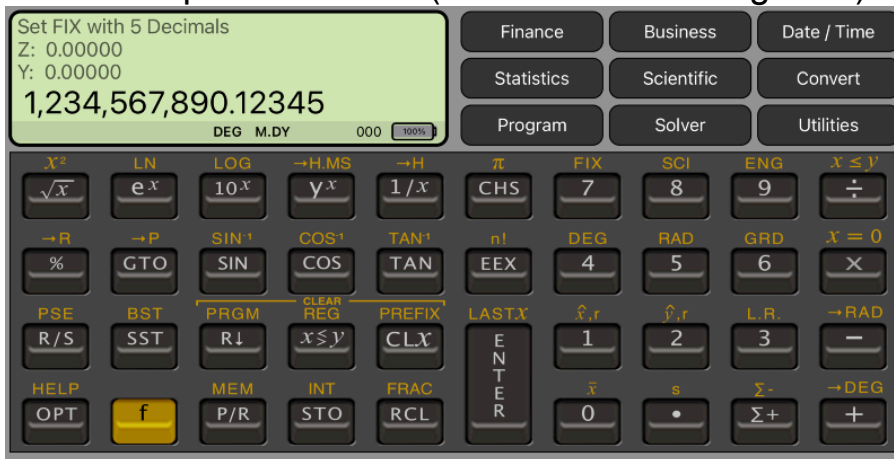# General Overview

The RLM-10CX calculator application is an extensive set of tools and enhancements inspired in the real HP-10C calculator. It works in the same way, but expanded with 15 digits precision, 20 storage registers, 1000 program steps and a complete set of menus to handle almost any scientific, financial and business problem (toggle tapping the **[OPT]** key). Also, the Display was expanded to show all the Stack registers and, in landscape orientation, the content of the storage registers, statiscs and program memory.

The HP-10C calculator was designed and introduced by Hewlett Packard in 1982 and discontinued in 1984. It was a basic programmable scientific calculator whose design, simplicity and RPN logic allows it to retain its value for the general public around the world.
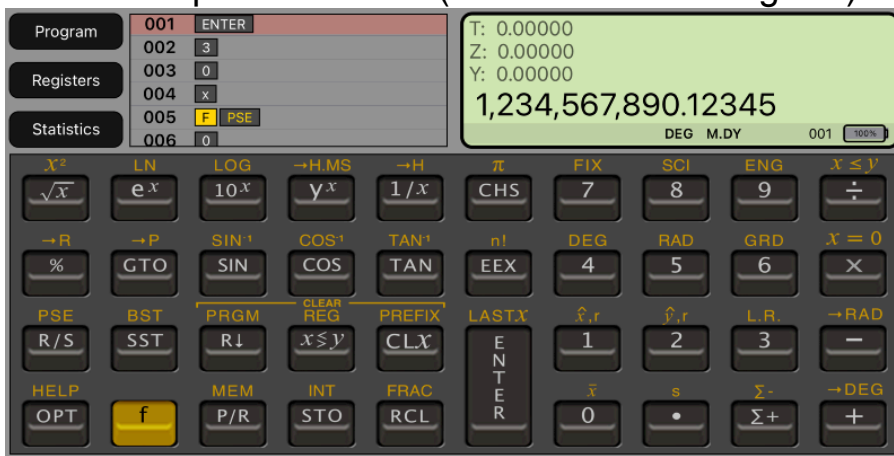
Landscape Orientation (Left Handed Setting OFF)
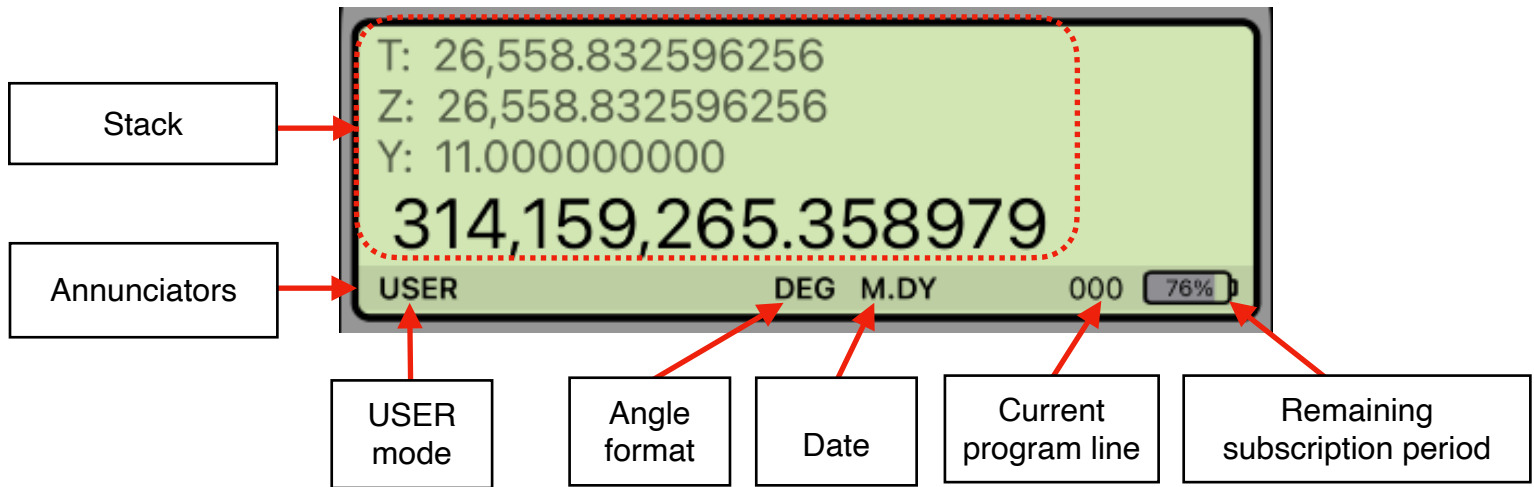
Portrait Orientation
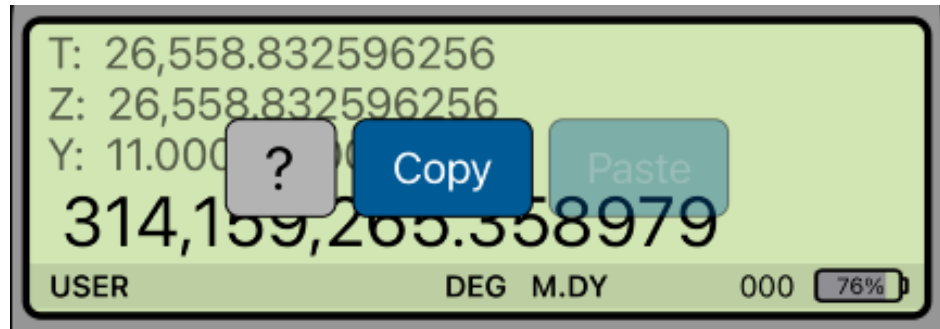
Landscape Orientation (Left Handed Setting ON)

