

MxCalc SE

for Palm OS

Version 3.0
User Guide

Product of:-

3GR Technologies

For Installation information & Sales/Support contacts refer the Read Me file.

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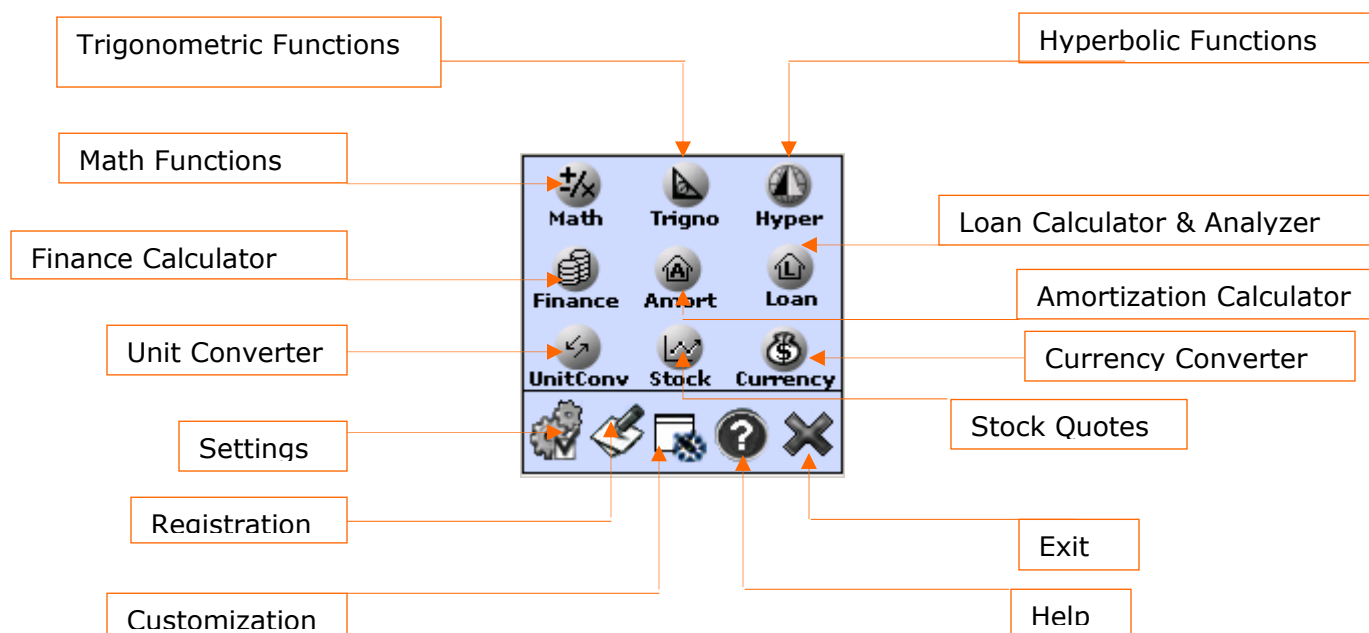
1. Introduction.

MxCalcSE version 3.0 is a multi utility tool. It comes with a most comprehensive Unit Converter, Scientific Evaluator, Loan Calculator & Analyzer, Amortization table generator & newly introduced Finance Calculator.

