CIBC Personal Loan & Mortgage Calculator 636C User's Guide

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Table of Contents

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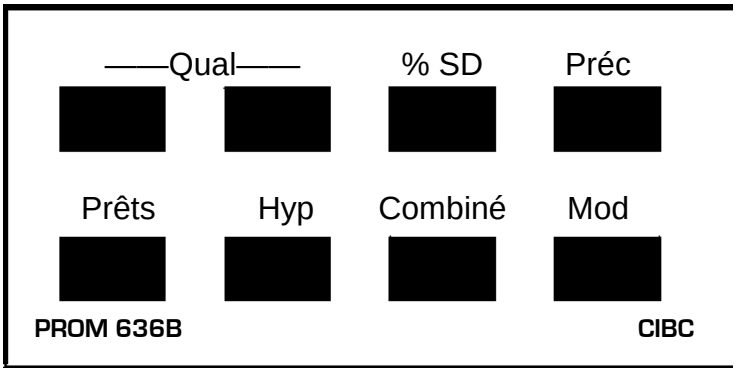
Key Template



Be careful when installing the template over the calculator's keys. If the template is not aligned correctly, it may keep one or more of the keys depressed. If this happens, the calculator will fail to operate at all. Remove the template and install it again correctly.

Backup Routine - [Backup] Function Key

This function key is used to back up in any of the other routines. You can back up as many prompts as you desire by continuing to push this key.

Rework Routine

You can rework the last routine executed by pushing the [Setup] key and then pushing [ENTER] (effectively entering a code of 0). This will restart the last routine saving all the entered data. You can accept the previously entered data by pushing [ENTER] in response to a prompt, or you can enter new data. A routine can be reworked as many times as desired.

Personal Loans - [Loans] Function Key

This routine computes a loan payment, amortization period, or available proceeds.

Prompt	**User Response**
PMT/$/AM 1/2/3?_	Enter "1", "2", or "3" for the Payment, Loan Amount, or Amortization Routine.
LOAN xxxxx.xx?_	(Does not appear in the amount routine.) Enter the amount to be borrowed.
PMT xxxx.xx?_	(Does not appear in the payment routine.) Enter the desired payment amount. (If the TDS Routine has passed a payment, just push [ENTER] to use it.)
AMORT-MTH xxx?_	(Does not appear in the amortization routine.) Enter the amortization period in months.
RATE % xx.xx?_	Enter the interest rate (as a percentage).
DATE *mmddyy*?_	Enter today's date in the format mmddyy, e.g., for March 15,1999, enter "031599".
AGE PRI-BOR xx?_	Enter the age of the primary borrower.[1]
AGE CO-BOR xx?_	If there is a coborrower, enter his or her age.[1]
LIFE x?_	Enter the correct life insurance code. 0 - None 1 - Primary borrower covered 2 - Coborrower covered 3 - Both covered (joint)
DIS x?_	Enter the correct disability insurance code. 0 - None 1 - Primary borrower covered (disability only) 2 - Coborrower covered (disability only) 11 - Primary borrower covered (Payment Protector) 12 - Coborrower covered (Payment Protector)

[1] An entry of 18 years of age or greater is required in order to provide insurance. If the age is greater than the maximum allowed for insurance, the message "AGE > XX" will appear briefly (XX is the maximum age for insurance). The coborrower, if there is one, must also be at least 18 years of age.

Computed Payment Disclosure

PMT-12 xxxxxx.xx	Payment frequency and amount.
LIFE x.xxx xxx.xx	Life rate & premium per payment.[2]
DIS x.xx xxxx.xx	Disability rate & premium per payment.[3]

TERM-MTH xx?_ Enter the interest term in months.

WITHOUT INS[4]	
LOAN xxxxxx.xx	Amount of loan.
2X xx.xx% xx.xx%	Semi-annual & loan interest rate.
PMT xxxxxx.xx	Payment amount.
INT CG xxxxxx.xx	Interest term costs.
PR BAL xxxxxxx.xx	Remaining principal balance.
TOT OB xxxxxxx.xx	Total obligation of borrower.