The normal ON key present in the real calculator was changed by the **OPT** key to show or hide the **Main Menu** described next.
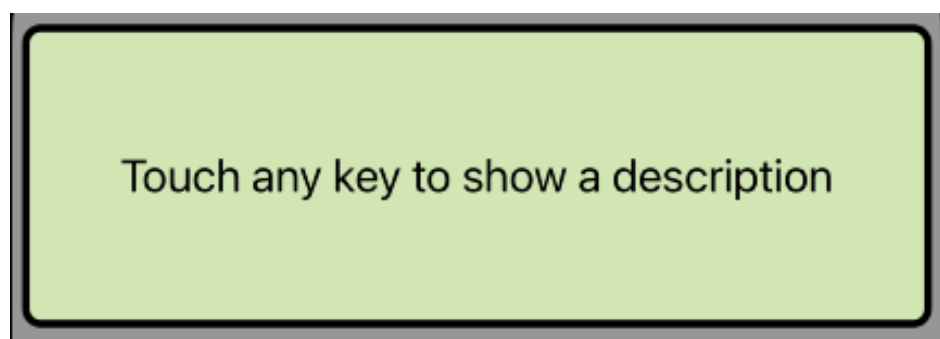
Normal Calculator Display

Stack

Annunciators

USER mode

Angle format

Date

Current program line

Remaining subscription period

T: 26,558.832596256
Z: 26,558.832596256
Y: 11.000000000
314,159,265.358979
USER   DEG M.DY   000 76%

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.

T: 26,558.832596256
Z: 26,558.832596256
Y: 11.00   ?   Copy   Paste
314,159,265.358979
USER   DEG M.DY   000 76%

The "**?**" button turn on the quick help for a short description of any keyboard or menu button.

Touch any key to show a description

Program Mode Display

When the Program Mode is set (**P/R** key) the display changes to show the Program Editor view (see the Program item of the Utilities / Editors menu):

Landscape Orientation (Left Handed Setting OFF)

Portrait Orientation

Landscape Orientation (Left Handed Setting ON)

You can swipe over the display to scroll the program listing to the desire location, and tap in any line to select it and edit as necessary.

Since the calculator is inspired in the real **HP-10C**, 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 buttons in the **HELP** view (tap **[f] [HELP]**).

