get Fast, Free Shipping with Amazon Prime

FREE Returns ▾

Available at a lower price from [other sellers](#) that may not offer free Prime shipping.[Eligible for Return, Refund or Replacement within 30 days of receipt ▾](#)Style: **Radio**

Radio \$18.72	TP5-2pack \$45.99	uv5r \$23.90
-------------------------	----------------------	-----------------

Brand BAOFENG

Color Black

Number of
Channels 128

Special Feature Keypad Lock

Frequency Range VHF/UHF 144-148 mhz / 420-450mhz

Talking Range 5 Kilometer

[See more](#)

About this item ▾

PRICE!!!**PRICE!!!****PRICE!!!**

Recommended Accessories for UV-5R

Programming Cable with chip in cable

PL2303 chip cable - \$5-10

- Prolific chip: the Chinese use a counterfeit chip
- Windows native drivers will not recognize it

CH340 chip cable - \$7-10

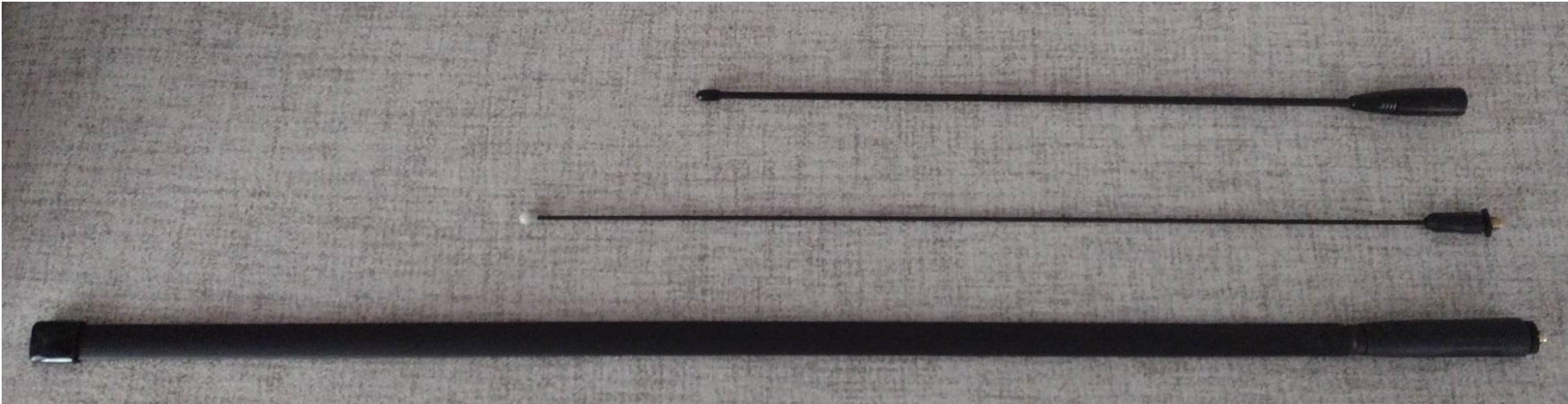
- generally works well but you need to load a driver

FTDI chip cable - \$18-22

- Fastest data transfer rate and works with other radio brands
- the driver is installed in Windows and will recognize this cable

Antenna

1. Nagoya NA-771 15.5 inch
2. Signal Stuff-Signal Stick 19.25 inch
3. Abree tactical folding antenna 28.5 inch



Extended Battery



Roll over image to zoom in

BAOFENG BL-5 3800mAh Extended Battery Walkie Talkie UV-5R BF-F8HP UV-5RX3 RD-5R UV-5RTP UV-5R MK2 MK3X MK5 Plus Series Two Way Radio

[Visit the BAOFENG Store](#)

4.4 ★★★★★ 147 ratings | 8 answered questions

\$17⁶²

Get **Fast, Free Shipping** with [Amazon Prime](#)

[FREE Returns](#)

Get \$50 off instantly: Pay \$0.00 ~~\$17.62~~ upon approval for Amazon Visa. No annual fee.

Size: **1 Count (Pack of 1)**

1 Count (Pack of 1)
\$17.62

Black-3800mAh+Type-C
\$19.19

Brand	BAOFENG
Battery Cell Composition	Lithium Ion
Recommended Uses For Product	Radio
Unit Count	1.0 Count
Reusability	Rechargeable

Baofeng UV-5R cheat sheet.

