

MTGEDyesUniversal Mortgage System , Wm. W.
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System HelpTRUEyes09/09/96

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Help file produced by **HELLLP!** v2.7 , a product of Guy Software, on 9/9/96 for Wm. W. Odlum.

The above table of contents will be automatically completed and will also provide an excellent cross-reference for context strings and topic titles. You may leave it as your main table of contents for your help file, or you may create your own and cause it to be displayed instead by using the I button on the toolbar. This page will not be displayed as a topic. It is given a context string of `__` , but this is not presented for jump selection.

HINT: If you do not wish some of your topics to appear in the table of contents as displayed to your users (you may want them ONLY as PopUps), move the lines with their titles and contexts to below this point. If you do this remember to move the whole line, not part. As an alternative, you may wish to set up your own table of contents, see Help under The Structure of a Help File.

Do not delete any codes in the area above the Table of Contents title, they are used internally by HELLLP!

How to View this Window in full size, click Maximize on Title Bar.

Help-Always on Top should show check mark. If not and this window is made smaller, clicking on the Mortgage program will hide this one which will still be running and using memory.

Close this Help file by clicking on Exit.

'Try Before You Buy' software is copyrighted software that is distributed by authors through bulletin boards, on-line services and disk vendors.

It allows you to try the software for a 30 day trial period. If you decide not to continue using it, please delete it. You only pay for it if you decide it is useful. We rely on your honesty and integrity.

You benefit because you can try out the software to determine whether it meets your needs, before you pay for it. Unlike buying from a Store where you have no opportunity to try it out before paying.

Even if the person who supplied you with this software tells you that registration is not necessary, this is not so.

When using this 'Try Before You Buy' version of the program you will be presented with nag messages asking you to register as I have not been paid for this copy.

On registering I will send you the latest Commercial Version of Universal Mortgage System. Without the Order Form or nag messages.

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To access this help file from within the program press F1 key.

Overview

Let us begin by cutting through the confusion created by the jargon and hype used by the mortgage industry.

A **mortgage** is the security you give to the lender. It is registered against a specific property and represents up to 90% of the value of the property, with the balance put up by the borrower. It will be removed when the loan is repaid.

In the event the borrower defaults on his payments, title to the property goes to the lender who can then sell it to get his money back.

A mortgage consists of four parts:

(1) Principal Amount: The total amount of money borrowed.

(2) Interest Rate: The nominal (Quoted) annual rate of interest to be paid on the outstanding balance.

(3) Amortization Period: The period over which the Principal Amount is fully paid. Usually stated in years.

(4) Repayment schedule: Based on one fixed amount paid each calendar month over the Amortization Period.

Each payment consists of a portion of the outstanding balance of the Principal plus the Interest on the outstanding balance of the Principal for that month.

As the outstanding balance of the Principal decreases each month the amount of Interest paid on it decreases, leaving an increasing amount of the fixed monthly payment to apply against the outstanding balance of the Principal.

That's it !. This is the only way mortgages are calculated and it is established by Law and general business practice.

The only way the amortization period can be reduced is by making extra payments that reduce the outstanding balance of the Principal.

This can be done using various methods. Lump sum payments or extra payments which are automatically made each year. These are explained in detail below as are the terms used in this program.

Interest compounding periods

Financial institutions use a fixed number of times each year to compound the nominal (quoted) annual interest on a mortgage loan.

Most borrowers are unaware of this unless the financial institutions are forced by law to make this disclosure.

Generally all major financial institutions in the same country use the same method. Which makes it easy to compare mortgage loans from different sources.

Beware of anyone who uses a more frequent interest compounding period as it will increase the amount of each payment by a small amount but over the years it adds up to a large amount.

Canada: Semi-annual compounding. (every six months).

United States: Monthly compounding. (every month).

Example of different interest compounding periods and how it effects the monthly payment:

| Mortgage Amount | Annual Rate(%) | Amortized Years | Compounding Periods | | Monthly Principal + Interest payment | Real Annual Rate(%.)(APR). |
|-----------------|----------------|-----------------|---------------------|---|--------------------------------------|----------------------------|
| \$100,000.00 | 8% | 25 | annually | = | \$753.42 | 8.00%. |
| \$100,000.00 | 8% | 25 | semiannually | = | \$763.21 | 8.16%. |
| \$100,000.00 | 8% | 25 | monthly | = | \$771.82 | 8.30%. |

Monthly Payment

This is the standard mortgage. A fixed Payment (a blend of principal and interest) is made once every calendar month for a total of 12 payments for each year of the amortization period of the mortgage.

