

GAZOMAT™





an ecotec company

Survey of Natural Gas Networks



NGS

Gas Network Survey Software

-  Optimised traceability of network surveys
-  Solution that can be used worldwide
-  Optional regular map updating
-  Real-time view of the circuit

The NGS monitoring software has been developed by GAZOMAT™ to meet the requirements of gas network operators. It offers ease of use and reliability for the optimised management of Systematic Leak Detection. When used in combination with the INSPECTRA® and GPS systems, it is a formidable tool at the service of gas operators.

Two types of use available



• **In a vehicle** for leak detection with the Network Survey Vehicle and its equipment.

• **On foot** with INSPECTRA® LASER detector and GPS Tablet.

NGS software main screen

The screenshot shows the NGS software interface. At the top, there is a menu bar and a mission stop button. The main area displays a map with a mission circuit overlaid. The circuit is divided into sections: 'Tournée libre', 'Tournée suivant circuit', and 'Compte-rendu tournée'. A data panel on the right shows two modes: 'In a vehicle' and 'On foot'. The 'On foot' mode displays the following information:

- Date
- Time: 17:19 07
- Distance covered: 0,05 km
- Distance to cover: 7,23 km
- Travel speed: 1 Km/h
- Longitude: 48°37.7776'N
- Latitude: 7°46.2818'E
- GPS reception status
- Current value
- Maximum value

At the bottom of the screen, there are several buttons and areas:

- Pump
- Note
- Pause
- Analyser area
- Map display area

The NGS software provides the operator with the choice between three monitoring options

• Monitoring mission in free round mode :

This option allows you to carry out systematic leak detection on foot or in a vehicle, defining your circuit as the mission is completed within a given zone.

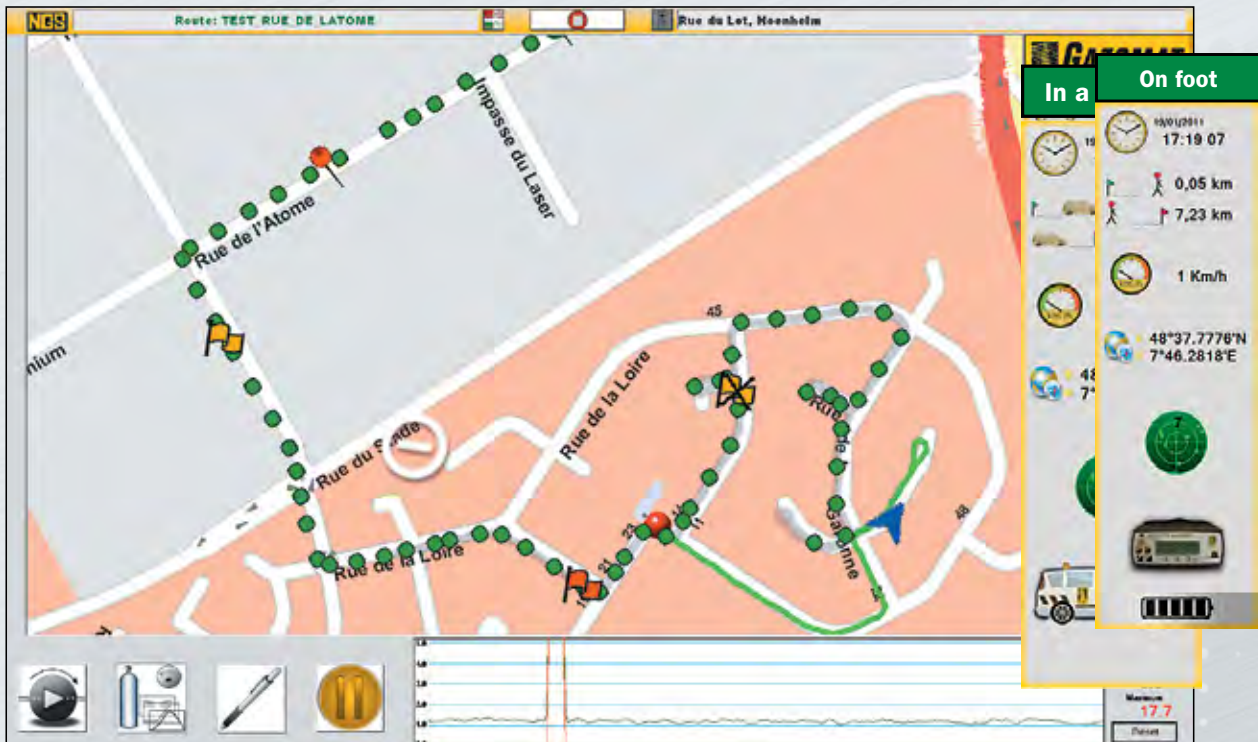
• Mission resumption :

This option is used to resume a survey on foot or in a vehicle from the spot where it had been left off.

