TROUBLESHOOTING ADDENDUM

Thoughts on the Radiooddity DB25-D DMR Mini-Mobile Transceiver

W9YA – 08-Aug-21

Here's what I have found that should be useful for a talented programmer, that has access to the firmware's source code, in troubleshooting ***TWO*** important problems.

Problem A:

The delineated "fix" for the radio randomly rebooting itself is; "BE SURE TO HAVE A RX-LIST (GCL) FOR EVERY CHANNEL". That DOES NOT prevent random reboots.

1 – The radio can more easily be induced to reboot when trying to access the menu features or various other P-Button functions. PLUS it helps to have the Ham Database enabled. i.e. This more easily happens when the radio is actually receiving a signal AND is doing a database look-up leading to a display of the received dmr-id info. DMR signals with missing packets and/or high BER should slaso help the troubleshooter.

2 – After the radio reboots; received DMR signals are not decoded, even if Promiscuous-Mode (referred to in some of the documentation as "Mandatory-Monitor") is "ON". Moving the channel switch off channel THEN enables reception. ("Re-indexing" at that point !…...Sigh…..)

Problem B:

Audio at the start of reception is truncuated and some settings that should work have NO recovered audio.

3 – The CPS (Code Plug Software) allows the programming of each channel's RX-List (GCL) to be set to "NONE". The documentation, in more than one place, says the radio then filters to ALLOW reception of the TX-TG setting. In fact the radio does not receive at all !

4 – Oddly, the reception/decoding of DMR signals is SLOWER with Promiscuous-Mode enabled (ON). This is easy to discover, IF the RX-List (GCL) contains the TX-TG in it. *

5 – Notably the FASTEST reception is when RX-List (GCL) is set to a RX-Group that does NOT have the TX-TG listed AND the Promiscuous-Mode ("Mandatory-Monitor") is TURNED OFF ! (EVEN when displaying the received Ham-Contact-Database !!) **

* Sadly the beginning of audio transmissions can be "lost" if the settings are as noted in number "4" above.

** The DB25-D can be as fast as needed by using option/setting of channels v/v number "5" above.

(How fast (or slow) a radio enables decoded audio for a DMR signal was tested using various other manufacturer's radios. The fastest receptions were on the openGD77 based radios that used TA (Talker Alias) for display. TA is transmitted by the BrandMeister Network automatically on all traffic.)