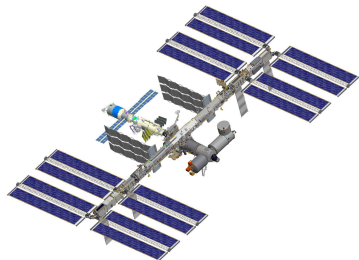
List of UV-5R Menus

Common	Menu #	Item	Description
Y	0	SQL	squelch level: 0-9
	1	STEP	frequency step: 0 2.5, 1 5, 2 6.25, 3 10, 4 12.5, 5 25
Y	2	TXP	transmit power: 0 high, 1 low
	3	SAVE	battery save: 0 off, 1 1:1, 2 1:2, 3 1:3, 4 1:4
	4	VOX	0 off, 1-10

Programming the Radio

How to manually program a simplex channel

1. Press ~~VFO~~/MR and enter Frequency Mode.
2. Press A/B and choose the A Side (upper display). The A side must be used to program channels into the radio. Programming data entered on the B Side (lower display) will not be saved.
3. Press **BAND** for the frequency band. Toggle **BAND** to choose 136 MHz (VHF) or 470 MHz (UHF). If the



What can you do with a UV5R?

1. Listen to the International Space Station. The ISS circles the earth every 90 minutes. It will be overhead on some of those passes. I use an app called ISS Detector to see when it will be overhead. The ISS has two cross band repeaters on board. Hams on earth try to contact other hams using the American repeater, NA1SS.

Listening is easy. Just tune the radio to 145.800 MHz and listen to the hams trying to contact each other as the ISS passes over our area.

You can try to make a contact. Check out ARISS.org and Youtube for more instructions on making your first contact with the ISS repeater. On rare occasions, an astronaut may answer your call !!!!!

Download SSTV pictures from the ISS

The Russian Cosmonauts used to periodically sent photo to earth via SSTV. Hams download these pictures as the ISS passes overhead. It is a challenge to get a perfect picture. The download is very sensitive to interference. I use a Signalink external sound card and MMSSTV software. However, you can use Robot36 app on your phone and the UV5R.



Bluetooth adapter to program the UV-5R from your phone

Works with 45 Baofeng models and clones

Allows you to
change settings
and add channels.



Odmaster APP

 iOS 

 Android 



Install the App Odmaster



Pair the device



Choose a model



Modify parameters

Mobile phone programming



No driver issue



Plug and Play



TIDRADIO Ham Radio Wireless Programmer Adapter APP and PC Program for Baofeng UV-5R and Multiple Models No Driver Issues Instead of Program Cable

Visit the [TIDRADIO Store](#)

4.0 ★★★★★

1,417 ratings | 147 answered questions

Amazon's Choice

Overall Pick

Deal

-20% \$19⁹⁸

List Price: ~~\$25.00~~

Get **Fast, Free Shipping** with [Amazon Prime](#)

[FREE Returns](#)

Coupon:



[Apply 10% coupon](#)

[Shop items >](#)

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[Eligible for Return, Refund or Replacement within 30 days of receipt](#)

Brand TIDRADIO

Color Black

Special Feature Wireless

Frequency Range No

Age Range
(Description) Adult


Tuner 2.0

Technology



Use APRS with the UV-5R

You can send your GPS position, send and receive messages and get weather forecasts anywhere in the world. You need the UV-5R, a cable and a phone with APRSdroid installed. You can make the cable but I bought the one from B-Tech


MOBILE ▾ ACCESSORIES ▾

BAOFENGTECH

SHOP NOW ▾ SUPPORT ▾ CONTACT



6X2: ACCESSORIES, UV-82, GMRS-V2, MURS-V2 SERIES:ACCESSORIES, UV-5X3, BF-F8HP, UV-5R SERIES:ACCESSORIES > BTECH APRS-K1 AUDIO CABLE



BTECH APRS-K1 Audio Cable


★★★★★ 3 customer reviews | [Add a review](#)


\$18.99





BTECH APRS-K1 Multi-Function Universal Audio Interface Cable – Supports APRSpro, APRSDroid – Android & iOS Compatible – Supports BTECH, BaoFeng, TYT, Wouxun, AnyTone, Kenwood, and More


CATEGORIES: DMR-6X2: ACCESSORIES, UV-5X3, BF-F8HP, UV-5R SERIES:ACCESSORIES, UV-82, GMRS-V2, MURS-V2 SERIES:ACCESSORIES

– 1 +




 **ADD TO CART**

BUY ON 



 **ADD TO WISHLIST**

Frequently Bought Together

 +  + 



11:48 66%

APRSdr...

