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Technical Support

[MILLER ASSOCIATES TECHNICAL SUPPORT](#)

Free to registered owners of Miller Associates products.

For information on the most current technical support and product sales hours and telephone numbers, refer to the Bill James Readme file which you can access from the Windows Desktop.

Player menu

Use these commands to access information about players.

History

View information about a single player.

Comparisons

Compare one player to another.

Leader Boards

Rank players on any statistic.

Charts

Graph player career performance, or create pie charts of performance distributions.

Awards

List winners of every significant award for every year.

List

Build a custom subset of players.

The last choice on this menu is to exit the Encyclopedia. You may also exit by double-clicking on the window control button (upper left corner of application window).

Exit **Alt+F4**

Team menu

Use these commands to access information about teams.

History

View information about a single team.

Comparisons

Compare one team to another.

Leader Boards

Rank teams on any statistic.

Charts

Graph team performance over time.

Season menu

Use these commands to access information about seasons.

History

View information about a single season.

Rosters

View the players who played on a team in a single season.

Charts

Graph team performance for a single statistic in a single season.

Awards Voting

Players receiving votes for various awards.

Hall of Fame Voting

Voting results for Hall of Fame candidates.

Options menu

Preferences

Controls how the Encyclopedia displays windows and prints reports, including font settings, plus other basic application features. When you access this command, a dialog box opens. See [Encyclopedia Preferences](#) for additional information.

Reports

Controls Encyclopedia report formats. When you access this command, a dialog box opens. See [Report Options](#) for additional information.

Quote of the Day

Select this command to toggle the check mark that enables or disables opening the Encyclopedia with a quotation about baseball.

History [player]

Display or print a biography; or offensive, pitching and defensive statistics for any portion of an individual player's career.

Comparisons [player]

Display or print a comparison of offensive, pitching or defensive statistics for any portion of two individual players' careers.

Leader Boards [player]

Display the players who are leaders or trailers in any statistical category using your own search criteria. Note that you can engage in other application activities while a leader board is being generated.

Charts [player]

Careers

Display or print line charts illustrating the career performances of one to three players for any single statistic.

Distributions

Display or print pie charts that illustrate the breakdown of a player's performance in six categories for any portion of his career. See [Distributions](#) for additional details.

Awards [player]

Display or print the winners of 29 different awards by year.

List [player]

Build a custom subset of players. The list is used to reduce the search set of players when selecting players for [Player History](#), [Player Comparisons](#), and [Player Charts](#). See [Player Lists](#) for additional details. Lists apply to the current session of Encyclopedia use only, and cannot be saved or used as the basis for reports.

History [team]

Display or print a biography; a summary; or a statistical report on offense, pitching, total defense, or defense by position for any portion of a team's existence.

Comparisons [team]

Display or print a comparative statistical report on offensive, pitching or defensive performance for any portion of two teams' existence.

Leader Boards [team]

Display the teams that are leaders or trailers in any statistical category. Note that you can engage in other application activities while a leader board is being generated.

Charts [team]

Display or print line graphs that illustrate the performance of one to three teams over any period of time for any single statistic.

History [season]

Display or print the standings and highlights; or statistical reports on offense, pitching, total defense, and defense by position for all teams active in a given season. Statistical reports display totals for all teams by league.

Rosters [season]

Display or print the offensive, pitching and defensive statistics for all players who played for a team in a selected year.

Charts [season]

Display or print bar charts that rank all teams that were active in a selected year by a specific statistic. Team bars are color coded by league.

Awards Voting [season]

Display or print a report of the MVP, Cy Young and Rookie of the Year awards_voting in a selected year.

Hall of Fame Voting [season]

Display or print a report of the Hall of Fame voting in a selected year.

Encyclopedia Preferences dialog

Indicate your choices for default settings controlling displays. Click on **OK** when you are finished with your changes. Click on **Reset** to return to initial default settings. Click on **Cancel** to close the settings box without incorporating any changes.

Screen or Printer font: Click on the appropriate **Set** button. Select font name, style and size.

Backdrop: Reports in the Encyclopedia are windows that open to display information. These windows appear against a desktop-like base which can be blank, or can contain a graphic image called a backdrop. You can choose any graphic image for a backdrop to the application. The image must be in bitmap (.BMP or .DIB) format.

Click on the **Set** button next to the selection box for **Backdrop** to open a **Select Backdrop** dialog (standard Windows format). Choose a file from those listed, or change to another directory to access a graphic file from a different application or collection. When you click on **OK**, the full path filename of the file you select appears in the selection window.

When you installed the Encyclopedia, backdrop artwork was added and assigned to the application. Additional artwork is available in the BACKDROP sub-directory of BBW100 and can be selected as the backdrop for the Encyclopedia. These displays are in 256 color resolution only.

Stadium displays supplied with Baseball for Windows or obtainable as additional ballparks are in .DIB (Device Independent Bitmap) format. These graphics can also be used as application backdrops. Standard Windows backdrops supplied with Windows Program Manager are typically in .BMP format. Any graphic image in either of these two formats can be selected as a backdrop.

Any graphic you select will immediately display when you click on the **OK** button of the Preferences dialog. After selecting a graphic, you must also specify how the graphic is to be displayed by making a choice in the **Display Backdrop** region of the dialog. See next section.

Display Backdrop: Aside from not displaying any backdrop, there are four options for how a backdrop will be displayed. Choose from **Actual Size**, **Best Fit**, **Full Screen**, or **Tiled**. The ideal choice will depend on the characteristics of the chosen graphic image.

Note: Stadium displays appear best with the **Actual Size** choice, which is equivalent to **Full Screen**.

Display Windows: Windows can be displayed in any of five ways: Standard, Cascaded, Vertically Tiled, Horizontally Tiled, or Full Screen. The display windows options are mutually exclusive. They can be overridden with a Window command.

Note: When more than 3 windows are open, either tiling option results in the same organization of the display. Any window can be maximized using the **Zoom** button.

Application Settings

Start Application Maximized: Click this box to set or clear the check mark. When maximized, the Encyclopedia's window fills the screen. Non-maximized exposes a portion of the Windows desktop, providing access to other minimized application icons.

Save Settings on Exit: Click on this box to set or clear the check mark. When checked, changes you make in these settings and other choices in the **Options** menu will be saved when you exit.

When this option is not checked, changes you make apply only to the current session.

New windows appear sized to the report contents, to the extent possible, and overlay other windows similar to the cascaded display. Opening a new window has no effect on the size and location of previously opened windows.

Each new window is a standard size, and is placed on top of, but to the right and below, the previous window. All open windows are redrawn cascaded.

As a new window is created, all windows are redrawn so that they are apportioned a section of the screen, and are sized according to the number of open windows. Vertical tiling places windows side-by-side.

As a new window is created, all windows are redrawn so that they are apportioned a section of the screen, and are sized according to the number of open windows. Horizontal tiling stacks windows top to bottom.

The active window fills the entire screen display.

Report Options dialog

This Help information applies to the general [Report Options](#) dialog as well as the specific [Options](#) dialogs that are secondary to many of the report dialogs, which are reached by clicking the [Options](#) button in a dialog box. (Some settings are not relevant to certain linked [Option](#) dialogs.) Be sure to read the notice at the bottom of this help screen.

History Format: These settings control the content and appearance of the reports you display or print from the Encyclopedia. The format boxes control how history reports will appear. Your choice is for Traditional or [Sabermetric](#) format for each of the three types of displays: [Offense](#), [Pitching](#), and [Defense](#). Click on one of the two options in each box to set that option.

Comparison Format: This box controls how you want comparison displays to appear. Your choices are again [Traditional](#) or [Sabermetric](#), with the addition that either format can be aligned in rows or columns. Click on your choice to select it.

Season Display Options: There are two choices for Season Display Options. You can choose to have either or both options on or off. Click in the selection box to set or remove the check mark. You may wish to include or exclude splits and cumulative totals for each season of a player's career.

Seasonal Games: The dialog contains two boxes for setting values for Seasonal Games. The purpose is to establish the number of games that represent an average season. For offense and defense, the standard (and default) value is 162 games played. If you were dealing with players from the 1930's, you might want to set the value at 154. For pitching, the average season is 36 starts (relievers are credited with 0.6 starts for every relief appearance). A few decades back, the average full season pitcher made 40 starts, so you might want to make an adjustment for that. To change a value, click in the box to obtain an editing cursor bar, or double-click on the value to highlight it and replace it by typing a new value.

Notice: When you change the settings on any [Options](#) dialog, the choices you make are saved and become default options for each report you create. If you later want to alter the options for a specific report, you can click on the [Options](#) button to establish new options for that display. Changes you make from any [Options](#) dialog will become the new defaults and will continue to apply to each new report you request unless you [Cancel](#) the main dialog before the changes are put into effect.

General Description

The Bill James Electronic Baseball Encyclopedia is your window into the performance of players and teams from the entire history of baseball. Use it to display, and print, a variety of performance tables and charts; team reports including leagues, divisions, and franchises; and player, or team, leader boards. Compare players to one another to fuel debates on who was the "best." See who won the various seasonal awards, who is in the Hall of Fame, and when members of the Hall were inducted.

Information for players, teams, and seasons includes biographical (text report) information about the players and teams, career highlights, franchise highs and lows, plus season standings and highlights and post-season results.

Extensive statistical data covers offense, pitching, baserunning, and defensive performance. Performance results can be displayed in traditional format or enhanced by modern sabermetric formulae. Many illustrative charts can be displayed or printed on performance measures of players, teams, and seasons.

The Encyclopedia includes lists of all players winning major awards and honors, as well as those receiving votes for various awards, including the vote tallies year-by-year for Hall of Fame candidates.

Bill James

Who is Bill James? Considered by many to be the father of sabermetric analysis of baseball performance, Bill James is the author of many books analyzing all facets of the sport of baseball, and is the creator of many new statistical (sabermetric) tools for evaluating player and team performance. For years he wrote and published the Baseball Abstract, and he is now closely associated with STATS, Inc., publisher of baseball statistics and source of the data in this Encyclopedia.

Credit is also due to Colby Duerk, who originally conceived of this electronic format for an encyclopedia of baseball information. Formerly known as Duerk's Electronic Baseball Encyclopedia, the application now represents the joint efforts of Duerk and James, supported by STATS, Inc., to present the most powerful and current analytical tool available to the researcher and the fan who wants to dig deeper into the history of baseball.

To select consecutive list entries, click on an initial choice, then hold down the **Shift** key and click on the final choice at the other end of the desired range. All choices between the two selections are highlighted. Alternatively, click and drag the mouse over the entries.

To select non-consecutive choices, hold down the **Ctrl** key and click on each choice desired.

Player History dialog

Search for ...: To locate a player, type his name in the **Search for** box: last name, then a comma, and first name. After typing, press **Enter**. You need not type a complete name, or anything more than a last name or even part of a last name. The search process looks for the first name in the Players list that matches what you typed. Note: Available player names may be limited by a previously generated player list.

Year: When a player is highlighted, the years he was an active major league player appear in the Year selection list. Initially, all career years are selected. Click on a single year to select that year. You can easily select multiple consecutive years or several non-consecutive years.

Reports: Four different reports are available on players: Biography, Offense, Pitching, and Defense. Click on a report type to toggle that report on or off. If a report type is grayed, no data is available on the player for that report type.

The **Options** button opens another dialog that provides for custom selection of report formats, seasonal display options, and seasonal average standards. Additional help is available for that dialog if you need it.

Click on the **Display** button when you are ready to view the report(s) on screen. Click on the **Print** button if you want the report(s) sent to your printer. Click the **Cancel** button to leave this dialog without creating any reports.

Player Comparisons dialog

Category: Comparisons are easier to create if you first select the Category. Three different categories are available for comparisons: [Offense](#), [Pitching](#), and [Defense](#). Click on a comparison type to select that type. The choices are mutually exclusive. Players who qualify with data relative to the category appear in the Players lists.

Search for ...: To locate a player, type his name in the [Search for](#) box: last name, then a comma, and first name. After typing, press [Enter](#). You need not type a complete name, or anything more than a last name or even part of a last name. The search process looks for the first name in the Players list that matches what you typed. Note: Available player names may be limited by a previously generated [player list](#). You need to select two players from the Player lists for comparisons.

Year: When a player is highlighted, the years he was an active major league player appear in the Year selection list. Initially, all career years are selected. Click on a single year to select that year. You can easily select [multiple consecutive years](#) or several [non-consecutive years](#).

Calculation: For each player, indicate which calculation method you prefer for organizing that player's performance. The choices are: [total](#), [average](#), and [seasonal](#). See [Seasonal Display Options](#) or [Report Options](#) for additional guidance.

The [Options](#) button opens another dialog that provides for custom selection of report [formats](#). Use this to adjust [seasonal games](#) for [seasonal average calculations](#). Additional help is available for that dialog if you need it.

Click on the [Display](#) button when you are ready to view the report(s) on screen. Click on the [Print](#) button if you want the report(s) sent to your printer. Click the [Cancel](#) button to leave this dialog without creating any reports.

Use career totals for the career years selected.

Use averages for the number of seasons selected. If eight seasons are selected, all stat category values (other than percentages) are divided by 8.

Use seasonally adjusted averages. For the seasons selected, a calculation is made to arrive at the number of whole and fractional seasons represented. The result is the divisor for each stat category, yielding a seasonally adjusted average.

Player Leader Boards dialog

Using this dialog will be much easier if you make choices in the following order:

Category: To generate a leader board, first select the Category. Four different categories are available for ranking: [Offense](#), [Baserunning](#), [Pitching](#), and [Defense](#). Open the list box and click on a stat type to select that type. The choices are mutually exclusive. When you select a category, statistics relevant to that category appear in the Statistic list.

Statistic: Next, select a specific statistic. They are listed alphabetically. Click on one to highlight it.

Order: Select an Order for ranking. This will be in the form fewest/most or lowest/highest, with the specific wording dependent on the statistic chosen. (Note: The "most" or "highest" is not always the "best." If you select Earned Run Average as the Statistic, Order will show "highest/lowest" with highest as the default, but you are more likely to want the leaders in lowest ERA.)

Include The Top: The default for number of players included is 10. If you want to see more or fewer players, change the value in the [Include The Top](#) box. Maximum number to include is 100.

Minimums: When you select a statistic, suggested minimum values may appear in the [Minimum##](#) box. If a black number is in the box, you can alter it to another value if you wish. The key for offense is plate appearances (PA); for baserunning it is attempted stolen bases (ASB); for pitching it is innings pitched (IP); and for defense it is defensive games (DG).

Period: Indicate which period should apply to the statistical category selected. The choices are: [Single Season](#), [Career Total](#), [Career Average](#), and [Seasonal Average](#). Note that the standard for seasonal average will be that which you last set in the [Report Options](#) dialog. See [Seasonal Average Standards](#) for further commentary.

Minimum Years: When you select a period that is an average (career or seasonal), you are presented with a suggested minimum number of years in the [Minimum Yrs](#) box. You can alter this value as you choose. For [Single Season](#) and [Career Total](#), the value is grayed, not applicable.

Criteria: Before you start the calculation process, you will probably want to set some criteria for eligible players. Initially, all players are eligible. Click on the [Set Criteria](#) button to establish specific criteria using another dialog box. Help for this dialog is available when you open it and click on the [Help](#) button.

Display: Click on the [Display](#) button when you are ready to view the report(s) on screen. Click the [Cancel](#) button to leave this dialog without creating a report. Leader boards can only be printed after creation, via the window system menu.

Take the single largest or smallest value for this statistic for any applicable career year for each player and use that value to rank players.

Use total career value for ranking.

Use the career average for each player's career to rank players. If eight seasons are involved, all stat category values (other than percentages) are divided by 8.

Use seasonally adjusted averages to rank players. For the seasons selected, a calculation is made to arrive at the number of whole and fractional seasons represented. The result is the divisor for each stat category, yielding a seasonally adjusted average.

Additional Leader Board Criteria dialog

When creating a leader board, you will probably want it to include only those players who satisfy a specific set of criteria. This dialog provides seven different categories for limiting the players who are eligible for inclusion in the rankings. It is functionally the same as the dialog to build player lists.

In each category, you can select a single choice or multiple choices. Initially, all choices are selected. To make a single choice from a list box, click on that choice. You can easily select multiple consecutive entries or several non-consecutive values.

Bats: How did the player bat? Left handed or right handed? Do you want to include switch hitters as well? The **Unknown** choice applies to players for whom the information on how they batted is unavailable.

Throws: With which hand does the player throw? Again, **Unknown** are the players for which data is unavailable. And yes, there is one Switch pitcher in the database.

Positions: See Positions for important commentary on this option. <Primary Position Only> is normally checked. When it is, and you select specific positions, a player is only eligible when the position(s) selected is considered that player's primary position. (When two or more positions are selected, players are eligible if any one of the selected positions was their primary position.) Click on this box to turn it on or off. Turning it off means a player is eligible if he played at that position, whether or not it was considered his primary position.

Age: The age range is from 15 to 60. Selecting an age will take only those players who played at that age, using the season when they were that age. The age used is the player's age on July 1 of the season.

Awards and Honors: Limit the player eligibility to those players who won the selected honor(s). When you choose **None** you mean those players who never won any of these awards.

League: Use this list to limit the organization(s) in which the player performed. You can have this list display Leagues, Divisions, or Franchises. Click on a choice button below the list to display organizations of that type.

Years: Select one or more seasons to limit the ranking to players who played in those seasons. Optionally, use the Year Options to choose a playing era.

