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Buttons & Keyboard	Explains the function of the calculator buttons and lists their keyboard equivalents.
Registration	Explains how to register your copy of Judy's TenKey in order to receive a free copy of Judy's CountDown.

Getting Started

Judy's TenKey™ provides an efficient and easy way to perform mathematical calculations in the Microsoft Windows environment.   We suggest familiarizing yourself with the program by reviewing the following help sections:

Topic	Description
Benefits	Summarizes the major advantages of Judy's TenKey over the base Microsoft Windows calculator.
Display Components	Describes the basic display elements.
Configuring Your TenKey	Helps you set up Judy's TenKey to best suit your individual needs.
Example Operations	Outlines the basic approach to performing calculations and provides several examples.
Registration	Explains how to register your copy of Judy's TenKey in order to receive a free copy of Judy's CountDown.

Benefits Of Judy's TenKey

Judy's TenKey™ makes your calculations easier and more reliable.   If you're still using an old-fashioned desktop calculator, you'll love the integration Judy's TenKey gives you with your other Windows applications.   If you use the default Windows calculator, you'll find that Judy's TenKey gives you many advantages:

History Tape:

> Records your calculations in a scrolling list which you can save, print, and resize (a *real* help in keeping track of your calculations).   You can also reuse tape entries (saving typing and reducing errors), and can calculate statistics such as average and standard deviation.

Selectable Syntax:

> Judy's TenKey can process numbers like a normal calculator, a scientific calculator (RPN), or an adding machine.   If you are familiar with one and not another, you know how difficult and frustrating it can be to try to switch.   Judy's TenKey can behave quite flexibly. . . name your preference.

Customizable Display:

> Allows you to decide how you want your TenKey to look (selecting from tape, memory, statistics, functions, trigonometry, finance, and number pad options), enabling you to optimize screen usage.   Any TenKey function can always be activated via the keyboard regardless of the current display configuration.

Financial Calculations:

> Judy's TenKey can calculate monthly payments for most loans (e.g., cars, houses, etc.), expected investment growth, necessary retirement savings, inflation adjustment, and more.

Intelligent Cut & Paste:

> You can copy history tape entries to other applications, including Microsoft Word, Excel, and Quicken.   You can also paste input from these applications into Judy's TenKey, interpreting them as a sequence of commands if desired.   If extraneous text and special formatting are mixed in with your numbers, Judy's TenKey uses heuristic reasoning to extract and interpret appropriate information.

Decimal Selection:

> You can set Judy's TenKey to display the number of decimal positions you prefer, ranging from 0 to "as needed".   If you frequently deal with money, you might want to set the decimals to 2 (for cents) or 0 (for dollars).   Judys TenKey also supports automatic
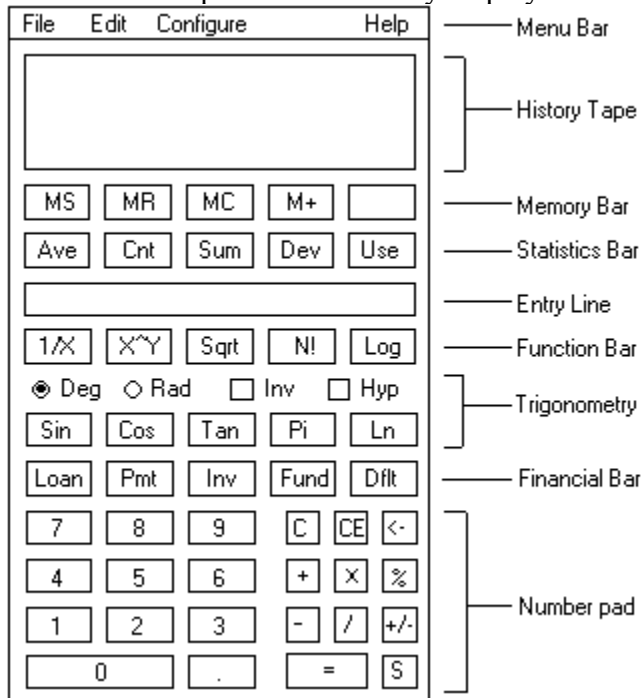
decimal insertion.

Extra Touches:

Judy's TenKey remembers your favorite screen position and displays itself there every time.   It also uses thousands separators for moderately large numbers (commas in the United States; "1,000,000" as opposed to "1000000"), displays negative numbers in red, and allows you to use the backspace key to edit results for further calculation.   You can set Judy's TenKey to stay on top of all other windows.

Better Performance:

Judy's TenKey enables you to work faster and more reliably.   Once you can see (and reuse!) the numbers in your calculations, you will never return to the default Windows calculator.   Judy's TenKey also uses a proprietary algorithm to ensure superior results (try subtracting "750.35 - 750.30" using the Microsoft calculator: it does not work!). Finally, Judy's TenKey can also express both larger and more precise numbers, and provides an unlimited stack when in scientific mode.

Display Components

Judy's TenKey provides 9 major display components, as illustrated below.   You can choose whether or not to include many of these components in your TenKey display by using the "Configure" menu option; all commands are accessible via the keyboard whether or not the associated component is currently displayed.

File Edit Configure Help	—— Menu Bar
	—— History Tape
MS MR MC M+	—— Memory Bar
Ave Cnt Sum Dev Use	—— Statistics Bar
	—— Entry Line
1/X X^Y Sqrt N! Log	—— Function Bar
⦿ Deg ○ Rad ☐ Inv ☐ Hyp	
Sin Cos Tan Pi Ln	—— Trigonometry
Loan Pmt Inv Fund Dflt	—— Financial Bar
7 8 9 C CE <- / 4 5 6 + X % / 1 2 3 - / +/- / 0 . = S	—— Number pad

Component	Description
Menu Bar	A command interface that enables you to configure the appearance and the operation of Judy's TenKey, to save and print tape files, and to access this help documentation.
History Tape	A scrolling list that records the numbers you type and the results of your calculations. When necessary, the history list displays a scroll bar on the right; use the scroll bar to review your work by clicking on the arrow or dragging the thumb button. The history list holds your last 150 entries, and can be set to display up to 25 lines at a time.
Memory Bar	A row of buttons that controls memory operations. If anything is currently in the memory, an "M" will appear in the memory status box at the right-hand side.
Statistics Bar	A row of buttons that performs calculations using selected tape entries, such as average and standard deviation.
Entry Line	Displays numbers as you type them, intermediate subtotals, and final

results of your calculations.   This line is the main interface to Judy's TenKey, and cannot be disabled.

Trigonometry Bar   Two rows of controls that support trigonometric functions.

Function Bar   A row of buttons that provides advanced mathematical functions, such as factorial and base 10 logarithm

Financial Bar   A row of buttons that calculates answers to common financial questions, such as loan payment sizes and retirement fund requirements.

Number Pad   Several rows of buttons that support number entry and basic mathematical operations.

Procedures

This section explains how you can use Judy's TenKey to accomplish common tasks:

Topic	Description
Configuring Your TenKey	Helps you set up Judy's TenKey to best suit your individual needs.
Standard Calculations	Describes how to perform common operations like addition, subtraction, multiplication, percentages, etc.
Using Memory	Explains when and how to save a number for later reuse.
Using The Tape	Describes various options you can perform with the tape, such as saving, printing, and reusing entries.
Copy & Paste	Reviews basic techniques for exchanging data with other applications.
Registration	Explains how to register your copy of Judy's TenKey in order to receive a free copy of Judy's CountDown.

Selecting Visible Components

You can decide which components to show in your TenKey window by using the "Configure | Components" menu.

> Components which can be turned on or off include the history tape, memory bar, statistics bar, function bar, trigonometry bar, finance bar, and number pad; the menu bar and entry line are always visible (see also Display Components).
>
> If a component is turned on (i.e., is visible), a check mark appears next to the component's name in the "Configure | Components" menu.
>
> To change a component from visible to invisible (or vice versa), simply select the name of that component from the "Configure | Components" menu.   You can control the visibility and the length of the history tape by resizing the main TenKey window, or by using the tape configuration dialog box.

When you initially begin using Judy's TenKey, you may wish to leave everything turned on in order to help you remember the available features.   Later, when you are more comfortable with its operation, you may wish to turn off components that do not provide calculation feedback (e.g., number pad, function bar, etc.).   By turning off such components, you free up screen space and system resources that you can use for other programs.   When you think about it, you really don't need a graphical number pad to perform your calculations . . . the number pad on your keyboard is usually much more convenient and efficient.

Tape Configuration

The Tape Configuration dialog box, available from the "Configure | Component | Tape" menu option, enables you to control the appearance and the behavior of the history tape.

Visibility:

To hide the history tape, click the mouse in the box next to the words: "Show List?".   To make it visible, click in the box again.   An "x" appears in the box when the tape is configured to be visible (the default).

If you have a favorite setting, but wish to quickly turn the tape display off for a moment, simply uncheck the "Show List?" check box.   Even when you disable the history list display, it still keeps track of your calculations, and can show them upon request.

View Length:

You can also control the *amount* of tape that is visible.   Type the number of lines you would like to see in the "Lines" field, from 1 - 25.   If you use the "Show List?" box to hide the tape, the "Lines" setting will have no effect.

Close Behavior:

When you close a TenKey tape (by exiting the program, opening a different tape, etc.), Judy's TenKey can automatically save it, ask you if you want it saved, or simply ignore it (thereby losing any unsaved work). To change the current close behavior, select the radio button next to the option you prefer.   Note that you must save the configuration for this change to have any effect the next time you run Judy's TenKey.

In addition, you can control the visibility and the view length of the history tape by resizing the main TenKey window.

Resizing The TenKey Window

You can resize the main TenKey window just as you resize any other Windows application: hold the mouse down on a window border and drag to the newly desired size.   You cannot change the width of Judy's TenKey, but by adjusting its height you can control the number of history lines that it displays (from 0 to as many as fit on your screen).

Note that you can also control the history tape configuration through the "Configure | Component | Tape" menu option.

Setting The Number Of Decimal Positions

Judy's TenKey allows you to decide how many decimal places you would like to see (in other words, how many digits to the right of the decimal point are shown).   Note that setting the number of decimal positions affects only the display; it does not affect internal calculation precision.   No matter what your configuration, you can always enter as many decimal digits as you like for a given entry . . . Judy's TenKey will internally keep track of the actual number.

If you frequently deal with money, you might want to set the decimals to 2 (for cents) or 0 (for dollars).   If you need to be as precise as possible, use the "As Needed" option in order to display as many as apply to a given result.

Example:	Decimals 0:	"1.279"=>"1"
	Decimals 1:	"1.279"=>"1.3"
	Decimals 4:	"1.279"=>"1.2790"
	Decimals As Needed:	"1.279"=>"1.279"

To change the decimal setting, select the "Decimals" option under the "Configure" menu.   From the submenu that pops up, select the number you desire.   A check mark appears next to the current setting.

See also Automatic Decimal Insertion.

Automatic Decimal Insertion

Judy's TenKey enables you to skip entering the decimal point for every number.

To turn on automatic decimal insertion, select the "Configure" menu option, then select the Decimals submenu option.   Click the submenu choice that says Auto Insert (if it has a check mark next to it, it is already on, and selecting it now will turn it off).

Once you have set automatic decimal insertion, Judy's TenKey will assume that the rightmost digits of your numbers correspond to your current number of decimal positions setting.

For example, if you have 2 decimal places configured, typing "1234" will produce "12.34". This mode of operation can save you significant typing when adding long columns of numbers.

Syntax Overview

Judy's TenKey can process numbers like a normal calculator, a scientific calculator (RPN), or an adding machine.   If you are familiar with one and not another, you know how difficult and frustrating it can be to try to switch.   Judy's TenKey can behave quite flexibly. . . name your preference.

Syntax refers to the order in which you must enter numbers and operations to achieve your desired results.   To change syntax, select the "Syntax" menu option under the "Configure" menu.   Then select your desired syntax from the submenu that appears:

Calculator Syntax

Tenkey Syntax

RPN Syntax

Note that changing syntax also clears any ongoing calculations.

