



REDCON – AUTOMATIC VIDEO-DETECTION SYSTEM OF VEHICLES PASSING ON RED

- Video-detection of a traffic junction light state
- Licence plate recognition
- Photographic documentation and traffic offence archiving
- Option of reconstructing the traffic accident from the video-recording
- Connection to traffic junction light not necessary

General Description

RedCon is an automatic system for detection and archiving traffic offences at junction traffic lights. The system operates on basis of vehicle licence plate recognition.

The basic function of the system is a detection of vehicles passing on red. At the same time also other functions based on modularity of the AŽD Praha camera system can be used (searching for stolen vehicles, checking traffic in so called BUS lanes and at separate tram lanes at intersections, acquiring traffic statistic data and other).

Basic Technical Description

The system consists of CCD cameras and VDU for evaluation of picture in the real time. Other parts are the infrared reflectors for easy detection of a vehicle in a bad weather or at night.

System monitors traffic situation and takes pictures of vehicles entering intersection on red.

Based on picture analyses the licence plate is recognised and stored in the text form in a database together with data, time, a picture and a traf-



RedCon – Jihlava

fic offence location. After that, it is transmitted through GSM technology in a coded form to a dispatcher's workplace for additional processing.

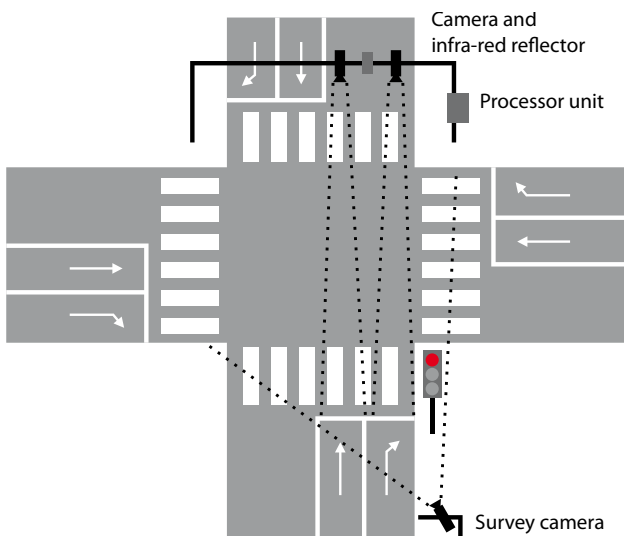


Diagram of camera layout





The survey camera is installed at the cantilever beam or a post so it can record the entire situation from a driver's view entering the intersection. The detail camera together with overvoltage protection and infrared reflector are installed at a can-

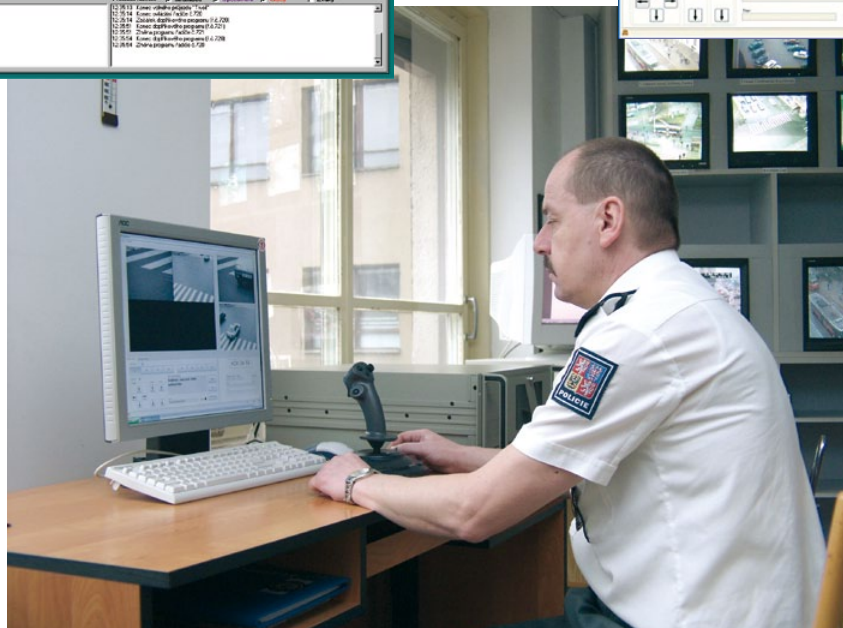
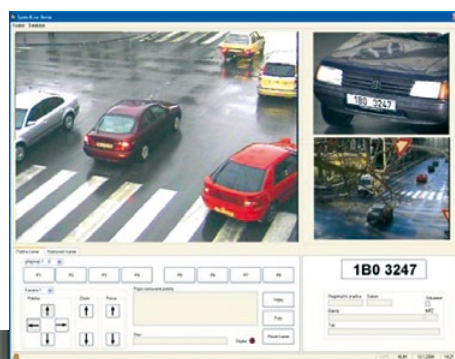
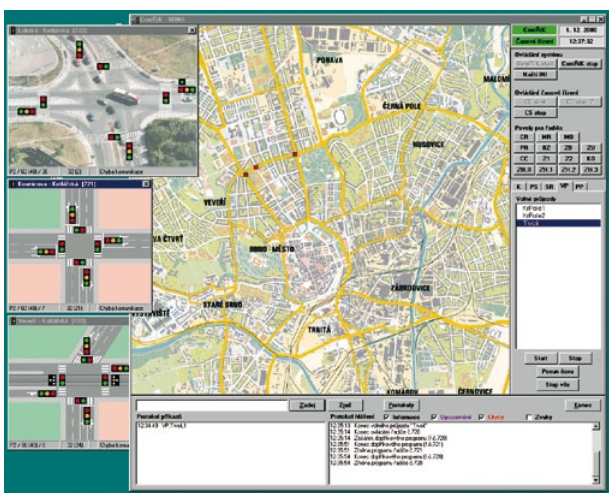
tilever beam or a post at the other side of intersection to register the vehicle from the front side.

Installation of the RedCon system depends on a current situation. Camera signal is transmitted over

a metallic line. In case when there is a danger of a signal distortion by induced voltage (for instance near the trolley-line or the tram-line or some other line) transmission is provided by fibre optic cable with signal optical converter.

Basic Technical Parameters

| | |
|---------------------------|---------------------------|
| Survey and detail cameras | colour CCD |
| VDU | PXI National Instruments |
| Operation system | OS of the real time |
| Software | RedCon |
| Communication module | GSM GPRS modem |
| Accessories | converters, IR reflectors |



Dispatcher's workplace