

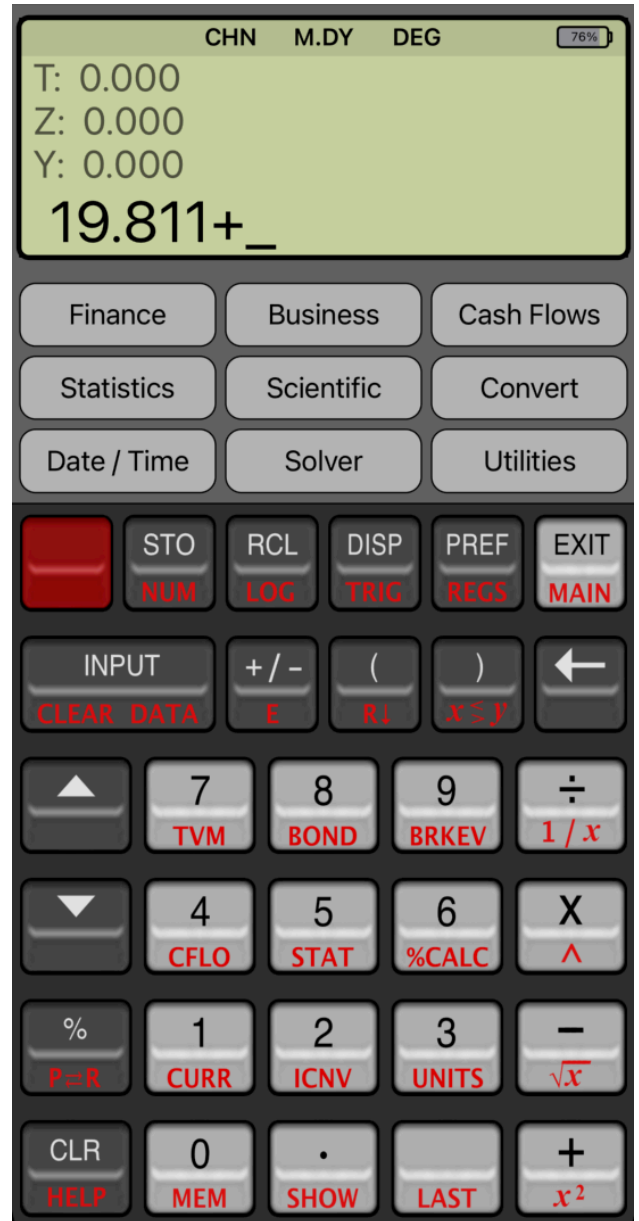
# General Overview

The RLM-19BX calculator application is an extensive set of tools and enhancements inspired in the real HP-19B calculator series made by Hewlett Packard Corp.

The first “HP-19BII” calculator was designed and introduced by Hewlett Packard in 1988 and it was a pocket business calculator with algebraic and RPN logic. It was the most powerful business calculator at that time, in a folding case with alphanumeric keyboard and menus that contains most of its functions.



**Old Skin**



**New Skin**

Since the calculator is inspired in the real world **HP-19BII**, we strongly recommend that you obtain the real calculator **Owner's Manual** available in internet and review all the help topics selecting them from the top button in the **HELP** view.

# Main Menu

Finance	Business	Cash Flows
Statistics	Scientific	Convert
Date / Time	Solver	Utilities

<b>Finance Menu</b>	
<b>Account Balance</b>	Calculates the balance of a credit line type account at any date based on a <b>(Date,Trx) List</b> of cash flows or interest rates that can
<b>Amortization</b>	Calculates a loan Amortization Schedule from a single loan payment or from several payments at once.
<b>Bond Price &amp; Yield</b>	Calculates annual or semi-annual coupons bonds with actual or 360 days/year calendar with all options and values at sight.
<b>Black-Scholes Options</b>	Calculates the prices of a CALL and PUT options and the Greeks using the Black-Scholes European option valuation model.
<b>Depreciation</b>	Calculates the Depreciation Schedule of an asset using SL, SOYD, DB, DBX, MACRS-SL and MCRS-DB methods.
<b>Interest Conversion</b>	Calculates nominal and effective interest rates using either periodic or continuous compounding.
<b>TVM: Time Value of Money</b>	Calculates compound Interest problems involving money earning interest over a period of time.