Computed Amount Disclosure

LOAN xxxxxx.xx	Available amount to borrower(s).

Computed Amortization Disclosure

AMORT (MTH) xxx	Amortization period in months.

Personal Loan/TDSR Debt Service - [Qual] Function Keys

This routine computes the total debt service for personal loan qualification.

Push the [Qual] function key above the [Loans] key to run this routine.

TDSR xx%?_ Enter the correct total debt service percentage.

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[2] The life rate shown is per $1000 per month of loan amount.

[3] The disability/Payment Protector rate shown is per $100 of payment.

[4] The "WITHOUT INS" message will appear for a moment to remind the user that all loans (both insured and uninsured) are disclosed as if they had no insurance to comply with disclosure regulations. This message does not necessarily mean that the loan has no insurance.

INC/YR xxxxx?_	Enter the annual income of the borrower.
MTGE/RENT xxxx?_	Enter the monthly mortgage or rent payment.
LOAN/MTH xxxx?_	Enter any existing monthly loan payments.
TAX/YR xxxx?_	Enter the annual property taxes.
HEAT/YR xxxx?_	Enter the annual heating costs.
CONDO/YR xxxx?_	Enter the annual condominium fees.[5]

If the resulting debt service payment is greater than $1.00, the program will automatically enter the Personal Loan routine and calculate the available proceeds.

Mortgages - [Mtge] Function Key

These routines compute mortgages with true monthly, semi-monthly, biweekly, or weekly payments and either monthly or semi-annual compounding of interest. Accelerated and "Option" biweekly and weekly payments can also be computed. The equivalent semi-annual rate of interest is also disclosed.

Prompt	**User Response**
MORT/C/F 1/2/3?_	Push the [Mtge] function key and enter "1" to compute a mortgage.
PMT/$/AM 1/2/3?_	Enter "1", "2", or "3" for Payment, Mortgage Amount, or Amortization routine.
MTGE xxxxxx?_	(Does not appear in the amount routine.) Enter the amount to be borrowed.
PMT xxxx.xx?_	(Does not appear in the payment routine.) Enter the desired payment amount. (If the GDSR routine has passed a payment, just push [ENTER] to use it.)
AMORT-MTH xxx?_	(Does not appear in the amortization routine.) Enter the amortization period in months.

The following four prompts appear if the Ontario Effective Cost of Borrowing Option is enabled. (See Setup Routine.) If enabled, enter the amounts for the items

[5] Only half of the entered fee amount is used in the calculations.

shown regardless of whether they are paid in cash or deducted from the principal amount of the mortgage. See the Ontario regulation for more information.

COMM?_	Enter any commission amount paid to obtain the mortgage.
BONUS?_	Enter any bonus amount paid to obtain the mortgage.
LEGAL?_	Enter any legal or title fees paid to obtain the mortgage.
OTHER?_	Enter any other fees paid to obtain the mortgage.
RATE % xx.xx?_	Enter the interest rate (as a percentage).
COMP FREQ 2?_	If the compounding frequency shown is correct, push [ENTER]; otherwise enter the correct frequency. (Default is 2. Frequencies allowed are 2 and 12.)
PMT FREQ 12?_	(Appears only in the payment routine.) Enter the desired payment frequency.[6]
ACCEL (0/1/2) x?_	(Appears only in the payment routine and only if the payment frequency is 24, 26 or 52.) Enter "1" to compute an "option" mortgage, a "2" for an accelerated mortgage, or a "0" for a conventional mortgage.[7]

Find Payment Routine

AGE PRI-BOR xx?_	Enter the age of the primary borrower.[8]
AGE CO-BOR xx?_	Enter the age of the coborrower.[8]
LIFE x?_	(Appears only if at least one of the borrowers is eligible for insurance.) Enter the life insurance code desired from the following table: 0 - None.

[6] Allowed frequencies are 12, 24, 26, & 52, corresponding to monthly, semi-monthly, biweekly, and weekly payments.