Calculator Syntax

This help topic assumes that you are not currently using an adding machine or a scientific calculator (i.e., familiar with tenkey or RPN syntax).   If you are, you may find the following discussion somewhat confusing (some of your underlying assumptions may be incorrect). Generally, once you become fluent in a given syntax, there is little to be gained from switching to a new one.

Calculator syntax can basically be expressed as follows:

1) Enter a number

2) Enter an operation

3) Enter a number upon which to perform that operation.

4) Repeat steps 2 and 3 as desired.

Examples: 2 + 3   => 5
            3 * 3   => 9
            5 * 3   => 15
            2 + 3 * 3   => 15

As the last example illustrates, every operation you enter will combine the previous subtotal with the next number you enter.   If you do not enter a number in between operations, the calculator will use your displayed subtotal as the default entry:

Examples: 2 + 3 + =   => 5 + 5   => 10
            2 + 3 + + 6 =   => 10 + 6   => 16

Note: This may seem somewhat complex, but since the running subtotal is displayed on the entry line as you enter your calculation, it actually works very naturally.   Try it.

Advanced operations generally take precedence over standard operations, and can modify the second number before it is applied to the subtotal: functions, finance, trigonometry, and percent (%).

Examples: 2 + 3 N!   => 2 + 6   => 8
            6 * 50 %   => 6 * .5   => 3

Tenkey Syntax

This help topic assumes that you are not currently using a standard or scientific calculator (i.e., familiar with <u>infix</u> or <u>RPN</u> syntax.   If you are, you may find the following discussion somewhat confusing (some of your underlying assumptions may be incorrect).   Generally, once you become fluent in a given syntax, there is little to be gained from switching to a new one.

Basically, a tenkey assumes that you are adding a series of numbers.   Consequently, the fundamental operation consists of entering numbers and their signs, which the application will sum:

> 1) Enter number.
>
> 2) Enter its sign.
>
> 3) Repeat steps 1 and 2 as desired.
>
> Examples: 2+ 3+   => 5
>   2- 3+   => 1
>   2+ 3+ 4-   => 1

A tenkey keeps the last number you entered in its *cache*; if you enter another operator without explicitly typing a new number, the tenkey will use the contents of the cache.

> Examples: 2+ + +   => 4+ 2+   => 6
>   2+ 3+ +   => 5+ 3+   => 8
>
> Note: Only numbers you enter which are followed by a '+' or a '-' get placed into the cache.

Multiplication and division are treated as a sub-calculation within this running sum, and numbers are assumed positive (you can use a negative number within a sub-calculation by using the '+/-' key).   When you have finished your sub-calculation, make sure to press the '=' key before trying to incorporate this subtotal into your running sum.

> Examples: 2*3=   => 6
>   5+ 2*3= +   => 5+ 6+   => 11

Advanced operations generally take precedence over standard operations, and can modify the second number before it is applied to the subtotal: <u>functions</u>, <u>finance</u>, <u>trigonometry</u>, and percent (%).

> Examples: 2+ 3N!+   => 2+ 6+   => 8
>   6 * 2r =   => 6 * .5   => 3

Judy's TenKey provides special handling for the percent (%) operator.   If you press the '+' key after calculating a percentage, Judy's TenKey will add the calculated percent to the original number ('+%').   Also works with the '-' key ('-%').

Example: "40*50%+"   => 40+20   =>60
                   (40*50%=20;   40+50%=40+20=60)

Reverse Polish Notation (RPN) Syntax

This help topic assumes that you are not currently using an adding machine or standard calculator (i.e., familiar with <u>tenkey</u> or <u>infix</u> syntax).   If you are, you may find the following discussion somewhat confusing (some of your underlying assumptions may be incorrect). Generally, once you become fluent in a given syntax, there is little to be gained from switching to a new one.

Basically, RPN syntax requires you to enter 2 numbers followed by an operator (e.g., 2,3,+).   To let Judy's TenKey know that you have finished entering the first number, press the <=> button or the <Enter> key.   Then enter the second number, and select the desired operator.   RPN syntax can be summarized as follows:

1) Enter number.

2) Press the <=> button or the <Enter> key.

3) Enter another number.

4) Choose an operation.

5) Repeat steps 3 and 4 as desired.

Examples:	2 = 3 +	=> 5	
	2 = 3 -	=> -1	
	2 = 3 *	=> 6	
	2 = 3 * 5 +	=> 6 = 5 +	=> 11

You may create more complex expressions by using the <Enter> key to hold certain numbers in reserve while you focus on a more immediate subcalculation.   Commonly, numbers held in reserve are said to be on the "stack", and get "popped" off the stack on a first-in, last-out basis. Most scientific calculators give you a stack that can hold 3 to 5 numbers; Judy's TenKey allows you to place as many numbers on the stack as you want.

Examples:	2 = 3 = 4 + -	=> 2 - (3 + 4)	=> -5
	2 = 3 + = 4 = 5 + *	=> (2 + 3) * (4 + 5)	=> 45

Advanced operations generally take precedence over standard operations, and can modify the second number before it is applied to the subtotal: <u>functions</u>, <u>finance</u>, <u>trigonometry</u>, and percent (%).

Examples:	2 = 3 N! +	=> 2 + 6	=> 8
	6 = 2 r *	=> 6 * .5	=> 3

Always On Top

The "Always On Top" option of the "Configure" menu allows you to keep Judy's TenKey on top of all other windows (in other words, prevent any other window from covering it).   This menu option is also available from the window's system menu, so you can directly adjust it even when the program is iconified.

"Always On Top" can be quite useful when working on large documents or spreadsheets.   It allows you to fill most of your screen with your document, yet still have access to your TenKey without having to hunt for it.

Note: Some older screen savers will not cover Judy's TenKey when this setting is enabled.

Red Negatives

The "Negatives Red" option of the "Configure" menu allows you to control whether negative numbers appear in red on the history tape.   Negative numbers are those preceded by a '-' (e.g., "-23.25").

When using tenkey syntax, numbers followed by a '-' are also shown in red (e.g., "23.25 -").

