

# QCalc™



Ilex Computing Ltd.

From

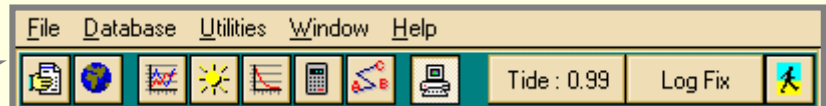
# Synectica

Solutions, Systems & Software

## Offshore Survey Utility Software

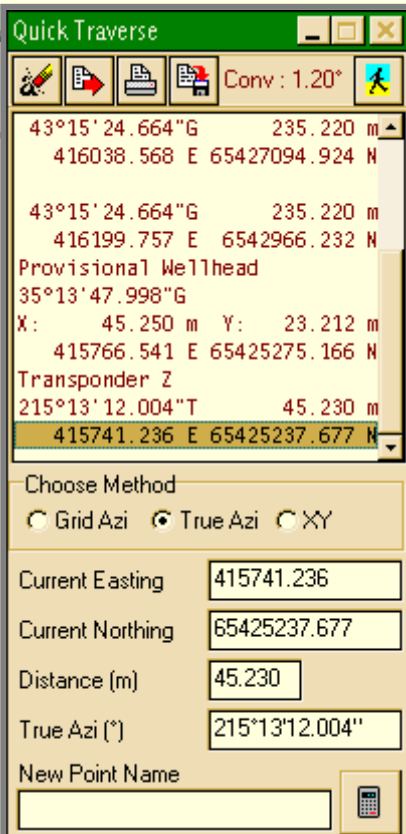
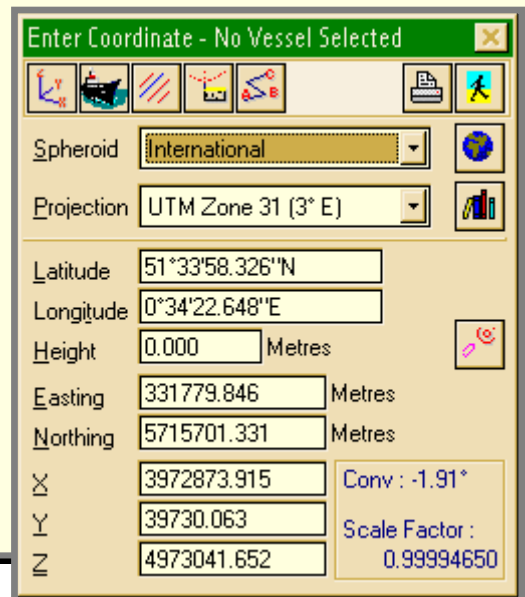
QCalc is a set of Hydrographic and Geodetic survey utilities that run on any Windows PC.

The program can be run full screen or minimised as a convenient menu bar



### The core of the Utilities is the "Geodetic Calculator".

By Selecting a Spheroid and Projection the user is given a choice of the possible Datum shifts to use, once selected, any change in any of the input fields causes all other fields to be re-computed using the appropriate parameters. Once computed the point can be used as the co-ordinate for a selected vessel's offset point, to compute the along/across and KP value for a selected line, use it as an origin for a USBL XYZ computation or to start a "Quick Traverse". Having performed further functions the result can be copied back into the "Geodetic Calculator" to carry out further transformations. Results can be printed or logged to a data file on disc. Spheroids, Projections and Datum Shifts can be user defined and include TM, UTM, Lambert, Hotine and RSO Projections plus the Statenskartverk 4<sup>th</sup> Polynomial solutions for Norwegian waters.



Quick Traverse allows the user to move from point to point by entering either Range and Bearing (True or Grid), or XY and Bearing to compute the next point. Each result is listed and the list can be printed or saved to disk. At any time data from the list can be utilised in further computations by double-clicking the item. This utility is useful when computing offsets and local grid co-ordinates.