<b>Business Menu</b>	
<b>Bill-Tip-Split</b>	Calculates the total and the amount to pay per person based on a bill amount, a number of persons and a tip percent or amount.
<b>Break-Even</b>	Calculates break-even based on the following equation: Profit = (Price - Var.Cost) • Units - Fix.Cost
<b>Currency Exchange</b>	Calculates a currency exchange between two selected world currencies and common crypto currencies.
<b>Percents &amp; Margins</b>	Calculates percent change, percent total and business margins in a single worksheet with all values at sight.

<b>Cash Flows Menu</b>	
<b>Equal Periods</b>	Calculations with Cash Flows occurring at regular time intervals using a <b>(X,N) List</b> .
<b>Unequal Periods</b>	Calculations with Cash Flows occurring at different dates using a <b>(Date,CF) List</b> .
<b>Statistics Menu</b>	
<b>&gt; (X,N) List Statistics</b> <b>One List Statistics</b> <b>Two Lists Statistics</b> <b>Curve Fitting</b>	Shows a submenu to select one of the different data editors. Statistics calculations over one <b>(X,N) List</b> of data samples. Statistic calculations over two <b>(X,N) List</b> of data samples assigning one to the 'X' and the other 'Y' variables. Applies a regression model to fit a curve from two <b>(X,N) List</b> of data samples.
<b>&gt; (X,Y) List Statistics</b> <b>Statistics</b> <b>Curve Fitting</b>	Shows a submenu to select one of the different data editors. Statistics calculations over one <b>(X,Y) List</b> of data samples. Applies a regression model to fit a curve from an <b>(X,Y) List</b> of data samples.
<b>Probability</b>	Calculates combinations, permutations and probability of selected distribution.
<b>Scientific Menu</b>	
<b>Angles &amp; Polar</b>	Calculates conversions of polar-rectangular coordinates and values of angles between different units.
<b>Complex Numbers</b>	Special menus to perform operations and functions over complex numbers in cartesian or polar (phasor) form.
<b>Logarithm</b>	Applies Logarithmic functions to the displayed number.
<b>Number Alteration</b>	Applies common number alteration functions.
<b>&gt; Triangle Solution</b> <b>Plane Triangle</b> <b>Spherical Triangle</b>	Shows a submenu to select 2D or 3D triangle. Solves a two dimensional triangle. Solves a triangle in the surface of a sphere of radius 'R'.
<b>Trigonometry &amp; Hyperbolic</b>	Applies trigonometric and hyperbolic functions to the displayed number.
<b>Universal Constants</b>	Inputs the value of a selected universal constant from the NIST-CODATA database.
<b>Vectors 3D</b>	Special menus to perform operations and functions over 3D vectors in cartesian, spherical or cylindrical coordinates.

## Conversion Menu

<b>Angles &amp; Polar</b>	Calculates conversions of polar-rectangular coordinates and values of angles between different units.
<b>Currencies</b>	Calculates a currency exchange between two selected world currencies and common crypto currencies.
<b>Interest Rates</b>	Calculates nominal and effective interest rates using either periodic or continuous compounding.
<b>Units</b>	Calculates physical units conversion within a selected units category.

## Date / Time Menu

Calculates Date and Time calculations with all values at sight.