To return to **All Players** eligible, click on the **Select All** button. Click on **Cancel** to leave the dialog without making any specific criteria selections. Click on the **OK** button to apply the criteria to the leader board you are going to generate.

Player Career Charts dialog

This reporting option provides graphic displays of player performance relative to a specific statistic over their careers. To complete this dialog most efficiently, make your choices in the order presented here.

Category: The first step is to select a category of statistical types. Click on the Category selection box button to display the options, which are: [Offense](#), [Baserunning](#), [Pitching](#), [Defense by Position](#), and [Games at DH](#). Click on a category to select it. Statistics relevant to that category will appear in the Statistic list, and players who qualify with data relative to the category appear in the Players list. **Note:** After choosing a statistic and one or more players to chart, you cannot alter the category until you clear the [Current Selection](#) player(s) or stat (the list button is gray). Use the [Clear](#) button to the left of a current selection to delete a selection.

Statistic: Each category provides a selection of individual statistics to apply in charting player performance. They are listed alphabetically. Scan the list until you find the statistic you wish to chart. Double-click on your choice to select it. The stat you select will appear under [Current Selections](#) on the first line with a cyan background. You may alter your choice of stat by double-clicking on another selection.

Search For ...: To locate a player, type his name in the [Search for](#) box: last name, then a comma, and first name. After typing, press [Enter](#). You need not type a complete name, or anything more than a last name or even part of a last name. The search process looks for the first name in the Players list that matches what you typed. (**Note:** Available player names may be limited by a previously generated [player list](#).) You may select just one player or up to three players from the Players list for charting. To select a player, double-click on the name in the Players list. Use a related [Clear](#) button to remove a player name from the [Current Selections](#).

Options: Select none, one, or both of these options. When you choose [cumulative](#), the values charted represent career-to-date values. Without that choice checked, the values are season-by-season totals. If you choose [by age](#) then the horizontal axis of the chart plots the age of the player during his career. Leaving that choice blank means that the horizontal axis plots year-of-service. **Note:** When using year-of-service, gaps in service (did-not-play seasons) do not appear as gaps on the chart; when the index is age, the time line is continuous and gaps in service are revealed (the value for the stat is zero at the age when the player missed the entire season).

There is a [Clear](#) button beside each of the current selections that may be used to delete the associated entry. Click on the [Display](#) button when you are ready to view the chart on screen. Click on the [Print](#) button if you want the chart sent to your printer. Click the [Cancel](#) button to leave this dialog without creating a chart. Also see [Player Career Chart](#) for a description of these charts.

Player Distributions dialog

This reporting option provides graphic displays of player performance relative to a specific statistic over their careers. To complete this dialog most efficiently, make your choices in the order presented here.

Category: The first step is to select a category of statistical types. Click on a category to select one. They are: [Offense](#), [Pitching](#), and [Defense](#). When you select a category, the "[Distribution of...](#)" section displays several choices of statistics that can be plotted on a pie chart, and players who qualify with data relative to the category appear in the Players list.

Distribution of ...: Each category provides one to three choices of statistics that can be graphed as a distribution. For example, under Offense the possible choices are Hits and Plate Appearances. Click on one of the stat choices under "Distribution of..." to select it.

Search For ...: To locate a player, type his name in the [Search for](#) box: last name, then a comma, and first name. After typing, press [Enter](#). You need not type a complete name, or anything more than a last name or even part of a last name. The search process looks for the first name in the Players list that matches what you typed. (Note: Available player names may be limited by a previously generated [player list](#).) You may select only one player from the Players list for charting. The highlighted player in the list is the selected player.

Year: When a player is highlighted, the years he was an active major league player appear in the Year selection list. Initially, all career years are selected. Click on a single year to select that year. You can easily select [multiple consecutive years](#) or several [non-consecutive years](#). Cumulative totals for the years you select will be used to construct the chart.

Click on the [Display](#) button when you are ready to view the chart on screen. Click on the [Print](#) button if you want the chart sent to your printer. Click the [Cancel](#) button to leave this dialog without creating a chart. Also see [Player Distribution Chart](#) for a description of these charts.

Award Winners dialog

Select one of 29 awards from the list of award categories.

Click on the **Display** button when you are ready to view the report on screen. Click on the **Print** button if you want the report sent to your printer. Click the **Cancel** button to leave this dialog without creating a report.

Build Player List dialog

Use a player list to limit the selection of players available for player histories, charts, and comparisons. When you establish a player list, the number of players included is displayed in the status bar. Player lists improve the efficiency and responsiveness of the Encyclopedia when selecting players. As you make selections, the box at the top provides a text description of the collective criteria.

In each category, you can select a single choice or multiple choices. Initially, all choices are selected. To make a single choice from a list box, click on that choice. You can easily select multiple consecutive entries or several non-consecutive values.

Bats: How did the player bat? Left handed or right handed? Do you want to include switch hitters as well? The **Unknown** choice applies to players for whom the information on how they batted is unavailable.

Throws: With which hand does the player throw? Again, **Unknown** are the players for which data is unavailable. And yes, there is one Switch pitcher in the database.

Positions: See Positions for important commentary on this option. <Primary Position Only> is normally checked. When it is, and you select specific positions, a player is only eligible when the position(s) selected is considered that player's primary position. (When two or more positions are selected, players are eligible if any one of the selected positions was their primary position.) Click on this box to turn it on or off. Turning it off means a player is eligible if he played at that position, whether or not it was considered his primary position.

Age: The age range is from 15 to 60. Selecting an age will take only those players who played at that age, using the season when they were that age. The age used is the player's age on July 1 of the season.

Awards and Honors: Limit the player eligibility to those players who won the selected honor(s). When you choose **None** you mean those players who never won any of these awards.

League: Use this selection to limit the organization(s) in which the player performed. You can have this list display Leagues, Divisions, or Franchises. Click on a choice button below the list to display organizations of that type.

Years: Select one or more seasons to limit the list to players who played in those seasons. Optionally, use the <Year Options> to choose a playing era.

To return to **All Players** available, click on the **Select All** button. Click on **Cancel** to leave the dialog without making any specific criteria selections. Click on the **Use List** button to establish the new player list.

Team History dialog

Information regarding "teams" really refers to specific teams or collections of teams that are grouped into recognizable organizational entities. These entities may be "organizations" (currently just Major League Baseball), leagues, divisions, or "franchises." Six different reports are available on teams, but team biographies (text articles about team highlights) are available only at the franchise level.

Entity: To view a team history, first decide what level of entity you wish to examine. Below the large white box are four options: [Organizations](#), [Leagues](#), [Divisions](#), and [Franchises](#). Click on one of these choices to select it. The list box displays the range of selections for that entity category. After choosing a category, select an entity from the list box by clicking on it to highlight it.

Years: When a selection is highlighted, the years that "team" was active in the major leagues appear in the Year selection list. Initially, all active years are selected. Click on a single year to select that year. You can easily select multiple consecutive years or several non-consecutive years.

Reports: Select any or all of the six report types to obtain a display window for each type of report. The Biography option is available only for franchises. The other options are: Summary, Offense, Pitching, Defense Total, and Defense By Position. Click on each type to set or remove the check mark.

The **Options** button opens another dialog that provides for custom selection of report formats. Additional help is available for that dialog if you need it.

Click on the **Display** button when you are ready to view the report(s) on screen. Click on the **Print** button if you want the report(s) sent to your printer. Click the **Cancel** button to leave this dialog without creating any reports.

Team Comparisons dialog

Comparisons match up two "teams" over one or more seasons on the basis of the three main categories of performance: [Offense](#), [Pitching](#), or [Defense](#). Note that you can compare entities at different organizational levels.

Category: First select a category that will form the basis for comparison. Choose from [Offense](#), [Pitching](#), or [Defense](#). You can select only one at a time.

Entity: Now you must decide which type(s) of entities you wish to compare. Below each of the large white list boxes are four options: [Organizations](#), [Leagues](#), [Divisions](#), and [Franchises](#). Click on one of these choices for each list box to select an option. The list boxes display the range of selections for that entity category. After choosing a category, select entities from the list boxes by clicking to highlight them.

Years: When a selection is highlighted, the years that "team" was active in the major leagues appear in the Year selection list. Initially, all active years are selected. Click on a single year to select that year. You can easily select multiple consecutive years or several non-consecutive years.

The [Options](#) button opens another dialog that provides for custom selection of report formats. Additional help is available for that dialog if you need it.

Click on the [Display](#) button when you are ready to view the report(s) on screen. Click on the [Print](#) button if you want the report(s) sent to your printer. Click the [Cancel](#) button to leave this dialog without creating any reports.

Team Leader Boards dialog

This type of leader board ranks teams on the basis of a statistic that you select.

Completing this dialog will be easier if you make selections in the following order:

Category: To generate a leader board, first select the Category. Sixteen different categories are available for ranking: [Offense](#), [Baserunning](#), [Pitching](#), [Defense](#), [Defense by Position](#) (10 choices), [Games at DH](#), and [Team](#). Open the list box and click on a stat category to select that type. The choices are mutually exclusive. When you select a category, statistics relevant to that category appear in the Statistic list.

Statistic: Next, select a specific statistic. They are listed alphabetically. Click on one to highlight it.

Order: Select an Order for ranking. This will be in the form fewest/most or lowest/highest, with the specific wording dependent on the statistic chosen. (Note: The "most" or "highest" is not always the "best." If you select Earned Run Average as the Statistic, Order will show "highest/lowest" with highest as the default, but you are more likely to want the leaders in lowest ERA.)

Period: Indicate which period should apply to the statistical category selected. The choices are [Single Season](#) and [Total](#). **Note:** When you choose Single Season, the last choice in the Level region is "Teams;" selecting Total in this section changes the last entry in the Level region to "Franchises."

Include The Top: The default for number of teams included is 10. If you want to see more or fewer teams, change the value in the [Include The Top](#) box. Maximum number to include is 100.

Level: Select a type of organizational entity: [Organizations](#), [Leagues](#), [Divisions](#), or [Teams/Franchises](#). See the note above for [Period](#).

Years: Select one or more seasons to limit the ranking to teams that were active in those seasons. Optionally, use the [Year Options](#) to choose a playing era. You can easily select [multiple consecutive year entries](#) or several [non-consecutive years](#).

Display: Click on the [Display](#) button when you are ready to view the report(s) on screen. Click the [Cancel](#) button to leave this dialog without creating a report. Leader boards can only be printed after creation, via the window system menu.

Take the single largest or smallest value for this statistic for any applicable season for each team and use that value to rank teams. When the level is "Teams," entities are teams from specific seasons.

Use the cumulative total of all the years selected for ranking. When the Level is "Franchises," the entities ranked are franchises regardless of team name or location.

Team Charts dialog

This reporting option provides graphic displays of team performance relative to a specific statistic over their histories. To complete this dialog most efficiently, make your choices in the order presented here.

Category: The first step is to select a category of statistical types. Click on the Category selection box button to display the options, which are: [Offense](#), [Baserunning](#), [Pitching](#), [Defense](#), [Defense by Position](#), [Games at DH](#), and [Team](#). Click on a category to select it. Statistics relevant to that category will appear in the Statistic list.

Statistic: Each category provides a selection of individual statistics to apply in charting team performance. They are listed alphabetically. Scan the list until you find the statistic you wish to chart. Double-click on your choice to select it. The stat you select will appear under [Current Selections](#) on the first line with a cyan background. You may alter your choice of stat by double-clicking on another selection.

Entity: Next you must choose what level of entity you wish to chart. Below the large white box are four options: [Organizations](#), [Leagues](#), [Divisions](#), and [Franchises](#). Click on one of these choices to select it. The list box displays the range of selections for that entity category. After choosing a category, select an entity from the list box by double-clicking on it to display it under [Current Selections](#). You can select up to three "organizations."

There is a [Clear](#) button beside each of the current selections that may be used to delete the associated entry. Click on the [Display](#) button when you are ready to view the chart on screen. Click on the [Print](#) button if you want the chart sent to your printer. Click the [Cancel](#) button to leave this dialog without creating a chart. Also see [Team Chart](#) for a description of these charts.

Season History dialog

Year: Select the year value to choose which season you desire for history reports. The range of valid years is shown to help you select a year.

Reports: A text article is available reporting Standings and Highlights for each season, plus statistical reports on the four main categories of performance (Offense, Pitching, Defense, and Defense By Position). Select any or all of the five report options by clicking on each to set or remove the check mark.

The **Options** button opens another dialog that provides for custom selection of report formats. Additional help is available for that dialog if you need it.

Click on the **Display** button when you are ready to view the report(s) on screen. Click on the **Print** button if you want the report(s) sent to your printer. Click the **Cancel** button to leave this dialog without creating any reports.

Rosters dialog

Franchise: Roster reports are available for franchises. Select a franchise from the list by clicking on it.

Year: The franchise entry includes the range of years that franchise was active. Select the Year to designate a season for printing rosters.

Category: Three categories of rosters are available: Offense, Pitching, and Defense. Choose any or all roster categories by clicking on an option to set or clear the check mark.

The **Options** button opens another dialog that provides for custom selection of report formats. Additional help is available for that dialog if you need it.

Click on the **Display** button when you are ready to view the roster(s) on screen. Click on the **Print** button if you want the roster(s) sent to your printer. Click the **Cancel** button to leave this dialog without creating any rosters.

Season Charts **dialog**

Make your selections in the following order:

Category: The first step is to select a category of statistical types. Click on the Category selection box button to display the options, which are: [Offense](#), [Baserunning](#), [Pitching](#), [Defense](#), [Defense by Position](#), [Games at DH](#), and [Team](#). Click on a category to select it. Statistics relevant to that category will appear in the Statistic list.

Statistic: Each category provides a selection of individual statistics to apply in charting season performance. They are listed alphabetically. Scan the list until you find the statistic you wish to chart. Click on your choice to select it.

Year: Select the year to choose which season you desire to chart.

Click on the [Display](#) button when you are ready to view the chart on screen. Click on the [Print](#) button if you want the chart sent to your printer. Click the [Cancel](#) button to leave this dialog without creating a chart. Also see [Season Chart](#) for a description of these charts.

Awards Voting dialog

Year: Select the year to display the voting tallies for the listed awards or the Hall of Fame. The range of years that the awards were presented is shown to help you choose the year.

Click on the **Display** button when you are ready to view the report on screen. Click on the **Print** button if you want the report sent to your printer. Click the **Cancel** button to leave this dialog without creating a report.

[MAP]

```
#define pref_box 49007
#define report_box 49490
#define about_bj 49450
#define player_history_box 49453
#define player_comp_box 49454
#define player_leader_box 49455
#define player_career_cht_box 49456
#define player_dist_cht_box 49457
#define awards_box 49458
#define list_box 49459
#define lb_criteria_box 49460
#define team_history_box 49470
#define team_comp_box 49471
#define team_leader_box 49472
#define team_cht_box 49473
#define season_history_box 49480
#define rosters_box 49481
#define season_cht_box 49482
#define awards_voting_box 49483
```

GLOSSARY

This glossary contains definitions of terms and descriptions of reports and charts used by the Bill James Electronic Baseball Encyclopedia. In certain cases of statistical terms we identify the person who introduced the concept as it is used today. The descriptions frequently include ranges and average values for teams or players in the big leagues.

[Application Terms](#)

[Reports & Charts](#)

[Statistical Terms](#)

Application Terms

[Awards](#)

[Backdrop](#)

[Charts](#)

[Distributions](#)

[Format](#)

[Leader Board](#)

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[Player List](#)

[Positions](#)

[Seasonal Average Standards](#)

[Seasonal Display Options](#)

[Reports](#)

[Roster](#)

[Year Options](#)

Reports & Charts

Reports

[Player Biography Report](#)
[Player Offense Report](#)
[Player Pitching Report](#)
[Player Defense Report](#)
[Player Comparison Report](#)
[Player Leader Board Report](#)
[Player Awards Report](#)

[Team Biography Report](#)
[Team Summary Report](#)
[Team Offense Report](#)
[Team Pitching Report](#)
[Team Defense Report](#)
[Team Defense By Position Report](#)
[Team Comparison Report](#)
[Team Leader Board Report](#)

[Roster Offense Report](#)
[Roster Pitching Report](#)
[Roster Defense Report](#)

[Season Standings and Highlights Report](#)
[Season Offense Report](#)
[Season Pitching Report](#)
[Season Defense Report](#)
[Season Defense By Position Report](#)
[Season Awards Voting Report](#)
[Season Hall Of Fame Voting Report](#)

Charts

[Player Career Chart](#)
[Player Distribution Chart](#)
[Team Chart](#)
[Season Chart](#)

Statistical Terms

Listing is alphabetical. Statistics defined here cover the whole range of baseball performance; many categories do not appear in the Encyclopedia database, but are relevant to other Baseball for Windows applications.