2023-08-21 11:48:48 TCP OK (44m)

KM4RGB-7>APDR16,WIDE1-1,WIDE2-1:3635.00V/08819.60W/A=000475
<https://aprs-fcgi01.org/>

2023-08-21 11:48:42 received

W4WYD-13>APRS,TCP1P,qAC,A
MBCHOP-2:21164823621.7WV/
08817.06W-.../...E...r000p000P00
Oh...b10217AmbientCHOP.com

2023-08-21 11:48:26 received

MB850P-D>APD03,TCP1P,qAC,MB85KP-
DS:13643.80ND08807.80W/A=000000440
MM0VM Voice 441,12500MHz +0.0000MHz,
APRS for DMIRGatway

2023-08-21 11:48:19 received

KAKAF-B>APD02,TCP1P,qAC,KAKAF-
BS:13654.05ND08820.15W/MB00001/
A=000010 440 Voice 446.52500MHz
+0.0000MHz

2023-08-21 11:48:09 received

KAKAF-S>APD01,TCP1P,qAC,KAKAF-
GS:KAKAF B
*21164823654.05ND08820.15W/MB00001/
A=000010 440 Voice 446.52500MHz
+0.0000MHz

2023-08-21 11:46:40 received

Send Position Stop Tracking

motorola

11:34

68%



2023-08-21 11:34:07 received

K4MSU-3>APN383,KY3-3,qAR,NA8X-10:!
3636.82NS08819.33W#PHG5400/W3,KY3
Murray, KY

2023-08-21 11:33:49 TCP OK (±3m)

KN4RGB-7>APDR16,WIDE1-1,WIDE2-
1:=3635.00N/08819.66W\$/A=000452
<https://aprsdroid.org/>

2023-08-21 11:33:39 received

W4WYD-13>APRS,TCPIP*,qAC,A
MBCWOP-2:@211633z3621.79N/
08817.06W_180/000g000t089r000p000P00
Oh70b10215L693AmbientCWOP.com

2023-08-21 11:33:30 received

K4MSU-5>APNU19,K4MSU-3*,K4UA
N-3*,WIDE2*,qAR,KQ4BUD-10:!
3655.31NS08805.81W#phg0000 ky,
MSU-ARC Northern LBL Digi

2023-08-21 11:32:49 received

K4MSU-5>APNU19,WIDE2-2,qAR,KJ4W:!
3655.31NS08805.81W#phg0000 ky,
MSU-ARC Northern LBL Digi

2023-08-21 11:32:05 received

K4MSU-5>APNU19,WIDE2-1,qAR,KJ4W:!
3655.31NS08805.81W#phg0000 ky,

2023-08-19 15:54:22 KN4RGB-7 aborted

Did you get this message? I am
inHuntsville

2023-08-19 16:03:13 WB8SKP

Yes got msg. Hope you are having
lots of fun. I watched W5KUB's+

2023-08-21 10:43:32 WB8SKP

Live broadcast today.