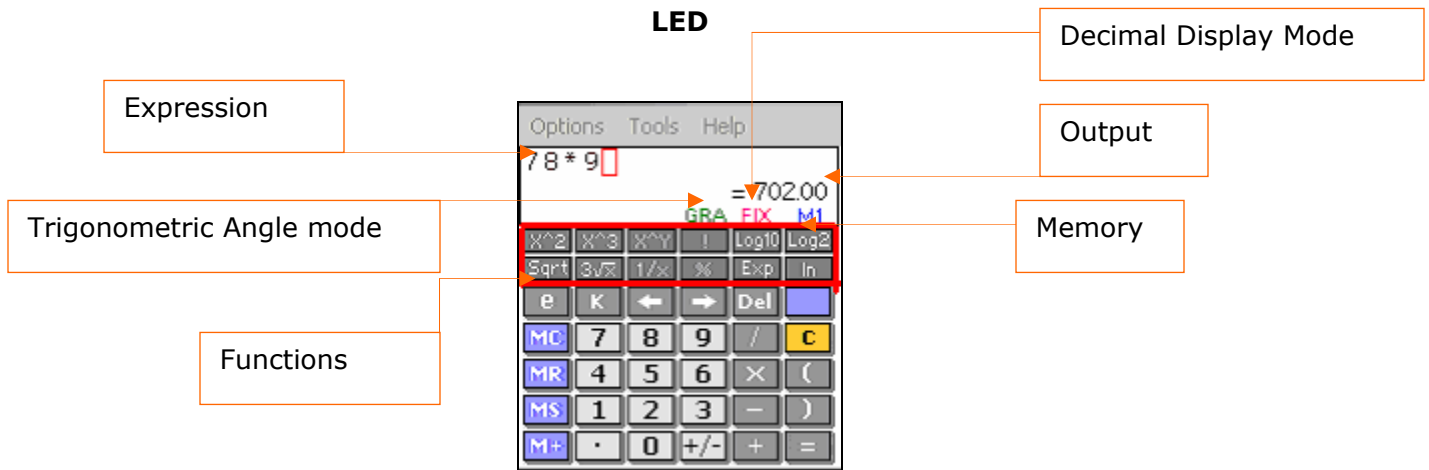
NEW v3.0

- ◆ Financial Calculator
- ◆ New MxLoan calculator with features like Compare loans, Save, Export etc.
- ◆ Smart LED - Allows to view & edit the expression easily, change settings etc.
- ◆ Finger operated menu & other operations.
- ◆ Multiple Memory registers.
- ◆ Numeric Display in Fix/Normal/Scientific.
- ◆ Removed error of Internet connection from MxStock & MxCurrency while Updating the currency.
- ◆ Faster loading of calculators.

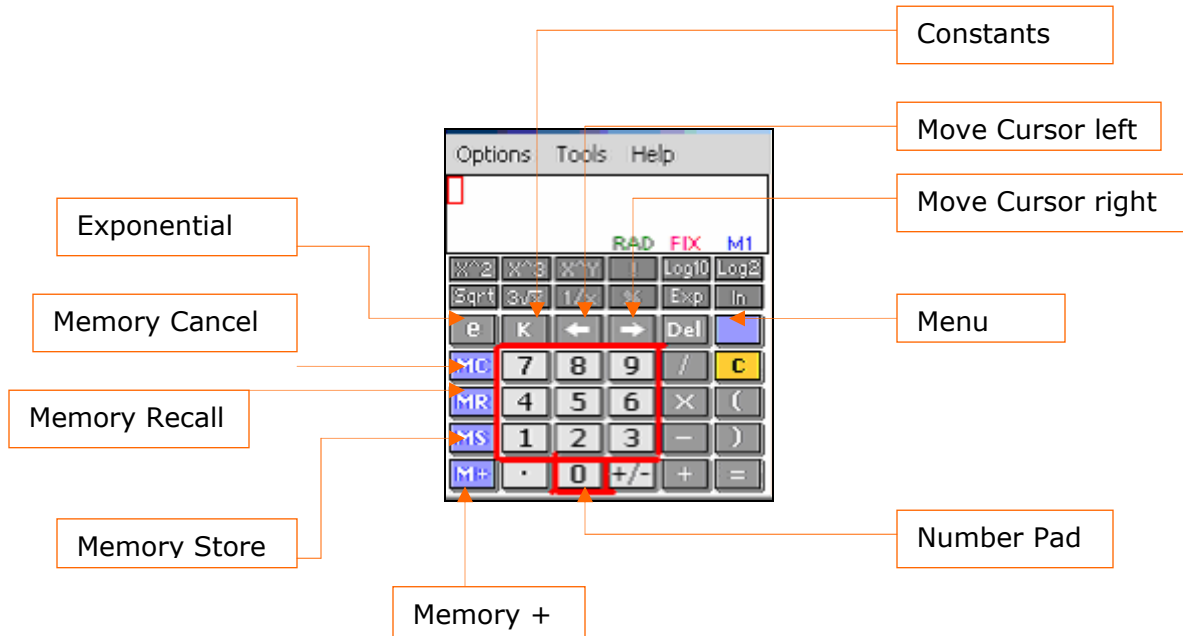
Main Menu.



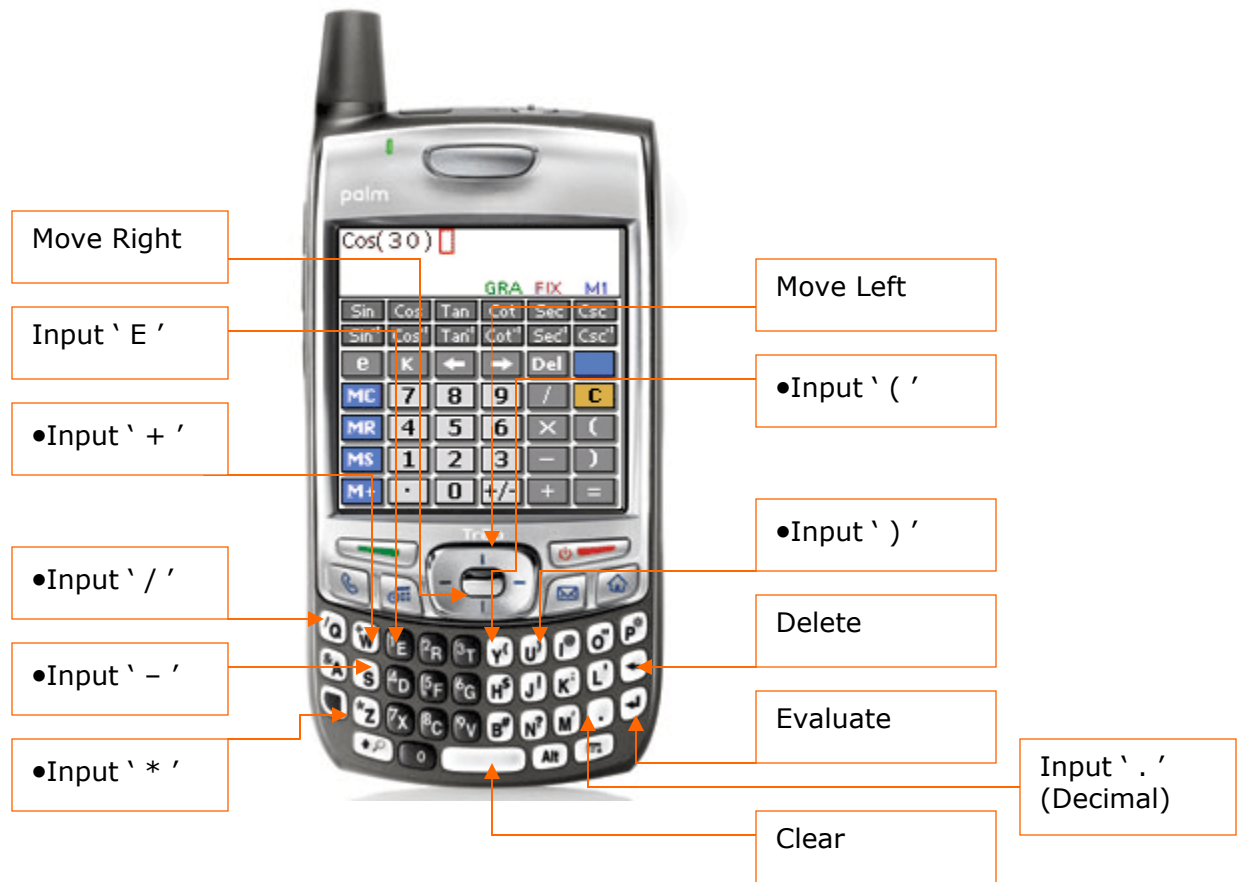
LED



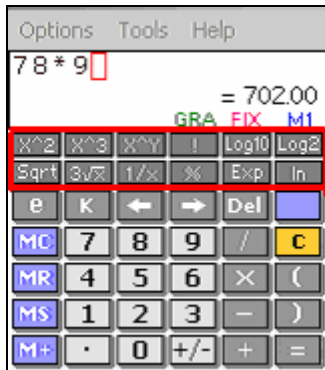
General Usage



Key Mapping for Treo Smartphones

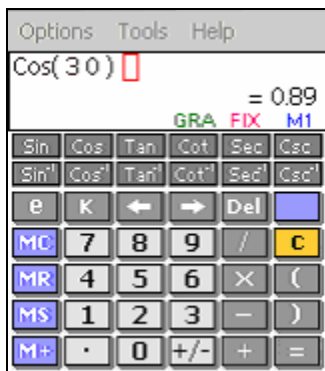


2. Mathematical Functions



- Tap on **Options** → **Math**
- You can also Launch Finance module by tapping **Math** button in **Menu**.
- **1/x** - Returns the inverse of a number.
- **Sqrt**- Returns the square root of number
- **Exp** - Returns e to the power of the number.
- **3√x** - Returns cube root of the number.
- **!** - Returns the factorial of a nonnegative number. The factorial of a number is equal to $1*2*3*...$ number. If number is not an integer, it is truncated.
- **x^2** - Returns the square of a number.
- **x^3** - Returns the cube of a number
- **In** - Returns the logarithm of a number to the natural base 'e'.
- **log10** - Returns the logarithm of a number to the base 10.
- **log2** - Returns the logarithm of a number to the base 2.
- **%**- Returns Percentage.
- **X^y** - Returns the y^{th} power of the number.

3. Trigonometric Functions:



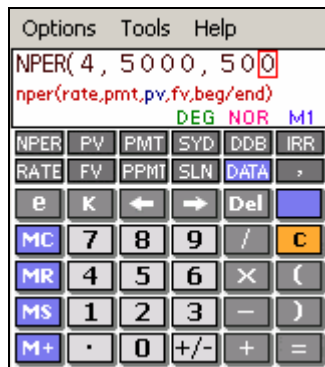
- Tap on **Options** → **Trigno**
- You can also Launch Finance module by tapping on the **Trigno** button in **Menu**.
- **Sin** - Returns the sine of the given angle.
- **Cos** - Returns the cosine of the given angle
- **Tan** - Returns the tangent of the given angle.
- **Cot** - Returns the cotangent of the given angle.
- **Sec** - Returns the secant of the given angle.
- **Cosec** - Returns the cosecant of the given angle.
- **asin** - Returns the arcsine of the given number.
- **acos** - Returns the inverse hyperbolic cosine of any real number. Number must be Greater than or equal to 1. The inverse hyperbolic cosine is the value whose Hyperbolic cosine is number, so $\text{ACOSH}(\text{COSH}(\text{number}))$ equals number.
- **atan** - Returns the arctangent of a number. The arctangent is the angle whose tangent is number.
- **acot** - Returns the arccotangent of a number. The arccotangent is the angle whose tangent is number.
- **asec** - Returns the arcsecant of the given angle.
- **acosec**- Returns the arccosecant of the given angle.

