

Signal Ambirak



THE MOST  
**advanced**  
AMBIENT AIR  
**quality**  
MONITORING SYSTEM

# The Ambirak is the most advanced integrated air quality monitoring system. It is easy to use, yet still provides exceptional data collection and control.

SIGNAL AMBITECH are part of the SIGNAL GROUP, which has been manufacturing gas analysers and systems since its inception in 1978. The Group is fully certified to ISO9001 quality standards. The Ambirak has been the preferred choice on the UK Governments' Automatic Ambient Urban Network (AUN) for the last four years.

Today, everybody from national governments to people in the street are concerned with air pollution. Many people have at some time experienced the effects of poor air quality, be it from traffic pollution, industry or other sources.

The Ambirak Air Quality Monitoring (AQM) system was designed with the help of several government organisations to ensure that the system was robust, compact, easy to use, upgrade and maintain.

Unlike old fashioned systems that use separate analysers, dataloggers, chart recorders and so on, the Ambirak is manufactured in one integrated package that offers the following benefits:-

- Complete integrated system with single interface
- Easy computer aided operation, configuration and calibration running on Windows™ (3.1x, 95, NT etc.)
- Compact design (1m x 0.7m x 0.6m HxDxW) allows location in places where space is valuable.
- Full remote control and communications from your desktop PC.
- Automatic report generation for data, calibration, audit and interims.
- Full system and analyser diagnostics are logged for data audit and ease of service.
- Automatic dissemination of data, ie public display, telephone lines and fax communications.
- Data logged in uncorrected (for audit purposes) and corrected (after calibration) units ie ppm/ug.m<sup>3</sup>
- PC based logging of one minute data giving years of data storage.
- Simple integration of external measurements (eg meteorological data).
- Optional package for full reporting to EU, WHO etc. guidelines.
- Faster communications means significantly cheaper phone bills.

## Ambirak - the system

The Ambirak system uses Signal's Modular Analyser Technology (MAT) to integrate intelligent modules via an internal data highway and bus master to a central control computer.

The modules collect data, diagnostic and mode files and prepare 1 minute averages and store this with rigorous time keeping in the bus master. This in turn then downloads to the logging PC.

The bus master ensures that no data is lost (by storing this data for up to 72 hours) when the computer is in use (eg downloading data by modem).

## Ambirak System Options

### INTERNAL ANALYSERS

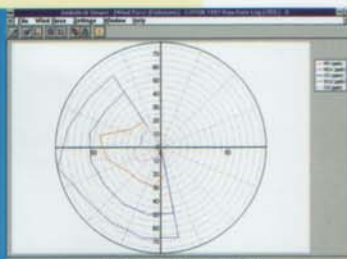
NO<sub>x</sub>  
SO<sub>2</sub>  
H<sub>2</sub>S  
CO  
O<sub>3</sub>  
CH<sub>4</sub> / non CH<sub>4</sub>  
NH<sub>3</sub>

### EXTERNAL INSTRUMENTS

BTEX  
Dust Monitor  
Wind Speed and Direction  
Temperature  
Relative Humidity  
Solar Radiation  
Rain Gauge  
Barometric Pressure

## Ambirak - the software

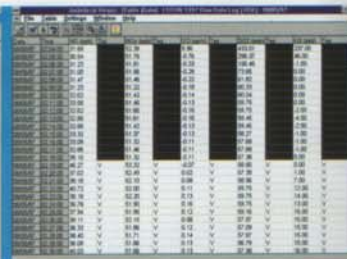
Ambirak software is configured to allow you to add modules as required. All Ambiraks are supplied with **Ambisoft** (the system operating software) and **Ambilog** (the logging software). If you want to operate the system from your desk and automatically generate reports, disseminate information and download data by modem then use **Ambidesk**. Finally, **Ambireporter** will roll up your data to produce WHO, EU and national reports.



