

Referee Tower

What is it?

A system used to test a Biological Point Detection System in an operational environment by collecting meteorological and aerosol data. This data is then compared to the data the detection system under analysis observed and is used to determine its effectiveness at detection.

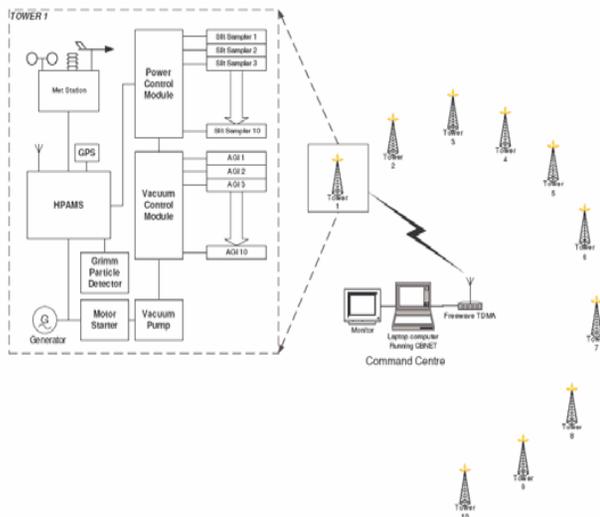
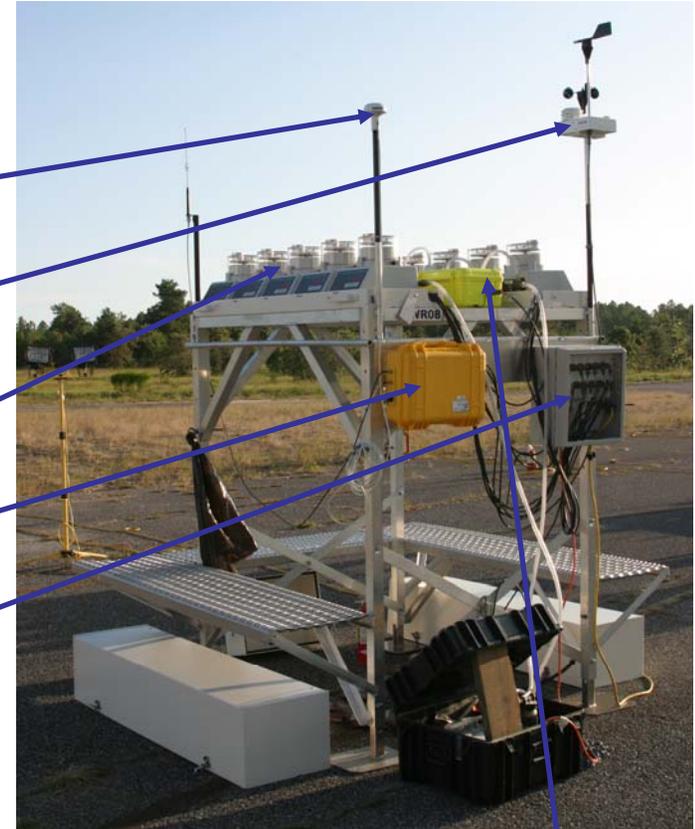
The **GPS** is used to provide time coordination for the system allowing for accurate time-stamping of the collected data.

The **Meteorological Station** provides real time data on wind speed, wind direction, wind gusts, temperature, and relative humidity.

Slit Samplers draw air by vacuum through a slit orifice that accelerates the sampled air and its particles onto an agar plate that rotates on a turntable at a selected rate of speed. Later the colonies are counted, and the ACPLA (agent containing particles per liter of air) at a given time is calculated.

HPAMS (High Performance Asynchronous Multiplexing System) is a system that collects data from various sensors, time stamps the data, formats the data, and then transmits the data to the command centre.

The **Power Control Module (PCM4)** receives commands from HPAMS and in turn it provides power to the slit samplers and VCM, and passes communication between HPAMS and the Grimm.



The **All Glass Impingers (AGI)** provides a similar function to the slit samplers, but rather than impacting the particles onto an agar plate, the particles are impinged into a liquid. The AGI is used to collect biological agent simulants that cannot be collected by the slit sampler (such as viruses and toxins).

The **Vacuum Control Module (VCM)** provides vacuum with precise timing to the AGI's. This module opens and closes valves to provide vacuum to the appropriate AGI for a specified period of time, ensuring that particles are collected throughout the entire trial.

The **Grimm** particle counter counts and sizes particles and is used for real time assessment of the natural background and subsequent dissemination of biological agent simulants during a test.