

The Datong SRB2 Auto Woodpecker

To recap, the "Woodpecker" interference which plagues most of the higher frequency bands emanates from 'over-the-horizon' radar based in Russia, but, now, also in the West as well. They are used for long range military warning purposes, such as the detection of moving objects in the shape of ICBM's etc, by reflection

communications receiver systems, as their inference suppression circuitry is usually designed for interference with totally different characteristics.

The other problem is the inconsistent nature of the pulses. By the time they reach your receiver they may be totally different to their original form when transmitted. Due to

The Solution

Conventional blankers are commonly designed to eliminate man-made interference, such as pulse-type ignition noise. This type of interference has a high amplitude, short rise time, and a short duration of 500 microseconds or less. Most blankers get rid of this by looking for this type of short duration, fast rise time pulse and then generate a control signal which shuts off a gate in the signal path. The problem is that Woodpecker signals often look more like conventional signals than interference pulses(!) so the blander doesn't cope with them very well. The only way this type of blander works is if it has very high gain, and even then it won't get at the remaining pulses which have lower amplitude.

The AEA Moscow Muffler, reviewed previously, used the technique

We had a look at one Woodpecker blander some months ago — here is another solution to the problem but which attacks the interference in a substantially different manner with better results.

By Tony Bailey, G3WPO.

from the ionosphere. The bandwidth is large, and a pulse repetition frequency of 10 or 16Hz is used, with a pulse width of typically 15uS. These characteristics make it extremely difficult to blank out with conventional

ionospheric reflection they may be stretched, or 'echoes' may be present. There may be multiple Woodpeckers going at the same time — and each pulse may be of different amplitude from the other(s)!!

