Qualitek-4
For Windows

Automatic Design and Analysis of
Taguchi Experiments

Nutek, Inc.

DOE/Taguchi   ANOVA   S/N Ratio   Dynamic Characteristics

Step 1: **Plan** Experiment/Brainstorm

Step 2: **Prescribe** Experiment

Step 3: **Perform** Tests

Step 4: **Predict** - Analyze Results

Step 5: **Prove** - Run Confirmation Tests

Nutek

Quality Engineering Seminars and Software

All Design of Experiments **(DOE)** software packages are not created equal. We've made ours to help you pursue your **Taguchi experimental design projects** in the most natural way.

Design - Do you find it difficult to remember which orthogonal array is most suitable for your experiment or how to assign factors to the columns? Let QT4 design the experiment for you automatically. If you prefer, design your own experiments by selecting an array from the list of L-4 to L-64 arrays. In automatic design, you simply indicate what are your factors and levels, QT4 selects the array and assigns the factors to the appropriate columns. You also have a *large selection of interactions and outer array* designs. While automatic design can handle most of your common experiment designs, the manual design option allows you to create the special designs to suit your needs.

A number of *orthogonal* arrays are available for designing *inner and outer* arrays in your experiments.
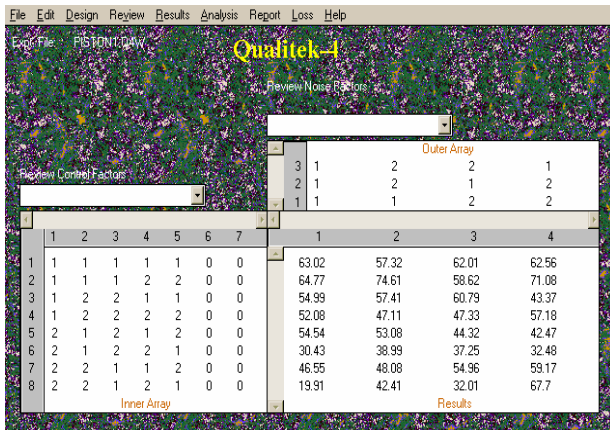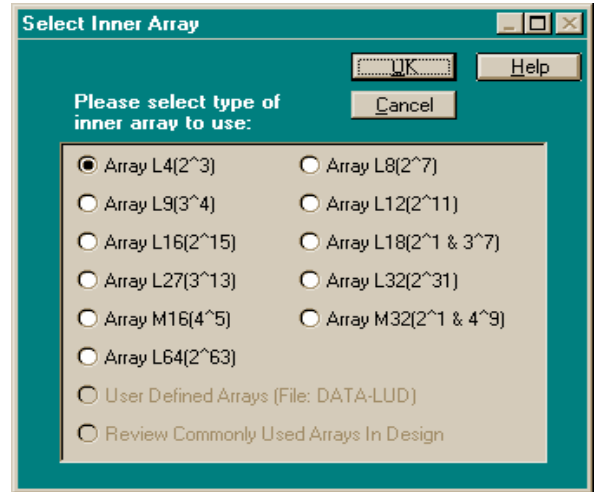
Active matric experiment configuration allows a complete review of factors, arrays and results.

Factor and level descriptions are entered using Spreadsheet input screens.
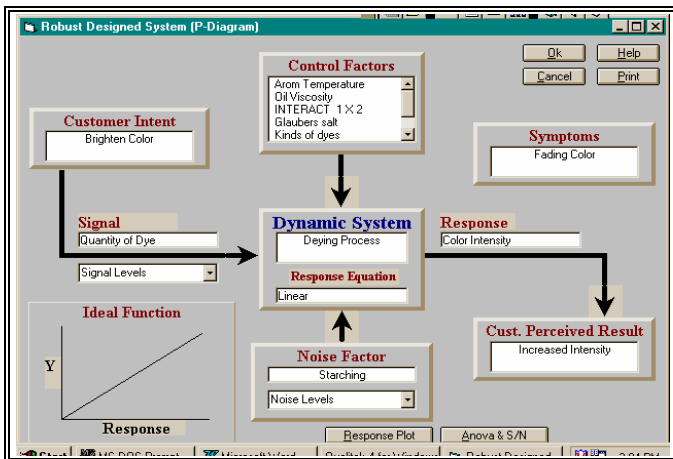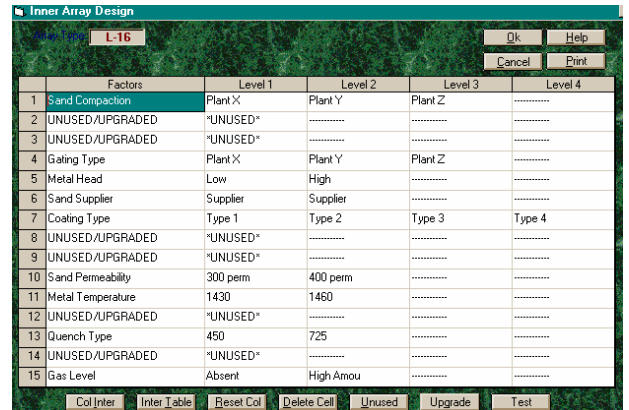
P-Diagram for Dynamic Systems represents system functions in a graphical form.

Analysis

The three basic steps in analysis, Main Effect, ANOVA, and Optimum studies are carried out in sequence with the click of OK buttons. Analysis can be performed using Standard *or S/N* ratios of results for Smaller, Bigger, Nominal, or Dynamic Characteristics.

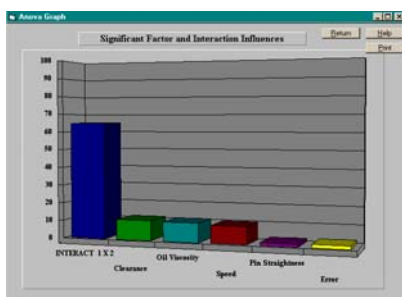Variation of results **within and between** trials are captured in the Trial Data Range graph.
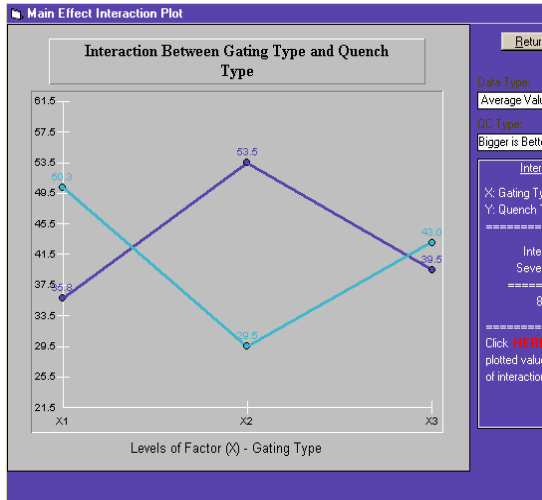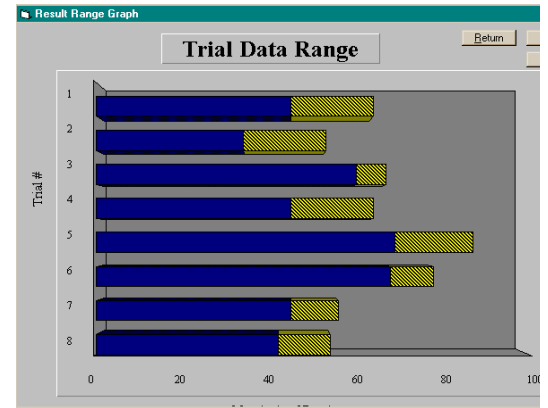
Interaction between two mixed-level factors are shown in a graph ready for **Test of Interaction.**

Realistic response plot for three and four level factors are simulated by a **least square quadratic curve.**
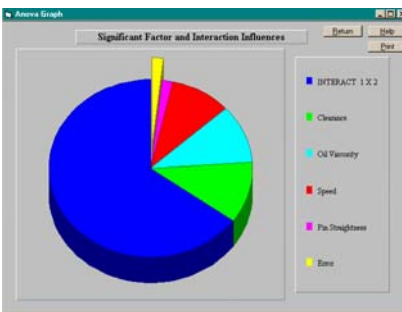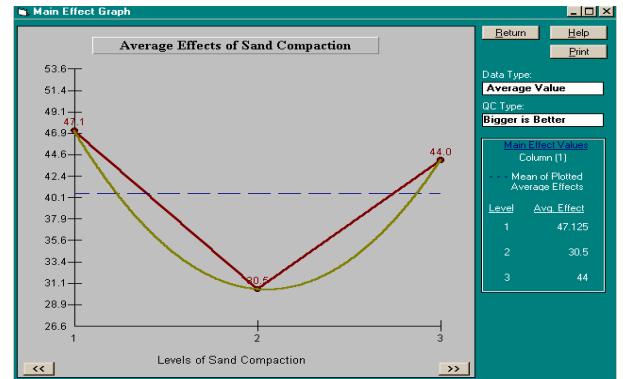
A N O V A statistics in terms of **relative factor influence** to the variation of results are shown in paretoized B a r G r a p h and exploded P i e d i a g r a m .

