

## FIRST HF

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> First 20 M SSB Contacts of a New HAM Inverted V dipole antenna Apex at 21 ' and 125 -degree leg angle Using a 100 -watt transceiver Broomfield, CO, Grid Square: DM $791 w$ WOCAM



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## TAKEAWAYS:

- Don't forget the excitement of your first HF contacts. Review that first logbook.
- Offer to help new hams and get them started off right.
- A new ham will have many questions on station setup, antenna setup, grounding, understanding the transceiver controls, and operating.


## TAKEAWAYS CONTINUED:

- HF operating etiquette was intimidating for me as it seemed people used different protocols and Q codes where they didn't make sense to me.
- I would like to encourage those who haven't tried HF to do so.


## WHAT'S NEXT?



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# 17M INVERTED V DIPOLE TRIMMING RESULTS \& LESSONS LEARNED 

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## DIPOLE LENGTH:

- 17 M phone portion of the band ranges from 18.110 to 18.168 MHz with 18.139 MHz being the center frequency
- Determine a starting length for each leg with the standard formula:
- 468/frequency (MHz) = Total length in feet for a $1 / 2$ wave dipole $468 / 18.139 \mathrm{MHz}=25.8^{\prime}$
- 25.8' $/ 2$ = 12.9' per leg = 12'-10.8"
- 12'-11" long was chosen as the starting point for each leg of the dipole




## TRIMMING RESULTS:

|  | Step 1 | Step 2 | Step 3 | Step 4 | Step 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Starting Length* | Trimmed off 4" | Trimmed off 4" | Tightened Legs only** | Trimmed off 2" |
| Length $\rightarrow$ | 12'-11' | 12'-7" | 12'-3" | 12'-3" | 12'-1' |
| Frequency $\downarrow$ | SWR | SWR | SWR | SWR | SWR |
| 18.123 | 4.6:1 | 3.4:1 | 1.96:1 | 2.5:1 | 1.93:1 |
| 18.137 | 4.6:1 | 3.5:1 | 1.96:1 | 2.5:1 | 1.92:1 |
| 18.143 | 4.6:1 | 3.5:1 | 1.96:1 | 2.5:1 | 1.93:1 |
| 18.153 | 4.6:1 | 3.5:1 | 1.96:1 | 2.5:1 | 1.91:1 |
| 18.163 | 4.6:1 | 3.5:1 | 1.96:1 | 2.5:1 | 1.92:1 |

## LESSONS LEARNED:

- Straighten out the wire as much as possible and double check that both legs are the same length from the beginning. The spool memory shape makes the wire difficult to work with. There is better wire available than what I used from Home Depot. DX Engineering sells "Premium Antenna Wire" that is relaxed and very easy to work with.
- Depending on the initial reading, trim off 2" at time until a 2:1 SWR reading is achieved. Then trim off $1^{\prime \prime}$ at a time to get close to your desired SWR. Trimming of a little length makes a big difference on the SWR.


## LESSONS LEARNED CONTINUED:

- Hoist the dipole to its height it will be used at before measuring SWR every time. Mine is on a pulley so this was easy to do.
- Take the time to fully tighten up both legs after each trimming before measuring the SWR. Saggy legs did make a difference in readings. Adjust the antenna rope and turnbuckles.
- Have a second person help. I did it alone which was not wise due to the ladder work and awkward position of one of legs. The process would have gone much faster with two people working together.


## LESSONS LEARNED CONTINUED:

- Height above ground, objects in the area, and leg angle greatly affect length. Finished 10 " shorter on each leg than the equation starting point length.
- Reading about antenna trimming and doing it are very different things. Enjoy the process.
- Perfection isn't required to make contacts. This compromised antenna works! Put up the HF antenna that you can for your location.

WHAT'S NEXT?
-Continue to experiment and learn.

- Maybe trim this dipole down to 10M and see what happens. -Questions?