[7] In an "option" mortgage, the payment is computed as twelve times the conventional monthly payment divided by the payment frequency; an "accelerated" mortgage payment is computed as thirteen times the conventional monthly payment divided by the payment frequency.

[8] An entry of 18 years of age or greater is required in order to provide insurance. If the age is greater than the maximum allowed for insurance, the message "AGE > xx" will appear briefly (xx is the maximum age for insurance).

1 - Borrower covered.
2 - Coborrower covered.
3 - Both covered.

PMT-xx xxxxxx.xx	Payment frequency and amount.[9]
LIFE x.xx xxxx.xx	Life rate and premium per payment.

AMORT (MTH) xxx	Recalculated amortization.[10]

TERM-MTH xx?_ Enter the interest term in months.[11]

DAYS TO IAD xx?_ Enter the interest adjustment period in days.

IA AMT xxxxx.xx	Interest adjustment amount.
MTGE xxxxxxx.xx	Mortgage amount.
2X xx.xx% xx.xx%	Semi-annual rate and interest rate.
PMT xxxxxx.xx	Periodic net payment.
PR BAL xxxxxxx.xx	Remaining principal balance.
INT CG xxxxxxx.xx	Interest term costs.
NET ADV xxxxxxx.xx	Ontario "Net advance".[12]
ECB xx.xx%	Ontario Effective Cost of Borrowing.
IC SAV xxxxxx.xx	Interest savings (for accelerated mortgages).

Amount Disclosure

MTGE xxxxxx.xx	Mortgage amount available.[13]

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[9] The payment shown here includes the life insurance premium.

[10] If the mortgage is an accelerated or option type, the amortization term in months is recalculated using the mortgage payment. The recalculated amortization will always be less than the entered amortization.

[11] The interest term entry is checked to see that it corresponds with a whole number of payments. In the case of semi-monthly (24 per year), monthly, quarterly, semi-annual, or annual payments, the interest term can be any number of whole periods (3 months, 6 months, or 12 months) that is equal to or less than the amortization period.

In the case of biweekly (26 per year) payments, the interest term must be a multiple of 6 months (there being exactly 13 biweekly payments every 6 months). In the case of weekly payments, the interest term must be a multiple of 3 months (there being exactly 13 weekly payments every 3 months.) If the amortization period is less than the minimum whole number of payments, i.e. an amortization term of 4 months for a biweekly loan, it is not possible to disclose the loan.

[12] See the Setup Routine to enable the Ontario Effective Cost of Borrowing.

[13] This does not take into account life insurance. For a given payment amount, the available mortgage amount will be less if insurance is elected.

Amortization Disclosure

PPMT/YR 0?_ Enter the additional annual principal payment, if any.[14]

AMORT-MTH xxx	Calculated amortization period in months.
INT CG xxxxxx.xx	Interest charges over amortization.
xxx PMTS	Number of payments (if other than monthly).

CMHC Routine

This routine computes the minimum required downpayment[15] for conventional and CMHC insured mortgages. If the CMHC option is chosen, the CMHC fees are computed.

The mortgage amount is computed from the entered price and downpayment and is passed to the Mortgage Find Payment Routine - [Mtge] function key.

Prompt	**User Response**
MORT/C/F 1/2/3?_	Push the [Mtge] function key and enter "2" to run this routine.
PRICE 0?_	Enter the price of the property.[16]
CMHC (Y/N)?_	Push [YES] to compute the minimum downpayment with CMHC insurance, or [NO] to compute it without.
DN PMT xxxxx?_	The minimum downpayment is computed and displayed. To use it, just push [ENTER]; otherwise, enter the desired downpayment amount. If a downpayment less than the

[14] If no entry is made at this prompt, the amortization period is computed conventionally. If an entry is made, the program considers the amount entered to be an additional principal payment made at the end of each year.

If the amortization period is an exact multiple of 12 months, indicating the loan will amortize in some whole number of years, the final principal payment will vary between $0.00 to the entered amount.