All other more frequent payment schedules are based on this one. Some offer very little savings in either time required to pay off the mortgage or money, only the accelerated ones offer great savings in both.

To see the difference between them use **'Mortgage Comparisions'** . Change only the **'Frequency and Type of each Payment'** for each of the 6 choices and click the **'Calculate'** button each time.

SemiMonthly Payment

This type of payment is not accelerated. The monthly payment is divided by 2 to get the semimonthly payment.

Payment is made twice a month, 24 payments each year. This results in a small saving in interest with the result that the mortgage is paid back a few months sooner.

2 Weeks Payment

This type of payment is not accelerated. The monthly principal and interest payment is multiplied by 12 to get the annual amount of the payments which is then divided by 26 to find the payment for every 2 weeks.

Payment is made every 2 weeks (14 days), 26 payments each year. This results in a small saving in interest with the result that the mortgage is paid back a few months sooner.

1 Week Payment

This type of payment is not accelerated. The monthly principal and interest payment is multiplied by 12 to get the annual amount of the payments which is then divided by 52 to find the weekly payment.

Payment is made each week (7 days), 52 payments each year. This results in a small saving in interest with the result that the mortgage is paid back a few months sooner.

Biweekly(Acc) Payment

Called Biweekly Accelerated. Each payment is at exactly one-half the normal monthly payment.

Payment is made every two weeks (14 days), 26 payments each year.

In the normal monthly payment schedule a month consists of $52 \text{ weeks} \div 12 \text{ months} = 4.33 \text{ weeks}$.

In the accelerated schedule a month consists of $52 \text{ weeks} \div 4 \text{ weeks} = 13 \text{ months}$.

As a result of these two extra payments, which equal one normal monthly payment, the mortgage loan is paid off in a much shorter time period.

The savings that result are all from interest not paid because of the shorter time period.

Weekly (Acc) Payment

Called Weekly Accelerated. Each payment is at exactly one-fourth the normal monthly payment.

Payment is made every week (7 days), 52 payments each year.

In the normal monthly payment schedule a month consists of $52 \text{ weeks} \div 12 \text{ months} = 4.33 \text{ weeks}$.

In the accelerated schedule a month consists of $52 \text{ weeks} \div 4 \text{ weeks} = 13 \text{ months}$.

As a result of these four extra payments, which equal one normal monthly payment, the mortgage loan is paid off in a much shorter time period.

The savings that result are all from interest not paid because of the shorter time period.

Term

Term refers to the actual number of years the mortgage contract is in effect. After that period it must be re-negotiated. Usually at the Annual Interest Rate then prevailing.

Terms can consist of 1, 2, 3 or 5 years.

Let the borrower be beware!

As mentioned earlier the method to calculate a mortgage is fixed by law and based on one fixed payment, which consists of principal and interest, each calendar month for the amortization period.

The interest portion of each payment is calculated by multiplying the outstanding balance of the principal by a factor called the Interest Rate Factor sometimes referred to as the Periodic Rate.

However, the law makers have not got around to establishing a standard method for calculating the Interest Rate Factor for other frequencies of payment.

A very small number of Financial Institutions use a standard 365.25 day year to establish the Interest Rate Factor.

This was arrived at by calculating to include a leap year, which has 1 day more every fourth year. $365 \text{ days} \times 4 \text{ years} = 1460$ adding 1 for the leap year $= 1461 \text{ days} \div 4 = 365.25 \text{ days}$.

Using the 365.25 day year gives the borrower the best savings on the total interest paid on a mortgage when using more frequent payment methods.

Others will use variations of what constitutes the number of days in a year.

Most use a 365 day year. Which increases the total amount of interest paid by a slight amount.

Then there are those who will use numbers all the way down to a Bankers year of 360 days.

You may think it laughable the stress placed on how many days constitute a year. Wait until you check the following table.

Principal Amount \$100,000.00

Interest Rate 10%

Amortization Period 25 years.

Interest Compounding Periods. Monthly = American.

Type: Biweekly accelerated payments = 26 payments each year.

| Days in Year | Monthly P + 1 | Years to Final Pmt. | Total Interest Cost | Savings vs. Monthly Pmt. |
|--------------|---------------|---------------------|---------------------|--------------------------|
| 365.25 | 454.35 | 18.58 | 119,425.81 | 53,184.42 |
| 365 | 454.35 | 18.62 | 119,711.30 | 52,898.92 |
| 364 | 454.35 | 18.75 | 120,865.79 | 51,744.44 |
| 360 | 454.35 | 19.12 | 125,762.25 | 46,874.98 |

Difference between 365.25 day year and 360 day year = \$6,309.44

One further way to pay down your mortgage is worthy of mention, that is by making additional payments each year.