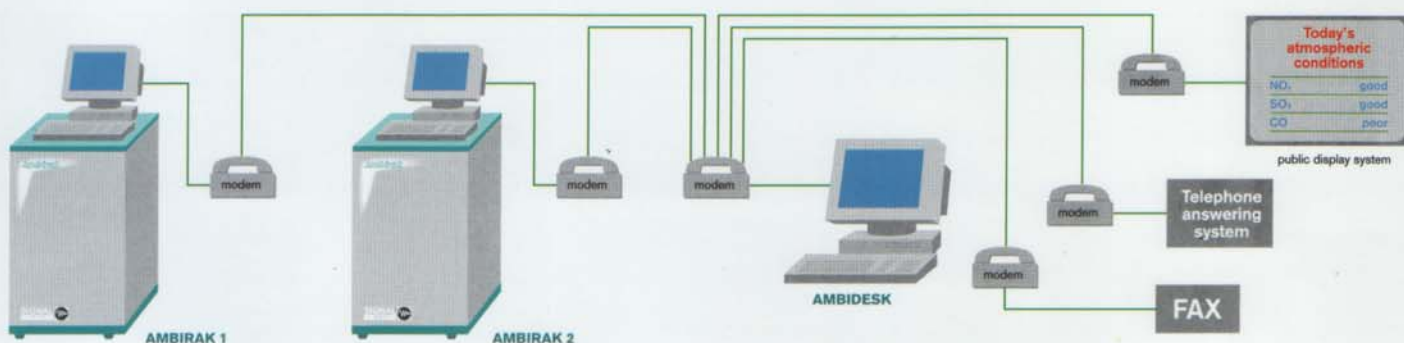
Ambidesk Viewer, pollution rose



Ambilog



Ambidesk Viewer, data tables



Typical Ambirak Network

## Ambirak - the advantage

The Ambirak offers the easiest way to collect ambient air quality data. Operators do not need to be analyser specialists as the Windows™ based software system allows them to operate and control all functions using only a keyboard and mouse.

### Easy calibration

Using automated daily "span checks" with more detailed calibration from certified cylinders being carried out using computer assisted manual calibration, either on-site or remotely from your desktop PC. This data is stored in "The correction factor file" for correcting the raw data and allowing maximum drift points to be set. If the analyser drifts beyond these set points, data is flagged as invalid.

### No need for datalogger

Dataloggers use old technology, often limiting the number of data points to be stored to a few days at 15 minute averages. The Ambirak logs true one minute averages (conversion to other time periods can be done later), storing the data, for a year or more, on to the local PC drive

### No need for chart recorder

Ambirak has a built in paperless chart recorder. No paper, no error in reading.

### True one minute averages

The use of one minute averages allows detailed investigation of any pollution incidents which may occur.

### The Ambirak has extensive, built in diagnostics

These tell you, on screen, exactly what is wrong in clear English. They also tell our service engineer, either by modem or through the customer, exactly what is wrong so the engineer can bring the correct parts. All this saves time and money.

### Interfaces with all common modelling packages

Data from Ambirak can be imported into almost any modelling package and as a spreadsheet format.

### Easy to upgrade

Adding additional analyser modules, software and upgrades to an existing Ambirak is easy and cost effective.

### No condensation

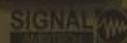
Both the analyser benches and sample manifold are heated to 40°C

## Ambirak - track record

There are over 30 Ambiraks in use in the UK where the Ambirak is installed extensively in the UK Automated Urban Network. Installations around the world in areas including Europe, Asia and the Middle East have proved the Ambiraks robustness and ease of use.

The current ambient air quality is . . .

SO<sub>2</sub> level at ET98  
is VERY GOOD



A typical public display

# Ambirak

## Enclosures

Signal can supply Ambiraks in various enclosures including vehicles, cabinets and houses.



Static and mobile enclosures



Inside the mobile laboratory

## Specifications

Separate technical pamphlets are available for all aspects of the Ambirak (analysers, Ambidesk, public display etc.), please contact us for details.

The Ambirak is UK NETCEN (National Environmental Centre) Approved.

Represented by:

