

PSB Newsletter #2 December 2004

An update for operators who support an improved reporting structure for the PSK modes.

Firstly, welcome to all new mailing list subscribers. We hope you find this update informative and motivating to your PSB reporting activities. Any snippets of information about your experiences that we can share with others or suggestions for improving the new reporting structure and website are welcome. Feel free to use the PSB site's Feedback facility to air your views, and thanks to those who have already responded.

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1. RSQ reporting alternative

The PSB website now includes RSQ reporting (Readability, Strength, Quality) as a subsequent development of the PSB system. RSQ provides the same improved reporting outcome as PSB and uses terminology more closely aligned to that of traditional RST. However RSQ does not replace PSB, but it was felt that some operators may be more comfortable using the alternative RSQ terminology.

An article titled "RSQ: an improved signal reporting system for PSK" has been recently published by the Wireless Institute of Australia's Amateur Radio Journal. Publication was in the August 2004 edition with VK3BGH as author. The article is now being offered to other National Societies for their consideration. We will keep the list advised if we are favoured with any further publication.

2. Web site updates

The website was revised November 2003 to make the reporting process independent of the PSK baud rate and to introduce the new RSQ development.

The "Why change" page has also been revised to present a more compelling argument for changing from RST.

See <http://www.psb-info.net/why-change.html>

The "IMD Reporting" page is now called "IMD MEasurement" and explores in-depth the pitfalls of received IMD measurement and the benefits of measuring your own transmitted IMD.

See <http://www.psb-info.net/IMD-Measurement.html>

Have you seen the NEW ICONS under the left hand menu navigation area? Facilities are now provided for:

- Text Only - page presentation
- Email this page - useful to promote PSB/RSQ discussion
- Print this page - for the PSB/RSQ tables, checklists, etc.

3. IMD measurement pitfalls

The former IMD reporting page has been completely revised to include advice from Howard (Skip Teller) KH6TY who developed the first panoramic PSK31 transceiver and Digipan software. KH6TY explains the limitations of received IMD measurements and further suggests that Digipan can be used in full duplex mode to provide an accurate measurement of transmitted IMD. A detailed procedure is now included for transmitted IMD measurements.

4. Measure your own PSK signal bandwidth

Use the IMD measurement procedure to check where your transmitted signal begins to display unwanted sidebands. For example, my 100W rig can reach 90W with an IMD of -30db before broadening of the signal trace starts to become visible. Whilst we don't recommend running 100W rigs above 50W in PSK, its nice to know the station limitations

5. Signal reporting for PSK63 and other baud rates

PSB and RSQ are baud rate independent with the new methodology now used to measure the signal Bandwidth or Quality. This is made possible by counting the number of additional unwanted sideband pairs surrounding the fundamental sideband pair rather than attempting to estimate the occupied bandwidth of a PSK trace. So PSK63 and any other baud rate trace can now be evaluated the same way as for PSK31.

6. ALC meter action is not necessarily bad

ALC meter activity is usually regarded as an indication that spurious PSK sidebands are being emitted and should therefore be carefully avoided. However, ALC activity may also be caused by an automatic foldback of power to protect the rigs finals due to the presence of SWR. In some situations this activity can occur below the desired power level for operating PSK. At my station for example, SWR induced foldback limits the target 50W output to 35W when using the 20M band antenna without an ATU. However, the IMD measurement process reveals that no amount of SWR induced ALC activity has the slightest effect on the bandwidth of my signal.

7. Subscribing to this newsletter

For those receiving this newsletter outside the mailing list, you can subscribe directly by registering on the 'Mailing List' page at www.PSB-info.net/mailling-list.html

Also, feel free to forward this newsletter to other PSK/Digimode operators and organisations.

8. Contact us

You can respond to this newsletter by replying to Graeme, VK3BGH at harmanco@bigpond.com

73's from the PSB Team