

Minitab Express[®] 1

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Part 1. Introduction to Minitab Express

Welcome to Minitab Express! This statistical software package for Mac and PC offers graphical and statistical tools for introductory statistics, including:

Graphs

- Histogram
- Dotplot
- Probability Plot
- Stem-and-Leaf Plot
- Scatterplot
- Boxplot
- Interval Plot
- Individual Value Plot
- Bar Chart
- Pie Chart

Probability Distributions

- Probability Distribution Plot
- Probability Density Function
- Cumulative Distribution Function
- Inverse Cumulative Distribution Function

Summary Statistics

- Descriptive Statistics
- Tally
- Column and Row Statistics
- Normality Test

Hypothesis Tests

- 1 and 2 Sample t
- Paired t
- 1 Sample Z
- 1 and 2 Proportions
- 1 and 2 Variances

Bootstrapping

- 1 and 2 Sample Means
- 1 Sample Proportion
- 1 Sample Function

Randomization Tests

- 1 and 2 Sample Means
- 1 Sample Proportion

ANOVA

- One- and Two-Way ANOVA
- Test for Equal Variances
- Main Effects Plot
- Interaction Plot
- Factorial Plots

Regression

- Correlation
- Covariance
- Linear Regression
- Binary Logistic Regression

Nonparametrics

- 1 Sample Sign
- 1 Sample Wilcoxon
- Mann-Whitney
- Kruskal-Wallis

- Mood's Median
- Friedman
- Runs Test

Tables

- Chi-Square Goodness-of-Fit
- Cross Tabulation and Chi-Square

Control Charts

- Xbar
- Xbar-R
- Xbar-S
- Individuals
- I-MR
- P
- U

Time Series

- Time Series Plot
- Trend Analysis
- Moving Average
- Exponential Smoothing

Data

- Recode
- Random Data
- Patterned Text Data
- Patterned Numeric Data
- Indicator Variables
- Random Sample from Columns
- Stack Columns
- Unstack Columns
- Sort
- Rank
- Standardize
- Formula Calculator

Visit www.minitab.com/express for more information.

Part 2. Problems Resolved in Minitab Express 1.1.1

Several specific issues have been resolved in Minitab Express 1.1.1, including:

Item 1

Updating the operating system to Mac OS X 10.10 (Yosemite) with a Single-User License version of Express 1.1 installed would cause the license to fail and disable launch of the application after reboot.

Affects: Minitab Express Mac Single-User License only

Part 3. New Features in Minitab Express 1.2

- Graph Editing – Easily edit your graphs. You can change existing text and also add subtitles, data labels, gridlines, and more.
- Import Data from Project Files – Directly import Minitab worksheets that are embedded within Minitab MPJ or Minitab Express MPJX project files using **File > Open Worksheet**.
- New Graphs for 1 and 2 Proportions Tests – To help you interpret your results, Minitab Express now provides a graph that illustrates your confidence intervals for 1 and 2 Proportions Tests.
- Toolbar Customization (Mac only) – Instantly access any analysis you frequently use by adding it to your toolbar. Just right-click the toolbar and choose **Customize Toolbar**.
- Enhanced Descriptive Statistics – Calculate descriptive statistics for more than one column of data at a time. There are also new options to compute skewness and kurtosis.
- New Zoom Options – Easily zoom in or out of both the data pane and the output pane.
- Copy and Export Output Improvements – Export output as .PNG, .PDF, or .HTML by right-clicking in the output pane. You can also edit tables that you have pasted into other applications, such as Microsoft Word or PowerPoint.
- Copy and Paste Data Improvements – Data manipulation is easier. For example, you don't have to select an entire column when pasting data from one column into another, and Minitab Express will warn you if you try to paste a column name into a data cell.

Part 4. Problems Resolved in Minitab Express 1.2

Several specific issues have been resolved in Minitab Express 1.2, including:

Item 1

One of the following actions may result in poor performance and/or an error, causing the application to close: Repeatedly executing Individual Value Plot with multiple variables of many

rows (approaching 10,000) or repeatedly executing One-Way ANOVA and choosing Individual Value Plot from the graph options with multiple response columns of many rows (approaching 10,000). (172344)

Affects: Minitab Express PC only

Item 2

If the same character is used for the List Separator and the Decimal Symbol, launching Minitab Express will immediately prompt the user to close the application. (172643)

Affects: Minitab Express PC only

Item 3

In certain scenarios, cutting rows from the data pane could result in undo/redo issues. (172545)