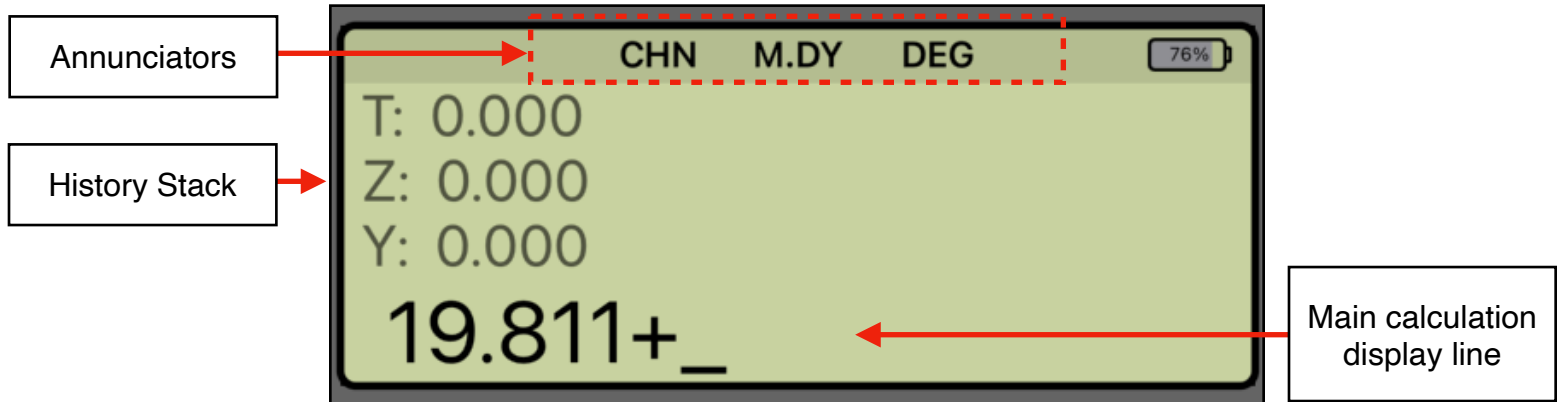
## Solver Menu

Solve arbitrary algebraic equations entered and saved in the **Equation Editor** and creates a menu with all the equation variables to solve for any of them.

## Utilities Menu

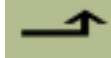
<b>General Settings</b>	Shows a view to customize the calculator to your preference.
<b>Storage Registers</b>	Shows a worksheet to manage the storage registers.
<b>Memory Content</b>	Shows a view to see all memory content with backup and restore all of it.
<b>Help Documents</b>	Shows the help view to learn by example about all the calculator's worksheets.
<b>&gt; Editors</b>	Shows a submenu to select one of the different data editors.
<b>(Date,Trx) List</b>	Opens the "Date-Transaction" list editor to create or edit the data used by the Account Balance worksheet.
<b>(Date,CF) List</b>	Opens the "Date-Cash Flow" list editor to create or edit the data used by the Unequal Cash Flows worksheet.
<b>(X,N) List</b>	Opens the "Value-Frequency" list editor to create or edit the data used by the Equal Periods Cash Flows & Statistics.
<b>(X,Y) List</b>	Opens the "Value-Value" list editor to create or edit the data used by the (X,Y List Statistics worksheets.
<b>Solver Equation</b>	Opens the "Solver Equation" editor to create or edit the equation used by the Solver menu
<b>Units Database</b>	Opens the "Units" editor to create or edit units and categories used by the Units Conversion menu

# Calculator Display



The RLM-19BX calculator’s display has three areas: the annunciators area, the history stack area and the main calculation.

