



Cassette Software

Model PHT 6003

Personal Financial Aids

Three programs to assist you in making financial decisions and evaluating your financial position.

- **AMORTIZATION SCHEDULE** — Prepares a loan schedule which calculates the amount of interest and principal paid with each payment. Also provides yearly totals of the interest and principal paid.
- **DEPRECIATION** — Calculates depreciation using three methods — straight-line, declining balance, and sum-of-the-years'-digits — and determines the most cost-effective crossover year.
- **MORTGAGE ANALYSIS** — Analyzes a loan and its effects on your taxes and calculates the annual appreciation for a home.

Requires the use of a cassette tape recorder (not included) for loading the program contents into the TI-99/4 Home Computer memory.

As this manual was designed for the U.S. market, the warranty conditions described herein are not applicable in the U.K. The only valid Guarantee Conditions are those set forth in the "Users Reference Guide" accompanying the Home Computer.

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Author: Texas Instruments

Language: TI-99/4 BASIC

Hardware: TI-99/4 Home Computer
Disk Controller and Drive or Cassette Tape Recorder
TI Thermal Printer or RS232 Interface and a
compatible printer (optional)

Media: Diskette or Cassette

The Personal Financial Aids package provides three programs to help you make financial decisions.

o The Amortization Schedule program prepares a loan repayment schedule which calculates the interest and amount paid to principal per payment and annually. This schedule is useful in calculating interest paid for tax purposes and determining the balance due.

o The Depreciation program prepares depreciation schedules and graphs based on three methods of depreciation: Straight-Line, Declining-Balance, and Sum-of-the-Years'-Digits. The program also calculates the most advantageous year to cross over from Declining-Balance or Sum-of-the-Years'-Digits method to Straight-Line. This program allows you to select the method of depreciation which best suits your tax and business needs.

The Mortgage Analysis program evaluates home purchases in terms of potential appreciation and tax savings. The information provided can help you determine whether the purchase of the property is financially sound.

The Amortization Schedule program prepares a repayment schedule for any loan. With the repayment schedules for various loans available, you can compare alternative loan agreements and choose the loan that is best suited for your financial situation. This program is also useful in compiling annual interest totals for tax purposes.

You provide the following information: the amount of the loan, the payment term in years, the number of payments per year, the nominal annual interest rate, and the date on which the loan is made. The program then calculates the amount of the periodic payment, the payment date, the principal payment, the interest payment, and the remaining balance to be paid. This information may be obtained for the entire term of the loan or any period during the term of the loan. You may print the schedules if a printer is attached.

STEP 1: If the computer is not already in the BASIC mode, select `II BASIC`. To load the program from a diskette, insert the diskette into the disk drive, type

```
OLD DSK1.AMORTIZE
```

and press `ENTER`.

To load the program from a cassette tape, refer to the "Loading Cassettes" section in this manual for instructions on determining the program's position on the cassette tape. When you have inserted the cassette and have properly positioned the tape counter on your recorder, type

```
OLD CS1
```

and press `ENTER`. The computer then displays directions for loading the tape. Refer to "Loading Cassettes" if you have difficulty in loading the program from the cassette.

STEP 2: When the cursor reappears, type `RUN`, and press `ENTER`. The `AMORTIZATION SCHEDULE` title screen is displayed next. Press `ENTER` to begin the program.

STEP 3: You are first asked if you wish to use a printer. If you use a printer, the loan definition and the amortization schedule are printed. If you enter `Y`, you are asked to enter a device name. To use the `II Thermal Printer`, enter `TP`. Refer to the `RS232` owner's manual for complete instructions for using the `RS232` Interface and a compatible printer.

STEP 4: Next, define your loan. First, enter a description of the loan. Then enter the amount of the loan and its term in years. Now enter the appropriate number of payments per year: 1, 2, 3, 4, 6, or 12. Then enter the nominal annual interest rate as a percent (for example, 13.250). Finally, enter the month and year for the beginning date of the loan. The month is entered as any number from 1 to 12, and the year is entered as a four-digit number.

Now, you may correct any portion of the loan definition. If your data is correct, enter Y and the program continues. To change an entry, enter N. The program asks for the item number to be changed. Enter the desired item number, and change your entry. The new entry is automatically displayed. When you have finished editing the loan definition, enter 0.

- STEP 5: You are now asked for the part of the schedule that you wish to see. To display or print the entire schedule, enter Y. To see only part of the schedule, enter N and then indicate the beginning and the ending years of the portion of the loan schedule you wish to see. If you enter a year which is not within the repayment period, you must make another entry.
- STEP 6: When you are using a printer, the schedule is printed automatically. If you are displaying the schedule, a brief pause occurs while the computer calculates the schedule. If you begin your schedule with the first payment, the loan definition and periodic payment are displayed. Then press any key to show the next year's analysis. Continue to do so until the portion specified has been displayed. If you display or print your payment schedule through the final payment date, the computer also calculates your last payment and the total interest paid.
- STEP 7: To continue, press any key, and you may choose one of three options. You may calculate another schedule for the same loan, define a new loan, or exit the program. Enter the appropriate number.

DEPRECIATION

Description

The Depreciation program gives you a quick, accurate way to calculate depreciation on any asset from oil wells to office equipment. Three methods for calculating depreciation are available: Straight-Line, Declining-Balance, and Sum-of-the-Years'-Digits.

The flexibility of this program allows you to select the factor to be used in calculating depreciation using the Declining-Balance method. The program also features a crossover year calculation for the Declining-Balance and Sum-of-the-Years'-Digits methods. You may choose to have the computer calculate the crossover year automatically, select the year that you wish to crossover, or prepare schedules that disregard the crossover year altogether.

After you have selected the depreciation method and entered the necessary data, the schedule and bar graphs are prepared. The schedule lists the data you have entered, the depreciation, and the excess per year. The bar graph illustrates the same information. Both the schedules and graphs can be printed using the optional printer.

The Depreciation program calculates the depreciation of an asset using three different methods, giving you the option of choosing the one that best serves your needs. The first method, Straight-Line, allocates an equal amount of the depreciation expense of an asset to each period in the life of the asset.

The second method, Declining-Balance, allocates a greater amount of the depreciation expense of the asset to the early periods of the life of the asset and less to the later periods. This method is often used for tax reporting because it generally allows the greatest amount of depreciation expense to be taken during the first years.

The final method used by the Depreciation program is the Sum-of-the-Years'-Digits. This method is calculated by multiplying the depreciable value of the asset by a fraction. The fraction is calculated as follows. The denominator is the sum of all the whole digits between one and the number of years in the life of the asset. For example, the denominator for an asset with 5 years of life is $1 + 2 + 3 + 4 + 5$ or 15. The numerator for the fraction for the first year is equal to the number of years of life (in this example, 5). It is reduced by one each year thereafter. In the early years, this method generally provides more depreciation expense than the Straight-Line method but less than the Declining-Balance method.

The following definitions are included to explain the values to be entered for each prompt.

Starting Book Value is the total value of an item you wish to depreciate.

Salvage Value is the value of the investment at the end of its usable life. This value can be estimated or taken from depreciation tables furnished by your accountant or the Internal Revenue Service (IRS). It does not necessarily equal the market value.

Life in Years is the estimated length of useful service of an item. It is the amount of time over which the item is depreciated. The Internal Revenue Service has established guidelines for determining the life of common assets.

Months in First Year is the number of months left in the year in which an item is acquired.

Declining Balance Factor is the rate at which you wish to depreciate an item using the Declining-Balance method. It is usually 125% to 200% of the Straight-Line rate.