Affects: Minitab Express Mac only

Item 4

After entering an invalid multi-line expression into the Formula dialog where the invalid portion of the expression is scrolled out of view, a warning bubble will not be displayed to the user. (172388)

Affects: Minitab Express Mac only

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Part 5. New Features in Minitab Express 1.3
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- More statistical features, including Variance and Nonparametric Tests.
- Enhanced graph options, such as the ability to edit histogram bins and scale type, display either percents or counts on a bar chart, add a connect line to scatterplots, transpose axes on graphs such as boxplots, and more.
- Make Similar – A new feature that allows you to retain your most recent dialog settings and graph edits, and instantly run subsequent analyses.
- Weibull and lognormal distribution options for generating random data and probability functions.

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Part 6. Problems Resolved in Minitab Express 1.3
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Several specific issues have been resolved in Minitab Express 1.3, including:

Item 1

For some combinations of Language & Region settings, tables and graphs may not be visible in the output pane after a command is run. (174245)

Affects: Minitab Express Mac only

Item 2

After launching the software, the Minitab Express icon appears in the taskbar, but the software is not visible. (174113)

Affects: Minitab Express PC only

Item 3

If the name of an input variable contains only commas, running Correlation or Covariance may cause Minitab Express to close unexpectedly. (173415)

Affects: Minitab Express PC only

Item 4

CSV files that include numeric values with commas for the thousands separator may not import correctly. (173813)

Item 5

Select All in the output pane does not select the command title. (172352)

Part 7. New Features in Minitab Express 1.4

- More statistical features, including Control Charts and Time Series.
- Multiple Regression enhancements, including the ability to include a categorical predictor and compute confidence intervals for the coefficients.
- Column Statistics and Row Statistics for calculating summary statistics, such as the average.
- Additional Formula calculator functions and operators, including percentile, concatenate, combinations, permutations, factorial, IF, AND, OR, NOT, <, ≤, >, ≥, =, and ≠.

- Exponential, lognormal, and Weibull distribution options for histogram and probability plot.
- Geometric distribution option for the distribution plot and functions.
- Bernoulli and geometric distribution options for generating random data.

Part 8. Problems Resolved in Minitab Express 1.4

Several specific issues have been resolved in Minitab Express 1.4, including:

Item 1

If the column name of a response variable or predictor variable used in Simple Regression, Multiple Regression, or Predict contains an ampersand (&) and/or a "less than symbol" (<), some or all of the formula is not displayed in that method's Regression Equation table. (55096)

Part 9. New Features in Minitab Express 1.5

- More statistical features, including bootstrapping, randomization tests, binary logistic regression, stepwise and best subsets.
- Ability to import data from a Microsoft Excel XLSX file.
- Stem-and-Leaf Plot option to specify the increment value.
- Ability to sort columns directly in the data pane.
- Additional keyboard shortcuts in the data pane, including Home, End, Page Up, Page Down, Tab, and Enter.

Part 10. Problems Resolved in Minitab Express 1.5

Several specific issues have been resolved in Minitab Express 1.5, including:

Item 1

Minitab Express may fail to launch due to a corrupted configuration file that gets created and used by the application. (63653)

Affects: Minitab Express PC only

Item 2

A security vulnerability could allow for code injection attacks, where an attacker who successfully exploited the vulnerability could cause arbitrary JavaScript code to be executed in the software's output pane.

Part 11. Known Problems and Workarounds

Item 1

Making changes and saving a project stored on a network drive from the Minitab Express Mac application that has also been simultaneously opened, modified, and saved from the Minitab Express PC application may result in errors and warning messages. (172347)

Affects: Minitab Express Mac only

WORKAROUND: Use **File > Duplicate** on the Mac to duplicate the project file.

Item 2

HTML files exported to network locations may not open in Internet Explorer 11. (172349)

WORKAROUND: Copy the file locally before opening or open the file using another web browser.

Item 3

The PC application does not support High Contrast Windows display settings, which could result in values in the data pane that do not display, blank warning bubbles in dialog boxes, or missing labels in dialog boxes. (172355)

Affects: Minitab Express PC only

WORKAROUND: Use Basic or Aero Theme for display settings.

Item 4

Printing a graph to an XPS file that is currently open may unexpectedly close Express. (173403)

Affects: Minitab Express PC only

WORKAROUND: Close the file before attempting to print to it.

Item 5

On Mac OS X 10.10.3, opening the filename popover could unexpectedly close Express. (46166)

Affects: Minitab Express Mac only

WORKAROUND: Press escape key or return key to close popover before continuing to use the application.