A

[Assists](#)

[At Bats](#)

[Attempted Stolen Bases](#)

[Awarded First on Interference](#)

B

[Balks](#)

[Baserunners](#)

[Baserunners Per Nine Innings](#)

[Batters Faced](#)

[Batters Faced Per Nine Innings](#)

[Batting Average](#)

[Blown Saves](#)

C

[Caught Stealing](#)

[Complete Games](#)

[Complete Games Percentage](#)

D

[Decisions](#)

[Decisions Percentage](#)

[Defensive Games](#)

[Double Play](#)

[Doubles](#)

E

[Earned Run Average](#)

[Earned Run Percentage](#)

[Earned Runs](#)

[Earned Runs Prevented](#)

[Errors](#)

[Extra Base Hits](#)

F

[Fielding Average](#)

G

[Game Score](#)

[Games Behind](#)

Games Finished
Games Finished Percentage
Games In Relief
Games Played
Games Started
Grounded Into Double Play

H

Hit Batsmen
Hit By Pitch
Hits
Hits Per Nine Innings
Home Runs
Home Runs Per Nine Innings

I

Inherited Runners
Inherited Runners Scored
Inherited Runners Scored Percentage
Innings Pitched
Innings Played
Intentional Walks
Isolated Power

L

Left On Base
Losses

O

On Base Percentage
Opposition Batting Average
Opposition Caught Stealing
Opposition Stolen Base Average
Opposition Stolen Base Percentage
Opposition Stolen Bases
Outfield Assists
Outs Made
Outs Pitched
Outs Played

P

Passed Balls
Pickoffs
Plate Appearances
Power-Speed
Production
Put outs

R

Range
Relief Losses
Relief Points
Relief Wins Plus Saves
Relief Wins
Runners Picked Off
Runs Allowed
Runs Batted In
Runs Contributed
Runs Created Per Game
Runs Created
Runs Per Game
Runs Per Nine Innings
Runs Scored

S

Sacrifice
Sacrifice Flies
Sacrifice Hits
Save Opportunities
Save Opportunity Percentage
Saves
Secondary Average
Shutouts Percentage
Shutouts
Singles
Slugging Percentage
Stolen Base Percentage
Stolen Bases
Strikeout To Walk Ratio
Strikeouts Per Nine Innings
Strikeouts
Successful Chances
Successful Chances per game

T

Total Average
Total Bases
Total Chances Per Game
Total Chances
Triple Plays
Triples

U

Unearned Run Percentage
Unearned Runs

W

Walks
Walks Per Nine Innings
Wild Pitches

Winning Percentage
Wins

Awards

Players are honored and acknowledged by the receipt of various awards. Most awards are decided by voting of professionals in the sport or by sportswriters. The Encyclopedia contains information on the winners of various awards, and also includes voting information that provides insight into who was considered a viable candidate for a major award but not a winner. (Cecil Fielder lead the American League in RBI for three straight years [1991-1993], but placed second and ninth in MVP voting in 1991 and 1992 respectively, and got one vote in 1993.)

The most prestigious and coveted award is election to the [Hall of Fame](#). The Encyclopedia lists all players who are members of the Hall of Fame, with the year of induction indicated. There is complete voting information for the Hall for every year that voting took place.

The highest single season honor is the [Most Valuable Player](#) award. All players are eligible for this award. The Encyclopedia includes all MVP winners and complete voting information for each year the award was made.

Pitchers vie for the [Cy Young](#) award. The Encyclopedia includes all Cy Young winners and complete voting information for each year the award was made.

First year players hope to win [Rookie of the Year](#) honors. The Encyclopedia includes all Rookie winners and complete voting information for each year the award was made.

All-Star Game and post-season series [MVPs](#) are recognized. [MVP](#) winners for the All-Star Game, League Championships, and the World Series can be displayed.

The best defender at each position in each league is honored with the [Gold Glove](#) award. Winners of this award are displayed by position (outfield is considered a single position with three winners). The award is voted on by coaches and managers (no voting information included in the Encyclopedia) and sponsored by an equipment manufacturer.

The best hitter at each position in each league is honored with the [Silver Slugger](#) award. Winners of this award are displayed by position. ("Outfield" is considered a single position with three winners; for this award, designated hitter in the American League is a separate position.) The award is also voted on by coaches and managers (no voting information included in the Encyclopedia) and sponsored by an equipment manufacturer.

The Sporting News (TSN) also selects award winners in a number of categories. The annual TSN awards for [MVP](#), [Major League Player](#), [Player](#) (i.e. offensive performer), [Pitcher](#), [Fireman](#) (Reliever), [Rookie Player](#) and [Rookie Pitcher](#) are all included in the Encyclopedia.

Backdrop

The current version of the Encyclopedia provides the ability to select a unique backdrop. Although any piece of artwork in .DIB or .BMP format can be used as a backdrop (similar to Windows Desktop Wallpaper), 10 original works by the nationally recognized baseball artist, Andy Jurinko, have been included on the Baseball for Windows CD-ROM. These images are part of a major life-work project for Jurinko and we are delighted to share them with you.

Backdrop art can be copied from the CD to your hard drive. The advantage of doing this is to make backdrops available without having to access the CD each time you use an application. The disadvantage is the amount of hard drive space used. A backdrop can be accessed from the CD, but this takes more time and requires that the Baseball for Windows CD be available each time you use the Encyclopedia.

Charts term

The Encyclopedia will produce three different types of graphic illustrations: line graphs, bar charts, and pie charts. Two types of charts illustrate the performance of players: line graphs of career performance that can compare two or three players to each other, and pie charts of distributions showing how a collective category splits into its primary ingredients. A line graph can also be generated for team performance charting, again allowing for comparison of two or three organizational entities. Bar charts relate to seasonal performance, and provide a ranking of teams in a season based upon a selected statistic.

Detailed descriptions of the various charts and graphs can be found in the Reports & Charts section of the Glossary. Assistance in interpreting the various charts and graphs is provided in how do I read a chart or graph.

Distributions

These apply to the display of pie charts, graphically detailing how a player's performance breaks down in various categories.

Batters: Chart the distribution of hits and of plate appearances.

Pitchers: Chart the distribution of baserunners, outcomes and decisions.

Fielders: Chart the distribution of positions played.

A breakdown of hits into singles, doubles, triples and home runs.

What proportion of plate appearances resulted in hits, walks or hit by pitch results, strikeouts, and other outs.

Of batters reaching base against this pitcher, what proportion reached on hits, by hit batters, by unintentional walks, and by intentional walks.

For all batters faced, what proportion achieved hits, were walked or were hit by pitches, were strikeout victims, or were other (non-strikeout) outs.

Of all games appeared in, what were the wins, losses, saves, and no decision percentages of total game appearances.

In what percentage of the player's total defensive games (appearances) did he appear at each position.

Format

How much information do you want on a player? If you ask for "Traditional" format, your reports will include only those standard statistical categories associated with measuring a player's production and abilities. If you instead specify "Sabermetric" format, you will see the traditional stats plus the extended family of "new" statistics that baseball researchers have developed to more accurately evaluate the value and contributions of a player to his team's efforts to win ball games.

When you are creating comparison charts, you have the option of having the data appear in rows or in columns in either format.

Additional information on report formats is contained in Season Display Options and Seasonal Average Standards. Use the forward and backward arrows on the Help screen menu bar to view these other topics.

The term derives from the acronym of the Society for American Baseball Research, or SABR.

Leader Board **term**

When you create leader boards, you are ranking players or teams according to a statistical category, such as batting average or runs scored. You have great control over the generation of leader boards, including how many players/teams to include; minimum values to qualify for inclusion; the "best" or "worst;" and criteria for the initial search set, such as "third basemen," or "all pitchers who were active in the 1960's."

Leader boards include a "context" stat. For example, if you rank players by home runs, the context will be plate appearances. When the ranking stat is ERA, the context stat is innings pitched. This value is used to determine the rankings when two or more players tie in the ranking stat; the player who needed fewer of the context stat to reach the total of the ranking stat ranks above the player who needed more.

Criteria: About the criteria: Although the process of setting leader board criteria appears to be the same as that for creating a [player list](#), there are some important differences. Leader boards are data oriented; player lists are not. That is, when you set criteria for a leader board, the Encyclopedia goes looking for data that fits that criteria. When you set criteria for a player list, the Encyclopedia looks for a player who matches that criteria.

Here is an example. If you specify that you want a player list to include players who played for the New York Yankees and who were active in 1993, you won't get just the players who were on the Yankee team in 1993. (Use [Season Rosters](#) for that.) You will get players who were active in 1993 and who, at some time in their career, were members of the New York Yankees. That is, this player list starts with one set of players who played in 1993 and another set of players who played for the Yankees anytime, and makes a list of players who are in both sets. But if you asked for a leader board that displayed the 10 players with the highest batting average who played for the Yankees and played in 1993, then the data that forms the basis of that leader board will be taken for players who had 1993 Yankee data. That is, the data must satisfy both criteria in order to be included. It must be for 1993 and it must be from the New York Yankees.

Note: While the Encyclopedia is generating a leader board, you can engage in other activities with the application. The generation process will be suspended while a dialog box is open, but you can display other reports, or look at other windows, while the leader board generation process is processing. Once you are complete with a dialog box, the leader board creation process will again proceed. You can even call for another leader board creation process, but the new leader board request will not commence processing until the current leader board has been completed. It may also help to minimize the leader board progress window while it is at work so that it does not get in the way of other displays you are viewing.

Team term

The word [team](#) as used in the Encyclopedia is a loose term for some organizational entity. The [Team menu](#) actually provides access to teams or collections of teams under various organizational entities. Occasionally the word [entity](#) is used in Help to refer to any type of grouping, including organizations.

Formally speaking, the only [organization](#) for purposes of the Encyclopedia is "Major League Baseball." Information is also assembled and accessible for [leagues](#), [divisions](#), and [franchises](#).

A [league](#), which is a collection of teams, can be one of six entities, but only two, the American and the National, have histories that span decades. Note that the Encyclopedia contains only what are considered "major league" organizations. This excludes all minor leagues as well as negro leagues and foreign (non-North American) leagues.

[Note: Although it does not appear in any league listing, the National Association (NA), which operated from 1871-1875, is recognized in the Encyclopedia as a "major league." Some franchises began as teams in this league, and season standings are available for years when this league was in operation. However, statistical data on players in the NA is so unreliable that no statistical reports are available for teams or players in this league.]

A [division](#), also a collection of teams, is a formation of the American and National Leagues from 1969 to the present. (From 1969-93 there were four divisions, two in each league; presently there are six.)

A [franchise](#) is an organizational entity identifiable as a team that has continuity over time regardless of geographical location or nickname. For example, the world famous New York Yankees franchise of the American League (East Division) originated in Baltimore and was first named the Orioles, then the New York Highlanders when it was moved to the Bronx borough of New York City. The franchise currently known as the Baltimore Orioles began as the Milwaukee Brewers in the inaugural year of the American League and was for many years thereafter [1902-1953] the St. Louis Browns.

[Note: Franchises are named according to the most current, or last used, team name. Consequently, teams such as the Brooklyn Dodgers and the Seattle Pilots are not included in the franchise lists since the current manifestation of these franchises are the Los Angeles Dodgers and the Milwaukee Brewers. Likewise, the franchise entry for the Washington Senators is a National League entity that shut down in 1899. There is no current franchise with that name; the most recent Washington Senators are now the Texas Rangers and are reported on within that franchise.]

A [team](#) is the manifestation of a franchise in a given year.

Player List term

The purpose of building a player list is to limit the "search set." A search set is a subset of the entire database of players. When you create a player list, you are simplifying the player selection process by limiting the players who are to be included in the process.

For example, if you want to examine several players who played in 1963, first create a player list (using the Player List command) of all players for that year. The status bar will indicate how many players are included in that list. Then, when you use the Player menu to create reports or charts, the player search list will include only those players who are in the player list. This will greatly speed up the process of locating the one (or two, when making comparisons) player(s) you wish to display.

It is important to understand the logic process behind the creation of player lists. When you select one or more options from a list box on the dialog, you are indicating that you want to include all players who match that particular criteria. For example, when you select the "Bats Right" choice, you are asking for all players who are right-handed batters. When you select an age, you are asking for all players who were active major league players at that age. When you select a specific league, division, or franchise, you are asking for all players who were ever on that team or in that division or league. The combination of these criteria are accomplished using logical "AND." When you choose more than one entry in a list, the collection of entries from that list is combined using logical "OR." Selecting two awards, such as Gold Glove catcher and Silver Slugger catcher, says you are asking for players who match either type of award winner.

But it is easy to mis-understand what is happening when the various sub-sets are combined. If you ask for New York Yankees franchise players who are primarily catchers, were awarded the MVP award, and played in the years 1946-1960 Post War period, this does NOT mean that the players in the list will be those who won the MVP award while playing catcher for the Yankees sometime between 1946 and 1960. It could include a player who won the MVP award in 1964 while playing for the Red Sox as a first baseman. Why? Because the list process does not apply a "while" test to the players. Players who were primarily catchers may also have played first base. Players who played between 1946 and 1960 may also have played in 1964. Players who played for the Yankees may also have played for the Red Sox or the Royals (or any other team). Using the above example, the list includes any player whose position is primarily catcher, who at some time played for the Yankees, who was active in the period 1946-1960, and who at some point in their career won the MVP award. But not necessarily all at once.

To return to the base set (the complete list of all players), use the **Select All** button in the **Build Player List** dialog.

You cannot save a player list for later use (in another session), nor can you generate reports concerning all the players in a list. However, you can report on individual statistics across a collection of players via the leader board process.

Note that player lists do not affect leader board creation. In that process, you establish criteria for inclusion in the report that may, but does not have to, reflect the same criteria you might have used for a player list. See [leader boards](#) for additional commentary regarding search criteria.

Positions

In addition to the nine standard positions on the field, there are additional position classifications in the Encyclopedia. Many players have careers that did not include any defensive appearances, in which case their position assignment is NONE. Some players can be classified as "multiple unknown" (or UNK) when their defensive data cannot be separated by position, with only the total known.

"Designated hitter" is classified as a defensive position, but the only valid statistic for this position is Games Played. It is included in Defense-By-Position reports.

Left Field, Center Field, and Right Field data exists only for limited time spans. Data on specific outfield positions is available from 1876-1890 for the National League only, and from 1987 to the present for both leagues. Generally, the specific outfield positions will not be a "primary" position. (In a few cases, a player's primary position will be a specific field [LF, CF, or RF] rather than Outfield.) Since Outfield embraces all three positions, this classification should always have the same or more games played at that position that at LF, CF, or RF.

NOTE: Because of the potential for overlapping data on outfield positions, setting position criteria for leader boards should include LF, CF, and RF plus OF if you intend to include any outfielders. If you specify just "Outfield" and "Primary Position Only" a small number of players may be left out.

This refers to the player's career, not the one or more seasons included in the specification of search criteria. It is the position at which the greatest number of total career defensive games were played.

Seasonal Display Options

How do you want a player's statistics presented? There are a number of options. If you ask for "splits," then each time a player performs for more than one team in a season, his statistics for each team are presented separately. Without splits, the player's seasonal data is totaled for each season. When you request a "cumulative" display, each new season shows the total accumulation of data through that season, meaning that is the player's career data to date. Without the cumulative display, each season's stats are the data for that season alone.

A collection of seasons for a player (which may or may not represent his entire career) will be totaled, and the data will also be presented in average and seasonal average notation. Averaging the data simply means dividing the totals by the number of seasons selected.

Use the forward and backward arrows on the Help screen menu bar to see information on report Formats and Seasonal Average Standards.

Seasonal Average Standards

For offensive and defensive stats, a "season" consists of some number of games played. (The initial default value for seasonal games is 162, which is the number of games comprising a current season in major league baseball.) To calculate a seasonal average, divide the number of games played by a player by 162 (or whatever your preferred norm for a season is). This will result in some real number (whole number and a fraction) of seasons. Each other accumulation stat total is then divided by this number to get the seasonal average for that stat. Applied to pitching stats, the process uses some standard for game starts, which could be 40 games or 36 games or whatever you consider most representative for a season. (Games-in-relief are counted as six-tenths (0.6) of a start for purposes of the calculation.) Total games for a pitcher are divided by this number, and the result is the number of whole seasons the data represents.

Why do this? Because the context of a complete season is meaningful for evaluating a player. Think of it as a corollary to earned run average. ERA is the number of earned runs a pitcher yields per 9 innings he pitches. A pitcher does not actually pitch 9 innings every time he appears in a game, but a standard game is 9 innings long, so recasting total earned runs allowed into a 9 inning game framework helps us to make sense of how well a pitcher performs. In the same way, a season consists of 162 games (or 154 in earlier times), so it makes sense to recast cumulative player data on the basis of 162 game seasons, even though most players (Gehrig and Ripken excepted) do not actually appear in all their team's games in any one season.

Additional information on report formats is contained in [Formats](#) and [Seasonal Display Options](#). Use the forward and backward arrows on the Help screen menu bar to view these other topics.

Each time a player plays for more than one team in a season, separate data for each team appears on individual lines of the report.

Cumulative reporting means always show the player's career totals to date. Otherwise, the data is season by season totals.

How many full season equivalents did a player play? You decide what a full season consists of (currently it is 162 games for offense and 36 games for pitching). Seasonal average notation presents averages based upon the number of full seasons played.

Reports

See [Reports & Charts](#) for a listing of all available reports. The report header will frequently contain specific information on how the report was generated, or how the criteria you set defines the report's contents.

When viewing a report, press **F1** for a description of that report.

A report can be displayed or printed. The choice is controlled by the dialog which generates the report (leader boards are the exception). Any report can also be printed via the associated report window system menu's **Print** command.

Statistics which appear in **blue** are offensive stats, **red** values are pitching stats, and **magenta** values are defensive stats. Values appearing in black or gray on a report are derived from incomplete data (based upon available information) or are unavailable from the data (zero value).

Roster

A roster is a listing of players who played for a team in a season. There are three roster reports: offense, pitching, and defense (by position). The reports display statistical data for the players who performed for that team in a specified season. Options for report formats are the same as for player histories. Use the Season Rosters command to display team rosters.

At the bottom of the Encyclopedia application window is the status bar. It always displays the current time, as well as the number of people contained in the currently active player list.

Year Options

When you establish criteria for a player list or a leader board, one optional qualification is a collection of seasons in which the players performed. While you can select a single year or a group of individual years, another approach is to designate an "era," such as the "dead ball era" or the "20th century" or the "expansion era."

Player Awards Report

Each version of this report lists the year-by-year winners of the major awards and honors that recognize the best performers in a season. In some cases, there are separate awards for each league. Exceptions are noted in the report header. The contents are self-explanatory.

Use the Player Awards command to generate this report. See Award Winners [dialog] for additional information regarding the report.

Player Biography Report

These are articles describing key biographical information about the player, the awards and honors he won, and highlights in his career. Includes a nickname if he had one, birth date and place, teams he played for, his primary position and other positions he played, and his batting side and throwing hand.

Use the Player History command to generate this report. See Player History [dialog] for additional information regarding the report.

Player Comparison Report

When comparing two players, the values for the second player selected are subtracted from the values for the first player to produce the variance. The percentage is the result of dividing the variance by the value for the second player, thus a 12 in the Percent row/column means that the variance is 12 percent of the second player's value.

The range of the variance is from -100% to +999.9% (the latter includes values larger than 1000.0%). Take care in interpreting what the percentages mean. Applied to small values, they can be misleading. Here is an approach to interpreting the variance:

-100%	Player 1 is infinitely worse than Player 2
-50%	Player 1 is half as good as Player 2
0.0%	Player 1 is equal to Player 2
50.0%	Player 1 is 50% better than Player 2
100.0%	Player 1 is 2.0 times as good as Player 2
200.0%	Player 1 is 3.0 times as good as Player 2
999.9%	Player 1 is immeasurably better than Player 2

Generally, a positive variance indicates a better performance. However, the reverse is true for statistics such as Earned Run Average (ERA) and Grounded into Double Plays (GIDP) where a lower value equates to better performance.

Use the [Player Comparison](#) command to generate this report. See [Player Comparison \[dialog\]](#) for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Player Defense Report

Fielding data is available for each position that the player appeared at during his career. The order of appearance of positions is based upon total career games played at each position. The first position shown is the player's primary position. Totals for each position are presented, including averages and seasonal averages, when you do not request cumulative reporting.

Use the Player History command to generate this report. See Player History [dialog] for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Player Leader Board Report

Leader board contents are quite dependent on how you frame the request. For example, if you request single season leaders, the report provides the year in which the player achieved the high value, and his age in that season. When the ranking is based upon career totals, the length of the player's career in years is included.

Leader boards include a "context" stat. For example, if you rank players by home runs, the context will be plate appearances. When the ranking stat is ERA, the context stat is innings pitched. This value is used to determine the rankings when two or more players tie in the ranking stat; the player who needed fewer of the context stat to reach the total of the ranking stat ranks above the player who needed more.

If you base the ranking on career or seasonal average and specify minimum levels of games played, the value for games used and reported is the player's average games per season for his career.

Take care in specifying year ranges. The years you choose may not embrace a player's entire career, in which case the data used will be for that portion of the player's career falling in the range of years you select. That is a reason for taking a good look at the range of years of each player's career on the leader board report. If the years criteria cut across some player career ranges, then inclusion and ranking of those players may be misleading, in that the data used does not represent their entire career. In other words, be very clear that you know what you are getting.

Use the Player Leader Boards command to generate this report. See Player Leader Boards [dialog] for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Player Offense Report

Provides all the essential offensive performance information produced by the player. This is a good report to experiment with various report options. Try traditional vs. sabermetric, season totals vs. cumulative, and splits or no splits to see how each choice affects the content and presentation of the report. See [formats](#) for additional commentary on these options. Totals for each position are presented, including averages and seasonal averages, when you do not request cumulative reporting.

Use the [Player History](#) command to generate this report. See [Player History \[dialog\]](#) for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Player Pitching Report

All the relevant performance statistics for a pitcher. Career totals, averages, and seasonal averages are included when the report is not assembled to display cumulative totals.

Note that pitchers are more likely than hitters to have season gaps in their major league service.

Use the [Player History](#) command to generate this report. See [Player History \[dialog\]](#) for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Roster Defense Report

Defense is presented by position, based upon the 1-9 position assignments from traditional scoring methods (e.g. position 3 is first base). Within a position, players are ranked by number of games appearing at that position. The "Outfield" summary grouping is presented after the individual outfield positions are listed. When appropriate, Designated Hitter is also included.

Use the [Season Rosters](#) command to generate this report. See [Rosters \[dialog\]](#) for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Roster Offense Report

Players are listed by position played, starting with Catcher (position 2), running through specific outfield positions (positions 7-9), followed by "Outfield", then Designated Hitter if appropriate, and ending with Pitcher where pitchers have offensive stats. The position to which players are assigned for this report is determined by where they played most games (when outfield is the leading position, a player is assigned a specific outfield position when he had at least 75% of his games at that position; otherwise, he will be classified as "OF"). Within a position, players are listed in games played rank order.

Occasionally, pitchers will be included on this report for teams that generally used the DH. American League pitchers will occasionally be used as pinch hitters and pinch runners, in which case they are included in offensive statistics by official AL rules. The number of games played is not based on games in which they appeared in an offensive role. If a pitcher was a pinch runner only, then he will be shown as appearing in that number of games (usually 1) where he was a pinch runner. If he comes to bat, even once in a season, then offensive games will list his total season games appearances, even though only one of those games might have included him in an offensive role.

Use the [Season Rosters](#) command to generate this report. See [Rosters \[dialog\]](#) for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Roster Pitching Report

Pitchers on a team's roster are listed in order of innings pitched. Note that non-pitchers occasionally appear in a pitching role; their primary position is listed under "Pos."

Use the Season Rosters command to generate this report. See Rosters [dialog] for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Season Awards Voting Report

Contains lists of all the players receiving votes for the three major awards in both leagues: MVP, Cy Young, and Rookie of the Year. Voting methods for each award changed several times, and eligibility for rookie status has also varied. Several books in the bibliography explain the history of how these awards have been presented.

Use the Season Awards Voting command to generate this report. See Awards Voting [dialog] for additional information regarding the report.

Season Defense By Position Report

In order of position (P, C, 1B, 2B, 3B, SS, LF, CF, RF, OF, DH, UNK), this report presents for each league the total team fielding stats for each position on each team. Values are presented for a single specified season.

Use the [Season History](#) command to generate this report. See [Season History \[dialog\]](#) for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Season Defense Report

Total values for all defensive stats on a team-by-team basis for each league. Values are presented for a single specified season.

Use the Season History command to generate this report. See Season History [dialog] for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Season Hall of Fame Voting Report

Election to the Hall of Fame requires that a player appear on a large proportion of the total ballots submitted. Each year there is a cutoff value for minimum votes needed. The applicable "Needed to Elect" value is shown, and those players gaining entrance are listed first with their vote totals in blue. Unsuccessful candidates have their totals listed in black.

It is always intriguing to see which players garnered one or two votes. In 1947, Tony Lazzeri received one vote; in 1991, the Veterans Committee voted him in. That same year (1947) Bubbles Hargrave also got one vote. Put Bubbles Hargrave in the HoF!

Use the [Season Hall of Fame Voting](#) command to generate this report. See [Awards Voting \[dialog\]](#) for additional information regarding the report.

Season Offense Report

Total values for all offensive stats on a team-by-team basis for each league. Values are presented for a single specified season. The farther back in time, the harder it is to present concise sabermetric stats, as many secondary statistics (such as IBB, SF and DP) are unavailable.

Use the [Season History](#) command to generate this report. See [Season History \[dialog\]](#) for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Season Pitching Report

Total values for all pitching stats on a team-by-team basis for each league. Values are presented for a single specified season. The farther back in time, the harder it is to present concise sabermetric stats, as many secondary statistics (such as IBB, SF and DP) are unavailable. When a derivative value (such as base runners [BR]) relies in part on an unavailable statistic (such as intentional walks [IBB]) then the value must be displayed in black type, meaning it is based upon incomplete data.

Use the [Season History](#) command to generate this report. See [Season History \[dialog\]](#) for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Season Standings and Highlights Report

Lists the final standings for all teams in each league. This is primarily a text article describing the major events of the baseball season. Final results of the All-Star Game and World Series are included (but not player or team statistics from those games), as is a brief mention of other leagues active, if any, and some commentary about baseball events away from the playing fields.

Use the [Season History](#) command to generate this report. See [Season History \[dialog\]](#) for additional information regarding the report.

Team Biography Report

This text article is available for [franchises](#) only. It shows the nickname history, league affiliation, and geographical location of the franchise throughout its life history. The highlights of the team's history are informative and entertaining. Did you know that the original name of the Boston Red Sox was the Boston Somersets?

The evolution of team nicknames can be confusing and difficult for conducting research. A single team name has often been used by a series of franchises. There was a Milwaukee Brewers team in 1891 (in the American Association) and again in 1901, but if you summon the team biography of the current Brewers franchise (which began its life in 1969 as the Seattle Pilots!), you won't see anything about the earlier usage of this name. When a franchise undergoes a name change, that information is included in the franchise biography, but only the current name of the team will appear in the listing of franchises. If you did not know that the Baltimore Orioles began life as the Milwaukee Brewers in 1901, you would only discover that in reading the Orioles' biography.

Use the [Team History](#) command to generate this report. See [Team History \[dialog\]](#) for additional information regarding the report.

Team Comparison Report

The variance is derived by subtracting the second team's values from those for the first team listed. This report can be used to compare a franchise to a division or league, which is most valuable when comparing statistics that are percentages or rates, such as batting average or ERA.

Note that you can select ranges of years. How did the Red Sox compare to the Yankees during the decade of the 1960's?

Use the Team Comparisons command to generate this report. See Team Comparisons [dialog] for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Team Defense By Position Report

For each year selected, lists the defensive statistics for each position, listed in order of (P, C, 1B, 2B, 3B, SS, LF, CF, RF, OF, DH, UNK). For teams with long histories, this report can be quite long unless you specify a limited range of years, or a single year.

Use the Team History command to generate this report. See Team History [dialog] for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Team Defense Report

For each year selected, lists the total defensive statistics for the team.

Use the Team History command to generate this report. See Team History [dialog] for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Team Leader Board Report

On a cold snowy day in February, you can entertain yourself by finding out which teams had the best (lowest) ERA or most extra base hits during a recognized era of baseball's history. Look for best single season, or use the total of all seasons. Whatever you discover, the results will probably lead you further into the history of the teams in the game, and the players who made those teams so great (or so awful!).

Note that leader boards include a "context" stat. For example, if you rank teams by home runs, the context will be plate appearances. When the ranking stat is ERA, the context stat is innings pitched. This value is used to determine the rankings when two or more teams tie in the ranking stat; the team that needed fewer of the context stat to reach the total of the ranking stat ranks above the team that needed more.

Use the [Team Leader Boards](#) command to generate this report. See [Team Leader Boards \[dialog\]](#) for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Team Offense Report

For each year selected, lists the total offensive statistics for the team.

Use the Team History command to generate this report. See Team History [dialog] for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Team Pitching Report

For each year selected, lists the total pitching statistics for the team.

Use the Team History command to generate this report. See Team History [dialog] for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Team Summary Report

Pulls together the primary statistics from the three categories of performance (offense, pitching, defense) in a single report. Contents and presentation varies from one organizational level to another as appropriate to each entity. When applied to franchises, lists the results of the team's season, including their standing (Place) in their league/division and how many games behind (GB) the winning team they were at the end of the season. Many values for franchises with long histories will appear in black, meaning that the data forming the basis for the stat is incomplete.

Use the [Team History](#) command to generate this report. See [Team History \[dialog\]](#) for additional information regarding the report. Use the Search facility in Help to locate explanations for stat term abbreviations.

Player Career Chart

These two dimensional charts plot a statistical value across time. There is no way of specifying a time period -- the chart plots the entire history for the player. However, try setting up the horizontal axis "By Age" rather than by service year. This is often a more meaningful way of comparing players. Don't ignore the possibilities for applying "Cumulative" to percentages. These career charts are a vivid tool for illustrating the similarities and differences between players, and for picturing a player's career development.

Note: When using year-of-service, gaps in service (did-not-play seasons) do not appear as gaps on the chart; when the index is age, the time line is continuous and gaps in service are revealed (the value for the stat is zero at the age when the player missed the entire season).

Use the [Player Charts Career](#) command to generate this report. See [Player Career Charts \[dialog\]](#) for additional information regarding the report.

Player Distribution Chart

A distribution chart takes a basic measuring stat, such as plate appearances or batters faced, and illustrates a player's performance by segmenting it, using a pie chart, across the range of possible outcomes. When charting pitchers, the distribution of "Baserunners" charts how the batters who did reach base got there, while "Outcomes" refers to the distribution of results relative to batters faced, and "Decisions" is a chart of the results arising from the total games the pitcher appeared in.

Use the Player Charts Distribution command to generate this report. See Player Distribution Charts [dialog] for additional information regarding the report.

Team Chart

These two dimensional charts plot a statistical value across time. There is no way of specifying a time period -- the chart plots the entire history for the "team."

A chart is a great tool for identifying trends and making comparisons. Note that you can select a franchise for one organizational selection and a division or league for another, and compare the team values to the league values year by year. This is most meaningful for percentage stats such as batting average or fielding average, because the vertical axis scale compresses franchise values for accumulation stats (e.g. double plays or errors) and flattens the chart line when compared to a much larger entity.

Hint: Charts that cover large periods of time are easier to interpret when using a full screen display.

Use the [Team Charts](#) command to generate this report. See [Team Charts \[dialog\]](#) for additional information regarding the report.

Season Chart

This is a good place to point out how you can use the window tiling capability to place numeric displays on the screen side-by-side with charts. After producing a chart, call up supporting team history data to back up the information in the charts. Use the window tiling option, and then see how other team data from that season correlates with the statistic that you have charted.

Also use tiling to view several charts as once, such as a chart of home runs and another of wins (from the pitching category). These kinds of comparisons help you locate possible correlations. Are home runs a necessary component of team wins?

Discover all kinds of information here that you might never have noticed before. For example, the team that lead the majors in stolen base attempts in 1950 was St. Louis, while the team that had the least stolen base attempts that same year was... St. Louis! And the leader was not the team you might have guessed; the Browns lead everyone with 79 attempts, while the Cardinals were the trailer with a mere 23. (Note, however, that the Cardinals' data is incomplete because there is no data on unsuccessful attempts. Meanwhile, the Browns had a success rate under 50%! They were 39-40 in their 79 ASB. Brooklyn probably had more attempts than the Browns, as they had 77 stolen bases, but the information on caught stealing for the Dodgers is not available.)

Use the Season Charts command to generate this report. See Season Charts [dialog] for additional information regarding the report.

Awarded First on Interference [AFOE]

A special category of error is catcher's interference. When the catcher interferes with the batter's attempt to hit the ball, the player is awarded first base and the catcher is charged with an error. In this unique situation, the batter is not charged with an at bat, as is usually the case with errors occurring on a plate appearance. Only a handful of interference calls occur each season.

Batting Average [AVG]

The ratio of a batter's hits to at bats. At bats, in turn, are fewer in number than plate appearances, because batters are not charged with an at bat when they receive a base on balls, are hit by a pitch, or are credited with a sacrifice hit or fly. An at bat is charged when an error is committed (with exceptions), thus when a batter reaches base by an error, the result is charged as if he made an out, even though he reached base safely.

Batting average is a major stat, yet taken by itself can be a misleading indicator of hitting ability. On Base Percentage and Isolated Power are more meaningful measures of offensive performance.

$$\text{AVG} = \text{H/AB}$$

Bigs: League leading batting average are typically in the .325-.345 range, although averages as high as .360 are not uncommon. The DH league in 1992 batted .259 as a whole, while the league where pitchers bat hit .252. No one has reached .400 since 1941, when Ted Williams was the last batter to average at or above that number for a season. Batting averages below .235 are not at all uncommon, although batting below .200 (the so-called "Mendoza Line") is considered grounds for demotion. But batters can hit below .240 and still make a powerful offensive contribution. (See Secondary Average.)

Caught Stealing [CS]

The number of times a player was thrown out trying to steal a base.

Stolen Bases [SB]

The number of successful steals of bases by a player.

Defensive Games [DG]

The number of games in which a player appeared at a specific position for any portion of a game, during a season or a career.

Earned Runs [ER]

When batters reach base as a result of walks, safe hits, or fielder's choice, and subsequently score runs on the basis of other walks, safe hits, or fielder's choices, then the runs scored are said to be earned. Baserunners reaching base are the responsibility of the pitcher who was pitching when they appeared at the plate, although they may score when another pitcher is pitching. Passed balls are treated as errors by the catcher, and may result in a run being classed as unearned. Wild pitches and balks by the pitcher do not excuse him from receiving responsibility for runs which score as a direct or indirect result of such pitching mistakes. Errors charged to the pitcher do count in making runners into potential unearned runs.

The official scorer is charged with the difficult task of determining when a run is earned and when it is unearned. It is often a matter of judgement whether a run that scored would have scored in any event had not the error occurred.