Crossover is the year in which it is most advantageous financially to change from either the Declining-Balance or Sum-of-the-Years'-Digits method to the Straight-Line method. In other words, the annual depreciation calculated using the Straight-Line method is greater than the depreciation calculated with the method currently being used. You can have this year calculated for you automatically by selecting Auto, you can determine the year by selecting Manual and entering the year you wish to crossover, or you can have a depreciation schedule that does not crossover at all by selecting No.

Excess is the difference between the depreciation calculated for one year using the method selected and that calculated using the Straight-Line method.

STEP 1: If the computer is not already in the BASIC mode, select TI BASIC. To load the program from a diskette, insert the diskette into the disk drive, type

OLD DSK1.DEP

and press ENTER.

To load the program from a cassette tape, refer to the "Loading Cassettes" section in this manual for instructions on determining the program's position on the cassette tape. When you have inserted the cassette and have properly positioned the tape counter on your recorder, type

OLD CS1

and press ENTER. The computer then displays directions for loading the tape. Refer to "Loading Cassettes" if you have difficulty in loading the program from the cassette.

STEP 2: When the cursor reappears, type RUN and press ENTER. The DEPRECIATION title screen is displayed. Press any key to continue.

STEP 3: Indicate whether you intend to use a printer by entering Y or N to the question DO YOU WISH TO USE A PRINT DEVICE (Y/N)? If you are using the TI Thermal Printer, enter 1 to select TP.U.S. If you are using an RS232 Interface and a compatible printer, enter 2 to select OTHER. Then refer to the RS232 owner's manual for full instructions on naming the printer.

STEP 4: Select one of the options from the following list by pressing the appropriate number.

- 1 STRAIGHT LINE
- 2 DECLINING BALANCE
- 3 SUM OF YEARS DIGITS
- 4 EXIT

OPTION 1: STRAIGHT LINE

If you press 1, the depreciation schedule or graph is calculated using the Straight-Line method. Enter values for Starting Book Value, Salvage Value, Life in Years, and Months in First Year. (Refer to the "Background" section of this manual for a definition of these terms.) You may now correct any of these values.

Once the values are correct, indicate whether you wish to prepare a schedule. If you decide to prepare a schedule, enter the starting year for your schedule; then enter the last year. Next specify whether you wish the schedule printed or displayed. Once the schedule is complete, press any key to continue.

If you decide not to prepare a schedule or after the schedule has been completed, indicate whether you wish to prepare a graph. If you prepare a graph, enter the beginning year for the graph. When the graph is displayed, you may print it by pressing P if you are using a printer. If you press SHIFT R (REDO), you may enter a different beginning year for a new graph. If you press ENTER, you return to the options list.

OPTION 2: DECLINING BALANCE

If you press 2, the depreciation schedule or graph is calculated using the Declining-Balance method. In addition to entering the variables used in Straight-Line depreciation--Starting Book Value, Salvage Value, Life in Years, Months in First Year--enter values for Declining Balance Factor and Crossover. (Refer to the "Background" section of this manual for a definition of these terms.) You may now correct any of these values.

In preparing a schedule or a graph, the procedure is the same as it is for the Straight-Line Method. First, indicate whether you wish to prepare a schedule. If you do prepare a schedule, enter the starting and ending years for your schedule. Next specify whether the schedule is printed or displayed. Once the schedule is complete, press any key to continue.

If you decide not to prepare a schedule or after the schedule has been completed, indicate whether you wish to prepare a graph. If you prepare a graph, enter the beginning year for the graph. You may print it by pressing P while the graph is displayed. If you press SHIFT R (REDO), you may enter a different beginning year for a new graph. If you press ENTER, you return to the options list.

OPTION 3: SUM OF YEARS DIGITS

If you press 3, the depreciation schedule or graph is calculated using the Sum-of-the-Years'-Digits method. As in the other methods of depreciation, values for Starting Book Value, Salvage Value, Life in Years, Months in First Year, and Crossover. (The "Background" section of this manual provides definitions of these terms.) You may now correct any of these values.

