Western Washington 9.6k UHF APRS System

Developed by Bob King – K7OFT

Some History, Current Operating Status and a look to the Future
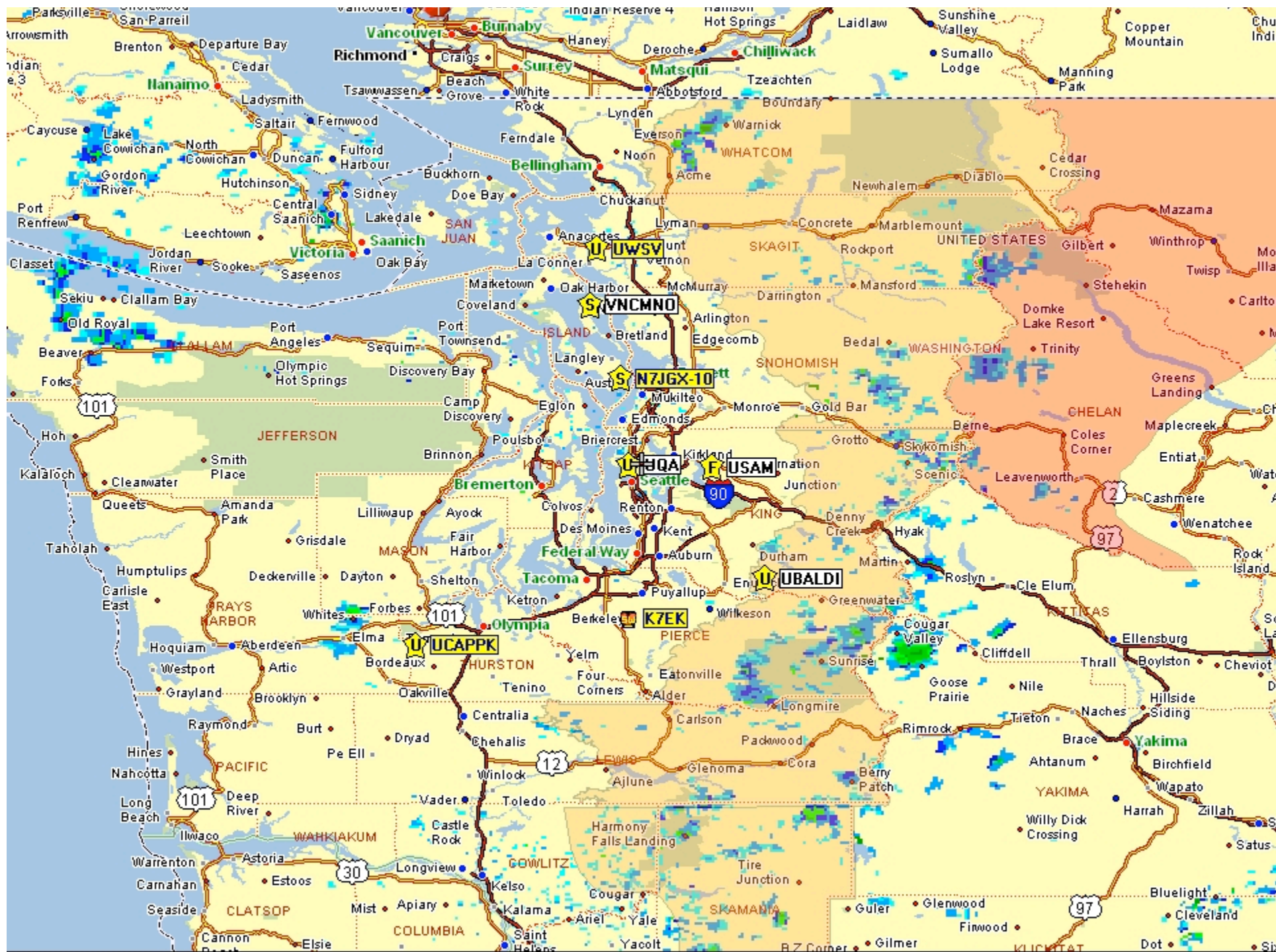
Western Washington 9.6k UHF APRS System

- A 9600 Baud APRS system operating in the Puget Sound area of Washington State.