ANOVA Statistics for Dynamic System is represented in a special table.

CAPABILITIES

Design

* L-4, L-8, ... L-64 orthogonal arrays(Inner and Outer)
* 2, 3 and 4 level Control and Noise factors
* On-line design help
* Spreadsheet data input and full screen editing
* User defined arrays for special experiment design
* Automatic individual trial condition descriptions

Results

* Preparation of results by combining multiple Criteria of Evaluations into a single index(OEC)
* Result import from text and spread sheet program files
* Writing report files to disk for word processing
* On-line Tagauchi method overview
* Up to 120 repetitions (samples/trial) of results.

Analysis

* Standard, S/N and Dynamic Characteristic analysis
* Fully automatic standard and S/N ratio analysis for bigger, smaller or nominal is better quality characteristic.
* Color graphic display and printing
    - Main Effects
    - Interactions
    - Bar and Pie Chart of Factor Influences
    - Stacked Bar Chart of Optimum Performance
* Selective and automatic pooling.
* Confidence Interval computation.
* Estimate of performance at Optimum Condition.
* Automatic S/N ratio to original unit transformation.

QT4 performs analysis automatically. When you select the type of analysis and the quality characteristic, the program computes Main Effects, performs ANOVA and determines the Optimum Condition with minimal user involvement. At each step, it allows you to select additional options from the screen menu or proceed directly to the next step.

Attractive Features

Reference Materials - You will have access to a large volume of reference materials from the main screen pull down Help Menu. The content includes overviews on about 20 topics.

Special Analysis Capabilities - Automatic test of presence of interaction, Plot of interaction between two, three and four level factors, Least Squares quadratic curve fitting between average effects for three and four level factors, plot of Main Effects, Bar graph and Pie diagram for ANOVA results, Stacked diagram for factor contributions to Optimum, etc.

Sing User Copy Price: $ 1,996/Copy
Academic version, Site License, Corporate Site License, and Multiple Users/Network version prices vary depending on the number of installations. The price quotations are available upon request.

WARRANTY

QUALITEK-4 is built to meet high standards of performance and precision. Our goal is to help you accomplish the objectives of your Taguchi experiment in the least amount of time. So you can count on learning QT4 in the least amount of time and produce analysis and reports within minutes of completion of experiments.

If for some reason you are not completely satisfied, you may return your software within two weeks of purchase for a full refund.

AUTHOR

Dr. Ranjit K. Roy, President and founder of Nutek, Inc., is the author of QUALITEK-4. With over 15 years of experience in the industry and over 10 years of experience in application and training of Taguchi experimental design, Dr. Roy developed this software for application minded engineers. He also teaches a 4 day onsite seminar/workshop on Design of Experiment Using Taguchi Approach. QT4 is designed to fully correspond with the seminar and workshop conducted by Dr. Roy.

SERVICE AND SUPPORT

Nutek offers free telephone support to all registered users with regard to installation and use of the software. In addition, Nutek provides on-site seminars with hands-on computer workshops and consulting services to help you apply the technique in your projects.

REFERENCE TEXTBOOKS:
1. Design of Experiments Using the Taguchi Approach: 16 Steps to Product and Process Improvement by Ranjit Roy, Hardcover (January 2001) John Wiley & Sons; ISBN: 0471361011
2. A Primer on the Taguchi Method by Ranjit Roy ,Hardcover - 247 pages 1 edition (Available from http:// www.nutek-us.com /wp-txt.html)

HOW TO ORDER
To order QUALITEK-4, contact your dealer or call Nutek directly. To place an order, have your purchasing agent call with a purchase order.
Visit: www.nutek-us.com/wp-q4w.html for details.

DELIVERY
Nutek will ship your order (via U.S. Mail or UPS) within 5 working days of receipt of order. If you need the software program immediately, you may request the registration number by email.

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