Once the values are correct, decide whether you wish to prepare a schedule. If you do, enter the starting and ending years for your schedule. Next indicate whether you wish the schedule printed or displayed. When the schedule is complete, press any key to continue.

If you decide not to prepare a schedule or after the schedule has been completed, you may now choose whether to prepare a graph. If you prepare a graph, enter the beginning year for the graph. When the graph is displayed, you may print it by pressing P if you are using a printer. Use SHIFT R (REDO), to enter a different beginning year for a new graph and press ENTER to return to the options list.

OPTION 4: EXIT

If you press 4, the message ** DONE ** is displayed, and the program stops.

MORTGAGE ANALYSIS

Description

Mortgage Analysis provides a method of evaluating mortgages. With this program you are able to project the future value of your investment, considering tax increases and appreciation. You enter data about the potential investment, such as down payment and interest rate, and estimates of the percentage increase in property tax and appreciation of property in the area. This data provides the basis for an estimate not only of your home's future value; but it also calculates your equity, tax deduction, and estimated tax savings based on your mortgage data. By using this program, you can gain insight into long-range financial situations.

STEP 1: If the computer is not already in the BASIC mode, select II BASIC. To load the program from the diskette, insert the diskette into the disk drive, type

OLD DSK1.MORTGAGE

and press ENTER.

To load the program from a cassette tape, refer to the "Loading Cassettes" section in this manual for instructions on determining the program's position on the cassette tape. When you have inserted the cassette and have properly positioned the tape counter on your recorder, type

OLD CS1

and press ENTER. The computer then displays directions for loading the tape. Refer to "Loading Cassettes" if you have difficulty in loading the program from the cassette.

- STEP 2: When the cursor reappears, type RUN, and press ENTER. When the MORTGAGE ANALYSIS title screen appears, press ENTER to continue.
- STEP 3: Now enter the data about the mortgage you wish to analyze. Enter the total price for the property you are purchasing, the down payment, the annual interest rate charged on the loan, and the length of the loan in years. For appreciation, enter the percentage of increase in property value in your area. Then enter the annual property tax rate. For tax inflation, enter the expected annual percentage of increase in property taxes in your area. Next, enter the amount paid to insure the property and the number of months left in the year at the time of purchase. Finally, enter the percentage of your annual income tax bracket.

STEP 3: After you have entered all of the information, the following list of options is displayed

- 1 DISPLAY/CHANGE INPUTS
- 2 YEARLY ANALYSIS
- 3 REDIRECT OUTPUT
- 4 EXIT

OPTION 1: DISPLAY/CHANGE INPUTS

If you press 1, you may review the information you just entered in Step 3. To change the information, enter the letters of the items you wish to change. For example, to change the appreciation (E) and tax inflation (F) data, enter EF. You may then change the rate of appreciation and tax increase. When all the information is correct, press ENTER, and the Mortgage Analysis option list is displayed again.

OPTION 2: YEARLY ANALYSIS

If you press 2, a brief pause occurs while the program prepares the analysis. Then you are asked to specify the years you wish to analyze. Enter the first and last years of the loan term you wish to analyze. If you are using a printer, the analysis begins printing immediately. If you are displaying the analysis, the first year's analysis is displayed. Press ENTER to display the next year's analysis, or press SHIFT Z (BACK) to return to the list of options.

OPTION 3: REDIRECT OUTPUT

If you press 3, this option allows you to select your output device by pressing

- 1 SCREEN
- 2 THERMAL PRINTER (TP)
- 3 OTHER
- 4 RETURN TO OPTION LIST

To use the TI Thermal Printer, enter 2. To use an RS232 Interface and a compatible printer, enter 3. If you choose option 3, refer to your RS232 Interface owner's manual for instructions on naming the device. Once you select an output device, that device is used until you change it.

OPTION 4: EXIT
If you press 4, the message ** DONE ** is
displayed and the program stops.