- Started in 2002 as a feasibility experiment.

- Intended to relieve congestion on the VHF frequency.

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- K7OFT-10 This IGATE and Gateway to 144.390MHz, 223.400MHz and 440.875MHz. 2002 (K7OFT)

- UQA   Queen Anne Hill, UQA. 2003 (K7OFT)

- UWSV West end of the Skagit Valley near Whitney. 2003 (N7RIG)

- UNCMNO/VNCMNO The UHF APRS DIGI on 440.875 is not performing well for our purposes and I need to evaluate it's usefulness for the network. The VHF DIGI on the same antenna is a great performer! 2004 (K7OFT) (WA7TAI owns Site)

- UWBY/VWBY South end of Whidbey Is. The site is at Brad Estill, N7JGX's qth. It is an IGATE. 2005 (K7OFT)

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- UBALDI Scott Cronk, N7FSP, owns the D700 for UBALDI and he manages the site at Baldi Mtn.. 2006

- USAM   Gregg Egsti, KD7UBJ, owns and operates the equipment for USAM a "Fill-In" Digi. 2007

- UCAPPK The Capitol Peak Repeater Group has committed to placing a UHF Digi on Capitol Peak 2007 (K7CPR) Currently Operating a D700

- AC7YY-15   January 2007, changed the APRsd port to UHF. IGATE from the South End.

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In September 2006 after Bob's Talk at Summer Gathering, Herb made a post to the TAPR SIG
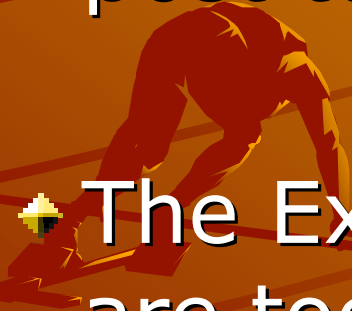
The Experts say it won't Work, Costs are too high and it's too complicated

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- In my opinion worldwide APRS never will transition to UHF 9600 baud, and never should. There are situations where it may be worthwhile for local areas to use it as a supplement, but I don't see that it could ever become the primary mode of APRS.Steve K4HG

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- Bob Bruninga wrote:...> *VHF is 9 dB better than UHF for omni antnenas (think mobiles) AND it has less multipath and fades. So APRS at UHF may have practical applications, but serving as a* general distribution it will never be as "good" as VHF. Sure all those problems can be fixed with 3 times more digis to cover the same area, but I doubt it will ever be practical for general coverage like VHF.

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- I agree that higher bandwidth is needed for other applications, but not for APRS. APRS does not need additional bandwidth to perform within its primary scope and designed function. Increase the bandwidth or operating frequency and you increase the complexity and cost of an already robust network. In my opinion APRS should be kept "simple" because it functions better that way. A.J. Farmer