It is possible to compute the final principal payment. Add the interest charge to the mortgage amount. From this subtract the sum of the regular payments (# of payments times the payment amount) and the one less than the whole number of years times the annual principal payment (# of years - 1 times annual principal payment). The balance is the final annual principal payment.

[15] For conventional mortgages, the minimum downpayment is computed as 25% of the price. For CMHC mortgages, the minimum downpayment is 5% of the price. The minimum downpayment is adjusted upwards to the next whole dollar.

[16] The price is assumed to be the value for purposes of calculating the loan-to-value ratio.

computed amount is entered, an error will be reported.

CMHC $ xxxxx.xx	The amount of the CMHC fee is displayed.[17] If no CMHC insurance was selected, this line will be 0.
AMT xxxxxx?_	The adjusted mortgage amount[18] will be displayed; to use it, push [ENTER]; otherwise enter the desired mortgage amount. The routine will continue through the standard mortgage routine to find the payment -- see Find Payment Routine on page 7.

Mortgage Gross Debt Service - [Qual] Function Key

Push the [Qual] function key above the [Mtge] key to run this routine.

GDS ##%?_	Enter the desired GDS percentage.
INC/YR xxxxx?_	Enter the annual income of the borrower.
TAX/YR xxxx?_	Enter the annual property taxes.
HEAT/YR xxxx?_	Enter the annual heating costs.
CONDO/YR xxxx?_	Enter the annual condominium fees.[19]

If the resulting debt service monthly payment is greater than $1.00, the program will automatically enter a Mortgage Amount routine.

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[17] Rates effective as of July 14, 2003. The CMHC Fee computation is based on the LTV% (loan-to-value ratio). The LTV% is found by dividing the mortgage amount by the price of the property and rounding the result to the nearest hundredth of a percent. The CMHC Fee is a percentage (see table below) of the mortgage amount based on the LTV%. The CMHC Fee is rounded to the nearest whole dollar.

LTV%	Fee
90.01 - 95.00%	3.25%
85.01 - 90.00%	2.00%
80.01 - 85.00%	1.75%
75.01 - 80.00%	1.00%
65.01 - 75.00%	0.65%
00.00 - 65.00%	0.50%

[18] The adjusted mortgage amount is the sum of the price and the CMHC fee less the downpayment.

[19] Only half of the entered fee amount is used in the calculations.

Blend Mortgage Routine - [Blend] Function Key

This routine computes the blended interest rate to be used when an older mortgage is rolled over into a larger mortgage.

Prompt	**User Response**
	Push the [Blend] function key to run this routine.
CUR MTGE 0?_	Enter the balance of the existing mortgage.
MTHS TO GO 0?_	Enter the number of months remaining in the original mortgage term.[20]
INT RATE % 0?_	Enter the interest rate of the existing mortgage.
NEW MTGE 0?_	Enter the entire amount of the new mortgage, including the existing mortgage amount.[21]
NEW TERM 0?_	Enter the mortgage renewal term in months.[22]
NEW RATE % 0?_	Enter the interest rate for the renewal period.

RATE %	xx.xx%	Blended interest rate.
AMOUNT	xxxxxx.xx	Additional funds to be provided.

Year 2000 Compliant

The date routines in this program will correctly recognize dates in the Year 2000 and beyond. Dates are entered in the 'mmddyy' format using 6 digits, with the last 2 digits reserved for the year. The span of dates that can be entered is from '010180' through '123179' (January 1st, 1980 through December 31st, 2079). Thus a date entry of '010100' represents January 1st, 2000.

The routine also correctly recognizes February, 2000 as a leap month.

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[20] This can be whole months, or whole and fractional months, e.g., 24.5 month.

[21] E.g., if the existing mortgage is $30,000 and the borrower wants an additional $20,000, enter $50,000 at this prompt. The entry at this prompt cannot be less than the existing mortgage balance.

[22] This must be at least as long as the remaining term entered above at the MTHS TO GO prompt, and it must be a whole number of months.

Equivalent Future Rate (EFR)

This routine performs a comparison between two renewal options of different terms and interest rates. The short term can be of any length, and the long term is longer than the short term but not greater than the remaining amortization of the mortgage. The long-term rate can be higher or lower than the short-term rate.