International Number Formats

Judy's TenKey supports Microsoft Windows international number formats.   If you wish to change the character that Judy's TenKey uses as the thousands separator or the decimal point, use the International icon within the Windows Control Panel.

To make things as easy as possible, Judy's TenKey interprets both the comma (",") and the period (".") as a decimal point when you enter numbers from the keyboard.

Saving Your Configuration

You can save any changes you have made to your configuration so that the next time you run Judy's TenKey it remembers and uses your preferences.   Saving your configuration records:

Visible Components

Decimals Setting

Syntax

Red Negatives

Always On Top

Screen Position

To save your configuration, select the "Save Settings" option from the "Configure" menu.

Registration Benefits

If you have not purchased your copy of Judy's TenKey, you must pay a <u>registration fee</u> to continue using it after the 60 day evaluation period.   Registration provides the following benefits:

> **Free Copy of Judy's CountDown**™:   You will receive a free copy of Judy's CountDown to help you track important dates.

> **Update Notification**:   You will receive timely notifications of new version releases, and will qualify for a reduced upgrade fee.

> **Support**:   Any questions you may have about the use of Judy's TenKey will be answered for a period of at least one year.   You can contact us via CompuServe (70574,2247), Prodigy (ndjf84a), or U.S. mail (see <u>Registration Procedure</u> for our address).   If you encounter a serious problem using Judy's TenKey within 3 months of registration, we will either fix the problem or refund your registration fee.   Judy's TenKey has been produced by a member of the <u>Association of Shareware Professionals</u>, entitling you to their support in problem resolution.

> **Peace Of Mind**:   You will be able to sleep at night knowing that you have acted ethically.   If you wish to encourage the continued development of low-priced shareware, you must do your part to support it.   A great deal of work has gone into the creation of this program, and the requested registration fee is quite modest.

If you purchased your copy through a retail distributor (such as *Egghead Software*), you may register your copy at no additional cost, but you will not receive a copy of Judy's CountDown. You will be notified of new version releases, and be eligible for reduced fee upgrades.

See also <u>Registration Procedure</u>.

Registration Procedure

Judy's TenKey™ is distributed via retail channels and via copyrighted shareware. If you have not purchased your copy of the program directly, you must register to continue using it after the 60 day evaluation period. If you have purchased your copy directly, you should register (at no charge, of course) to make sure you receive timely notification of new releases. See also Registration Benefits.

To register your copy, send your name, address, and check or money order for $14.75 plus $2.95 shipping and handling (CA residents please add 8.25% sales tax; retail customers send no money at all) to:

> Judy's Applications
> 602 Valeri Ruth Court
> Santa Clara, CA 95050-5590

International customers may either contact us at the above address, or use one of our international distributors.

For your convenience, you can print a registration form directly from Judy's TenKey using the "Configure | Register" menu option. If you do not have a printer, feel free to send us a handwritten note instead. Just remember to send us your name and your address!

You can also use your Visa or Mastercard by calling 800-242-4775, but please be aware that the operator cannot answer any questions concerning the technical operation of the program. If you have any problems using the 800 number, please use the registration form described above (the 800 number registration service actually consumes quite a bit of our low registration fee, so we prefer you to use the registration form anyway).

If you choose not to register your copy, please uninstall Judy's TenKey from your system.

Registration Dialog Box

The Registration Dialog Box is available from the "Configure | Register" menu option.   It summarizes <u>registration instructions</u> and provides access to additional information via the following buttons:

Button	Description
Register Now...	Prints a registration form which you can fill out and <u>mail</u> to Judy's Applications.
More Info...	Brings up the help topic which describes <u>registration benefits</u>.
International...	Brings up the help topic which describes alternate registration methods for <u>international customers</u>.

International Distributors

International customers may be able to conveniently register their copy of Judy's TenKey via one of the following organizations:

US-CAN Computer Services   Phone: (800) 663-1537
Box 34146 1200 37th Street
SW Calgary, Alberta, T3C 3W2
Canada
(Price Canadian$20.65)

WindowShare SARL   Phone: (33) 87-30-85-57
B.P. 2078
57051-METZ cedex 2
France
(Price 160FF, including TVA and S&H)

If you encounter any difficulties in contacting these organizations, please register via our <u>USA address</u>.

Association of Shareware Professionals (ASP)

This program is produced by a member of the Association of Shareware Professionals (ASP). ASP wants to make sure that the shareware principle works for you. If you are unable to resolve a shareware-related problem with an ASP member by contacting the member directly, ASP may be able to help. The ASP Ombudsman can help you resolve a dispute or problem with an ASP member, but does not provide technical support for members' products.   Please write to the ASP Ombudsman at 545 Grover Road, Muskegon, MI 49442 or send a CompuServe message via CompuServe Mail to ASP Ombudsman 70007,3536.

Installing Judy's TenKey

To install Judy's TenKey, run "install.exe" from the File Manager by double-clicking on it or by using the "File | Run" command.

1)   Press the <Install> button.

2)   Enter your name in the "Your Name" field (for example, "John Smith").

3)   Verify that the "From Directory" information is correct.   It should specify the name of the directory that contains the Judy's TenKey program files (typically, "B:\").

4)   Enter the directory where you would like to install Judy's TenKey (C:\TenKey by default).   Judy's TenKey will create it if necessary.

5)   Optionally set your preferred <u>syntax</u> (you can change this later if you are unsure).

6)   Optionally set Judy's TenKey to start every time you start Windows.   This option will add the necessary information to the "load=" line in your win.ini file, causing Judy's TenKey to appear as an icon at the bottom of your screen whenever you start Windows.

7)   Press the <OK> button.

You *must* use the installation program that comes with Judy's TenKey to install your copy, or your installation will not be licensed and you will eventually receive warning messages whenever you start the program.

Network users should *not* each run the installation program; the installation program should be run only once per site.   Individual network users can simply begin using the program as they would any other shared program (to create an icon for Judy's TenKey, simply drag the "tenkey.exe" file from the File Manager to an appropriate group within the Program Manager).