Using the same parameters as above but using the standard monthly schedule.

If you make additional payments equal to the monthly principal and interest of 908.70 each year, starting with year 2 up to year 20.

Mortgage will be paid off in 19.17 years. Total Interest cost: \$125,025.66. Savings: \$47,584.57.

This program uses the Interest Rate Factor established by law for the standard monthly payment.

For different payment frequencies the 365 day year is used to calculate the Interest Rate Factor.

The commercial version of the program allows the user to change the Interest Rate Factor.

Data Input Boxes

The following data input boxes perform the same function in both mortgage table and mortgage comparison calculations. To change the contents of any input box (yellow) click on it.

Do not use any symbols or comma's with numerical entries. Only period or decimal input will be accepted. On leaving an input box the numbers will be formatted automatically.

Using various combinations of inputs makes it possible to perform any mortgage calculation.

Experiment - Cannot do any harm to the computer or the program. If the calculation is impossible an error message will be generated.

Principal amount of mortgage

Type in the total amount of the mortgage.

Annual interest rate(%)

Type in the annual interest rate - 10% as 10.

Amortization period in years

Type in the length of the amortization period in years.

Interest compounding periods in year

Click on the down-arrow and select the interest compounding period used by your financial institution. There are 5 choices.

| | |
|-------------|-------------------|
| Monthly | Every month. |
| Semi-annual | Every six months. |
| Bimonthly | Every 2 months. |
| Quarterly | Every 3 months |
| Annual | Every 12 months. |

Canada: Semi-annual compounding. (every six months)
United States: Monthly compounding. (every month).

Frequency and type of each payment

Click on down-arrow to select the time period for each payment.

There are 6 choices.

| | |
|---------------|----------------------------------|
| Monthly | Every calendar month (Standard). |
| Bimonthly | Two every month. |
| 2 Weeks | Every two weeks (14 days) |
| 1 Week | Every week (7 days) |
| Biweekly(Acc) | Every two weeks (14 days). |
| Weekly(Acc) | Every week (7 days). |

Show Payments

Click on the '**All**' option to display all payments or the '**Annual Totals**' option to display annual payments

[Additional payments](#)

Click on the '**Entry Form**' button to open up the **Additional Payments** table.

[Toolbar Command Buttons](#)

Each command button is named with the function that it will perform when clicked.

Mortgage Tables

The top row of boxes will show the following information generated for each calculation.

Interest Rate Factor used in Calculation: The outstanding balance of the Principal is multiplied by this number to get the interest due for that payment. The Interest Rate Factor is sometimes referred to as the Periodic Rate.

No. of Payments each Year: This number will depend on the setting in the 'Frequency and type of each payment' input box.

No. of Years to Final Payment: Shows the actual number of years taken to pay off the mortgage.

For monthly payments the number of years will be the same as the amortization period.

The number of years will vary using accelerated payments or additional payments.

Principal + Interest Payment: This shows the fixed payment of Principal and Interest necessary to amortize the loan.

Total Paid over Life of Mortgage: Shows all payments made of both principal and interest.

Total Interest Savings: When using a different payment frequency than monthly. This will show the savings in total interest versus that paid under the standard monthly schedule.

If the **Show Payments** option is set to **'All'** every payment made will be shown in the spreadsheet. If option is set to **'Annual'** totals for each year will be shown.

Each row will show the following information.

Payment No. Year: Shows the number of each the payment and beside it the number of the year in which it was made.

Interest Payment: Shows the amount of interest paid from the fixed payment.

Principal Payment: Shows the amount of principal paid from the fixed payment.

Remaining Balance: Shows the remaining balance after deduction of the principal paid.

Cumulative Interest: Total of all interest paid to date.

Cumulative Principal: Total of all principal repaid to date.

Mortgage Comparisons

In the top spreadsheet. Each row displays information on one mortgage calculation and will show the following details:

Row Compound Frequency: Three pieces of information about the calculation are shown in this column:

Row: The number of the row.

Compound: Shows the interest compound period. Identified by the first letter.
M = Monthly, S = Semi-annual, B = Bimonthly, Q = Quarterly and A = Annual.