4. Hyperbolic Functions:



- Tap on **Options** → **Hyper**
- You can also Launch Hyperbolic Functions by tapping **Hyper** button in **Menu**.
- **sinh** - Returns the hyperbolic sine of a real number.
- **cosh** - Returns the hyperbolic cosine of a real number
- **tanh** - Returns the hyperbolic tangent of a real number
- **Sech** - Returns the hyperbolic secant of the given angle.
- **cosech** - Returns the hyperbolic cosecant of the given angle.
- **coth** - Returns the cotangent of the given
- **asinh** - Returns the inverse hyperbolic sine of a real number. The inverse hyperbolic sine is the value whose hyperbolic sine is number, so ASINH (SINH (number)) equals number.
- **acosh** - Returns the inverse hyperbolic cosine of a number. Number must be greater than or equal to 1. The inverse hyperbolic cosine is the value whose hyperbolic cosine is number, so ACOSH (COSH (number)) equals number.
- **atanh** - Returns the inverse hyperbolic tangent of a number. Number must be between - 1 and 1 (excluding - 1 and 1). The inverse hyperbolic tangent is the value whose hyperbolic tangent is number, so ATANH (TANH (number)) equals number.
- **acot** - Returns the arccotangent of a number. The arccotangent is the angle whose tangent is number.
- **asec** - Returns the arcsecant of the given angle
- **acosec** - Returns the arccosecant of the given angle.

5. Financial Functions:



- Tap on **Options** → **Finance**
- You can also Launch Finance module by tapping **Finance** button in **Menu**.
- **NPER** - Calculates number of periods of an investment based on periodic constant payments and a constant interest rate.
- **RATE** The annual interest rate.
- **PV** The present value
- **FV** The future value
- **PMT** The payment made each period
- **PPMT** - Calculates the principal payment for a given period of an annuity based on periodic fixed payments and a fixed interest rate.
- **SYD** - Calculates the sum-of-years digits depreciation of an asset for a specified period.
- **SLN** - Straight-line depreciation.
- **DDB** -Double-declining-balance depreciation method.
- **IRR** - Calculate internal rate of return for set of cash flow.
- **Data** -Opens Data input interface where you enter cash flow values for IRR calculations.
- **Comma separator** - It is used to separate parameters. As the values are entered the parameters in the Tip gets highlighted.

Input Data for IRR:

N = 4		▲
C.F. 0	-51000	↕
C.F. 1	48000	▼
C.F. 2	51000	
51000		Add
7	8	9
4	5	6
1	2	3
.	0	+/-
		OK

N = 14		▲
C.F. 0	-51000	↕
C.F. 1	48000	▼
C.F. 2	51000	
C.F. 3	48000	dd
C.F. 4	48000	
C.F. 5	51000	lr
C.F. 6	48000	ert
C.F. 7	49500	
C.F. 8	50500	K

- Tap on **Data** button to input data for IRR. Set number of samples in top input area.
- Input Data in data input area and tap on **ADD** button. Data is added/edited in the list.
- Tap on **UP** and **DOWN** button for scroll the data list. Tap on (**middle button**) to see all the values.
- **Edit**: Tap on Data value change the value and tap on add button.
- **Clr**: Remove all the data from data list.
- **Insert**: Insert a new data in between to data values
- **Ok**: Close the form
- **Cut**: Remove the data from it's place and you can paste at other position in list
- **Copy**: Copy data value and paste in data list
- **Delete**: Delete Data from the list

Set the value of N with the period of Cash Flows. If you decrease the value of N, the last records get deleted from the List. Atleast one Outflow (Negative Value) & One Inflow is required to calculate IRR.

6. Amort:

Options Tools Help

Loan amt: 200000 Term: 5

Periods: 4 APR: 3

Escrow: 4 Xtra Prn: 500

1 2 3 4 5 6 7 8 9 0 - <=

Int Saved:

Calculate Clear ?