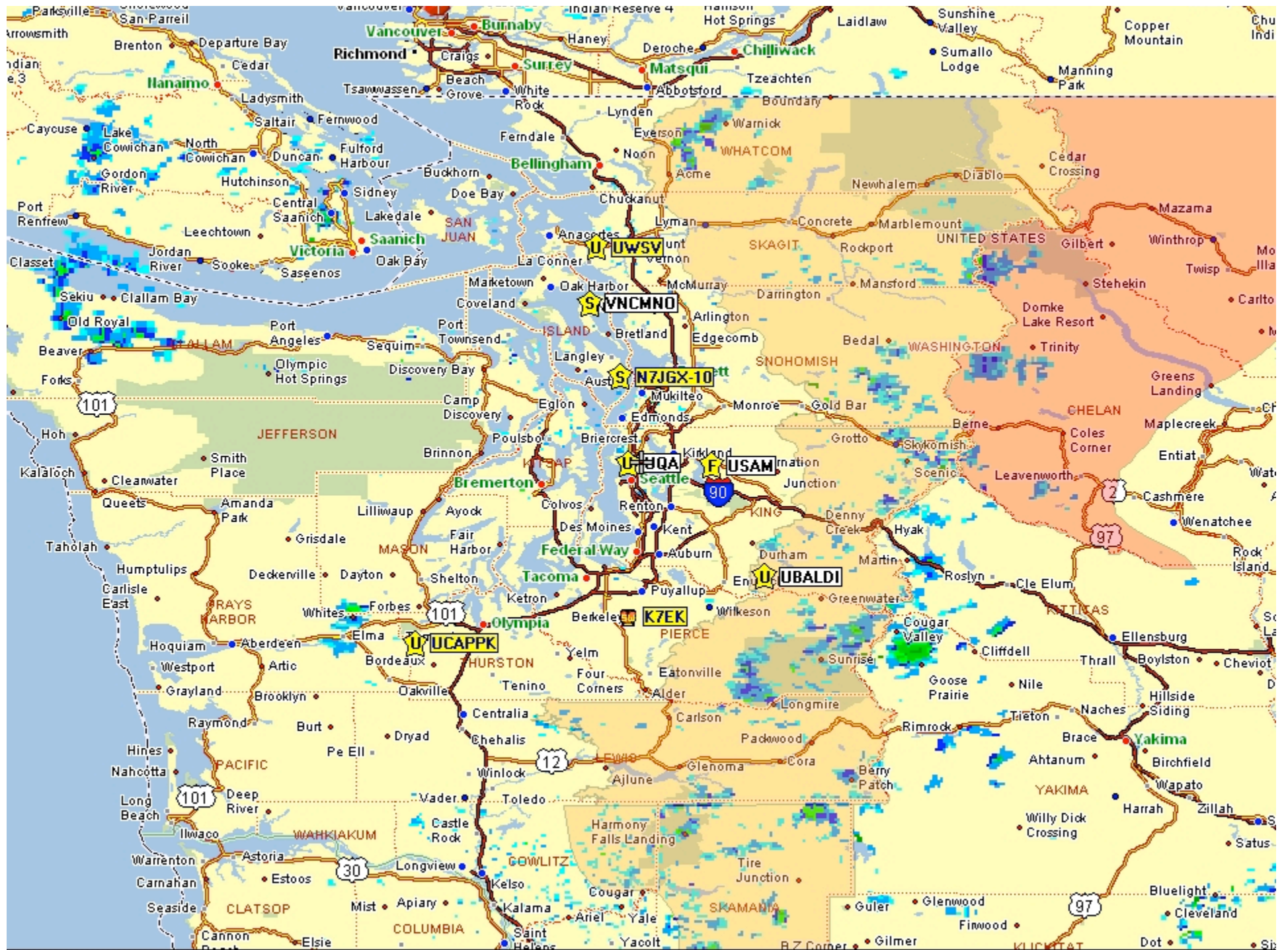# Western Washington 9.6k UHF APRS System

They each make good points and mostly actuate,

But the one point they all missed ....

This Infrastructure is operational.

How do we use it?

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- The simple way to use the system is with the Kenwood D700 and D7 transceivers   ………………

- No problems with setting deviation levels, simply set up a PM for UHF use and you are on the system

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- Easy set up for the D700 PM

- http://nwp.ampr2.net/jnos/KenwoodD700Config   Bill – WA7NWP

- http://www.nwaprs.info/9600bauduhfaprs.htm   Dave – K7GPS
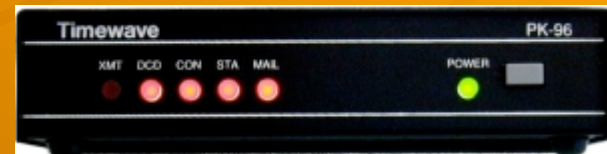
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- There is a wide choice of amateur radio equipment available

- KENWOOD TH-D7 and D700 - 9600 Baud capable internal TNC. All in one solution.

- ICOM IC-207/208 Transceivers – 9600 Baud capable but require external TNC.

- YAESU FT-7800R/8800R Transceivers – 9600 Baud capable but require external TNC.

- ALINCO DR-435T - 9600 Baud capable - Internal TNC available as an add-on.