Uninstalling Judy's TenKey

If you decide not to register Judy's TenKey, please remove it from your system by pressing the "uninstall" button on the main display of the installation program that came with Judy's TenKey.

If you are running Program Manager, the installation program should be available from the group named "Judy's Applications".

Example Operations

Performing basic operations (e.g., +, -, *, /) differs according to your selected syntax:

Calculator Syntax

Tenkey Syntax

RPN Syntax

See also Buttons & Keyboard.

Using Memory

Judy's TenKey allows you to save a number for later recall and use.   For example, if you plan to multiply several items by the same factor, you may want to first enter the factor and then follow these instructions:

> 1) Press <MS> to store the number.
>
> 2) Enter your next calculation.
>
> 3) When appropriate, press <MR> to recall your number.
>
> 4) Continue with your calculation.
>
> 5) Repeat steps 2 - 4 as desired.

Judy's TenKey allows you to store one number at a time.   Pressing the <MS> button overwrites any previous contents of the memory.   When you have a number stored in the memory, an "M" appears in the <u>memory status box</u>.

You can add to the contents of the memory by pressing the <M+> button, causing the current number displayed on the entry line to be added to the current contents of the memory.   To subtract a number, press the <u><+/-></u> button to change the sign of the number on the entry line before pressing the <M+> button.

See also <u>Memory Bar</u>.

Using The Tape

Judy's TenKey automatically records your calculations in a scrolling tape, which you can configure to be visible or invisible.

Category	Summary
File Operations	Save tape contents to a file, open a previously saved tape, print the current tape, and more.
Selecting Entries	Highlight tape entries for copying, deleting, calculating statistics, or reusing.
Copy & Paste	Copy selected tape entries to another application, paste data from another application, etc.
Statistics	Calculate statistics about selected tape entries such as sum and standard deviation.
Reusing Entries	Reuse tape entries in subsequent calculations.
Resizing	Change the visible length of the tape.

Selecting Tape Entries

You can select tape entries for "Edit" operations, statistical calculations, or reuse.   Selected entries appear highlighted.

Using the Mouse:

To select a single entry, click the left mouse button when your cursor is over the desired entry.

To highlight several contiguous entries, hold the mouse button down and drag your cursor over the desired entries.   Alternately, select the first entry normally, then hold the <Shift> key down when you select the last entry -- all entries in between the two will be selected.

To highlight several non-contiguous entries, select each additional entry while holding down the <Ctrl> key.   Clicking (while holding down the <Ctrl> key) on an entry that has already been selected will cause it to become deselected.

Note that *double-clicking* on an entry causes its value to appear in the main TenKey entry line.   See Quick Num.

Using the Keyboard:

First, press the <Tab> key, causing the topmost visible tape entry to become selected.

Change your selection using the arrow keys or the page keys.

To select multiple, contiguous entries, hold down the <Shift> key while using the arrow or page keys.

You cannot select multiple, non-contiguous entries using only the keyboard.

You can select all tape entries via the "Edit | Select All" menu command.   See also Using The Tape.

Quick Num

You can quickly place a number from the tape into the entry line by double-clicking on the desired tape entry.   You can then either use the number directly (for example, by pressing the "+" button), or modify it by pressing the backspace key.

Using the Clipboard

Copying Data To Other Applications:

      Judy's TenKey enables you to copy selected tape entries to other applications.   First, select the information you wish to copy, then use the "Edit | Copy" command.   From the desired destination application, use the "Paste" command to insert your information.

Pasting Data From Other Applications:

      Judy's TenKey also allows you to paste information into the history tape.   Once you have placed the desired information into the Windows clipboard (via another Windows program or even Judy's TenKey itself), simply use the "Edit | Paste" command to append the information to the bottom of the tape.   Judy's TenKey uses heuristic reasoning to interpret the information you paste, so it is usually not necessary to strip out any extra text that may be intermingled with the numeric operations.

Only Numbers:

      You can choose to copy or paste only numbers using the "Edit|Special.   Using this method, the exchanged information will not include operations.   This option is especially useful when copying information to a spreadsheet, or pasting a series of numbers for which you then wish to calculate statistics.

Entry:

      The "Edit | Special" menu allows you to copy or paste the information in the entry line (rather than selected tape entries).

See also the "Use" command, the "Edit" menu, and Quick Num.

The "Use" Command

Judy's TenKey enables you to "use" information in the <u>history tape</u> or the <u>Windows clipboard</u> as input for your current calculations.   This capability can substantially reduce the amount of typing you do, saving time and minimizing the possibility of typing errors.

<u>Reusing Tape Entries</u>:

>To reuse tape entries, <u>select</u> the desired entries and press the <u><Use></u> button (see also <u>Quick Num</u>).

>Often you may get part way through a calculation and realize you have made a mistake. Rather than retyping everything to where you made the mistake, press the <u><Clear></u> button to start over, select the valid tape entries, and press the <Use> button.   Judy's TenKey will now be ready to correctly continue the calculation.

>Similarly, there are frequently parts of a calculation that you use over and over.   Simply select the entries you wish to reuse, and press the <Use> key whenever you want to reuse them (Judy's TenKey keeps your selected entries highlighted until you select other entries).

<u>Using Clipboard Contents</u>:

>To use information in the clipboard as input for your current calculation, select the "<u>Edit | Special | Use Paste</u>" menu option.

<u>Note</u>:   The *use* command is NOT the same as a replay command!   For example, suppose you type "2 + + =" using <u>calculator syntax</u>.   This leads to a history tape that looks like the following:

>2.00   +
>2.00   +
>4.00   =
>8.00   T

Now suppose you type "4 +" and then reuse the above tape entries.   A replay command would result in "4 + 2 + + =", leading to a result of 24.   The *use* command actually uses the entries as they appear (not as they were formed), leading to the following result:

>4.00   +
>2.00   +
>2.00   +
>4.00   =
>12.00   T

Menu Commands

Menu commands can be accessed via the mouse or the <u>keyboard</u>.

Option	**Purpose**
<u>File</u>	Print, save, and restore history tapes.
<u>Edit</u>	Cut, copy, and paste numbers between applications.
<u>Configure</u>	Customize your TenKey's appearance and operation.
<u>Help</u>	Access this help system.