After tapping on **Calculate** button

#	Int Rate	Loan Amt	Payme
1	0.008	190193.87	10807.
2	0.008	180314.2	10807.
3	0.008	170360.43	10807.
4	0.008	160332.01	10807.
5	0.008	150228.37	10807.
6	0.008	140048.96	10807.
7	0.008	129793.2	10807.
8	In nno	119420.07	10807.

Int Saved: 745.61

Calculate Back ?

- Tap on **Options** → **MxAmort**
- Enter all the mandatory Inputs.
- Then tap on **Calculate**.

Inputs (M – Mandatory, O- Optional)

- **Loan amt (M)**- Loan Amount
- **Term (M)**- # of years
- **Periods (M)**- It can be weekly, bi- weekly, 2/month, monthly, Quarterly, 2/year or yearly. E.g. Enter 12 in case of months and 4 in case of quarterly payments.
- **APR (M)**- Annual Percentage Rate
- **Escrow (O)**- Money placed with a third party for safekeeping either for final closing on a property or for payment of taxes and insurance throughout the year, an item of value, money, or documents deposited with a third party to be delivered upon the fulfillment of a condition. For example, the earnest money deposit is put into escrow until delivered to the seller when the transaction is closed.
- **Xtra prn (O)**- You can choose to add extra principal payments.

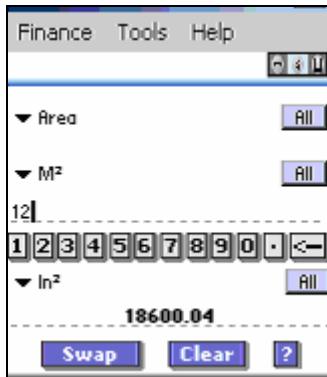
After tapping on Calculate it will show the details of the amortization.

By tapping on particular field you will get All following details.

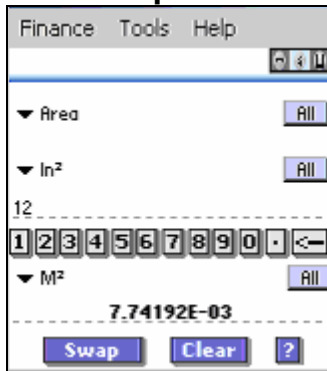
- The details include following contents:
- Interest Rate
- Loan Amount
- Applied Principle
- Applied Interest
- Total Interest
- Total Principle
- Total Extra

E.g. In the adjacent fig. at 4th term you will get remaining Loan amt.

7. Unit Converter:



After Swap



- Tap on **Options** → **MxUnitConv**
- You can also Launch Unit Converter module by tapping **Unit Conv** button in **Menu**.

This module of unit converter offers a very comprehensive collection of properties with respective units. A very usefull utility to Convert Values from one unit to another. Following are the steps for Converting Values.

- Choose a property from the list.
- Enter the value and Choose a unit from the 'From Value'
- Choose a unit from the 'To Value' and tap Calculate to see the conversion.
- You can use the Swap button to swap the value entered in 'From Value' with the value entered in 'To Value'. Shown in the figure.
- To filter properties and units for specific range of alphabets then tap on the buttons next to the properties/units drop downs. **[a-g]** **[h-m]** **[n-t]** **[u-z]**.
- Tap on clear button to clear Input values.

Note: Properties marked as Hidden will not be displayed in the List. Same goes with the Units.