The comparison is based over the number of months in the longer term and calculates the future short-term rate that would have to be in effect for the remainder of the comparison period to make the short-term option financially equivalent to the long-term option.

If the actual interest rate in effect for the remainder of the comparison period happens to be exactly the computed equivalent future rate, it does not matter which option (short or long) the borrower takes. If the actual rate happens to be higher than the computed equivalent future rate, the borrower will gain by selecting the longer option. Conversely, if the actual rate happens to be lower than the equivalent future rate, the borrower will gain by selecting the shorter option.

If the investment opportunity interest rate is set to zero, the differences are compared by simple arithmetic. If the investment opportunity rate has a value, the time values of the differences are compared. See Investment Opportunity Rate below.

Prompt	**User Response**
MORT/C/F 1/2/3?_	Push the [Mtge] function key and enter "3" to start this routine.
PR BAL 0?_	Enter the current balance of the mortgage.
PMT 0?_	Enter the current mortgage payment.
PMT FREQ 12?_	Enter the payment frequency.[23]
INT RATE 0%?_	Enter the current interest rate.
SHORT TERM 0?_	Enter the shorter option interest term in months.
SHORT 0%?_	Enter the interest rate percentage offered for the shorter term.
LONG TERM 0?_	Enter the longer option interest term in months.

[23] Allowed frequencies are 1, 2, 4, 12, 24, 26, & 52, corresponding to annual, semi-annual, quarterly, monthly, semi-monthly, biweekly, and weekly payments.

LONG 0%?_	Enter the interest rate percentage offered for the longer term.
INV RATE 0%?_	Enter the investment opportunity interest rate percentage (see text).

AMORT	xxx	Remaining amortization.
EF RATE	x.xxx%	Equivalent future rate.

Equivalent Future Rate (EFR) Example

This example shows a practical application of the EFR routine. A borrower has a mortgage with a current balance of $104,930.57, a current interest rate of 9.00%, and a monthly payment of $915.74. The remaining amortization is 253 months.

The borrower is faced with renewing his or her mortgage and is trying to decide between a one-year and five-year renewal term. The one-year term offers a rate of 7.75% and the five-year renewal term offers a rate of 8.25%. We are going to compute the interest rate that would have to be in effect for the four-year period remaining after the one-year renewal term that would put the borrower in an equivalent financial position as taking the five-year option. Clearly, the rate for this four-year period would have to be higher than 7.75% (the short term rate) and even higher than the 8.25% rate. Using an investment opportunity rate (see below) of zero, we calculate the equivalent future rate to be 8.388%.

To illustrate that the calculated rate of 8.388% is correct, you can follow through the calculations below using the Mortgage routine in your calculator.

If the five-year renewal option is taken, the monthly payment will be $866.98 and the principal balance at the end of the five-year term will be $93,311.12.

If the one-year renewal option is taken, the monthly payment will be $835.06 and the principal balance at the end of the one-year period will be $102,841.67.

At the end of the one-year renewal period, the remaining amortization is 241 months (253 - 12 = 241). Using the principal balance of $102,841.67 that exists at the end of the one-year renewal period, we calculate the monthly payment for the subsequent four years at the equivalent future rate of 8.388% to be $874.53. The principal balance at the end of the four-year period is $93,331.90.

The total of monthly payments over the five-year period with the short-term renewal option is $51,998.16 (12 x 835.06 + 48 x 874.53 = 51,998.16). With the long-term renewal option, the total is $52,018.80 (60 x 866.98 = 52,018.80). Subtracting these two totals, we find the borrower will make $20.64 more in payments if he elects the long-term option.

However, we also find by comparing the remaining principal balances at the end of the five-year period that he will owe $20.78 less by taking the long-term option (93,331.90 - 93,311.12 = 20.78).

Thus if the interest rate for the four-year period happens to be exactly 8.388%, the borrower is in an equivalent financial position with either choice. (The small difference of $0.14 occurs because the equivalent future rate is calculated to only three decimal places.)

