

SYMON Light - The Portable Radio Surveillance Station

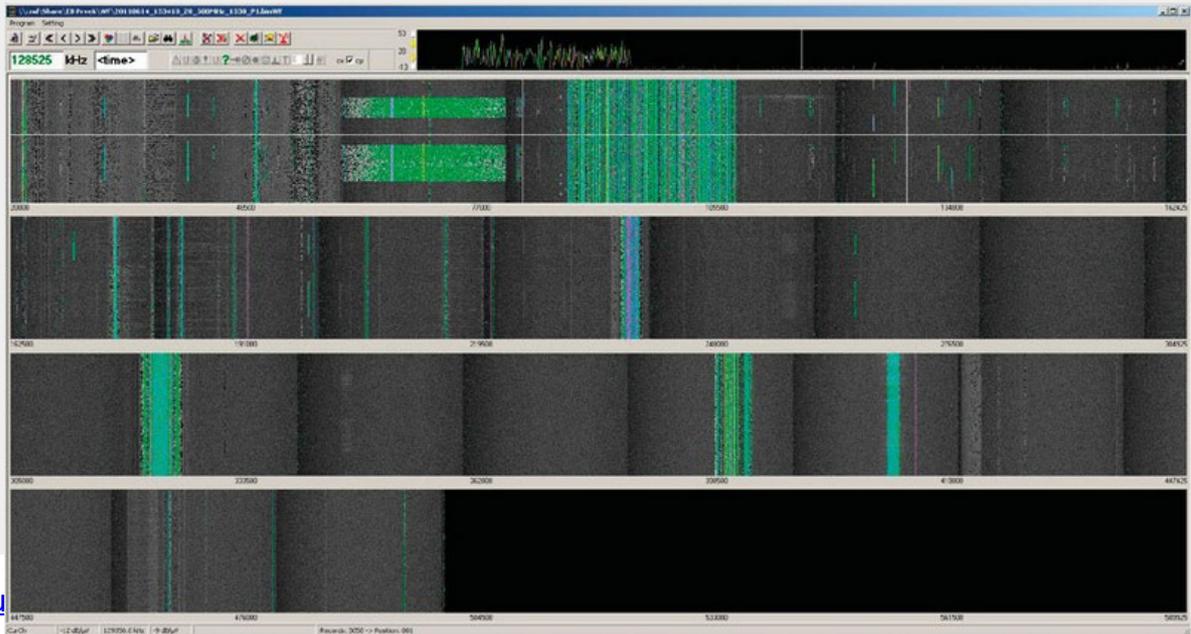
SYMON Light - The Portable Radio Surveillance Station



Symon Light is a portable system (manpack) for monitoring of the radio spectrum in range from 20 MHz up to 3 GHz. It is designed to be used by the army and police units as well as special forces. SYMON Light is constructed for an outside use in adverse weather conditions and wide range of operating temperatures. A typical application of SYMON Light is to be used by military patrols for automated monitoring of selected frequency bands, an evaluation of radio situation and a record of the radio targets activity which meet user-defined parameters (time, a geographical location of SYMON Light, threat, new target, ...).

The system operates in the following modes:

- ✓ Surveillance
- ✓ Collection
- ✓ Detection



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Surveillance

This mode is used at the patrol post. It is controlled by an operator and enables an automated collection of the signal of interest. The operator controls the system with an integrated rugged laptop/tablet. According to the set up and configuration the operator is able to monitor particular frequency bands, listen to a demodulated signal or record an IF signal at a selected frequency.

Collection

The collection mode is designed to collect information about radio operation without being directly controlled by an operator. To do list is loaded into the system before it starts working. The activities carried out in this mode are as follows:

- ✓ A spectrum record in the monitored frequency bands
- ✓ Detection of activities according to set parameters at selected frequencies or bands
- ✓ A priority selection of detected activities
- ✓ A record of a demodulated signal or an IF signal at one or more particular frequencies (according to the HW configuration)
- ✓ Adding a record of carried out activities and about all files created by system into the database

Detection

The system autonomously monitors particular radio frequency bands and focuses on detection of activities in the nearest surroundings. It warns the operator about the detected activity and provides its record or listening in real time. The main purpose is to alert the operator (patrol) about the radio signal activity in the nearest surroundings.

Other Properties

The user's interface is an integrated and resistant notebook/tablet and a control unit equipped with a 4" graphic touch screen. The control unit shows the status of the system and the most important information about the monitored frequency (or frequencies in case of multiple receivers in the system) and enables to suppress the detection of activities at frequencies which do not appear as dangerous. The unit is placed on the operator's wrist.

All records are provided with information about proper place and time because the system is equipped with a GPS signal receiver. The maps layout of action area and the Geo3D application enable to determine the actual position and basic navigation if needed.

The system is designed to be modular; other receivers, direction finder or a jamming module might be added and thus the deployment options of the system might be extended.



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