When a new pitcher is announced, he does not receive the benefit of prior errors in determining whether runners he allows to reach base and which subsequently score are earned or unearned. For example, if there are two outs in an inning and there was an error which allowed a batter to reach base safely, a newly announced pitcher who then gives up a home run to the first batter faced would be charged with an earned run for the run represented by that batter.

Earned Run Average [ERA]

A measure of pitching effectiveness. The number of earned runs allowed by a pitcher per nine innings pitched. Earned runs are considered to be the responsibility of the pitcher, since they were scored without the assistance of defensive errors or passed balls. See Unearned Run Percentage.

$$\text{ERA} = 9 * \text{ER} / \text{IP}$$

ERA for starting pitchers is considered a reasonably meaningful statistic, particularly when compared to win-loss average. A starter's ERA can be improved if his team possesses quality relief pitching, and if his manager knows how to use him. ERA for relievers is somewhat less indicative of ability, since they pitch fewer innings, and frequently have less control over runs scored by baserunners they are responsible for.

Bigs: Quality performances by pitchers must be considered in the context of their league and in their home park. In general, pitchers with an ERA under 3.00 are considered exceptional; an ERA of 3.75 to 4.00 is acceptable; above 4.50 is marginal. In 1992, teams using the DH experienced an overall ERA of 3.94 (while scoring an average of 4.32 runs per game); without the DH, the league ERA was 3.50 (while team runs scored per game were 3.88).

Earned Runs Prevented [ERPT]

The "Linear Weights" measure of a pitcher's performance. (See also Runs Contributed.) A measure of how many runs a pitcher prevented compared to an average pitcher in the league who pitched the same number of innings. (Earned runs prevented may be translated into losses prevented by dividing by runs required per win for that league.) Remember that ERPT measures the extent to which a pitcher is better than average, not his total contribution. Runs-prevented leaders are published weekly in the New York Times (currently on Wednesdays) and in other newspapers. A Pete Palmer statistic.

Earned runs prevented = (league ERA - ERA)/(9/IP)

Bigs: Best ERPT = 30 to 60 runs per 162-game season (30-40 starts). Average ERPT = 0.

Fielding Average [FLD]

The percentage of balls handled that were fielded cleanly.

$$\text{FLD} = (\text{PO} + \text{A}) / (\text{PO} + \text{A} + \text{E})$$

Bigs: Average performance differs by position. A typical season might be P--.958, C--.986, 1B--.992, 2B--.981, 3B--.955, SS--.963, and OF--.981. Modern major-league teams generally field from .970 to .985 overall; leagues average .979.

The differences between team fielding percentages is about 1.5% and between individual players (non-pitchers), no more than 3-4% at each position. These are indicators--along with URP--that fielding is not a major factor in run prevention/creation, not when compared to pitching and batting. Sabermetric analysis, as practiced by Messrs. Palmer, Thorn, and others, concludes that fielding is about 6% of baseball, pitching 44%, and batting 50%. Every player, manager, and fan, of course, has an opinion about the relative importance of various aspects of the game. We suspect, happily, that disagreements about methods of baseball analysis will persist.

Note: Sometimes abbreviated as PCT.

On Base Percentage [OBP]

A measure of how often a batter reaches base due to his effort as a percentage of his opportunities to reach.

$$\text{OBP} = (H+BB+HBP)/(AB+BB+HBP)$$

The denominator of the formula does not include sacrifice flies (SF). The contemporary formula for Major League Baseball includes this value, but since separate statistics on sac flies and sac hits is unavailable for most of the history of baseball, the Encyclopedia formula excludes this item.

Bigs: Typically, league OBP = .330, team OBP = .300 to .340, player OBP = .250 to .450.

Power-Speed [Pw-Sp]

Bill James claims to have developed this stat in the early 1980's. It is a way of stating a player's combined ability to hit home runs and steal bases. The formula is:

$$\text{Pw-Sp} = (\text{HR} * \text{SB} * 2) / (\text{HR} + \text{SB})$$

It is so designed that if a player hits 30 home runs and steals 30 bases, his power-speed number will be 30.0. If he hits 20 homers and steals 40 bases, it will be 26.7.

Rickey Henderson posted a Pw-Sp number of 42.4 in 1986 when he hit 28 home runs and stole 87 bases. Jose Canseco's 1988 performance of 42 HR and 40 SB produced a 41.0 Pw-Sp. Willie Mays is the all-time career leader with a 447.1 Pw-Sp for his career. Through 1993, Rickey Henderson had accumulated a 366.4 career value. If he keeps playing, he may catch Bobby Bonds, number two on the career list at 386.

Production [PRO]

Sabermetricians (baseball statisticians) consider the ability to get on base (OBP) and the ability to hit for power (SLG) to be the two most valuable offensive abilities of a player. Thus one measure of a player's prime offensive talents, his "production" or PRO, is to simply combine OBP and SLG.

$$\text{PRO} = \text{OBP} + \text{SLG}$$

Bigs: One way to shop for players is to see who is a member of the .800 club, those players whose PRO is .800 or better. In 1992, Barry Bonds' PRO was 1.080. The 1992 average for PRO in the DH league was .705; in the non-DH league it was .683.

Opposition Batting Average [OBA]

The batting average of the opponents of a specific team or pitcher against that team or pitcher.

$$\text{OBA} = \text{OH}/\text{OAB}$$

For individual pitchers, an approximation is used: $\text{OBA} = \text{OH}/((\text{IP} \times 3) + \text{OH})$. The actual OBA would be 10 to 14 points higher after adjusting for outs made on the base paths by players whose plate appearance was not an at bat.

Bigs: League OBA = league batting average (recently has been approximately .255 without DH, .265 with DH); team OBA = same as team batting averages (typically .230 to .280); pitcher OBA = .200 to .300.

Opposition Stolen Base Average [OSBA]

The average number of opposition stolen bases per game in games started by each catcher or pitcher. A measure of their effectiveness at stopping the running game. A Bill James statistic.

For catchers: $OSBA = (9 * OSB / \underline{INN})$.

For pitchers: $OSBA = (9 * OSB / IP)$.

Bigs: for catchers and pitchers, about 0.5 to 1.3 stolen bases allowed per game (less is better).

Isolated Power [ISO]

A player's slugging average minus his batting average. Bill James provided its current name. Branch Rickey championed the stat, calling it "Power Average." A measure of a player's ability to hit for power considered apart from his ability to hit singles.

$$\text{ISO} = \text{SLG} - \text{AVG}$$

Bigs: In 1992, league ISO = .116 without DH; .126 with DH. Team ISO = .091 to .134 without DH; .095 to .151 with DH. For an individual, ISO under .080 means he can be considered a singles hitter; ISO over .200 is very good power.

Runs Batted In [RBI]

The number of runs scored as a direct result of a batter's hits, sacrifices, and infield ground outs, or the force produced by his being issued a bases loaded walk, by his being hit by a pitch, or by a defensive player's interfering or obstructing his progress. No RBI is credited when a run scores during a ground ball double play or what would have been one if an error had not been committed.

As Bill James points out, RBI is not a highly reliable stat for measuring a hitter's performance because it is situational. Leadoff hitters get fewer opportunities to drive runners in, while cleanup hitters tend to find many more runners in scoring position when they bat. On Base Percentage and Isolated Power are more meaningful measures of a player's offensive contributions, while Runs Created and Total Average give a more complete picture of his abilities.

Bigs: About 94% of the runs scored by teams are credited as RBI to batters. Individual batter's RBI above 100 are exceptional; league leaders may have no more than 110.

Runs Contributed [RCON]

An estimate of the number of runs contributed to a team's offense by each player above the number contributed by an average player in the league. A Pete Palmer statistic.

Like runs created, runs contributed is an attempt to measure the overall offensive contribution of a player in terms of the only thing that ultimately counts, number of runs. If you divide runs contributed by the runs required per win (approximately 10), you have the wins contributed by this player's offensive performance above the league average.

Pete actually calls runs contributed "Batting Runs" to distinguish it from Defensive Runs, Stolen Base Runs, and Pitching Runs, all "Linear Weights," and all measures of contributions to the team stated in terms of runs. (For Pitching Runs, see Earned Runs Prevented.) In the formula below, we use the historical average 0.25 for the league factor (it can vary from approximately 0.24 to 0.26 from one year to the next). This means that the sum of runs contributed for all players is not precisely zero, as it would be if the league factor were adjusted to overall league performance. In comparing players from a single season, their relative performance is not changed by using this approximation.

$$\text{RCON} = (.46)\text{S} + (.80)\text{D} + (1.02)\text{T} + (1.40)\text{HR} + (.33)(\text{BB} + \text{HP}) + (.30)\text{SB} - (.60)\text{CS} - (.25)(\text{AB} - \text{H})$$

Bigs: An average player would contribute approximately zero (0) runs above average. An average outfielder might contribute 20 runs in 400 plate appearances above the average player in the league. On the other hand, a good shortstop might be expected to contribute no runs above the average player in the league. Clearly, outfielders are expected to be better offensively than shortstops.

Players having great seasons contribute 40 to 70 runs; very poor seasons are in the range -40 to -20. Only players who play a lot can have a very high or low season total, since the absolute number is dependent on number of games played.

Runs Created [RC]

An estimate of the number of runs that a player would produce based on his offensive statistics. Runs created is an attempt to measure total offensive contribution in terms of runs (see also [Runs Contributed](#)). Divided by the runs required per win (in professional baseball, approximately 10), runs created becomes the total wins created by this player's offensive performance. A Bill James statistic.

$$RC = ((H+BB+HBP-CS-GIDP) * (TB+ 0.26*(BB+HBP-IBB) + 0.52*(SB+SH+SF)))/(AB+BB+HBP+SH+SF)$$

[Note: The formula shown here is the modern formula in current use by sabermetricians. Bill James created many variations of the basic formula to adjust for available data and other factors in bygone eras. The Encyclopedia uses all versions of the formula as appropriate for various time periods to accurately reflect properly calculated RC values. For a complete exposition on the evolution of the Runs Created formula, see the Bill James Historical Abstract, Section II, Part III.]

Biggs: RC typically ranges from 0 to 120 in a 162-game season. Only players who play a lot can have a very high season total, since the number is dependent on total stats. For a team, runs created is a projected estimate of the runs the team should have scored given its number of hits (by type), walks, stolen bases, and times caught stealing. Comparing team runs created to actual runs scored gives an indication of other factors at work, factors that effect the efficiency of a team's offense. For instance, high efficiency -- consistently scoring more runs than projected -- could be explained by good clutch hitting, good baserunning, good managing, or good luck (or maybe cheating). The more consistent the two figures, the less luck is probably involved.

Also see [Runs Created Per Game](#)

Runs Created Per Game [RC/G]

Runs created is an accumulation stat; the more a player bats, the more runs he creates (assuming he makes some positive contribution). Converting runs created into runs created per game provides an indication of how valuable this player is to have in the lineup. RC/G is somewhat like ERA is for pitchers; it recasts the offensive contribution of the player in the context of a nine inning (in this case, 27 out) game. To calculate RC/G, multiply RC by 27 and divide by the number of outs the player is responsible for (OM), thus:

$$RC/G = 27*RC/OM$$

[Note: The formula shown here is the modern formula in current use by sabermetricians. Since data is available to account for all outs made, it is appropriate to use 27 outs as the context. In earlier periods, data on some kinds of outs (GIDP and CS are examples) are incomplete or unavailable. Consequently, applying the formula to other eras requires use of 25.5 or 26 outs per game. For a complete exposition on the application of the Runs Created formula to this RC/G calculation, see the Bill James Historical Abstract, Section II, Part IV.]

One way to look at RC/G is to imagine a lineup with the same player batting in every spot. A team made up of nine 1992 model Barry Bonds, for example, would be expected to score 11.34 runs per game on average. (Bonds had 147 runs created in 1992.)

Secondary Average [SECA]

A measure of a player's offensive contributions that are not adequately reflected by his batting average. As noted in the comment on [batting average](#), a player may have a relatively low batting average and still make a significant contribution to his team's offense. SECA reflects these contributions. A Bill James creation.

$$\text{SECA} = [D + (2 * T) + (3 * \text{HR}) + \text{BB} + \text{SB} - \text{CS}] / \text{AB}$$

That is, add the bases reached via extra base hits to walks and net stolen bases (stolen bases minus caught stealing) and divide the sum by at bats.

Bigs: The 1992 combined major league secondary average was .229. While SECA is roughly comparable to batting average, the spread of SECA for players is broader than batting average. League leading SECA are on the order of .450, while many players have a SECA as low as .150. (1992 SECA leaders: Bonds-.647 McGwire-.507)

Slugging Percentage [SLG]

A measure of a hitter's power and batting average combined. It is the ratio of total bases to at bats.

$$\text{SLG} = \text{TB}/\text{AB}$$

Bigs: In 1992, league SLG = .368 without DH, .385 with DH. Team SLG = .339 to .414, player SLG = .250 to .624.

Stolen Base Percentage [SBP]

The success rate of stealing bases. Sabermetricians appear to be in wide agreement that if an individual's or a team's base stealing percentage is less than 0.670 (67% or 2 out of 3 successful), then the running game is costing the team more runs than it is creating.

$$SBP = SB/(SB+CS)$$

Bigs: In recent years the annual stealing success rate has been between 0.630 and 0.710 for professional baseball divisions, between 0.550 and 0.770 for teams, and varies widely for individuals. A league-leading percentage among frequent base stealers is generally around 0.800 (80% successful). For a team, 1.4 attempts/game is a lot; 0.6 attempts/game is very few.

In 1992 professional baseball players stole successfully at a rate of 0.671, so their base stealing contributed approximately nothing to overall run production. A [Project Scoresheet](#) study by Kevin Hoare provides strong evidence that base stealing attempts lower the batting average of the player at bat during the attempt, possibly by as much as 50 batting average points and 100 slugging average points. Stealing attempts also increase on base percentage, possibly by 40 points or more, but this does not appear to outweigh the negative impact on batting. More research is called for in this area.

Total Average [TA]

A ratio of the bases a player accumulates for his team and the outs he costs his team. Total average is a Thomas Boswell statistic included in a delightful book, How Life Imitates the World Series (see Bibliography).

$$TA = (TB+HBP+BB+SB)/(AB-H+CS+GIDP)$$

Using the above formula, league total averages for 1992 were .627 without the DH and .664 with the DH. If a player has a TA over 1.000, that's very good.

Total Bases [TB]

The sum of all bases reached by a batter due to his credited hits. A batter is credited with one base for a single, two bases for a double, three bases for a triple, and four bases for a home run. Slugging average is the ratio of total bases to at bats.

$$TB = S + (2 * D) + (3 * T) + (4 * HR)$$

Biggs: In 1992 teams without the DH averaged 12.45 total bases/game; with the DH, 13.1 total bases/game. Over 400 total bases for a player is the mark of an excellent season. The last player to achieve 400 or more total bases was Jim Rice in 1978 (406 TB).

Plate Appearances [PA]

The total number of times a player comes to the plate to perform as the batter, regardless of the outcome of that appearance. On Base Percentage is calculated relative to plate appearances, while many other measures of performance are related to at bats, which are a large percentage of plate appearances. PA is used as a condition for qualifying for the leader boards.

$$PA = AB + BB + HBP + SH + SF$$

Big: Teams averaged 38.1 plate appearances/game in 1992.

Unearned Run Percentage [UERP]

Unearned runs allowed by a team as a percentage of total runs allowed.

$$\text{UERP} = (R - \text{ER}) / R$$

Bigs: Overall, for professional baseball in 1992, UERP = .094, that is, about 9.5% of the runs were unearned. Teams' UERP varied from .061 to .143. See [Fielding Percentage](#).

Earned Run Percentage [ERP]

Earned runs allowed by a team as a percentage of total runs allowed.

$$\text{ERP} = \text{ER/R}$$

Bigs: Overall, for professional baseball in 1992, ERP= .906, that is, about 91% of the runs were earned. Teams' ERP varied from .939 to .857. See Unearned Run Percentage and Fielding Percentage.

Assists [A]

When a defensive player handles the ball during a play in which an out is recorded, but does not receive credit for making the putout, that player is credited with an assist. Only one player can be credited with a putout on a play, but several players may be credited with an assist.

Defensive plays resulting in outs are frequently described, or scored, by the position numbers of the players involved in the play, thus a 6-3 groundout play is a shortstop [6] to first [3] play with the shortstop receiving an assist and the first baseman receiving credit for the putout.

At Bats [AB]

An official at bat for a player is a plate appearance where the player obtained a hit, reached base by a fielding error or a fielder's choice, or made an out other than a sacrifice hit or sacrifice fly. At bats are used to calculate several key percentage measures of performance, such as batting average and slugging percentage. Accumulated at bats are sometimes also used as a standard minimum or threshold value in qualifying for seasonal leader recognition.

At bats are nearly always less than plate appearances for a batter, because there are several varieties of plate appearances that do not count as official at bats.

Attempted Stolen Bases [ASB]

For a player, the sum of stolen bases and caught stealing.

Balks [BK]

A balk is an action on the part of the pitcher meant to deceive a baserunner. When a base is occupied, it is a balk when the pitcher pitches when he isn't touching the rubber. When he is touching the rubber, it is a balk when the pitcher:

- fakes a throw to first
- fails to step ahead of a throw to a base
- drops the ball, accidentally or intentionally
- fakes a throw to an unoccupied base
- does not face the batter when he delivers the ball
- intentionally delays the game
- pitches when he isn't touching the rubber
- stands on the rubber without the ball
- pitches to a batter who's not ready
- pitches to a catcher who's not in the catcher's box
- pitches from the set position without coming to a stop
- takes his hand from the ball for anything other than to pitch or pick a runner off after he is in position

A pitcher is allowed to fake a throw to second or third when it is occupied and not complete the throw without a balk being called.