"File" Menu Commands

These commands control history tape files (see also <u>Using the Tape</u>):

Command	Function
New	Replace the current tape with a new blank one.
Open	Replace the current tape with a previously saved one. Type the name of the desired file into the dialog box that appears.
Clear	Erase the contents of the current tape. Does not affect the saved file until you explicitly save the new version.
Save	Store the current contents of the history tape into a file, overwriting any previous contents. If the tape has never been saved, Judy's TenKey will prompt you for a file name.
Save As	Store the current contents of the history tape into a new file. Enter the desired file name in the dialog box that appears; use standard DOS file naming conventions (i.e., an optional path plus at most 8 characters with a 3 character extension).
Print	Print the contents of the current tape to your default printer.
Exit	Close Judy's TenKey. The fate of the history tape is determined by the "<u>Tape Close Behavior</u>" configuration setting.

"Edit" Menu Commands

These commands enable you to copy and paste information between Judy's TenKey and other Windows applications (see also Using The Clipboard).   Many of these commands have keyboard accelerators, which enable you to specify your commands directly via the keyboard.

Command	Accelerator	Function
Cut	Shift+Del	Deletes any selected tape entries and places them in the Windows clipboard.
Copy	Ctrl+Ins	Copies any selected tape entries to the Windows clipboard.
Paste	Shift+Ins	Appends clipboard contents to the bottom of the tape. Uses heuristic reasoning to understand contents.
Delete	Ctrl+Del	Deletes any selected tape entries.
New Line	Ins	Appends a blank line to the bottom of the tape.
Special	None	Submenu for less common copy & paste functions.
Select All	None	Selects all tape entries.

"Edit | Special" Menu Commands

These commands are available via the "Special" option of the "Edit" menu (see also Using the Clipboard).   Many of these commands have keyboard accelerators, which enable you to work directly via the keyboard.

Command	Accelerator	Function
Use Paste	Ctrl+U	Interprets the Windows clipboard contents as TenKey commands. See also the "Use" command.
Copy Only Numbers		Copies the numeric portion of any selected tape entries to the Windows clipboard. Does not copy the operators.
Paste Only Numbers		Appends the contents of the Windows clipboard to the bottom of the tape. Skips over any non-numeric data (including operators).
Copy Entry	Alt+Ins	Copies the number displayed in the entry line and places it in the Windows clipboard.
Clear Entry	Del	Changes the entry line number to 0. See also Number Pad.

"Configure" Menu Commands

These commands allow you to customize your TenKey's appearance and functionality.

Command	Function
Components	Specify the TenKey elements you want displayed (number pad, history tape, etc.).
Decimals	Set the number of digits past the decimal point that Judy's TenKey displays, and control automatic decimal insertion.
Syntax	Choose how you want Judy's TenKey to interpret your input (calculator, tenkey, or scientific mode).
Negatives Red	Toggle whether Judy's TenKey records negative numbers in red.
Always On Top	Toggle whether Judy's TenKey allows other windows to cover it.
Register	Read instructions for registering your copy of Judy's TenKey™. Judy's TenKey is provided as copyrighted © shareware, which means that if you decide you like the program and you wish to continue using it, you must pay a small licensing fee.
Save Settings	Record the configuration settings you have made, so that Judy's TenKey will use them next time you run the program.

"Decimals" Menu Commands

These commands are available from the "Decimal" option of the "Configure" menu, and allow you to customize the way Judy's TenKey deals with decimals.

Command	Function
Number	Set the number of digits past the decimal point that Judy's TenKey displays.
Auto Insert	Have Judy's TenKey automatically insert decimal points in your numbers as you type them.

See also International Number Formats.

"Help" Menu Commands

These commands focus the help system on the selected topic:

Command	Topic Description
Getting Started	Reviews the basic fundamentals of Judy's TenKey and helps you begin using the program.
Benefits	Summarizes the major advantages of Judy's TenKey over the base Microsoft Windows calculator.
Registration	Explains how to register your copy of Judy's TenKey in order to receive a free copy of Judy's CountDown.
Procedures	Explains how to use Judy's TenKey to accomplish various goals.
Menu Commands	Outlines the purpose of each menu option.
Buttons & Keyboard	Explains the function of the calculator buttons and lists their keyboard equivalents.
About	Displays the program version number and the owner of this copy.

Buttons & Keyboard

You can always use the keyboard to access any capability supported by Judy's TenKey, regardless of whether the buttons that control that capability are <u>visible</u> on the screen.

Component	Topic Description
<u>Function Bar</u>	Advanced mathematical calculations.
<u>Finance Bar</u>	Common financial analyses. Uses capital letters for keyboard access.
<u>History Tape</u>	Tape manipulation using the keyboard.
<u>Memory Bar</u>	Store a number for later recall and use. Uses capital letters for keyboard access.
<u>Menu Bar</u>	Menu selection via the keyboard.
<u>Number Pad</u>	Enter numbers; perform basic mathematical operations.
<u>Statistics Bar</u>	Calculate statistics of selected tape entries.
<u>Trigonometry Bar</u>	Trigonometric functions. Uses Alt+key combinations for keyboard access.

Common keyboard commands have been chosen to allow you to operate very efficiently using only one hand (centered on the number pad of your keyboard).   An exception to this rule is the <u>Clear</u> command, which is a drastic action and is therefore located at the opposite side of the keyboard.

Menu Bar

At the top of the TenKey window is a basic <u>menu bar</u> that provides access to the menu commands.   You can access this menu bar using the mouse or the keyboard.

<u>Keyboard Access</u>:

Press the <Alt> key to access the menu bar.   Use the arrow keys to navigate through the <u>menu choices</u>.   Alternately, you can skip directly to your desired choice by typing the letter that appears underlined in that choice.   Press the <Enter> key to activate a choice that you have highlighted.

