

# The HF Ambient Noise Floor

There are two main sources of noise at a typical suburban location

### Man-made noise

This consists of a "floor" plus discrete emissions and occasional bursts of relatively high level broadband noise.

## **Atmospheric Noise**

This varies with the season and the time of day. It is often below the man-made noise in the UK.

### This is the ultimate limit on HF communications.

The following three slides illustrate the fact that the noise floor is lower than many people think.



#### Signals and Noise in a 9kHz Band Centred on 7.025MHz

The tall spikes are CW morse telegraphy, other spikes may be narrow band signals or intermods

Field-strengths relate to a h/w dipole in free space. In practice the effective antenna factor will vary dependent on azimuth and elevation of the incoming signals and noise.

Mid-morning at a typical suburban location. The antenna is an inverted "V" half-wave dipole



## ITU-R PI.372-6 man-made noise levels 2 - 20MHz