When a balk is called, all runners are entitled to advance to the next base.

Baserunners [BR]

The number of batters who reached base against a pitcher and which are his responsibility. Note that this does not include intentional walks (IBB) or batters reaching base on errors.

The formula is: $BR = H + BB + HB - IBB$

Baserunners Per Nine Innings [BR/9]

The total number of batters reaching base against a pitcher divided by the number of innings pitched and multiplied by nine. It measures how many batters reach base on a per game basis against a pitcher.

A league best figure for this category is typically between 9 and 10.

Batters Faced [BF]

The number of batters a pitcher has faced, or pitched to, in a game or a season.

Batters Faced Per Nine Innings [BF/9]

An average of the number of batters a pitcher has faced for every nine innings he has pitched. Calculated similarly to ERA, that is:

$$[BF/9] = 9*BF/IP$$

In most instances of typical games, a team will send between 35 and 39 batters to the plate. Thus, an average pitcher will face between 35 and 39 batters per nine innings. Less than 35 is a quality pitcher. More than 39 is a pitcher who has a tough time getting batters out.

Blown Saves [BS]

When a relief pitcher enters a game, he may be said to have a save opportunity if his team currently has the lead and he would be awarded a save if he finished the game. If, while he is pitching, his team loses the lead, either by way of the score becoming tied or by falling behind, that pitcher is said to have "blown the save." He is charged with a blown save, even if his team should eventually win the game, because he was entrusted with the responsibility to preserve his team's lead, and he failed to accomplish that.

Complete Games [CG]

A pitcher is credited with a complete game if he both starts and finishes the game for his team. Games shortened by rain may still be complete games if only one pitcher is credited with having pitched for a team, and the game is declared official.

Double Play [DP]

A double play is a defensive play upon which two outs are scored when the ball is put in play by a single batter. The most common double play is the "grounded into double play (GIDP)," where a ground ball is fielded by an infielder, a runner is forced out at second base (or rarely, third or home), and the batter is also out at first. A "lineout double play" occurs when a fielder, usually an infielder, catches a line drive for an out and then "doubles up" a baserunner by touching the base, or throwing the ball to another fielder who touches the base, which was last occupied by that runner and before the runner can return to the safety of the base. This will occur most frequently on a hit & run play, where the base runner is running on the pitch. A third type of double play is the situation where a fielder, usually an outfielder, catches a fly ball and then throws out a runner who is attempting to advance on the fly after tagging up.

It is not considered a double play when a batter strikes out and then a runner is either caught stealing or is picked off base by the catcher. These are considered separate, unlinked, events.

A player is credited with a DP if as a fielder he receives an assist on the play that is defined as a double play or he records both put outs during such a play. The official baseball rules also credit a fielder with a DP if he made either putout during the play.

Grounded Into Double Play [GIDP or GDP]

A double play is a defensive play upon which two outs are scored when the ball is put in play by a single batter. The most common double play is the "grounded into double play (GIDP)," where a ground ball is fielded by an infielder, a runner is forced out at second base (or rarely, third or home), and the batter is also out at first.

A batter is charged with a GIDP when he puts the ball in play on the ground and the outcome of the play is a double play. No GIDP is charged to a batter for a lineout or flyout double play. Also note that if a run scores on a play that is a GIDP, then no RBI is credited to the batter (its relation to the double play has no direct bearing on whether it is an earned run charged to the pitcher). If two outs are recorded on a fly out, but a run still scores during the course of such a play, then the play is nevertheless scored as a sacrifice fly and RBI for the batter.

Doubles [2B]

A safe hit by a batter where he succeeds in reaching second base. If the batter reaches second base as a result of an attempt by the defense to put out an advancing runner, then the batter is only credited with a single base hit and then an extra base on the fielder's choice. When a batter advances past second base on a hit and attempts to reach third base, but is unsuccessful, he is still credited with a double. Doubles are included in the total of a batter's extra base hits.

Errors [E]

A fielder is charged with an error for each misplay (fumble, muff, or wild throw) which prolongs the time at bat for a batter or which prolongs the life of a runner, or which permits a runner to advance one or more bases. Passed balls and wild pitches are not included in errors.

Extra Base Hits [EB]

Doubles, triples, and home runs are collectively referred to as extra base hits. The sum of these three types of hits for a batter are his total extra base hits. By contrast, compare total bases.

Game Score [G Sc]

A measure of pitching performance for starting pitchers. Developed by Bill James. The formula consists of eight parts:

1. Start with 50.
2. Add 1 point for each out recorded.
3. Add 2 points for each inning the pitcher completes after the fourth inning.
4. Add 1 point for each strikeout.
5. Subtract 2 points for each hit allowed.
6. Subtract 4 points for each earned run allowed.
7. Subtract 2 points for each unearned run allowed.
8. Subtract 1 point for each walk.

Consider this pitching line:

IP	H	R	ER	BB	K
8.1	5	2	1	2	7

The game score for the performance shown would be 72 ($50+25+8+7-10-4-2-2$).

An average start would score 50. One start in 300 reaches a score of 90 or better, and an all-time great performance would reach 100.

Games Behind [GB]

The number of games by which a team trails the record of the team which leads the division or league of which that team is a part. This is measured in half-games. To calculate GB, add the differential number of games won by the leading team and the team in question to the differential number of games lost, and divide by two.

For example, if the team with the best record is 57-44, while the team in question has a record of 50-48, then the wins differential is 7 and the loss differential is 4 for a total of 11, divided by 2 which results in 5.5. Note that the trailing team has played three fewer games than the leader. If it made up the three games not played, and won them all, then their record would be 53-48, and it would be exactly 4 games back of the leaders.

Games Finished [GF]

When a relief pitcher is the last pitcher to pitch for his team in a game, that pitcher is credited with a game finished. Only one pitcher per team can receive such credit in a game. If the starting pitcher also finishes the game, he is not credited with a GF, but rather with a complete game.

Games Played [G]

The number of games in which a player appeared, in which case each game is counted once as a unit appearance. Games appeared in for players are tallied in a number of places, including offensive stats, pitching stats, and defensive stats.

A non-pitcher is credited with a game played if he had a plate appearance or appeared as a pinch runner.

A pitcher is credited with a game if he appears and faces at least one batter (a pitcher who is announced must face one batter before being relieved, unless he is injured).

When a player appears in a game at a specific position, he is credited with a defensive game played at that position. If he plays more than one position during the course of a single game, he will be credited with a defensive game at each position he played. The point is to determine how many games a player appeared in where he manned a particular position. Thus, defensive games may be greater than total games appeared for a player.

Teams are credited with games when a game played becomes an official game.

Games In Relief [GIR]

The number of games in which a pitcher appeared where he was not the starting pitcher, that is, where he was introduced in relief of another pitcher.

Games Started [GS]

The number of games in which a pitcher appeared where he was the starting pitcher. Also the number of games a non-pitcher appeared in as a member of the starting lineup, and the number of games a non-pitcher started a game while playing a defensive position.

Hit Batsmen [HB]

This is a pitching category. The number of batters a pitcher faced who were awarded first base as a result of being hit by a pitch. Also see [hit by pitch](#).

Hit By Pitch [HBP]

This is an offensive category. The number of times a player was awarded first base as a batter as a result of being hit by a pitch. Also see [hit batsmen](#).

Hits [H]

The number of safe base hits credited. Hits are tallied in several categories. Hits are credited to batters; hits are charged against pitchers. Hits are also credited to, and charged against, teams.

Whenever a batter reaches base on a play where he batted the ball, putting it into play, and he reached first base, or a successive base, safely where no fielder was charged with an error and no other runner was put out by a force out, he is credited with a hit.

Hits Per Nine Innings [H/9]

The average number of hits allowed by a pitcher for each nine innings pitched. Calculated similarly to ERA, that is:

$$[H/9] = 9 * H / IP$$

A league leading figure for this category is typically about 6.5.

Home Runs [HR]

A batter is credited with a home run if he hits a fair ball out of the playing field on the fly, or he is able to complete the circuit of the bases while the opposition is attempting to field a fair ball and fails to put the batter out in errorless play (this is called an "inside-the-park home run"). If a batter scores on a play where there is an error, he will be credited with a double or triple based upon the scorer's judgement of how far he would have advanced had no error been committed on the play.

Balls that leave the playing field after at least one bounce are not home runs and are credited as "ground rule hits" and are usually scored as "ground rule doubles."

The batter is credited with a run scored and a RBI for his home run, and may earn additional RBI if other baserunners score ahead of him. A home run with the bases loaded is termed a "grand slam" which is abbreviated [GSHR].

Home Runs Per Nine Innings [HR/9]

The average number of home runs a pitcher yields for each nine innings he pitches. Calculated similarly to ERA, that is:

$$[\text{HR}/9] = 9 \cdot \text{HR}/\text{IP}$$

A league leading value for this category is about 0.25 to 0.3. The average pitcher will yield approximately one home run per nine innings pitched.

Inherited Runners [IR]

When a relief pitcher enters the game and there are one or more opposition runners on the bases, these base runners are termed inherited runners. His task is to see that these runners do not score. See [inherited runners scored](#) for additional details.

Inherited Runners Scored [IRS]

If a relief pitcher enters a game and there are one or more runners on base, each of those runners who score are charged to him as an inherited runner scored. He was not responsible for their being on base, but he may be responsible for their reaching home. By the official rules, such baserunners are the responsibility of the pitcher who was pitching when they reached base, and if they score, such runs are charged to the pitcher who allowed them to reach base. However, to better measure the abilities of relief pitchers, the concept of inherited runners provides a means to gauge the effectiveness of pitchers who pitch in relief.

Inherited Runners Scored Percentage [IRSP]

The ratio of Inherited Runners Scored to total Inherited Runners, that is:

$$\text{IRSP} = \text{IRS}/\text{IR}$$

In 1992, Dennis Eckersley lead his league with a 6.5% figure for inherited runners scored. The best figure in the other league was turned in by Al Osuna of Houston; it was 15.0%. The major league average is about 32%.

Innings Pitched [IP]

The total number of innings pitched by a pitcher, or a team, for a game or a season.

Innings Played **[INN]**

This is a defensive category. It is the total number of innings credited to a defensive player while he played a specific position. Each out recorded is one-third of an inning.

Intentional Walks [IBB]

When a batter is intentionally passed, that is, the defensive team elects to run the count to four balls by deliberately pitching one or more pitches well outside the strike zone, then the batter is credited with an IBB, and the pitcher is likewise charged with an IBB.

A pitcher's control ability should not be based upon his total walks allowed, because some of these may be IBB, and such walks are not under his control, they are a decision on the part of his manager. Likewise, a batter's ability to draw walks, sometimes referred to as "patience," should not include IBB. However, a player receiving many IBB is certainly a feared hitter, and it is a mark of great respect for him (and much less for the batter who typically follows him in the batting order) if a player receives many IBB.

In 1992, Barry Bonds received a league leading 32 intentional walks.

Losses [L]

Games lost by a pitcher or a team for the season.

Opposition Caught Stealing [OCS]

The number of times a catcher is credited with an assist on a putout related to an opponent's stolen base attempt. Also the number of failed stolen base attempts recorded by opponents against a team.

Opposition Stolen Base Percentage [OSBP]

This is a measure of catching and of team defensive ability. It is the ratio of opponent stolen bases to opponent stolen base attempts. Any value less than 67% is a plus for a team.

Opposition Stolen Bases [OSB]

The total number of successful stolen bases by the opponents of a catcher or team.

Outfield Assists [A(of)]

These are the assists on put outs credited to outfielders. A primary measure of an outfielder's defensive abilities is his assists total.

Outs Made [OM]

Every batter who comes to the plate is attempting to achieve a positive outcome, but another way of looking at baseball is to say that batters and baserunners should be doing everything possible to avoid making outs. The context of a baseball game is the 27 outs allotted to each team. Some players are responsible for a greater percentage of their team's outs than others. This value is the sum total of all outs for which the player is responsible. It includes batting outs, baserunning outs, caught stealing, and additional outs caused by hitting into double plays. Outs made figures into the calculation of runs created per game.

$$OM = AB - H + SH + SF + CS + GIDP$$

Passed Balls [PB]

When a catcher fails to successfully control a pitched ball, and a baserunner is able to advance a base on his muff, this is charged as a passed ball. A PB may also enable a batter to reach base safely if it occurs on a third strike call. Any runs which score as an immediate or consequential result of a passed ball are classed as unearned.

The official scorer is responsible for deciding what is a wild pitch and what is a passed ball. A passed ball is scored as a category of error, but it is not included in the catcher's error total nor in the team's total number of errors. Errors by a catcher are fielding and throwing errors, including dropped throws on defensive plays.

Pickoffs [PCK]

This stat is maintained for pitchers. When a pitcher throws to a base occupied by a runner and that runner is declared out on a tag, the pitcher is credited with an assist which is also defined as a pickoff. Pitchers vary widely in their ability to hold baserunners, and a pitcher with a good move to first may achieve a higher pickoff total.

Put outs [PO]

Defensive actions which directly result in outs. An out may be recorded by tagging a baserunner, or by attaining a force out in a situation where contact with a base while in possession of the ball is sufficient to record the out. Occasionally, a fielder will be credited with an out merely by being in closest proximity to an offensive player who through his own actions (e.g. running outside of the basepath) result in his being called out. Every out must be credited to some defensive player. Strikeouts are credited as put outs by the catcher (who must successfully catch the third strike pitch, or otherwise throw the ball to first for an assist). A player may receive credit for more than one out on a single play, the most famous and rare being the unassisted triple play.

Runners Picked Off [PCK]

When a pitcher catches a runner off base with a pickoff throw, he is awarded one runner picked off.

Range [RNG]

This is an unofficial measure of a defensive player's fielding ability. In effect, it indicates how many defensive chances a player is able to convert into outs on a per game basis. Range for 1B, C and pitchers is not a meaningful stat. It is calculated as:

$$\text{RNG} = 9 * \text{SC} / \text{INN}$$

where SC is successful chances and INN is innings played on defense.

Bigs: Performance differs by position. Typical season range factors are: 2B-4.5 to 6.0; 3B-2.0 to 3.3; SS-4.0 to 5.3; RF- and LF-1.5 to 2.5; CF-2.3 to 3.2.

Relief Losses [RL]

Losses charged to a pitcher when he appeared in a reliever role.

Relief Points [RPT]

A method of scoring and measuring the value of a relief pitcher. A reliever is awarded 3 points for a save, 2 points for a win, and -2 points for a loss or for a blown save.

Relief Wins Plus Saves

The sum of relief wins and saves.

Relief Wins [RW]

Wins credited to a pitcher when he appeared in a reliever role.

Left On Base [LOB]

When the final out is recorded in an inning, the number of baserunners who remain on the bases is recorded as the number of runners left on base for a team. The total of this number for a game, or a season, is the recorded LOB for a team.

For a player, following an at bat, the number of runners remaining on base is charged to him. Runners left on base can be repeatedly charged to successive batters.

Runs Allowed [R]

The total number of runs charged to a pitcher, meaning the number of baserunners who reached base by any means while this pitcher was pitching and who eventually scored.

Runs Per Game [R/G]

The ratio of team runs scored to games played.

Runs Scored [R]

The number of runs a player or a team has scored in a game or a season.

Sacrifice [SAC]

A scorer's decision to award the batter with a sacrifice, meaning that the plate appearance does not count as an at bat against the batter. A sacrifice is either a sacrifice fly or a sacrifice hit.

Sacrifice Flies [SF]

A sacrifice fly is a fly ball out which succeeds in scoring a run. When there is a runner on third base and there are less than two outs, the team on offense may attempt to score a run by having the runner on third tag up on the base on a fly ball which appears to be catchable, then advance to home plate before the fielder can throw the ball to the catcher so that he can apply a tag. When this play is successful, the batter is credited with an RBI and is not charged with an at bat, thus removing this out from being detrimental to his batting average. It still counts as a plate appearance and thus is detrimental to his On Base Percentage.

Sacrifice Hits [SH]

Also known as a sacrifice bunt, or sac bunt, this offensive play is designed to advance existing baserunners, possibly even from third to home, by putting the ball in play in the near infield and accepting that the defense will obtain an out at first on the play in a large majority of the cases. Most often this play is called for from pitchers who are batting when there are runners on first or on second base. When successful, this plate appearance is not charged as an at bat. It is a play that frequently avoids the potential for a double play, as well as moving runners into scoring position.

Successful Chances [SC]

Successful chances are total chances less errors.

Successful Chances per Game [SC/G]

The ratio of successful chances to the number of games played at a position for a fielder.

Save Opportunities [SOP]

A pitcher who enters the game in the later innings is credited with a save opportunity if, when he enters the game, he would be credited with a save if he finishes the game and preserves the existing lead for his team. See the definition of save for additional information.

Save Opportunity Percentage [SOPP]

The ratio of saves to save opportunities.

$$\text{SOPP} = \text{SV/SOP}$$

Saves [S, SV]

A pitcher is credited with a save if he enters the game when his team has the lead, he finishes the game, and he is not the winning pitcher of record (his team never lost the lead while he was pitching). In addition he must meet one of the following conditions:

1. His team must lead by no more than three runs and he must pitch for at least one inning.
2. He enters the game, regardless of the count, with the potential tying run on base, at bat, or on deck.
3. He pitches three full innings or more without regard to his team's lead.

