RCVL

SAPHYMO

- **Reference detector with more than 2,000 systems used by various clients:**
  - local authorities (household and industrial waste),
  - recycling companies (metal, wood),
  - steel industry,
  - nuclear industry, etc.

- **System approved by major national and international organizations**

- **Several detection volumes available**

- **Monitoring of vehicles in motion; no intervention by control personnel**

- **Real-time count rate analysis during measurement**

- **Rugged material designed for all weather conditions**

RCVL

Radiological Control of Vehicle Load

The R.C.V.L system is specially designed for the detection of radiation sources in transportation vehicles.

Our flexible measurement system can manage 1 to 4 detectors, perform static and dynamic measurements, take into account the vehicle type and load and changes in field conditions, so as to adapt to the specific features of the site.

The principle of operation is based on an ANDREA processing unit connected to two DSPxxx - 400 detectors combined to a presence detection device ensuring radiation measurement of the vehicles in motion.

Various options are available to meet your needs, such as alarm report.

After each measurement, a report containing the main information (date and time, background, count rate and alarm activation) can be printed via an impact or a ticket printer.

The processing unit can be connected to a PC-driven supervision software.
All information contained within the ANDREA processing unit (background, measurement, status, etc.) are available via this electronic link. If the electronic link is disrupted, the control system remains operational.

Our control system can be connected to a weighing system via a RS 485 serial link using JBUS protocol – widely used in industry and already developed by most weighbridge manufacturers.

Performance

- The different types of detectors available are listed below.

Type	Plastic scintillator		Sensitivity at 1m using 137Cs (counts/s/kBq)
	Volume	Size	
DSP 001	2.5 liters	50 cm x 10 cm x 5 cm	>2.2
DSP 002	5 liters	100 cm x 10 cm x 5 cm	>3.6
DSP 010	25 liters	100 cm x 50 cm x 5 cm	>14

System Architecture
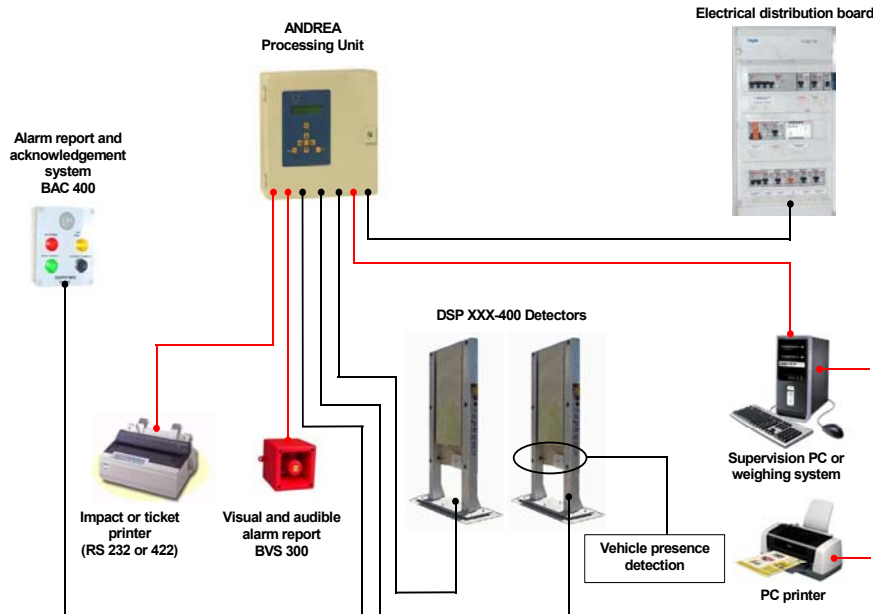
Presence detection

A presence detection device is essential for the proper functioning of the system. Presence detection is provided by:
- two infrared detectors fixed on the detector supports,
- magnetic inductive loop BDM 400 (optional) to be embedded into the pavement,
- a contact on the weighbridge or a barrier.

Alarm report

Alarm reports are not essential for the operation of the system. However, it is highly recommended to have at least one alarm report. Various types of alarm reports are available.

- **BAC 400 box**:
  - alarm and acknowledgement system consisting of a buzzer, an acknowledgement button and three indicator lights (green: normal operation / yellow: technical failure – error / red: nuclear alarm).
  - usually placed in the control room or weighing premises, nearby the processing unit.

- **BVS 300 box:**
  - visual and audible alarm with xenon flash and a loud siren alarm.
  - usually placed outside, on one of the detector supports.

Alarm acknowledgement

- There are two ways to acknowledge alarms – using the alarm acknowledgement button of the BAC 400 or a button on the ANDREA kit. Alarm acknowledgement turns off visual and audible alarms.

Other options

- Impact or ticket printer
- Supervision software