



#### Mast Bending Stress and Weather Station - Times Square, New York USA

Traditionally the new year Times Square celebrations includes a ceremonial raising and lowering of a crystal ball high above the buildings of this famous landmark. As part of the Millennium celebrations, Waterford Crystal constructed a giant crystal ball weighing 6 tonnes, comprising of several hundred halogen lamps. The mast used to raise the ball high above Times Square had not previously supported this weight, so in the event of high winds, a monitoring system was proposed to provide early warning in case of significant bending stresses in the mast.

Strainstall supplied, installed and commissioned a primary and back-up data acquisition system, which monitored the bending stresses during the raising of the 6 tonne ball to the top of the 20 metre mast on New Years Eve 2000 and 2001.



Other parameters measured were the wind speed and direction, ambient temperature and ball surface temperatures. The Millennium Ball lowering was watched by over one billion people around the world.

#### The System:

- 2 x 10 Channel Dataloggers
- Peak Bending Stress and Direction
- Wind Speed and Direction
- PC with Windows Software
- Mimic and Graphical Displays to Warn of Alarm Condition
- Surface Temperature

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