OK

2023-08-21 11:37:31 KN4RGB-7

Today

2023-08-21 11:37:38 WXBOT

2 Miles SSW Murray KY. Hazardous
Weather Outlook, Today, Sunny High

2023-08-21 11:37:43 WXBOT

93

2023-08-21 11:38:16 KN4RGB-7

35756

2023-08-21 11:38:22 WXBOT

Belle Mina AL. Today, Sunny High 95

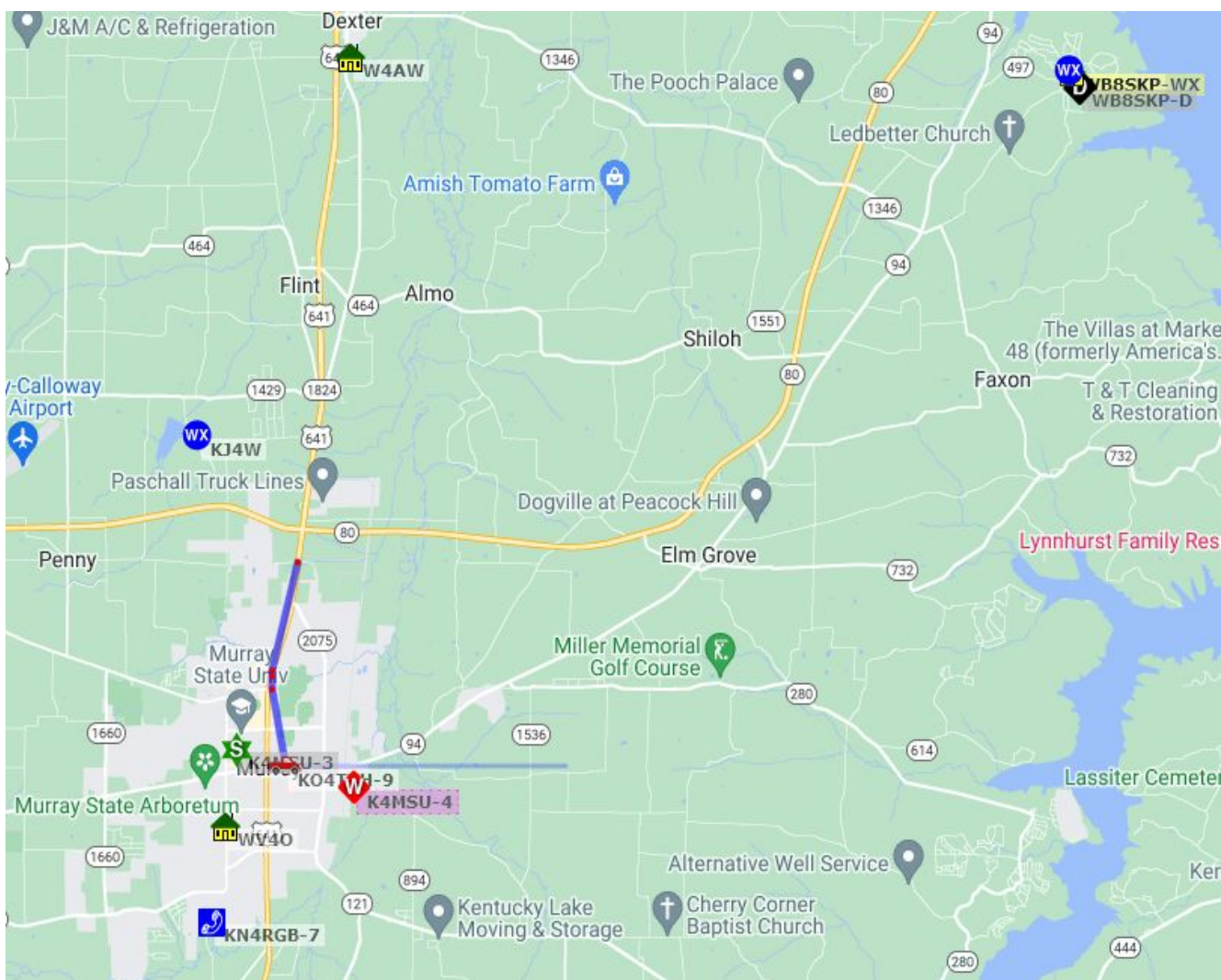
2023-08-21 11:39:00 KN4RGB-7

19609

2023-08-21 11:39:07 WXBOT

West Lawn PA. This Afternoon, Partly
Sunny High 90

OK



www.aprs.fi

KO4TVH traveling

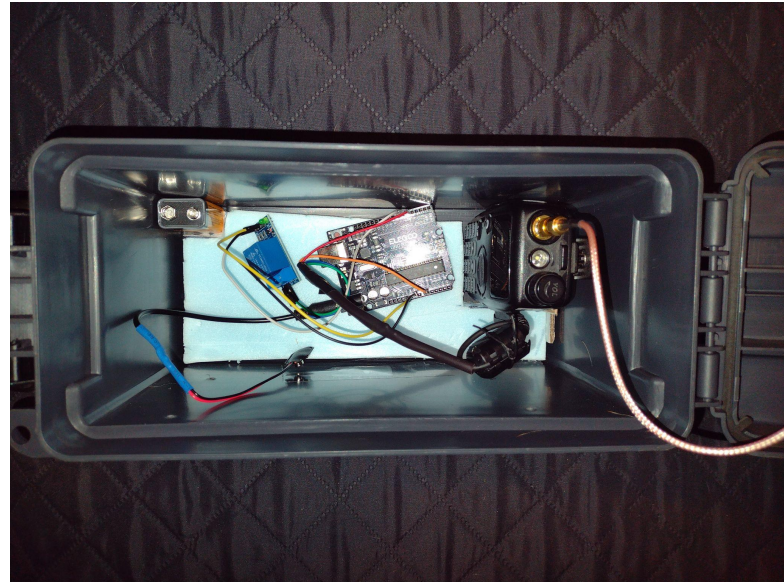
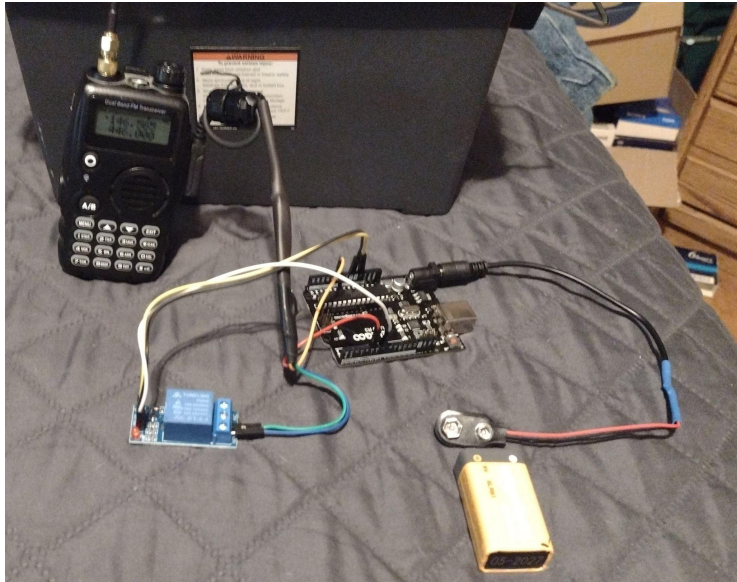
Fox Hunt Transmitter

The simplest way to make a transmitter is to connect the Baofeng UV-5R to an MP3 player using the BTech APRS cable. You record your message in one MP3 file and a blank recording for the dead time between messages. You make a playlist from these two files and and play it back on a continuous loop. You must turn on the UV-5R VOX and find the sensitivity setting that works best, typically between 2 and 5.



Foxhunt Transmitter

I chose the more complicated method of using an Arduino Uno, a relay for the PTT, a 9 volt battery and a UV-5R and put it all in an ammo can. The program on the Arduino takes my message and converts it to Morse code.



The Next Baofeng UV-5R



Baofeng UV-17R or 18 or 21 or H,L, Pro

-USA band plan locked

-Reduced spurious emissions

-999 channel with blocks (zones in DMR)

-USB-C charging