If the borrower thinks that the four-year rate available after the first year will be greater than 8.388%, the long-term option is the better choice. On the other hand, if the borrower feels the four-year rate will be less than 8.388%, the short-term option will be the better choice.

The above computations assume an investment opportunity rate of 0%. If this rate is 4.75%, the equivalent future rate increases slightly to 8.401%. The inclusion of the investment opportunity rate takes into account the timing of the differences in payments. By selecting the long-term option, over the first 12 months the borrower is making a payment each month that is $31.92 higher (866.98 - 835.06 = 31.92). However, for the subsequent 48 months, the borrower will be making a payment that is $7.55 lower (874.53 - 866.98), and at the end of the five years, will owe $20.78 less on the principal balance.

Investment Opportunity Rate

The purpose of the investment opportunity rate is to take into consideration the fact that one of the options (usually the shorter one) will have a lower interest rate and consequently a lower payment amount and that the savings could be invested to earn interest.

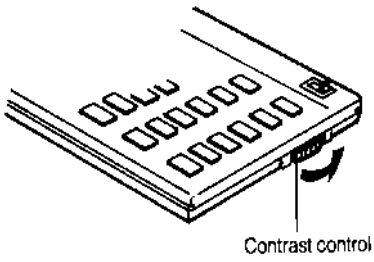
In the previous example, the long-term option has 60 monthly payments of $866.98, and the short-term option 12 monthly payments of $835.06, followed by 48 payments of $874.53. If the borrower elects the short-term option, he will save $31.92 for each of the first 12 payments, but will pay an extra $7.55 for each of the 48 subsequent payments. The investment opportunity rate is the interest rate that the borrower would receive on this account into which he would make a series of 12 monthly $31.92 deposits followed by a series of 48 monthly $7.55 withdrawals.

At the end of the comparison period, there would be some interest left in this account which the borrower could apply to reduce the principal balance if the short-term option is selected.

The program suggests an investment opportunity rate that is 3.00% less than the short-term rate, however, any rate can be entered. The additional interest that the borrower earns with the investment opportunity rate has the effect of raising the equivalent future rate slightly.

Battery Replacement & Maintenance

Adjusting the Display Contrast



The calculator is equipped with a control to adjust the contrast of the LCD (liquid crystal display). While looking at the display from a position about 70 degrees above the keyboard, first increase the contrast until black squares are clearly visible behind the characters and then decrease the contrast slowly until the squares just disappear.

If the display contrast becomes too dim, the batteries should be replaced.

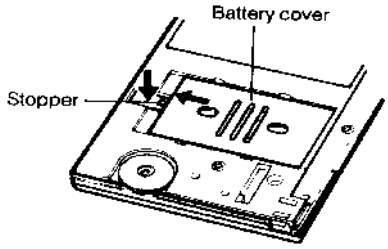
Battery Replacement

To replace the batteries, you should first have replacement batteries at hand. Two lithium type CR2032 batteries and a small screwdriver are required.

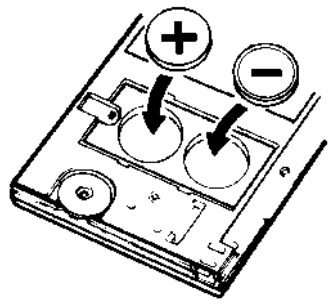
1) Make sure the calculator is turned off. Place the calculator face down on a table with the contrast control in the upper left-hand corner (the writing on the back of the calculator will be right-side up).

2) Remove the Software Cartridge from the calculator.

3) Using a small screwdriver, remove the two screws holding the back. While lifting the edge of the calculator's back cover closest to you, slide it up to remove it.



4) Slide the silver-colored battery compartment cover upwards to open the compartment; remove the cover. The batteries are now disconnected; remove and discard them.