Main Menu (OPT key)

Finance	Business	Date / Time
Statistics	Scientific	Convert
Program	Solver	Utilities

Finance Menu	
Account Balance	Calculates the balance of a credit line type account at any date based on cash transactions and interest rates applied.
Amortization	Calculates a loan Amortization Schedule from a single loan payment or from several payments at once.
Bond Price & Yield	Calculates annual or semi-annual coupons bonds with actual calendar or 360 days year in an easy way with all at sight.
Black-Scholes Options	Calculates the prices of a CALL option, PUT option and the Greeks values using the Black-Scholes European option valuation model.
> Cash Flows	
Equal Periods	Calculations for different cash flows occurring at regular periods.
Unequal Periods	Calculations for different cash flows occurring at different dates.
Depreciation	Calculates the Depreciation Schedule of an asset with all the values at sight, using SL, SOYD, DB, DBX and MACRS methods.
Interest Conversion	Calculates nominal and effective interest rates using either periodic or continuous compounding.
TVM: Time Value of Money	Calculates compound Interest problems involving money earning interest over a period of time.
Business Menu	
Bill-Tip-Split	Calculates the tip, total, and amount per person over a bill.
Break-Even	Analyze the equation: Profit = (Price - Var.Cost) • Units - Fix.Cost
Currency Exchange	Calculates a currency exchange what online rates.
Percents & Margins	Calculates percent change, percent total and business margins.

Date / Time Menu	
Perform Date and Time calculations with all values at sight.	

Statistics Menu	
> Load (X, Y) Data	Load a previously created "**(X,Y) List**" to the calculator.
> (X,N) List Statistics	Statistics calculations over one **(X,N) List** of data samples.
One List Statistics	Statistics calculations over one **(X,N) List** of data samples.
Two Lists Statistics	Statistics calculations over two **(X,N) Lists** of data samples.
Curve Fitting	Applies a regression model to fit a curve from two **(X,N) Lists**.
(X,N) List Editor	Opens an editor to create or edit a **(X,N) List**.
> (X,Y) List Statistics	Statistics calculations over one **(X,Y) List** of data samples.
Statistics	Statistic calculations over an **(X,Y) List** of data samples.
Curve Fitting	Applies a regression model to fit a curve from an **(X,Y) List**.
(X,Y) List Editor	Opens an editor to create or edit a **(X,Y) List**.
Probability	Calculates combinations, permutations and probability densities and lower-tail cumulative probability of selected distribution.
Scientific Menu	
Angles & Polar	Calculates conversions of polar-rectangular coordinates and values of angles between different units.
Complex Numbers	Special menus to perform operations and functions over complex numbers in cartesian or polar (phasor) form.
Logarithm	Applies Logarithmic functions to the displayed number.
Number Alteration	Applies common number alteration functions.
> Triangle Solution	Shows a submenu to select 2D or 3D triangle.
Plane Triangle	Solves a two dimensional triangle.
Spherical Triangle	Solves a triangle in the surface of a sphere of radius 'R'.
Trigonometry & Hyperbolic	Applies trigonometric and hyperbolic functions to the displayed number.
Universal Constants	Inputs the value of a selected universal constant from the NIST-CODATA database.
Vectors 3D	Special menus to perform operations and functions over 3D vectors in cartesian, spherical or cylindrical coordinates.

Convert Menu	
Angles & Polar	Convert Angle units and Polar-Rectangular coordinates.
Currencies	Exchange between two world currencies with on-line rates.
Interest Rates	Nominal and effective rates conversion.
Units	Calculates physical units conversions.
Program Menu	
> Load Program	Load a previously saved program in the calculator.
New…	Shows the Program Editor to start creating a program.
Program Editor	Opens the Program Editor view to create or edit programs.
Solver Menu	
Solve arbitrary algebraic equations entered and saved in the equation editor and creates a menu with all the equation variables to solve any of them.	
Utilities Menu	
General Settings	Shows a view to customize the calculator to your preference.
Storage Registers	Storage Registers content and operations.
Memory Content	Shows a view to see all memory content and backup or restore it.
Help Documents	Shows the help view to learn by example about all the calculator's menus.
> Editors	Shows a submenu to select one of the different data editors.
(Date, Trx) List	Opens an editor to create a list in the form "Date, Transaction".
(Date, CF) List	Opens an editor to create a list in the form "Date, Value".
(X,N) List	Opens an editor to create a list in the form "Value, Frequency".
(X,Y) List	Opens an editor to create a list in the form "X-value, Y-value".
Program	Opens the program editor to create or edit a program.
Solver Equation	Opens an editor to create or edit equations used by the Solver.
Units Conversion	Opens an editor for the physical units database.

For further information and support go to...
"www.rlmtools.com" or send an email to "support@rlmtools.com"