8. Loan:

Options Tools Help

Saved Loans sorted by Name

☒ Carloan
☐ Homeloan

Find:

New Compare Delete Pref

Fig (a)

Name Carloan
Description HSBC
Amount 255000
DownPay \$ 0
Principal 255000
Interest Rate 400
Duration 5 Years
Payment Monthly 85000
Balloon Amount 0
Start Date 12/8/2006

More

1 2 3 4 5 6 7 8 9 0 . <

Calculate Clear Back

Fig(b)

Name	Carloan	Homeloan
Sale Price	255000	33333
Loan Amt	255000	33333
APR	400 %	4 %
Length	5 Years	4 Years
Total Pay	5100000	36126.24
Total Int	4845000	2793.24
Total	85000	752.63

New Done Delete Pref

Annual amounts for

Tax % of Price 10
Insurance % of Price 10
PMI % of Loan 2

Additional closing cost

Loan Point 1
Others \$ 1

1 2 3 4 5 6 7 8 9 0 . <

Calculate Clear Back

- Launch Loan module by tapping **Loan** button in **Menu** or Tap on **Options** → **Loan**.
- Select the predefined Loans or tap on 'New' button to perform a new Loan calculation. The form shown in fig (a) will appear.
- After entering all inputs, tap on Calculate button as shown in Fig (a).
- You can also compare the more then 2 loans by tapping Compare Button. Shown in fig (b).

Inputs (M – Mandatory, O- Optional)

- **Name (M)**- Any name can be entered to name scenario. This name will be displayed on the saved loan list.
- **Amount (M)** – Loan Amount
- **Down Payment (O)**- This is the down payment amount. It can be entered in dollars or percent of Amount.
- **Interest Rate (M)**- Interest rate in percent
- **Duration (M)**- Duration of the loan
- **Balloon Amount (O)**- Enter a lump sum final payment at the end of all loan length here. If the loan is to be paid off with normal payments, enter 0 or leave this field blank.
- **Start date** - Choose a start date for the first loan payment. This is used when displaying payment dates in amortization table.

More

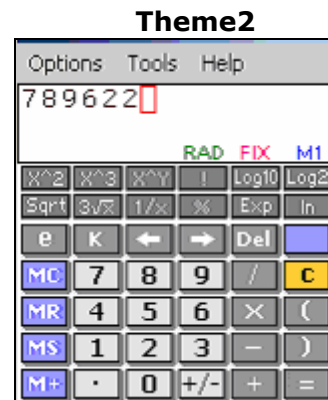
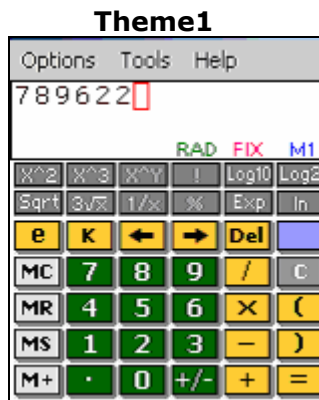
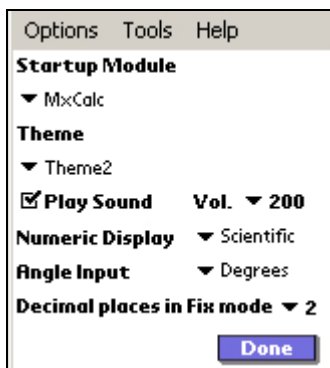
- **Tax (O)**-This is the yearly tax for the property. This value, if entered, will be divided by payment frequently and included in the payment amount.
- **PMI (O)**-This is the yearly PMI (mortgage insurance) amount for the property. This value, if entered, will be divided by the payment frequently and included in the payment amount.
- **Loan Points (O)**- Enter loan points to be paid here. This value is used when estimating closing cost on the overview screen.
- **Other (O)**-Enter other loan closing fees in this field. The value can be entered as dollars or a percent of loan amount. Use the dropdown selector to specify if the value is in dollars or percent. This value is used when estimating closing costs on overview screen.

9. Preferences:

Settings:



- Tap on **Tools → Settings**
- You can also Launch Settings, tapping **Settings** button in **Menu**.
- To set Startup Module select the Module from the dropdown list.
- To change the Themes select a Theme from the List of themes available Numeric Display, and Angle Input. The theme you select would become the default theme every time you load the program & in some case might load when you restart the program.
- Set the Decimal places in Fix mode.
- Check 'Play Sound' option to play button tap sound.