-improved screen, larger keypad

-some models with GPS others triband

Conclusion

1. Should everyone run out and buy a UV-5R? No
2. Is it a good starter radio for a Technician on a tight budget or is unsure about whether they will like ham radio? Yes
3. Is there more to the Technician license besides making local contacts and listening to the Monday 2 meter net? Absolutely
4. Are UV-5R's as bad as people say. Maybe, but they are getting better.
5. Yaesu, Icom, Kenwood radios are a better choice. However, there are more budget friendly accessories for a UV-5R than any other radio on the market. The UV-5R may be the better choice for first time users and seasoned experimenters when unit price and availability of accessories are factored in.

References

https://en.wikipedia.org/wiki/Baofeng_UV-5R

History

<https://www.baofengradio.com/collections/online-store/products/uv-5r>

Specs

<https://www.youtube.com/watch?v=1JyM8oNtoaE&t=228s>

Dave Cassler Youtube #387

<https://www.miklor.com/UV5R/UV5R-Expand.php>

Miklor frequency range tests

<https://w7apk.com/baofeng>

Baofeng cheat sheet

<https://www.ariss.org/contact-the-iss.html>

Contact ISS

<https://ariss-sstv.blogspot.com/>

Download SSTV images

<https://www.instructables.com/APRS-and-the-UV-5R/>

APRS

<https://www.youtube.com/watch?v=MV-nQAfSJ1w>

MP3 foxhunt transmitter

<https://www.youtube.com/watch?v=e4b0fNvXA10>

Arduino foxhunt transmitter