A pitcher cannot be credited with a win and a save for the same game. Only one pitcher may receive credit for a save (but see holds).

Shutouts [SHO]

When a pitcher is credited with a complete game and his opponents score no runs during that game, he is also credited with a shutout. The ratio of shutouts to total wins is a pitcher's shutout percentage, abbreviated [SHOP].

Singles [1B]

A base hit where the batter reaches first base only. Also, the result of subtracting extra base hits from total hits. If the batter is able to advance to another base as a result of the defensive team's attempt to putout a preceding runner, then he is still credited with a single, plus an extra base by way of fielder's choice.

Strikeout To Walk Ratio [SO/BB]

The ratio of strikeouts credited to a pitcher divided by the number of total walks charged to that pitcher. Obviously all pitchers want to have high strikeout totals and low walk totals. But pitchers are all over the map on this ratio. Some combine high walks with high strikeouts (Nolan Ryan and Randy Johnson) while others have low totals of both (Bob Tewksbury). A low ratio, say 1 to 4, is justification for a ticket to the minors.

Strikeouts Per Nine Innings [SO/9]

The average rate at which a pitcher obtains outs via strikeouts. It is calculated as:

$$[SO/9] = 9 * SO/IP$$

A typical average for pitchers is 5. Upwards of 9 or more is outstanding.

Strikeouts [SO]

The total number of outs obtained by striking out the batters for a pitcher or a team in a game or a season. Also for a batter, his total number of strikeouts in a game or a season.

Total Chances Per Game [TC/G]

The ratio of total chances to the number of games played at a position for a fielder.

Total Chances [TC]

This is a defensive statistic. It is the sum of put outs, assists, and errors for a fielder for each position that he plays.

Triple Plays [TP]

A defensive play during which three outs are recorded. As there are only three outs in an inning, triple plays can only occur when there are no outs. Likewise, they can only occur when there are at least two existing baserunners. Such plays are rare, happening only a handful of times each season. The unassisted triple play is one of the most unusual and seldom seen occurrences in all of baseball. When a triple play is completed, it is frequently assisted in part by baserunning blunders committed by the offensive team.

Triples [3B]

A safe hit by a batter where he succeeds in reaching third base. If the batter reaches third base as a result of an attempt by the defense to put out an advancing runner, then the batter is only credited with a double and then an extra base on the fielder's choice. When a batter advances past third base on a hit and attempts to reach home, but is unsuccessful, he is still credited with a triple. Triples are included in the total of a batter's extra base hits.

Unearned Runs [UER]

Runs scored by a team, or against a team, or against a pitcher, which are not classified as earned runs. Also see [unearned run percentage](#).

Walks [BB]

A free pass. A base on balls (BB). The result of pitching four non-strikes. Charged to pitchers, credited to batters. Some walks are intentional.

Walks Per Nine innings [BB/9]

The base on balls average for a pitcher. Calculated similarly to ERA, that is:

$$[BB/9] = 9*BB/IP$$

Wild Pitches [WP]

When the pitcher uncorks a pitch that is so wide or high or short of the plate that the catcher cannot field or control the ball by his ordinary effort, then the pitch is deemed a wild pitch, but only if there are one or more baserunners, and they are able to advance one or more bases as a result of the pitch. It is a kind of error, but it is not included in the accumulation of errors for the pitcher or the team. Runs scoring as a result of a wild pitch are earned unless the runner otherwise represents an unearned run due to a prior fielding error.

Winning Percentage [PCT]

The ratio of team wins to total games played.

Wins [W]

The number of won games credited to a team or to a pitcher.

Runs Per Nine Innings [R/9]

Total runs charged against a pitcher on a per nine inning basis. Some experts consider this to be a better gauge of pitching effectiveness than ERA.

$$R/9 = 9 \cdot R/IP$$

Decisions Percentage [DECP]

The ratio of decisions to total games.

$$\text{DECP} = \text{DEC}/\text{G}$$

Decisions [DEC]

The number of wins and losses awarded or charged to a pitcher.

Games Finished Percentage [GFP]

For relievers, this is the number of games they finished as a percentage of total games in relief.

$$\text{GFP} = \text{GF}/\text{GIR}$$

Shutouts Percentage [SHOP]

For starting pitchers, the ratio of shutouts to all starts.

$$\text{SHOP} = \text{SHO/GS}$$

Complete Games Percentage [CGP]

For starting pitchers, the ratio of complete games to all starts.

$$\text{CGP} = \text{CG/GS}$$

Starters rarely complete games these days. Of the 4212 games played in 1992 (actually 2106 games with two teams per game) only 419, or 9.9%, of those games was a complete game. In the Senior Circuit, the rate was 9.1%; in the Junior Circuit, it was 10.7%. Clearly, the DH rule allows pitchers more opportunities to remain in, and complete, the games they started.

Outs Pitched [OP]

Each complete inning pitched by a pitcher is equivalent to three outs. This is the number of outs recorded by a pitcher in a game or a season.

$$OP = (3 * \text{whole IP}) + \text{partial IP}$$

Outs Played [OPLYD]

The number of outs during which a fielder manned a given position on the field. For each out recorded while a player was on the field in a defensive position, he is awarded one OPLYD.

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[MAP]

```
#define glossary 49128
#define player_bio_rep 49561
#define player_off_rep 49562
#define player_pitch_rep 49563
#define player_def_rep 49564
#define player_comp_rep 49565
#define player_leader_rep 49566
#define player_awards_rep 49567
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#define roster_pitch_rep 49569
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#define season_hof_rep 49585
#define player_career_chn 49600
#define player_dist_chn 49601
#define team_chn 49610
#define season_chn 49620
```

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Change Encyclopedia default preferences

Select the **Preferences** command from the Options menu.

Fonts

To change a font:

1. Click on the **Set** button, then edit the options for font name, style and size.

Backdrop

To change the backdrop:

1. Click on the **Set** button under **Backdrop**, and then select an appropriate bitmap file.
2. Choose a method of displaying the backdrop under the **Display Backdrop** section of the dialog.

Windows

Select one of the available options for how windows should be combined on the desktop by clicking on the display type of your choice.

Application

Click on the **Start Application Maximized** or **Save Settings on Exit** choices to set or remove the check mark.

Click on **OK** when you are finished with your changes. Click on **Reset** to return to initial default settings. Click on **Cancel** to close the settings box without incorporating any changes.

The **Help** button in the dialog provides additional guidance.

Contact technical support

You can obtain technical information and assistance for the Encyclopedia and other Baseball for Windows programs by contacting Miller Associates as directed in [Technical Support](#).

Display a player leader board report

1. Select the **Leader Boards** command from the **Player** menu.
2. Make choices in the dialog box that will produce the desired report. See the **Help** for [Player Leader Boards](#) for more details.
3. Optionally, you can Set Criteria for the search that will narrow the range of eligible players and reduce the time needed to generate the report. Click on the **Set Criteria** button to open another dialog box, and make your selections from the lists in this dialog. See the **Help** for [Additional Leader Board Criteria](#) for more details.
4. Click on the **Display** button when ready. It will take some time to generate the report.
5. Once the report has been displayed, you can print it using the window system menu.

Notes: You may cancel report generation any time prior to completion. You can work on other activities in the Encyclopedia while a Leader Board report is being generated. Minimizing the progress window to an icon will help reduce clutter on the desktop.

While the report is being created, the progress box indicates how many players are being included in the analysis. This number can be misleading in that a larger set of players may satisfy the initial criteria than are ultimately found to have data relevant to the ranking statistic being used. See the description of [leader boards](#) for a more detailed explanation of how "criteria" affects the process.

Exit the Encyclopedia

To leave the Encyclopedia application:

Choose the **Exit** command from the **Player** menu. Alternatively, the key combination **Alt+F4** will exit the application, or double-click on the application system menu button.

Note: You may wish to minimize the window, but keep the Encyclopedia operational, by clicking on the minimize window button. The application is reduced to an icon on the Windows desktop. An icon called "Graphics Server" will also reside there. It is a component of the Encyclopedia and will terminate when you exit the application.

Print a displayed report

1. Open the window system menu by clicking on the button in the upper left corner of the report window.
2. Select the **Print** command.
3. When the print dialog appears, click **OK** to begin printing. Optionally, click the **Setup** button to alter your printers configuration options (e.g. Landscape vs. Portrait).

Print a report without displaying it

1. Make your choices in a report dialog, using one of the menu commands.
2. When ready, click on the **Print** button. The report will print but will not be displayed.

Note: This option is not available for leader board reports. See [how do I print a displayed report](#) for instructions on printing leader board reports.

Send a report to an ASCII file

Although it is currently not a fully integrated feature, it is possible to save any report in the Encyclopedia to an ASCII file for use in an editor, word processor, spreadsheet, or database.

1. Open Control Panel in the Main Program Group. Select the **Printer** icon.
2. Press the **Add** button to reveal the list of available printers.
3. Locate the printer called Generic/Text Only printer, highlight it and press the **Install** button. It should now appear in the list of installed printers. Note: To complete the installation process you may be prompted to insert your Windows 3.1 disks.
4. Highlight the Generic/Text Only printer in the installed list and press the **Connect** button. In the list of ports locate FILE: and select this.
5. Highlight the Generic/Text Only printer in the installed list and press the **Setup** button. Check the items labelled No Page Break and Wide Carriage.
6. Optionally, you may select this printer as your default printer at this time. However, all printing for all Windows programs will now be sent to ASCII files and not to your normal default printer. Generally, you should choose it as your default printer if you intend to save numerous reports in Baseball to ASCII files. Then reset your default to your normal printer when completed.
7. Before generating any reports, select the **Preferences** from the Options menu to examine your currently selected Printer Font. If you are using a Bold, Italic or Bold Italic font, alter it to Regular.
8. When you generate a report select the Generic/Text Only printer using the **Setup** Button on the Print Dialog. Note: If you have defined it as your default printer selection it is already selected. Press **OK** to proceed.
9. You will then be prompted for a file name. Enter a valid directory path and file name. When completed the file is now available to be used.

IMPORTANT NOTES:

1. Each report must be saved into separate files and cannot be appended into one file. This includes selecting multiple reports in the Encyclopedia simultaneously. In this case you will be prompted for a new file name for each report. You may append them later via DOS commands or other file utility programs.
2. ASCII files created using this process contain all the report information but will require some manual editing to remove extra line feeds and report headings before importing them to other programs. Any editor or word processor can be used for this purpose.
3. The Generic/Text Only printer specified above can be used with any Windows application for the same purpose.

Change Encyclopedia statistical format preferences

To make changes in your report format preferences, use the **Reports** command from the **Options** menu. Any changes you make in the dialog box will become your new preferences.

There are two types of formats for displaying statistics: **Traditional** or **Sabermetric**. When running comparison reports, you also have the option of creating the report in row or column format.

When displaying player data, there are a number of options for how their seasonal results are shown. You may choose to show the splits, meaning the breakdowns of statistics for each team a player played for when he was on more than one team in a season. You can also choose to display season by season values, or have each season display a player's career cumulative values through that season.

There are also options for how many games you want to have represent a typical season for an offensive player or a pitcher. This relates to the calculation of seasonal averages.

You can also make changes in your choices of report format options by clicking on an **Options** button on many of the report dialog boxes and selecting new preferences in the **Report Options** dialog box that appears.

For a detailed explanation of how to use the **Report Options** dialog box, click on the **Help** button when that dialog is open.

Compare players

Use the Encyclopedia to compare the performance of two players to each other and see how alike or different they are.

1. Select the **Comparisons** command from the **Player** menu to create a comparison report. This command opens a dialog box in which you select two players to compare and also indicate how you want that comparison to be made. The players available for comparing may be limited by any player list you may have created using the **List** command.
2. Select a category of performance to compare: **Offense**, **Pitching**, or **Defense**. The player lists include only those players with relevant statistics for this category.
3. Search for two specific players from the lists of players. For help on how to make selections from these lists, see how do I make selections in dialog boxes. Note that the lists of available players may be limited by the prior creation of a Player List. See how do I create a player list for additional details on how this is done.
4. The Years list box shows all seasons that the players were active in baseball. Initially, all years are selected (the entries appear framed). You may leave this as is to accept all active seasons, or you can select one or more specific seasons for the reports you want. For help on how to make selections from this list, see how do I make selections in dialog boxes.
5. For each player, indicate how you want these seasons calculated. The choices are: **Total**, **Average**, or **Seasonal**. The **Help** which you can access from the dialog box provides additional information on what these three methods mean.
6. If you want to make any changes in the contents and appearance the report, click on the **Options** button to open a **Player Comparison Options** dialog box. Make any changes you wish in report formats, or seasonal average standards. Click on the **OK** button when done.
7. Click on the **Display** or **Print** button to create the report.

For a detailed explanation of how to use the **Player Comparisons** dialog box, click on the **Help** button when that dialog is open.

Compare teams

Use the Encyclopedia to compare the performance of two teams or other entities to each other and see how their performances relate. Use the Team-Comparisons command to create a comparison report.

1. Select the **Comparisons** command from the **Team** menu. This command opens a dialog box in which you select two "teams" to compare and also indicate how you want that comparison to be made.
2. Select a category to compare **offensive**, **pitching**, or **defensive** performance stats.
3. Choose two entities for comparison. Under each list box are four choices of entity types. Select one of the four types of entities. Then within each list, locate and highlight the entity you want to include in the comparison.
4. The Years list box shows all seasons that the teams were active in baseball. Initially, all years are selected (the entries appear framed). You may leave this as is to accept all active seasons, or you can select one or more specific seasons for the comparison you want. For help on how to make selections from this list, see how do I make selections in dialog boxes.
5. If you want to make any changes in the contents and appearance the report, click on the **Options** button to open a **Team Comparison Options** dialog box. Make any changes you wish in report formats. Click on the **OK** button when done.
6. Click on the **Display** or **Print** button to create the report.

For a detailed explanation of how to use the **Team Comparisons** dialog box, click on the **Help** button when that dialog is open.

Display a player's career highlights article

Part of a player's historical information is a text article which describes the player's personal characteristics and origins and usually includes a brief biography of the player's baseball career.

1. Select the **History** command from the **Player** menu. This opens a **Player History** dialog box.
2. Search for a specific player from the list of players. For help on how to make selections from this list, see [how do I make selections in dialog boxes](#). Note that the list of available players may be limited by the prior creation of a [Player List](#). See [how do I create a player list](#) for additional details on how this is done.
3. Be sure that the selection check mark is on next to the **Biography Reports** option. If you want to view only the biography, turn off the check mark by the other types of reports.
4. Click on the **Display** or **Print** button to create the report.

Display a team's highlights article

Part of a franchise's historical information is a biographical text article which describes the team's nicknames and origins and includes a brief summary of the franchise's highlights.

1. Select the **History** command from the **Team** menu. This opens a **Team History** dialog box.
2. Click on the **Franchises** dot below the team list box; this will provide the listing of franchises. Team biographies are available only for franchises, not divisions, leagues, or organizations.
3. Search for a specific team and highlight that team name in the Franchise list. Note that franchises are shown only by their most recent name. For example, the St. Louis Browns is not listed because that same franchise was moved and is now the Baltimore Orioles. You would need to know that in order to get information on the Browns.
4. Be sure that the selection check mark is on next to the **Biography Reports** option. If you want to view only the biography, turn off the check mark by the other types of reports.
5. Click on the **Display** or **Print** button to create the report.

Display a team leader board report

This capability provides the means to rank teams in the same way that players can be ranked in the player leader boards process. The process of completing the dialog box is somewhat elaborate. As this process is fully documented in the Help for the dialog box, the explanation is not repeated here.

1. Select the **Leader Boards** command from the **Team** menu.
2. Make choices in the dialog box that will produce the desired report. See the **Help** for [Team Leader Boards](#) for more details.
3. Click on the **Display** button when ready. It will take some time to generate the report.
4. Once the report has been displayed, you can print it using the window system menu.

For a detailed explanation of how to use the **Team Leader Boards** dialog box, click on the **Help** button when that dialog is open. Remember that it will take some processing time to complete the report. Minimizing the progress window to an icon will help reduce clutter on the desktop.

Note: You may cancel report generation any time prior to completion by clicking on the **Cancel** button. You can work on other activities in the Encyclopedia while a Leader Board report is being generated.

Display a team's roster reports

Part of a franchise's historical information is a set of team roster reports which lists the players who appeared in any games for the team for a selected season. The three available reports are Offensive Roster, Pitching Roster, and Defensive Roster.

1. Select the **Rosters** command from the **Season** menu. This opens a **Rosters** dialog box.
2. Search for a specific franchise and highlight that name in the Franchise list. Note that franchises are shown only by their most recent name. For example, the St. Louis Browns is not listed because that same franchise was moved and is now the Baltimore Orioles. You would need to know that in order to get information on the Browns.
3. Click in the Year box to edit the season (Year) for which you want roster information. Note the Start and End years associated with the franchise you selected. Seasons outside the range shown are not valid entries.
4. Select one or more of the three report types and either set or clear the check mark by each by clicking on the box.
5. If you want to make any changes in the contents and appearance of any of the reports, click on the **Options** button to open a **Roster Options** dialog box. Make any changes you wish in report formats. Click on the **OK** button when done.
6. Click on the **Display** or **Print** button to create the report.

Display a player's performance statistics

Three reports are available providing performance statistics on any player in the database. Report categories are: Offense, Pitching, and Defense.

