

## "Strange Sounds"

Around the first of March, Utility columnist Hugh Stegman received this email from a reader named Ted. We thought you might enjoy analysis of the accompanying audio file **Short sounds.zip** as well.

*Hello Hugh,*

*I'm new to shortwave and I've been trying to identify some strange sounds that I'm hearing.*

*Would you mind listending to the attached .MP# audio clips and tell me what these different sounds are? I really appreciate your time as well as your magazine column.*

Hugh's reply:

Hi Ted! Welcome to the strange world of utility signals. Let's sort 'em out:

**DW\_B0293:** sounds like a noisy broadcast being stomped on by the Over-The-Horizon Backscatter Radar used by the government and military to look for hostile actions and catch drug bad guys.

**DW\_B0294:** ??? possible swept-audio jamming.

**DW\_B0295:** Japanese military, probably Navy. The thing has at least 13 frequencies and we in the US hear maybe 8 of them. Some sort of really distinctive encrypted data mode using phase-shift keying. What you hear is the idler for crypto sync. The bursts of hissing noise are the data. Probably fax or other sort of tactical tracking and weather info. The people who know for sure won't let on that the system exists, let alone what it's for, but I have very good sources here. Sounds like a gambling machine, so the ENIGMA bunch is calling it XSL (odddity/ Slot Machine). Tag reports thusly.

**DW-B0297:** ??? Could be RTTY (Radio Teletype, you know, like old news and Telex machines) tuned in AM (Amplitude Modulation) mode instead of upper sideband (USB). All these utilities sound better tuned in USB.

**DW-B0298:** This is Morse code tuned in AM instead of CW (Morse telegraphy) or USB. The noise goes down when the transmitter keys, so you hear kind of an inverse keying that can't be copied by ear.

**DW-B0299:** Weather FAX, tuned in AM. FAX on the short wave bands is a frequency-modulated analog mode where the frequency of a tone corresponds to a tone on the picture. It is properly received in USB mode, and the radio dial should read 1.9 kHz below the frequency listed in the schedules. Decoding programs for FAX will have lines on their waterfall displays to tune the signal between.

**DW-B0301:** Sounds like RTTY tuned in AM, getting absolutely stomped on by a military call in ALE (Automatic Link Establishment, an 8-tone data linking mode). The weird noises are heterodynes between the two signals. There's a free computer program for Windows (and I think now, even Vista) called PC-ALE that can decode ALE, though it's still pretty technical stuff.

**DW-B0302:** Same as 295.

**DW-B0303:** ?????????? Can't tell.

**DW-B0304:** Strong voice station using single sideband, but tuned in AM mode. In USB you'd get a quack-quack Donald Duck kind of voice which would sound "normal" when you tune across the right frequency. Then it would be possible to hear what he's saying, providing of course he's speaking any language we know.

Fun stuff.

Thanks for supporting MT and Utility World.

-hugh