

# MultiMon Software

## Introduction

MultiMon is designed for projects that require real-time processing of data. It features multiple views of the site, automatic data updates, and pop-up alarms. It can also generate trend plots and replay historical data.

MultiMon can be run on networks so that data can be distributed easily to those who need it.

## Features

### Plan Views and Section Views:

MultiMon displays sensor readings superimposed onto plan views and section views of the site. The background graphics for these views are created from site plans, drawings, or photographs.

**Trend Plots:** MultiMon generates trend plots of data. Plots can be zoomed into, printed, or pasted into other applications. User settings, such as sensor selection and scales, can be saved for reuse.

**Profile Plots:** MultiMon generates profile plots for linked sensors, such as in-place inclinometers and beam sensors.

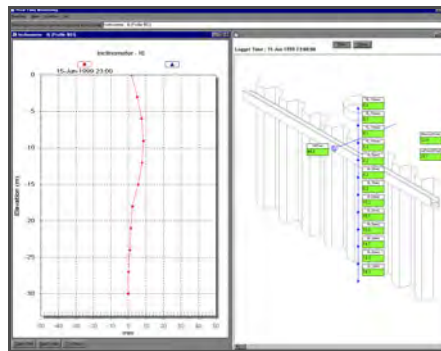
**Alarms:** MultiMon provides four levels of alarms. If a reading exceeds an alarm limit, an alarm message pops up, and the reading changes color to indicate the level of the alarm condition.

**Pop-Up Trend Plots:** MultiMon provides pop-up trend plots to allow engineers to quickly review data from sensors that show alarms. The scrolling trend plots show the last five days of data.

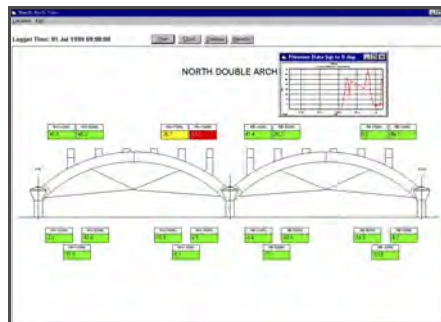
## Applications



**Monitoring for settlement during tunnel construction:** EL beam sensors were installed in these buildings to monitor for settlement as a tunnel was excavated below. MultiMon allowed engineers to monitor the entire site at a glance. The site plan was taken from an AutoCad drawing. The shaded area shows the path of the tunnel.



**Monitoring multiple parameters:** This sheet pile wall was instrumented with a load cell and an EL in-place inclinometer. MultiMon displayed load cell data and inclinometer data simultaneously. The engineer could then determine with confidence whether the wall was performing as expected.



**Monitoring performance:** These arches were instrumented with strain gauges to verify their load-carrying capacity. In this screen shot, one gauge has triggered and alarm, and the engineer had clicked on its data box to pop up a 5 day trend plot. The trend plot helped the engineer evaluate the severity of the condition.



**Construction control:** The floors of this building were to be suspended from load-carrying hangers located at its four corners. EL beam sensors and MultiMon provided real-time data for level-control, so that the load of each floor could be transferred evenly to the hangers.

### How MultiMon Works

MultiMon makes use of the Windows multi-tasking environment in which a data retrieval program and MultiMon run concurrently. The data retrieval program continuously transfers data from multiple data loggers to data files on the computer's hard disk.

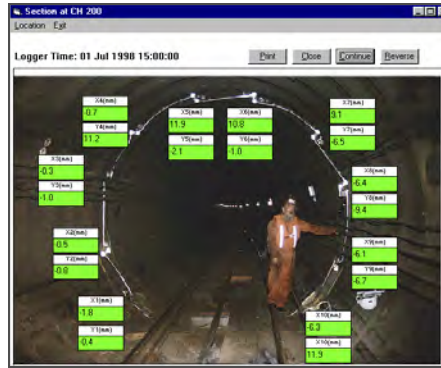
MultiMon continuously processes the data from these data files. It applies sensor calibration factors, performs any necessary calculations, stores the results in a database, and then generates screen displays.

### ORDERING INFORMATION

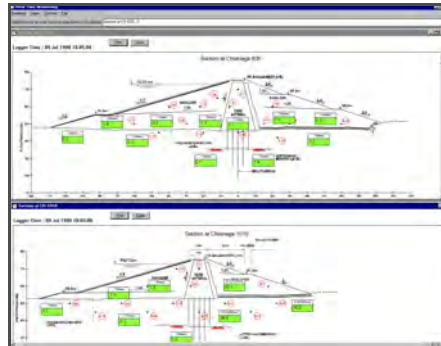
MultiMon Software . . . . .56708050  
MultiMon Configuration . . . . .97608050

MultiMon runs on Windows 95/98/and NT computers. The program is supplied as part of a complete data acquisition solution that includes sensors, data acquisition equipment, and data logger programming.

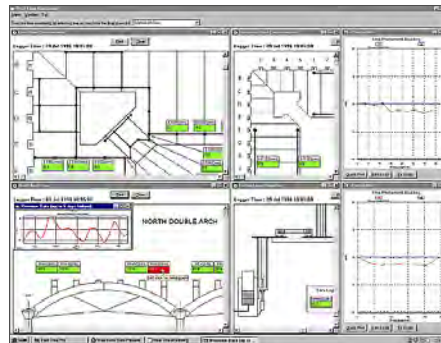
MultiMon must be configured for the sensors used at the site. This is typically performed by Slope Indicator and involves entering sensor identifiers and calibration factors, creating the graphic views, and linking sensors.



**Safety Monitoring:** The BCS Win program, a variation of MultiMon, is now part of the Bassett Convergence System. In this case, the BCS was used to monitor an operational mass transit tunnel while construction proceeded on a new tunnel nearby. The screen shot shows MultiMon's ability to replay historical data.



**Monitoring a dam:** MultiMon was used to monitor multiple sections of the dam. Sensors, data loggers, and additional views of the project can be added to the system as necessary.



**Multi-Window Display:** MultiMon can display different parts of the site in different windows. Windows can be tiled, cascaded, minimized, or maximized for easy viewing. Each window can be printed, as well.