New Entry Form:

- Tap on **Tools** → **New Unit**.

The image displays two screenshots of a software interface for adding new properties or units. The left screenshot shows the 'Property' tab selected, with the 'Property Name' field containing 'widenesss' and the 'Base Unit' field set to 'cm'. The right screenshot shows the 'Unit' tab selected, with the 'Unit Name' field containing 'cm', the 'Factor' field set to '10', and a numeric keypad below. Red circles highlight the 'Property' and 'Unit' tabs, and the 'Base Unit' dropdown menu. Green text labels with red lines point to these elements: 'New Property' points to the 'Property' tab, 'New Unit' points to the 'Unit' tab, and 'Base Unit' points to the 'Inch' dropdown menu.

This module allows you to add new Property & Unit.

Following are the steps for adding new values in the database:-

1. Select an option from top of the screen – 'Property' or 'Unit'.
2. (a) **New Property** - Enter the New Property name in the Edit Area next to '**Property Name**' and the Base Unit of that Property tap on '**Add**' button. The value of Base Unit will be 1. All other units added to this Property will have values with respect to this unit.
2. (b) **New Unit** - Enter the New Unit name in the Edit Area next to '**Unit Name**'. Enter Unit Value next to in the edit area next to '**Factor**' and select a Base Unit.

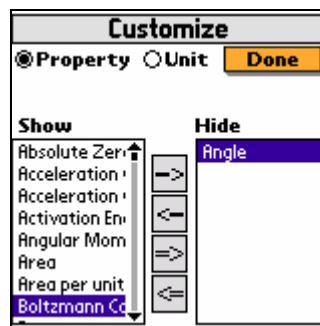
Customize:

The Customize module allows you to hide/show items in the list of Properties & Units. The items which are very rarely used can be hidden. Those items which are marked as hidden are not populated in the list and hence making the list short and easy to scroll.

Following are the steps to Hide/Show any Property

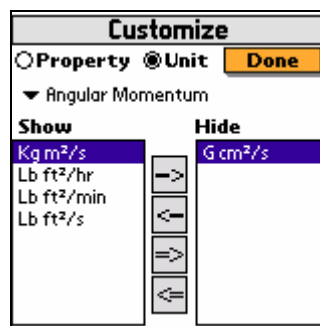
:-

- Select an option from top of the screen. This will load the lists with visible items (**left**) and Hidden items (**right**).
- Select items from the list (**multiple selection supported**) and then tap on '->' Button to hide or '<-' Button to show. Tapping on '=>' Button will make all the items in the Left list Hidden and tapping on '<=' Button will make all the items in the Right list Visible



Following are the steps for Hiding/Showing any Unit:-

- Select an option from top of the screen. Selecting a Group or Property will display the Formulas or Units respectively.
- Select items from the list (**multiple selection supported**) and then tap on '->' Button to hide or '<-' Button to show. Tapping on '=>' Button will make all the items in the Left list Hidden and tapping on '<=' Button will make all the items in the Right list Visible

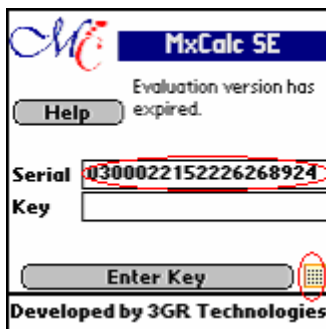


10. Registration

For registration:



- Tap on **Tools → Register**
- Put Serial number.
- After that Enter Key.
- In this way you can do registration.



Serial #

Input Panel

- To register you will need the HotSync ID. You can locate the HotSync ID as shown below in the figure.
- Select 'Custom' by clicking on the HotSync Icon in the System Tray. In the example given below **'John Cruz'** is the HotSync ID.
- Enter the key provided with your purchase (or later via email) in the input area below the serial # and tap on 'Enter Key' button.