• Monitoring mission in a predefined circuit :

This option is used to complete a circuit from an existing mission file (predefined circuit). When there is no such file, it can be generated easily after the circuit is completed or when a circuit is resumed.

NGS screen during the mission



Ease of use

- Use of network plans in hard or electronic form.
- Location and automatic logging of measures for traceability.
- Highly flexible and user-friendly.

Customisable solution

- The software operates with country mapping depending on availability.
- User-friendly interface.
- Software adapted to the local language.

Simplified interface

- Real-time view of the road and piping networks.
- Notes may be added by the operator at any time.
- Automatic display of error messages and gas leak indications.

Dedicated surveys

To monitor gas networks, operators need to enter their mapping data (itineraries, buildings, land plans etc.) in a dedicated directory in SHAPE format comprising three files with the following extensions:

- xxxx.shp
- xxxx.dbf
- xxxx.shx

These files need to be generated in **SHAPE format** and the GPS coordinates need to be in **WGS84 format**.

NOTE :

- When the user resumes a round, they must use the files of the mission already completed (ending with the **“.NGS“ extension**).
- While following a circuit, the user can use those same missions.

Mission report

At the end of each survey mission, the NGS software generates a report comprising all information relating to the mission (operator's name, location, route, weather conditions, events recorded during the mission, etc.) and an individual report sheet for each gas leak indication with corresponding map view.

All the measurement data and information entered at the start and during the survey mission are grouped together in a single compressed file. The file contains the following items:

- The survey mission report in PDF format.
- Two files in SHAPE format named as follows:
 - o Evenements.shp : the file gathers together all the events occurred during the mission (gas leak indications, malfunctioning, etc.) also in SHAPE format.
 - o Points_gps.shp : the file contains all the gas concentrations measured during the completed circuit.

Examples of reports generated by the NGS software:

View of the circuit during mission review



View of the circuit with Google Earth

The NGS software makes it possible to view the circuit and measured gas concentrations with Google Earth. It just requires Google Earth to be installed beforehand.

Survey report (1st page)

Survey report

SurveyNumber	SurveyName
test 2 Speed 20km	test 2 Speed 20km

Date	26/08/2009 08:52
Operator	claude Dominique
City	TALLIN
Supplier	Test customer
Provider	Gazomat
VSR ID	4585BAW57
Bottle Ref	458e4544
Emergency Phone	01233456789
Weather	sunny
Distance	Survey distance : 3,42km
Clue detected	17

Date	Time	Lat	Lon	Events	Comments
26/08/2009	08:52	59,427151	24,794480	Mission - Debut	Begin of Mission
26/08/2009	08:52	59,427151	24,794480	Test - Debut	
26/08/2009	08:52	59,427151	24,794480	Test -	Success
26/08/2009	08:52	59,427151	24,794480	Detector -	
26/08/2009	08:52	59,427151	24,794480	Test - Temps de reponse	Success
26/08/2009	08:52	59,427151	24,794480	Test - Fin	
26/08/2009	08:55	59,428520	24,799880	Pause - Debut	Paused by user
26/08/2009	08:55	59,428520	24,799880	Pause - Fin	Resumed by user
26/08/2009	09:07	59,428471	24,799789	Indice accepte	egout
26/08/2009	09:07	59,428471	24,799789	Indice accepte	
26/08/2009	09:08	59,428471	24,799789	Indice accepte	
26/08/2009					

Clue1

Information	Location : ? Majaka poik Tallinn Latitude : 59,428471 Longitude : 24,799789 Concentration : 8,0PPM	Date : 26/08/2009 08:52 Operator : claude Dominique City : TALLIN Supplier : Test customer Provider : Gazomat VSR ID : 4585BAW57 Bottle Ref : 458e4544 Emergency Phone : 01233456789 Weather : sunny
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Comment

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Individual report sheet for each gas leak indication



After-sales service

GAZOMAT provides all customers with comprehensive product assistance and maintenance through its global service teams.

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