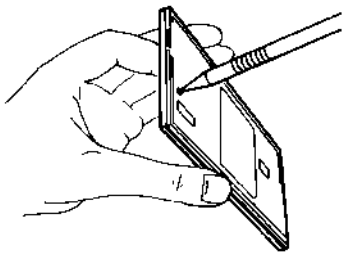
5) Install the new batteries, making sure the polarity (+ and -) is correct, and replace the battery compartment cover. (Make sure to replace the battery compartment cover--the batteries are not connected unless the battery compartment cover is in place.) Replace the back of the calculator by first hooking the 3 tabs on the top and then lowering the edge closest to you so you can replace the 2 screws.

6) Replace the Software Cartridge in the calculator. If it

has been out of the calculator for more than about 5 minutes, you will have to initialize it. See below.

Initializing the Software Cartridge

After replacing the batteries or if you remove the Software Cartridge from the calculator, you may need to initialize the Software Cartridge with the following steps. Software Cartridges have a label on the back side (the side that faces the calculator) which has instructions similar to the following.)



1) Install the Software Cartridge in the calculator. With a pencil or straightened paper clip and the calculator ON, push the "ALL RESET" button on the left side of the back of the calculator. You should see 4 stars in the display (2 on the left, 2 on the right). (On some calculators, there may be a white label over the "ALL RESET" button. If so, gently lift up the lower left corner to reveal it)

2) Push [ENTER]. You should now see a single star at the right edge of the display.

3) Turn the calculator off, wait a few seconds, and then turn it back on. You should see "0." in the display. The calculator is now ready to be configured.

4) Push the [Setup] key. You should see "CONFIGURING..." appear for a moment and then, after several seconds, the "CODE?" prompt will appear. Refer to Setup Routine - [Setup] Function Key on page 20 to select the correct province and desired language.

Error Messages

From time-to-time, the program may report an error. The information here provides a more detailed explanation of the error and the corrective action to be taken.

Errors take two general forms:

The first type is produced by one of the programs installed in the calculator and usually is the result of a data entry error or an unreasonable result (such as a loan with negative payments). If possible, you will be returned to the prompt that needs to be changed.

AMORT TOO LONG — Although the payment entered will amortize the loan or mortgage being computed (See "PMT TOO SMALL" below), it will take more than 480 months. Increase the payment and/or reduce the proceeds and

	recompute the loan.
INVALID AGE!	Entry of ages is optional, however, if an age is entered, it must be at least 18 years. No insurance can be computed unless an age is entered.
DOWN PMT < MIN	In the CMHC routine, the entered downpayment is less than the minimum requirement.
INVALID CMP FREQ	The compounding frequency entered is not valid. For mortgages, it can be either 2 or 12, corresponding to semi-annual and monthly compounding.
INVALID ENTRY	The entry just made is not allowed.
INVALID INS CODE	The insurance code entered is not legal. Life codes can be from 0, 1, 2 or 3; personal loan disability codes can be 0, 1, 2, 11 or 12.
INVALID INT TERM	The interest term entered is not valid. This can occur if the interest term 1) is equal to zero, 2) is greater than the amortization period of the loan or mortgage, or 3) does not correspond with a whole number of payments. This last condition can occur when the payment frequency is weekly or biweekly.
INVALID PMT FREQ	The mortgage payment frequency is not valid. It can be 12, 24, 26, or 52 corresponding to monthly, semi-monthly, biweekly, or weekly payments.
PMT < $1.00	The available payment computed by either of the Qualify Routines is less than $1.00, indicating that the borrower is already at or above his or her maximum debt service.
PMT TOO SMALL	The payment entered will not amortize the loan or mortgage because the periodic interest due exceeds the payment amount. The payment must be increased or the proceeds reduced. (See also "AMORT TOO LONG!" above.)
L TERM > REM AMORT!	In the Equivalent Future Rate routine, the entered longer term is greater than the remaining amortization.

The second type appears as "ERROR # (IN ###)" and is a system error whose significance can be determined from the following table. If one of these errors occurs, push the [CA] key to clear the error before starting a routine.