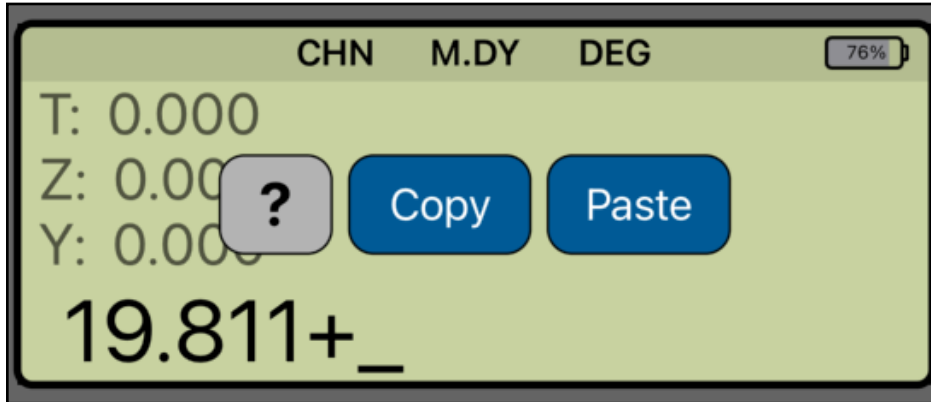
**Annunciators:** Show the current status of the calculators:

Display Annunciators	
	When shown, the shift functions are active in the keyboard.
<b>ALG</b> <b>CHN</b> <b>RPN</b>	Algebraic operation logic ( $1 + 2 \times 3 = 7$ ). Chain operation logic ( $1 + 2 \times 3 = 9$ ). Reverse-Polish-Notation operation logic.
<b>M.DY</b> <b>D.MY</b> <b>Y.MD</b>	Date format set to Month-Day-Year (MM.DDYYYY). Date format set to Day-Month-Year (DD.MMYYYYY). Date format set to Year-Month-Day (YYYY.MMDD).
<b>DEG</b> <b>RAD</b> <b>GRD</b> <b>DMS</b> △%	Current angles unit set to Decimal Degrees. Current angles unit set to Radians. Current angles unit set to Gradians. Current angles unit set to Degrees-Minutes-Seconds. Current angles unit set to Slope Percent.

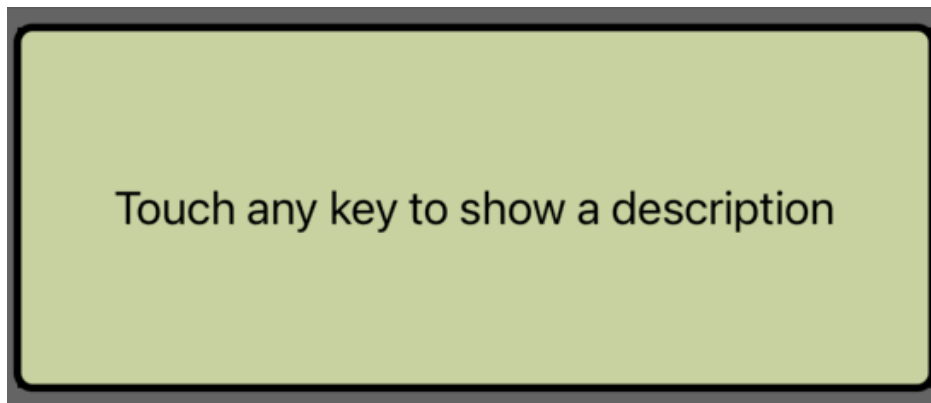
**History Stack** area: At the left shows the value in the stack register or a relevant message depending of the calculation performed. At the right shows the “Virtual Battery” status indicating your auto renewable subscription (full “battery” last for 30 days of usage).

**Main Calculation** line: Shows the current entered number, a calculation in progress or a calculation result.

Touching the display at any time brings up the Help-Copy-Paste buttons to the front. There you can “Copy” the displayed number or “Paste” previously copied one.



The “?” button turn on the quick help hint for a short description of any keyboard or menu button.



**For further information and support go to...**

**[“www.rlmttools.com”](http://www.rlmttools.com)**

**or send an email to...**

**[“support@rlmttools.com”](mailto:support@rlmttools.com)**

**DISCLAIMER: THIS IS NOT A HEWLETT-PACKARD CALCULATOR, AND IS NOT SPONSORED, SUPPORTED OR UNDERWRITTEN IN ANYWAY BY HEWLETT-PACKARD OR ANY OF ITS SUBSIDIARIES.**