<u>Keyboard Accelerators</u>:

The "<u>Edit</u>" menu offers keyboard accelerators, which enable you to activate "Edit" menu functionality without first activating the "Edit" menu.   Keyboard accelerators often require you to press two keys simultaneously (e.g., Ctrl+Del).   If an accelerator requires two keys, we recommend that you press and hold the modifier key (i.e., Ctrl, Shift, or Alt), then press the other key specified.

Memory Bar

Allows you to save a number for later use.   The <u>memory status window</u>, located to the far right of the memory bar, shows an "M" when a number has been saved, and appears blank when the memory is empty.

Button	Key	Function
MS	Shift-S	<u>Memory Store</u>. Places a copy of the number currently displayed on the entry line in memory, causing an "M" to appear in the memory status window.
MR	Shift-R	<u>Memory Recall</u>. Places a copy of the memory contents on the entry line, replacing whatever was previously displayed there.
MC	Shift-C	<u>Memory Clear</u>. Removes any number stored in memory, causing the memory status window to appear blank.
M+	Shift-A	<u>Memory Add</u>. Adds number currently displayed on entry line to contents of memory.

Keyboard Manipulation of the Tape

To manipulate the tape using the keyboard, first press the <Tab> key to select the topmost visible tape entry.

To then scroll the tape, use the arrow keys or the page keys.

See also <u>Selecting Tape Entries</u>.

Statistics Bar

Allows you to calculate statistics for <u>selected</u> tape entries.   See also <u>Display Components</u>

Button	Key	Function
Ave	a	<u>Average</u>. Adds the numbers in the selected lines and divides by the number of lines. Ignores blank lines. *Tenkey Syntax*: Considers trailing operators (+,-) when calculating average value.
Cnt	c	<u>Count</u>. Counts the number of lines selected. Ignores blank lines.
Su<u>m</u>	m	<u>Sum</u>. Adds the numbers in the selected lines. Ignores blank lines. *Tenkey Syntax*: Considers trailing operators (+,-) when calculating sum.
Dev	d	<u>Deviation</u>. Calculates the standard deviation of the highlighted numbers. *Tenkey Syntax*: Considers trailing operators (+,-) when calculating standard deviation.
Use	u	<u>Use</u>. Reuses the highlighted entries in the current calculation. See also the "<u>Use</u>" Command.

Function Bar

The function bar provides advanced mathematical functionality.   See also <u>Display Components</u>.

Button	Key	Function
1/X	r	<u>Reciprocal</u>. Calculates the inverse of the number currently displayed on the entry line (i.e., 1 divided by the number). Example: "2r" => 0.5 (1/2 = 0.5).
X^Y	^	<u>Exponent</u>. Raises the first number to the power of the second number (i.e., multiplies the number by itself the number of times you specify). Example: "5^2=" => 25 (5*5=25). "5^3=" => 125 (5*5*5=125). *RPN Syntax*: When using RPN Syntax, follow standard multi-argument procedures (e.g., "5=2^" => 25).
Sqrt	q	<u>Square Root</u>. The square root of a number is defined to be that number which, when multiplied by itself, equals the starting number. Example: "9q" => 3 (3*3=9).
N!	f	<u>Factorial</u>: Calculates the factorial of the current entry (i.e., N*(N1)*(N2)...*1). This function only works with whole numbers. Example: "4f" => 24 (4*3*2*1=24). "6f" => 720 (6*5*4*3*2*1=720).
Log	l	<u>Logarithm</u>. Calculates the base 10 logarithm of the current entry (works only with positive numbers). You can also calculate the <u>inverse</u> logarithm. Example: "100l" => 2 (10^2=100). "1000l" => 3 (10^3=1000).

Trigonometry Bar

The trigonometry bar includes a row of standard buttons (sin, cos, tan, pi, ln), and another row of <u>modifier settings</u> (radians or degrees, inverse, hyperbolic) that affect the functionality of those buttons.

The following table describes the default behavior of the trigonometry buttons (assuming numbers expressed in degrees):

Button	Key	Function
Sin	Alt+s	<u>Sine</u>. Calculates the sine of the number in the entry line. Example: "90Sin" => 1
Cos	Alt+o	<u>Cosine</u>. Calculates the cosine of the number in the entry line. Example: "90Cos" => 0
Tan	Alt+t	<u>Tangent</u>. Calculates the sine divided by the cosine (sin/cos) of the entry line. Example: "45Tan" => 1
Pi	Alt+p	<u>Pi</u>. Places the value of pi in the entry line. This function is unaffected by any of the trigonometry modifier settings.
Ln	Alt+l	<u>Logarithm</u>. Calculates the natural logarithm of the current entry (works only with positive numbers). Example: "2.718Ln" => 1

Trigonometry Modifiers

The Trigonometry Bar includes a row of modifier controls that affect the functionality of the standard trigonometry buttons.

The leftmost two radio buttons control the units for trigonometric functions.   You must choose one or the other.

Button	Key	Function

Deg   Alt+d   Degrees.   Tells Judy's TenKey that all trigonometric functions should be performed in degrees.

                                Example: "90Sin" => 1

Rad   Alt+r   Radians.   Tells Judy's TenKey that all trigonometric functions should be performed in radians.

                                Example: "90Sin" => 0.894

The rightmost two check boxes modify the functionality of trigonometric functions.   You can pick none, one, or both.   As soon as you use an applicable trigonometric function, the check boxes reverts to their unchecked states.

Button	Key	Function

Inv   Alt+i   Inverse.   Tells Judy's TenKey that the next trigonometric function should calculate its inverse (in other words, calculate the value that would have led to the number currently in the entry line).   This function also applies to both Ln and Log.

                                Example: "1ArcSin" => 90

Hyp   Alt+y   Hyperbolic.   Tells Judy's TenKey that the next trigonometric function should perform the hyperbolic version.

                                Example: "1Sinh" => 1.175

Finance Bar

The finance bar performs advanced financial calculations that typically require several pieces of information.   It may help you to remember two things:

1)   The name of the function indicates what you are trying to calculate, NOT the identity of the first variable.

2)   The second piece of information you must provide is always the interest rate. You can enter interest rates as a decimal or as a percent (0.08 or 8%).