9600 Baud TNC's

- Kantronics 9612+
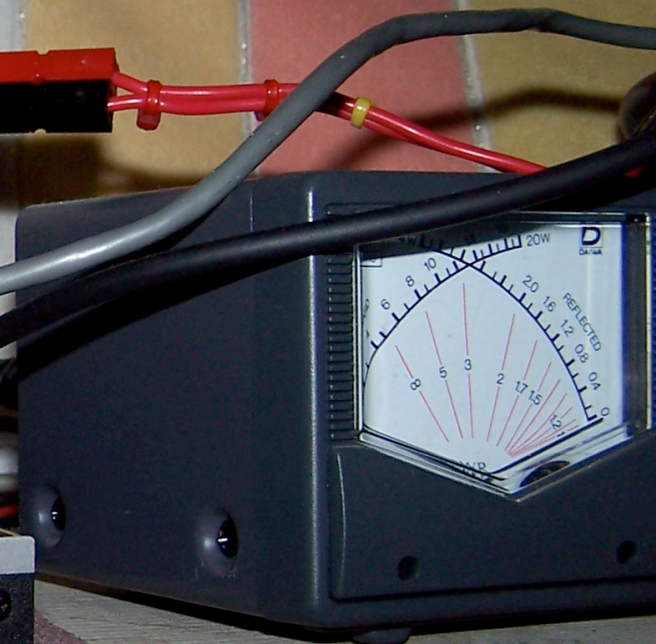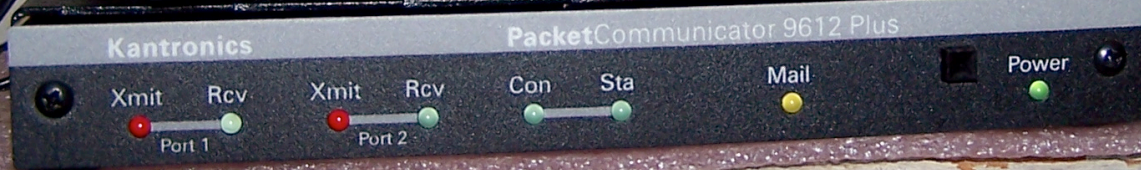
- AEA/Timewave PK-96

- *IFD* TNC7*multi* (German)

- SCS Tracker DSP Tnc

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- Some of the difficulties from my experiences with the PRD-70 and the KPC-9612+

- Bob told me "Don't even try to set your deviation without a service monitor" … NOW I really believe him

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- What is next ?

- Future Developments?

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- Bob – K7OFT posted to the NWAPRS SIG on Feb 2, 2007:

- I am thinking about changing the UHF 9k6B APRS network preferred paths to

- U1-1,U2-1 for mobile stations and U2-2 for all other UHF 9k6B APRS stations.

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- PRO:

- It's shorter. (The default paths for 144.39 should be changed to V1-1,V2-1 for mobiles and V2-2 for fixed stations).

- It is distinctive so that no matter where you look you know the packet came from the UHF net.

- UHF packets will not propagate around the VHF network if somehow they get there.

- VHF packets will not propagate around the UHF network if somehow they get there.

- The UHF network is growing faster now. If we change it now the pain will be much less than later on.

- It reduces system ID confusion and sets an excellent precedent for growth of other APRS related frequencies.

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- CON:

- Initial confusion and resistance may keep people from going to UHF.

- There may be technical reasons precluding implementation of the new paths.
- (I know of none at the present time)

- I would especially like to hear from the UHF users and those who are thinking of going to UHF . But all are welcome to comment.

- What do you think?

- Bob King K7OFT
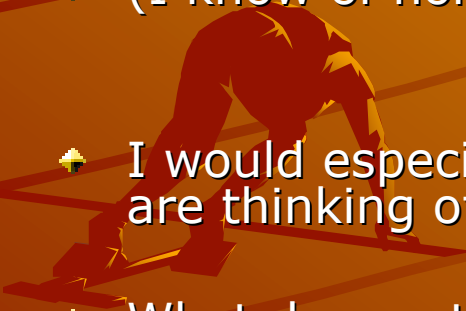
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- Lets all meet Bob – K7OFT

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- The new path suggested for the UHF 9600Baud network will be 96UHF

- 96UHF1-1,96UHF2-1 for mobiles and 96UHF2-2 for fixed stations.

NWAPRS Annual Gatherings

Winter Gathering: 1 day, February 24, Microsoft, WA
Summer Gathering: 3 days, September, North Bend, WA