1. Select the **History** command from the **Player** menu. This opens a **Player History** dialog box.
2. Search for a specific player from the list of players. For help on how to make selections from this list, see how do I make selections in dialog boxes. Note that the list of available players may be limited by the prior creation of a Player List. See how do I create a player list for additional details on how this is done.
3. The Years list box shows all seasons that the player was active in baseball. Initially, all years are selected (the entries appear framed). You may leave this as is to accept all active seasons, or you can select one or more specific seasons for the reports you want. For help on how to make selections from this list, see how do I make selections in dialog boxes.
4. Be sure that the selection check mark is on next to the report(s) you would like to produce. Click on any **Reports** option to set or remove the check mark. Some reports may be unavailable for a specific player because that player has no statistics for that type of performance.
5. If you want to make any changes in the contents and appearance of any of the reports, click on the **Options** button to open a **Player History Options** dialog box. Make any changes you wish in report formats, seasonal display options, or seasonal average standards. Click on the **OK** button when done.
6. Click on the **Display** or **Print** button to create the report.

Display a season's highlights article

One of the reports covering the history of a major league season is a Standings and Highlights text article providing league and divisional standings, plus reports on All-Star and post-season games, the league or divisional races, and special happenings on and off the field.

1. Select the **History** command from the **Season** menu. This opens a **Season History** dialog box.
2. Enter the season (Year) for which you want information. You can type in a year, or click in the Year box to create an editing cursor so that you can delete and type specific digits. Note that this report is valid for any year from 1871 to the present.
3. Be sure that the selection check mark is on next to the **Standings and Highlights Reports** option. If you want to view only this article, turn off the check mark by the other types of reports.
4. Click on the **Display** or **Print** button to create the report.

Display season performance statistics

Four reports are available providing team by team summaries of performance statistics for any season in major league baseball history. The reports cover every year from 1876 to the present. Report categories are: Offense, Pitching, Defense, and Defense By Position.

1. Select the **History** command from the **Season** menu. This opens a **Season History** dialog box.
2. Enter the season (Year) for which you want information. You can type in a year, or click in the Year box to create an editing cursor so that you can delete and type specific digits.
3. Be sure that the selection check mark is on next to the report(s) you would like to produce. Click on any **Reports** option to set or remove the check mark.
4. If you want to make any changes in the contents and appearance of any of the reports, click on the **Options** button to open a **Season History Options** dialog box. Make any changes you wish in report formats. Click on the **OK** button when done.
5. Click on the **Display** or **Print** button to create the report.

Display team performance statistics

Five reports are available providing performance statistics on any team or other entity for any season in major league baseball history. Reports can focus on Major League Baseball as an entity, or can apply to Leagues, Divisions, or Franchises. Select "Franchises" to report on specific teams. Report categories are: Summary, Offense, Pitching, Defense Total, and Defense By Position.

1. Select the **History** command from the **Team** menu. This opens a **Team History** dialog box.
2. Click on one of the four organizational level options below the entity list box; this will provide the listing of entities included in that category. Statistical reports are available at all levels of entities.
3. Search for a specific team (or division / league / organization) and highlight that entity name in the list. Note that franchises are shown only by their most recent name. For example, the St. Louis Browns is not listed because that same franchise was moved and is now the Baltimore Orioles. You would need to know that in order to get information on the Browns.
4. The Years list box shows all seasons that are valid for the selected entity. Initially, all years are selected (the entries appear framed). You may leave this as is to accept all available seasons, or you can select one or more specific seasons for the reports you want. For help on how to make selections from this list, see how do I make selections in dialog boxes.
5. Be sure that the selection check mark is on next to the report(s) you would like to produce. Click on any **Reports** option to set or remove the check mark.
6. If you want to make any changes in the contents and appearance of any of the reports, click on the **Options** button to open a **Team History Options** dialog box. Make any changes you wish in report formats. Click on the **OK** button when done.
7. Click on the **Display** or **Print** button to create the report.

Display voting data for awards and the Hall of Fame

1. Select the **Awards Voting** or the **Hall of Fame Voting** command from the **Season** menu.
2. In the Awards Voting dialog box, type in a year for which you want to view the voting totals.
3. Click on the **Display** or **Print** button to create the report.

A **Help** button provides information for the dialog box.

Increase application speed

How fast the Encyclopedia runs on your PC is in part related to what kind of PC you have. On a 386, you might find that some procedures take quite a bit of time. On a Pentium system, they may zip. Two kinds of activities in the Encyclopedia take noticeable amounts of time.

Search For: When you want to locate a player in a Player list box, you type a name in the related "Search for" box to home in on the name. This process will make you wait a bit when all of the nearly 14,000 players in the database are available. To speed up that process, create a [player list](#). Now when you search for a player, the set of available players is shorter and it will take less time to find any one name. See [how do I create a player list](#) for the procedure to make a subset list of players.

Leader Boards: These will always take some amount of time to generate because there is usually a lot of data to access, combine, and compare before the ranking list can be displayed. You can significantly reduce the time it takes to display a player leader board if you narrow the criteria for who is eligible for inclusion. Use the [Year Options](#) and the [Positions](#) list to cut down on the number of players included in the analysis.

The good news about leader boards is that you can move on to other activities in the Encyclopedia while a leader board is being produced. You can even set up another leader board process while a different one is being generated. The only hitch is that only one can be processing at a time. The others enter a queue, waiting for their turn to access the database. If one will take a while to complete, consider minimizing it to an icon so that it won't interfere with your other displays.

Create a player list

A Player List is a subset of the player database. It is a collection of players that satisfy various criteria that you establish. The list then controls which players may appear in the selection list boxes of several report dialogs, including [Player History](#), [Player Comparisons](#), and [Player Charts](#). When you create and use a player list, you improve the responsiveness of the Encyclopedia and make it easier to find the specific player you are looking for.

1. Select the **List** command from the [Player](#) menu.
2. If you had been working from an existing player list and now want to regain access to the entire database of players, click on the **Select All** button. This reframes (selects) all entries in all lists.
3. To create a list, make your choices in any or all of the list boxes. As you indicate specific choices, the box at the top of the dialog box provides a text description of the criteria you are setting for selecting players. For help on how to make selections from these lists, see [how do I make selections in dialog boxes](#).
4. Note that there are two ways to select Years; use either the [Year Options](#) or the list of specific years. When you choose specific positions, you should also decide whether you want those to be applied as **Primary Position Only** or any player who ever played the position.
5. When you have made all the appropriate choices from the lists, click on the **Use List** button to create the list. Creation may take a few seconds time. The status bar will indicate how many players are included in the list.

Display award winners

1. Select the **Awards** command from the **Player** menu.
2. In the **Award Winners** dialog box, highlight your choice of award in the Awards list.
3. Click on the **Display** or **Print** button to create the report.

A **Help** button provides information for the dialog box.

Display Hall of Fame inductees

1. Select the **Awards** command from the **Player** menu.
2. In the **Award Winners** dialog box, highlight **Hall of Fame** in the Awards list.
3. Click on the **Display** or **Print** button to create the report.

A **Help** button provides information for the dialog box.

Make selections in dialog boxes

Three different procedures govern the process of making selections in dialog box lists. Once you get accustomed to the differences between the methods, you will find that making selections is quite easy.

Single Selection List Box: The simplest type of selection is in the lists that appear of statistics, players, teams or awards. Each choice is mutually exclusive. One selection is always highlighted, and clicking on a different selection moves the highlight to that choice. Use the mouse pointer to move the scroll bar, if necessary, then point at the desired selection and click once on it.

The Player list box is a special instance of the single selection list box. See below for additional guidance on how to use this type of list box.

"Current Selection" List Box: In two dialog boxes, [Player Career Charts](#) and [Team Charts](#), making selections means choosing an item from a list and moving it to the [Current Selections](#) region of the dialog box. Again, only one selection at a time can be highlighted; clicking once on a selection highlights it, but does not "select" it. To make such a choice a current selection, you must double-click on the item to make it appear in the list of [Current Selections](#). Double-clicking on a new choice will replace a statistic, but will only add a player or team name to the list of Current Selections. Use a related [Clear](#) button to remove a choice from the [Current Selections](#) display.

Multiple Selection List Box: Many list boxes allow for multiple selections. "Year" is a good example. When a player or team is initially chosen, all career years or seasons are selected. This is evidenced by a "frame" around each year choice. If you click on a particular selection in the list, then that choice is highlighted and becomes the only item selected. The others lose the framing around them.

You can select more than one choice from these list boxes. The process works in the same way that Windows File Manager provides for multiple filename selections. Three options are available:

1. To select consecutive entries, click on one item in the list. Press and hold [Shift](#), then click on another item above or below the initial choice (you may need to use the scroll bar to find that choice). When you do, all items between the two identified choices become active selections (they are highlighted). When you move to another area of the dialog box, the highlighted items become framed (they are no longer "focused").
2. Another way to select consecutive entries is to click on an item and hold down the left mouse button. Now drag the mouse pointer across additional selections. All the items that you highlight in this way will become active selections.
3. You may want to choose non-consecutive selections. A frequently used example is the Position list. To make two or more non-consecutive selections, click on your first choice. Now press and hold [Ctrl](#). Click on other selections. Only the selections you click on will be highlighted. Other items between the identified selections will not be affected. When you move to another area of the dialog box, the highlighted items become framed (they are no longer "focused").

Search For... Player List Box: This is a version of the single selection list box, but the process of searching for a player is unique to this one list box. You can scroll through a Player list box, but when a large number of players are available, this is very tedious. Furthermore, the

displayed list will often contain only those players whose names begin with a specific letter.

1. To search for a player, put the editing cursor in the "Search for" box by clicking in the box. If a name already appears there, you can select the entire entry by double-clicking on it. Whatever you then type will replace the existing entry.
2. Type the last name of the player, then a comma, then the first name. You need not include the comma and first name, and can even type just a few letters of the last name. (Note: Do not type a space after the comma; one space is inserted automatically between the comma and the following letter. Capitals are optional, but not necessary. Apostrophes are used when appropriate; e.g. O'Connell. Spaces are allowed when the last name has multiple words; e.g. Dal canton or De la cruz.) Homing in on a player is easy once you establish the region of the list in which he resides.
3. Press **Enter** once. The highlight will move to the first player name that matches what you typed. Be careful not to press **Enter** twice or hold it down. That could signal that you are done making choices in the dialog box.
4. If the player you want is not highlighted, scroll down to the name you want to select. Note that you might not have entered the correct spelling of the name. The process is quite literal. If an exact match cannot be found, the highlighted name is that which matches the leading letters which are comparable. (If you were to type "pelligrini" the actual name highlighted would be "Pellagrini, Eddie" because no names begin with "pelli-".)

Read a chart or graph

The Encyclopedia will produce three different types of graphic illustrations: line graphs, bar charts, and pie charts. Each type has its own unique characteristics. A chart is much easier to read if you use a full screen display. Also try tiling a chart window with a text window to see how a chart can make table data more understandable.

Line Graphs: A line graph plots the value of a statistic across time. What you see is the point at which the value of the statistic meets the time value; these points across a span of years are connected by lines to illustrate how the values rise and fall. It is a two dimensional display, with the statistic on the vertical axis and time (expressed as age or year of service or just year of existence) on the horizontal axis. When two or three players or teams are being charted, the lines and points are differentiated by color and by symbol (the mark at the point). A legend will indicate which line is for which player or team.

When comparing players, it is particularly useful to chart by age, rather than by career year. Age in first year of career varies widely from player to player.

Bar Charts: These work best when you need to compare a larger number of values and get a sense of relative magnitude. That is why bar charts are used for Season Charts. From the largest to the smallest, the three-dimensional bar charts rank teams into leaders, trailers, and those in between. The height of the bar measures the value of the stat being charted. Note the coloring of team bars to differentiate leagues. Teams from both leagues are intermixed to produce a single chart. If you want to know the exact values, create a team leader board on the stat to accompany the chart.

Watch for team bars that include a black shading. This means that the data supporting the chart is incomplete. What you see may be somewhat misleading if a significant category of stat, such as data on caught stealing to go along with stolen bases, is unavailable. This would make data on attempted stolen bases unreliable for some seasons, and the chart can only tell you so much.

Pie Charts: This type of chart is used for player distributions. What emerges from a pie chart are the fractions of the whole; how a collective category breaks down into its constituent parts. What portion of a player's plate appearances are hits? What portion are walks? How many base runners reach base on hits off a pitcher? How many reach base on walks? Of all the batters a pitcher faces, what fraction does he strikeout?

Interpreting a pie chart is difficult because it lacks information about average or standard values. If Jim Abbott strikes out 13% of all the batters he faces, is this good, average, or low? One way to answer this is to look for extremes. Randy Johnson strikes out lots of batters, while Bob Tewksbury gets very few strikeouts. Chart them both, then put all three on the screen at once. (The values are hard to read when more than two charts are tiled on screen; with three or more, try cascading them.)

The only defensive distribution chart is for positions played. Robin Yount had a great career, almost exactly half of which (51.9%) was at shortstop. This is the sort of information a pie chart can easily show you. Pete Rose had his most productive years from 1965-1979 (or so it would appear from a career chart plotting his runs created per game). What positions did he play during that time? The pie chart says: A tad more than half those games were as an outfielder.

Display a player career performance graph

1. Select the **Charts** command from the **Player** menu, then select **Careers** from the sub-menu. This opens a **Player Career Charts** dialog box.
 2. Choose a **Category** of statistic from the Category list. When you make a choice, the Statistic list displays a list of statistics that are relevant to the chosen category.
 3. Select a statistic from the Statistic list. These are listed alphabetically. Double-click on a stat to establish it in the list of **Current Selections**. If you change your mind about the statistic, you may have to clear it using the **Clear** button beside the stat in the **Current Selections** list.
 4. Search for a specific player from the list of players. For help on how to make selections from this list, see [how do I make selections in dialog boxes](#). Note that the list of available players may be limited by the prior creation of a **Player List**. See [how do I create a player list](#) for additional details on how this is done.
 5. When you have located a player name, double-click on that name to add it to the list of **Current Selections**. Note that you can graph up to three players in one graph. Each new name selected is added to the Current Selections list. If you decide not to include a player, click on the **Clear** button next to the player's name in the **Current Selections** list.
 6. Under **Options**, select none, one, or both of these options. When you choose **cumulative**, the values charted represent career-to-date values. Without that choice checked, the values are season-by-season totals. If you choose **by age** then the horizontal axis of the chart plots the age of the player during his career. Leaving that choice blank means that the horizontal axis plots year-of-service.
- Note:** When using year-of-service, gaps in service (did-not-play seasons) do not appear as gaps on the chart; when the index is age, the time line is continuous and gaps in service are revealed (the value for the stat is zero at the age when the player missed the entire season).
7. Click on the **Display** or **Print** button to create the graph.

Also see [how do I read a chart or graph](#) for additional information regarding this type of graph.

Display a player's distribution chart

1. Select the **Charts** command from the **Player** menu, then select **Distributions** from the sub-menu. This opens a **Player Distributions** dialog box.
2. Choose a **Category** of performance from the Category region. When you make a choice, the Distribution of ... region displays choices that are relevant to the chosen category.
3. Select a collective statistic under Distribution of ...
4. Search for a specific player from the list of players. For help on how to make selections from this list, see [how do I make selections in dialog boxes](#). Note that the list of available players may be limited by the prior creation of a [Player List](#). See [how do I create a player list](#) for additional details on how this is done.
5. The Year list box shows all seasons that the player was active in baseball. Initially, all years are selected (the entries appear framed). You may leave this as is to accept all active seasons, or you can select one or more specific seasons for the reports you want. For help on how to make selections from this list, see [how do I make selections in dialog boxes](#).
6. Click on the **Display** or **Print** button to create the chart.

Also see [how do I read a chart or graph](#) for additional information regarding this type of chart.

Display a team performance graph

1. Select the **Charts** command from the **Team** menu. This opens a **Team Charts** dialog box.
2. Choose a **Category** of statistic from the Category list. When you make a choice, the Statistic list displays a list of statistics that are relevant to the chosen category.
3. Select a statistic from the Statistic list. These are listed alphabetically. Double-click on a stat to establish it in the list of **Current Selections**. If you change your mind about the statistic, you may have to clear it using the **Clear** button beside the stat in the **Current Selections** list.
4. Now select an entity from the Organization list. Four types of entities are available; choose a type from the four options which appear beneath the Organization list box. Entities appropriate to the type chosen appear in the box.
5. When you have located a entity name, double-click on that name to add it to the list of **Current Selections**. Note that you can graph up to three organizations in one graph. Each new name selected is added to the **Current Selections** list. If you decide not to include an entry, click on the **Clear** button next to the organization's name in the **Current Selections** list.
6. Click on the **Display** or **Print** button to create the graph.

Also see [how do I read a chart or graph](#) for additional information regarding this type of graph.

Display a seasonal ranking chart

1. Select the **Charts** command from the **Season** menu. This opens a **Season Charts** dialog box.
2. Choose a **Category** of statistic from the Category list. When you make a choice, the Statistic list displays a list of statistics that are relevant to the chosen category.
3. Select a statistic from the Statistic list. These are listed alphabetically.
4. Enter a Year for the season you wish to chart. Click in the Year box to edit the year value. The valid range of years is from 1876 to the present.
5. Click on the **Display** or **Print** button to create the chart.

Also see [how do I read a chart or graph](#) for additional information regarding this type of chart.

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