



# PNW DMR Best Practices

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*“The 70% DMR Expert”*

Now that you’ve learned about DMR, how do you put your knowledge to practical use?



So, today you've heard about DMR, and about the PNW DMR systems. Now what?

- PNW DMR Partner Organizations (HamWAN, Data Center hosts, Vendors)
- Intro to DMR – the specifics and technology behind DMR
- Demonstrations of systems/devices
- Q&A
- Infrastructure Overview

# Key Points – PNW DMR

- Most of the following information can be found at <http://www.trbo.org/pnw/bestpractices.html>
- The system is open to all amateurs, local and visitors
- Owners of the repeaters are the ultimate guide to how their repeaters are used.
- No Dues or Fees – but understand, a lot of money is being spend on the system (sites, internet access, equipment). Financial support is appreciated.
- Users *\*should\** refer to this best practices site, and be familiar with the guidelines laid out here.
  - <http://www.trbo.org/pnw/bestpractices.html>

# Give your audience a good signal

- Use HIGH Power
  - Especially if using an HT inside a car
  - If an HT in car – try to use an outside antenna
  - 40 watt mobile much better
  - Lower the likelihood of high BER, easier on the ears of your audience and prevents the back and forth of “I didn’t get that/didn’t understand that/you have a bad signal”.

## Local 2, Audio, and the Parrot...

- New Users – consider using Local 1 or Local 2 until you learn how network operates. Chat with locals, seek out an Elmer (may not be practical, if your local repeater has few/no users).
- Nasty Audio can be a problem – Loud and soft audio disparity, breath puffs (can confuse vocoder).
- CS-580's have hot audio. Consider talking 6-8 inches from mouth.
- Use Parrot talkgroup to gauge your audio and adjust accordingly.

# Quick Key, strong signal, “footprint”

- No quick keying – leave 2 to 3 seconds between transmissions to allow someone to break in.
- Maintain high signal level (stronger than -110dBm). Prevents obnoxious noise artifacts to other listeners.
- Think in terms of “Footprint” or “Resources; two stations in downtown Everett don’t need to tie down the PNW wide area talkgroups (i.e., use Frailey Local 2 rather than Wash 2).

# TS 2 is preferred over TS 1

- Be considerate of TS1 talkgroups. TS2 talkgroups have less impact on our primary TS 1 talkgroups. Study the talkgroup list to learn the purpose and impact of each talkgroup that you use.
  - That's why most users in WA are using WA 2, rather than WA 1
  - That keeps other wider-area TG's like PNW 1, DCI 1, I-5, Comm 1 available locally.
  - For local comms, try Local 2 first, then Local 1

# Announce yourself on a TG

- When making a call, say the talkgroup you are on (and perhaps the repeater you're using)
  - Other users may not be able to look at the radio quick enough, and if scanning/using RX groups, they won't know what TG to reply on.
  - If it's known right away you are both on a local repeater, perhaps you can move to a talkgroup with a smaller footprint (move to Local 2?).



# How to get a conversation going

- Say something compelling during that first call to strike up a conversation.
  - Usually way more listeners than talkers
  - Using phrases like “CQ” or “is there anyone out there that wants a QSO”, or using I0-codes will likely NOT get a response.
- Listen to (or even participate in) the Not-a-Net “Gathering” on Wednesday, 1900, PNW 2 talkgroup. Even if you don’t ask a question, others will and you will glean more knowledge about the system and how it operates.
  - That’s also a good time to try your radio – can get some feedback about how it sounds.

## OR DMR network has different rules...

- The Oregon DMR network has an operational philosophy different than the rest of the PNW DMR system
  - The Oregon DMR repeaters were set up to support Search and Rescue and other Emergency Communications. Rag-chewing and “chat-line” conversations are not allowed. Usage is limited to 5-10 minutes.
  - This also includes the Megler and Larch Mtn sites (both in WA, but controlled by Oregon managers).
  - Refer to the OR North DMR Users Guide:
    - <http://www.trbo.org/pnw/oregon/DMR-user-guide-KB7APU.docx>

# Yahoo Group and our Email

- Subscribe to the PNW DMR Yahoo Group.
  - System information is disseminated here
  - Codeplugs for a variety of radios are stored here, free to download for your new radio. Saves you a lot of time with codeplug creation.
  - Share your codeplug work – pay it forward.
- You may also email the PNW DMR with questions/comments: [pnwdmr@gmail.com](mailto:pnwdmr@gmail.com)

# The radio page – what to use or what **not** to use?

- Radios

- Endorsed list of radios:

- Motorola MotoTRBO, including original Gen I handhelds and mobiles
- Hytera PD series HT and MD mobiles
- Vertex-Standard VXD series/EVX mobiles
- BFDX CS580
- CSI 7xx and 8xx portables and mobiles

- Do NOT USE:

- Baofeng, any model including the DM54 and DMR 5R;
- Koytone

- If not on the Do Not Use list, the radio can *generally* be used on PNW DMR network. Be careful, some of these inferior radios could be re-badged.

# PNW DMR Quick-Start Page

- Much of the information from the Best Practices page is also included in this new user “Quick Start” page:
  - <http://www.trbo.org/pnw/quick-start.html>
- Some state/national/international talkgroups are not managed by PNW DMR. Know their rules before accessing them.
- PNW DMR is not a Brandmeister Network. A few PNW DMR TG's are connected to Brandmeister. Not to be used for exclusive link to other Brandmeister hams. An openSpot is a better approach for Brandmeister contacts if you are a regular user of Brandmeister.

# Quick Start Guide

- **So, to recap: the top 5 things to keep in mind:**
  - When calling, say your call sign, announce the talkgroup and/or location (or repeater)
  - Pause a few seconds and listen before keying up.
  - Minimize rapid talkgroup changes with kerchunking, pause to listen for traffic or responses.
  - Be mindful when using wide area talkgroups that it uses significant resources (Local vs. WA vs. PNW vs USA)
  - If you wish to start a conversation, say more than your call for a response from the lurkers.

# Resources

- <http://www.pnwdigital.net>
- <http://www.trbo.org>
- PNW DMR Yahoo Group  
<https://groups.yahoo.com/neo/groups/pnw-dmr/info>
- Weekly Gathering – Wed 1900 PNW 2
- On the air – ask on Wash 2 or PNW 2