Data can be imported and exported in several formats including CSV and DXF. The program contains an internal database of parameters, all of which can be easily edited by the user. Functionality and Usability was given high priority when designing this package.

An unlimited number of Run-lines, Waypoints, Coastline definitions and Vessels can be defined (subject to memory limitations), and several vessels can be simultaneously plotted on the graphic display and data boxes defined for each. Real time tides are computed and data entry and display forms can be configured and positioned to suit the individual user preference.

## QCalc functionality

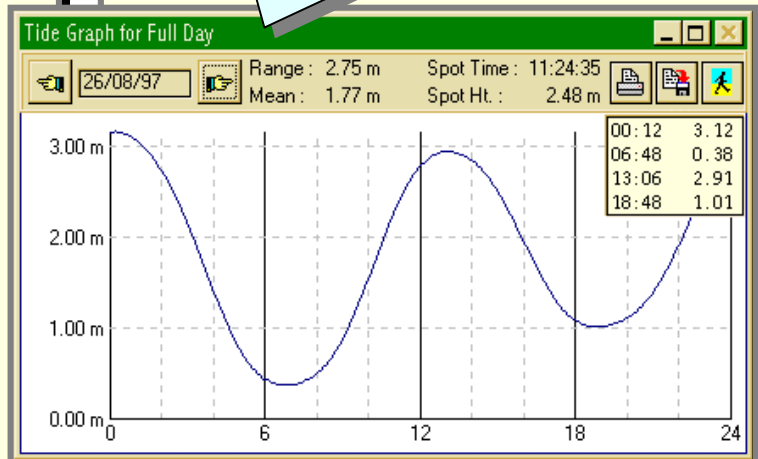
- User defined Night/Day Colour schemes.
- User defined Multiple Data Boxes and Chart Displays.
- Resection, Intersection and Multi-ray least squares computation.
- Velocity of Sound Profiles.
- Run-line/Pipe-Route computation and verification.
- Sun, Planets and Star astro-observations.
- Catenary computations for mixed lines chain/wire with support buoys.
- Geodetic Calculator (Datum shift incl. Statenskartverk Norway)
- Quick Traverse (Rolling offset & Range/Bearing calculations)
- Point-to-Point calculator.
- Tidal computations in real-time and predicted (Admiralty Method)
- On-Screen interactive measurement.
- Graphics dump to File or Printer.
- Interactive Scaling, Window & Zoom features.
- DXF import and export of chart data.

## Database Capacities

- Unlimited Waypoints, Runlines, Coastline and Vessels (Subject to memory limits)
- Cross Line Automatic Generation
- Parallel Line Automatic Generation
- Block of Lines Generator
- 20 Spheroids
- 20 Projections
- 20 datum Shifts
- 20 Standard Ports
- 31 Days Tidal constants

## QCalc in action

A Tide graph for a complete day can be obtained by simply clicking the Tide button. The graph shows the tidal curve plus the highs and lows for the day, spot heights can be obtained by moving the cursor across the graph. The graph can be saved as a bitmap or printed.



Other Utilities include Mixed Wire/Chain Catenaries, Sun and Star Astro observations for Azimuth, Velocity of Sound Profiles, Multi-ray Resection and Intersection by Least Squares.

## The QCalc package

**QCalc** is fully compatible with Windows 3.x and Windows 95/98 operating systems, and runs on any hardware supporting these.

Provided on CD-ROM (or diskette if required) the software package comes complete with an installation set-up, an operation manual and on-line Windows Help facility.

**QCalc** is produced by **Ilex Computing Ltd.**

Based in Great Yarmouth, UK, the company provides IT and software services primarily for the offshore survey industry. Their client list includes RACAL, EMC, Van Oord ACZ, Fugro UDI, Shell and Stolt Comex Seaway.

**Ilex** also produce on-line navigation and surveying software packages running under Windows - see other literature for details of *Columbus Navigator* and *GeoNav Surveyor*.

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