Button	Key	Function

Loan   Shift+l   <u>Loan</u>.   Calculates the total loan amount you can afford given your desired monthly payment.   First enter the desired monthly payment, then the annual interest rate, then the term of the loan in years.   The result is your total loan amount.

Example: An $805 monthly payment at a 9% annual interest rate for 30 years implies an original loan of $100,000.

> *Calculator* & *Tenkey Syntax*:
> "805Loan9%30=" => 100000

> *RPN Syntax*:
> "805E9%E30Pmt" => 100000

Pmt   Shift+p   <u>Payment</u>.   Calculates monthly payments for most loans.   First enter the loan amount, then the annual interest rate, then the term of the loan in years.   The result is your monthly payment.

Example: A $100,000 loan at 9% annual interest rate for 30 years requires an $805 monthly payment.

> *Calculator* & *Tenkey Syntax*:
> "100000Pmt9%30=" => 805

> *RPN Syntax*:
> "100000E9%E30Pmt" => 805

Inv   Shift+i   <u>Investment</u>.   Calculates the future value of your investment.   First enter your starting investment amount, then the annual appreciation (e.g., interest) you expect, then any monthly contribution you plan to make, and finally the number of years.   The result is your total investment worth.

Example: Starting with $1,000, earning an average return of 9%, adding another $200 per month, you will have $139,587 at the end of 20 year.

> *Calculator* & *Tenkey Syntax*:
> "1000Inv9%200=30=" => 139587

Fund   Shift+f   <u>Retirement Fund</u>.   Calculates how much money you will need to guarantee a certain level of income during your retirement.   First enter the monthly withdrawal you desire, then the annual appreciation (e.g., interest) you expect to earn on the remaining funds, and finally the number of years you expect your retirement to last.   The result is the amount of money you will need in your retirement fund when you retire.

Example: If you withdraw $2,000 a month, earn an average return of 9%, and have a retirement lasting 20 years, you will need $223,957 at the start of your retirement.

Calculator & *Tenkey Syntax*:
"2000Fund9%20=" => 223957

RPN Syntax:
"2000E9%E20Fund" => 223957

Dflt   Shift+d   <u>Deflation</u>.   Calculates the future value of your money in today's dollars (useful when evaluating the results of the Invest function, or deciding your desired monthly income for the Fund function).   First enter the future amount of money you wish to evaluate, then the annual inflation rate you expect, and finally the number of years into the future.   The result is the future amount expressed   in today's dollars.

Example: At an average inflation rate of 4%, in 20 years $10,000 will be worth only $4,564 in today's dollars.

Calculator & *Tenkey Syntax*:
"10000Dflt4%20=" => 4564

RPN Syntax:
"10000E4%E20Dflt" => 4564

Number Pad

Provides the basic means of entering and manipulating numbers.   See also <u>Display Components</u>

Button	**Key**	**Function**
C	Esc	<u>Clear</u>. Stops any calculation in progress, and displays 0 on the entry line.
CE	Del	<u>Clear Entry</u>. Erases any number currently displayed on the entry line, replacing it with a 0, but does not interrupt any calculation in progress. For example, if you are adding a long series of numbers and mistype one, using the \<CE\> button will allow you to retype that number without losing your place.
\<-	Back	<u>Backspace</u>. Erases the last digit of the number currently displayed on the entry line.

% p,% <u>Percent</u>.   Converts a number to a percentage.   Mathematicians know that a number expressed as a percentage is equivalent to that number divided by 100, and Judy's TenKey expresses the results accordingly.

Example: "50%" => 0.50   (50/100=0.50).

Tenkey Syntax: Pressing the '+' or '-' key after the '%' yields special results ('+%', '-%').

+/- ~ <u>Sign</u>.   Changes the sign of the number currently displayed on the entry line, changing a positive number to a negative and vice versa.

Example: "34s" => -34
                        "-34s"=> 34

\+ \+ <u>Add</u>.

Calculator Syntax: Adds the next number to the current subtotal. Example: "5+2=" => 7.

Tenkey Syntax: Enters the current number as a positive number in the running subtotal.   Example: "5+2+" => 7.

RPN Syntax: Adds the current entry to the previous subtotal. Example: "5=2+" => 7.

\- \- <u>Subtract</u>.

Calculator Syntax: Subtracts the next number from the current subtotal.   Example: "5-2=" => 3.

Tenkey Syntax: Enters the current number as a negative number in the running subtotal.   Example: "5-2+" => -3.

RPN Syntax: Subtracts the current entry from the previous

subtotal.   Example: "5=2-" => 3.

*   *****   <u>Multiply</u>.

> *Calculator* & *Tenkey Syntax*:   Multiplies the current number by the next entry.   Example: "5*2=" => 10.
>
> *RPN Syntax*:   Multiplies the current entry by the previous subtotal .   Example: "6=2*" => 12.

/   **/**   <u>Divide</u>.

> *Calculator* & *Tenkey Syntax*:   Divides the current subtotal by the next entry.   Example: "6/2=" => 3.
>
> *RPN Syntax*:   Divides the previous subtotal by the current entry. Example: "6=2/" => 3.

0-9   **0-9**   <u>Digit</u>.   Causes the digit to appear in the entry line.   If currently editing a number, appends the digit to the end; otherwise, it starts a new number from scratch.

.   **.**   <u>Decimal</u>.   Causes a decimal point to appear in the entry line.   If currently editing a number, appends the decimal point to the end; otherwise, it starts a new number from scratch ("0.").   Note that this may appear as a comma (",") if you make use of Windows <u>international settings</u>.

=   **Enter**   <u>Total</u>.   Calculates and records the current result in the tape.

> *Calculator Syntax*:   Indicates the end of the calculation.   Displays and records final result.   Example: "5-2+3=" => 6.
>
> *Tenkey Syntax*:   Indicates the end of the calculation.   Displays final result and clears cache.   Example: "5-2+3=" => -6.   When used in a subexpression, does not clear cache (e.g., 2*3=6).
>
> *RPN Syntax*:   Pushes the current entry onto the stack.

S   **Ctrl+Enter** <u>Subtotal</u>.   Appends the current subtotal to the bottom of the history tape.