ERROR 1 (IN ###)	The batteries may be weak. Try replacing them with new ones. If this error persists, the program has been changed due to some mechanical failure and will no longer operate. The calculator needs to be returned for maintenance.
ERROR 2 (IN ###)	A calculation error occurred because of a divide by 0 or overflow problem. This can occur if the amortization period or other items are not entered causing the calculator to use a value of zero.
ERROR 3 (IN ###)	The calculator needs to be initialized by using the Setup Routine. The data arrays have not been established and the programs are trying to obtain data from them.
ERROR 4 (IN ###)	If your calculator is equipped with a Software Cartridge, you may be able to correct this error by following the instructions in the section Initializing the Software Cartridge.
ERROR 7	A computed or entered number is too large to be displayed. Generally, dollar amounts are limited to $999,999.99. (For transactions over $999,999.99, the amounts can be divided by 10 before being entered into the calculator and the computed results multiplied by 10 to obtain the correct results.)
ERROR #	Other errors should be reported with the circumstances under which they occurred.

It is possible to attempt to compute illogical loans with the calculator (for example entering a proceeds amount of 0). Although the program will usually abort with an "ERROR 2 IN ###" message indicating an underflow or overflow condition, in a few cases the calculator may "hang" (the display will stay blank and the keys become inoperative). If this occurs, push the [CA] key or turn the calculator off and back on.

Installing Your Name in the LoanMaker

You can install your name (or an identification number, telephone number, or other message) in the Calculator. Once installed, your name will appear briefly each time you start a routine.

To install your name, push the [Setup] key and enter a code of 726 in response to the "CODE?_" prompt. The message "INSTALL NAME" will appear briefly, followed by a single question mark, **"?_"**.

To enter a character (letter, number, or symbol), enter the appropriate code number from the table below and push [ENTER]. The character will appear in the display followed by a question mark. Enter the code number for the next character and push [ENTER] again. Continue entering code numbers for all the characters you wish to enter, and then push [ENTER] when you're done. If you make a mistake, push the [Backup] key to erase the last character.

You can enter up to 16 characters. The first character must not be a space (code 27), however, spaces can be used in any other position.

For example, to enter the name "LARRY 555-1234", enter the code numbers 12, 1, 18, 18, 25, 27, 35, 35, 35, 28, 31, 32, 33, 34.

To remove a name without installing a new one, start the Install Name routine and just push [ENTER] when the "?_" prompt appears.

Character Code Table

A	1	P	16	1	31	(	46
B	2	Q	17	2	32	)	47
C	3	R	18	3	33	+	48
D	4	S	19	4	34	,	49
E	5	T	20	5	35	.	50
F	6	U	21	6	36	/	51
G	7	V	22	7	37	:	52
H	8	W	23	8	38	;	53
I	9	X	24	9	39	<	54
J	10	Y	25	!	40	=	55
K	11	Z	26	"	41	>	56
L	12	(space)	27	#	42	?	57
M	13	-	28	$	43	@	58
N	14	*	29	%	44		
O	15	0	30	&	45		

Setup Routine - [Setup] Function Key

CODE?_ — Push the [Setup] key and enter the appropriate code number.

CODE = 1 — Rework the last routine. You can accept the previously entered data by pushing [ENTER] in response to a prompt, or you can enter new data.

CODE = xx — **Select Province and Language.**

Select the appropriate code number from the table below.[24]

Province	English	French
Ontario	538	912
Quebec	672	160
All other provinces	339	789

Code = 4 — **Change Language**

ENG(1)/FRAN(2)?_ — Enter a "1" for English, or a "2" for French.

Code = 569 — **Change Sales Tax Rate**

TAX x.xxx%?_ — If the sales tax rate shown is correct, push [ENTER]; otherwise enter the desired rate as a percentage (e.g., enter 9.00 for 9%).[25]

[24] It is important to select the correct province. Insurance premium calculations vary by province, and the results will not be correct if the wrong province is selected. The Ontario Effective Cost of Borrowing option is activated in Ontario (you can use setup code 633 above to turn this option on or off in any province).

[25] The tax is applied to the credit insurance premium. The rate is set automatically when the province is selected.