Frequency: The frequency and type of payment:

1m = Monthly, sm = Semimonthly, 1wk = Weekly, 2wk = 2 Weeks, b(a) = Biweekly(Acc) and w(a) = Weekly(Acc).

Amortization Period: Shows the amortization period in years.

Retired at end of Year: Shows the actual number of years taken to pay off the mortgage.

For monthly payments the number of years will be the same as the '**Amortization Period**'.

The number of years will vary using accelerated payments or additional payments.

Accelerated payment can be identified from the '**Annual Number of Payments**' column.

Additional Payments can be identified by a * in the '**Retired at end of Year**' column.

Annual Number of Payments: Shows the number of payments made each year.

This will vary depending on the '**Frequency and Type of Payment**' chosen.

Amount of Mortgage: The total amount of the Principal borrowed.

Annual Interest Rate: The annual(quoted) interest rate.

Principal + Interest Payment: The amount of the fixed principal and Interest payment made each payment period.

Total Interest Payment: Total interest paid over the life of the mortgage.

The bottom spreadsheet displays all additional payments paid in a calculation. The header shows the row number of the calculation in which the amounts were used.

Each row display consists of two columns, the first column shows the year number while the second column shows the amount.

Personalize Settings

Allows original settings to be changed anytime to those you use most frequently.

Settings for **Change Interest Compound Period** and **Change Printer Fonts** are automatically saved to disk and remain in effect every time you start up the program.

Change Interest Compound Period

Select the option for the method used by financial institutions in your area.

Choices are:

Monthly
Biweekly
Quarterly
Semi-annually
Annual

Change Interest Rate Factor - days

There are 6 options to allow changes to the number of days in a year used to calculate the Interest Rate Factor.

365.25 day year.
365 day year.
264 day year.
363 day year.
362 day year.
361 day year.
360 day year.

On startup the option is set for 365 days as it used by most major Financial Institutions. Changes can be made anytime while the program is running. The settings are not saved.

See Overview for an explanation of why different days in a year are used and how this effects the Interest Rate Factor.

Change Printer Fonts

Select the printer font you find works best with your printer.

Choices are:

Standard Printer Font.
Courier New 11 Point Font.

Type In Your Name

Type in your name in the yellow input box. If wider than the box, text will scroll to the left.

Number of characters are limited to 80, which is the length of the display line at the bottom of the Main Menu.

To change the text be sure to delete all the characters in the input box.

Additional Payments

Click on the **'Entry Form'** button to open up the **Additional Payments** table.

Table will list each year of the amortization period.

In the input box above **'Year'** type in the number of the year that you wish to make an additional payment. Then press the <ENTER> key. Cursor will move to the next input box.

In the input box above **'Amount'** type in the amount you wish to pay. Then press the <ENTER> key.

The amount will then move to the cell beside the year selected. The cursor will then toggle back to the **'Year'** input box - ready for another entry.

If you make a mistake by inserting a wrong amount, simply type in the year again and the correct amount. Or a 0 to erase an amount.

Clicking the **'OK'** button accepts the data and this will be stored for use in all subsequent calculations, unless changed. Amounts will be added to the principal payment on the first month of the year specified.

Clicking the **'Cancel'** button erases all stored data and resets the table to .00.

If you use additional payments in one calculation and do not need it for the next one. Go back to the **'Additional Payments'** and press the **'Cancel'** button to erase the stored data.

Stored data will also be erased if a change is made to the **'Amortization Period in Years'** input box as the number of years in the table would no longer be valid.

Amounts assigned to years up to when the mortgage is fully paid will be used, any years beyond that point are ignored.

For anyone whose mortgage lender does not allow Biweekly(Acc) or Weekly(Acc) payments, if you pay the equivalent of one months payment each year as an additional payment the mortgage will be reduced in almost the same time frame as if using them.

Copyright

Universal Mortgage System

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Price: \$14.95 + \$3.50 for Shipping & Handling

Please register and I will send to you, by Air Mail, the latest Commercial version of the program which contains more great features.

United States of America and Canada

Checks from only U. S. A and Canada residents are accepted. I pay no Bank fee to cash them.

Residents of all other countries

Do not send checks - I cannot accept them as the Bank charges a \$25.00 fee to cash them.

Please obtain an International Postal Money Order from your local Post Office for US\$18.45.

These I can cash at my Post Office.

Be sure to put enough Air Mail postage on the envelope. A 46 cent stamp gets the order here in about 7 days, anything less takes up to 3 weeks.

Click 'About...' on the Main Menu and then 'Show Order Form' and type in your name and address on the prepared form.

