

WARILY SOFTWARE

Frames Users Guide

Version 4.x



Introduction

Frames is the easy to use bowler's scoring and statistics program for Android devices that provides you with a simple and fast method of recording your scores, and powerful, pro-style statistics, graphs, and reports.

Contents

This document contains the following main sections:

Installing Frames for Android

This section details the steps necessary to install Frames on your Android device.

Running Frames

This section describes how to run Frames on your Android device, including subsections on using the main Frames screen, adding bowlers, alleys, oil patterns, events, and balls to the Frames database, scoring games for one or more bowlers, generating statistics and graphs, and reviewing and replaying completed games.

Data Backup and Restoration

This section describes how to back up your Frames data to the expansion storage in your device, and how to restore it (if necessary).

The Exporter Program

This section describes how to install and run the Frames Exporter program, which allows you to print and export (to a spreadsheet) your bowling data, on your desktop or laptop computer. The Exporter program requires that Java is installed on your computer, so this section also contains Java installation instructions.

Support

This section contains support information.

End User License Agreement (EULA)

This section contains the Frames end user license (EULA); by installing Frames, you are agreeing to this license.

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Installing Frames for Android

This section contains the minimum requirements for Frames on Android devices, and the steps necessary to install Frames on your Android device.

Minimum Requirements

Frames for Android requires version 8.0 (or newer) of the Android operating system (this version is also known as “Oreo”). Frames will work on tablets, but, as of this writing, it has not yet been optimized for larger screens.

To check the version of the Android operating system on your device, tap **Settings** | **About phone** | **Android Version**. The version of the operation system will be displayed near the top of the Android version screen.

Installing via Google Play

You can purchase and install Frames for Android from the Google Play Store. You can either search for “warily software” in Google Play, or you can enter the following web address directly into the browser on your device:

<http://play.google.com/store/apps/details?id=com.warilysoftware.frames>

Android Licensing

The licensing mechanism that Frames for Android uses requires an internet connection to validate your license with Google’s licensing servers. This means when you run Frames, it is a good idea to have your device connected to the internet.

The Android operating system does save the license result for a period of time, so you can run Frames a few times without access to the internet. However, eventually the cached license response will expire, and Frames will attempt to contact the licensing servers again. (The length of time the license response will be saved is controlled by the licensing server, not by Frames itself.)

If you have purchased a Frames license, but you get a “demo version” warning message, you should exit Frames, enable your network, ensure you have internet connectivity, and then re-run Frames. (You may have to “force stop” Frames before enabling the network.)

Installing the Demo Version

If you want to try Frames before buying a license, you can install the free demo version of Frames by downloading it from our web site at the following web address:

<http://www.warilysoftware.com/pages/FramesAndroid.html>

Read the instructions and the End Users License Agreement (EULA) on this web page, and then click the **Download** link at the bottom of the page. When the download completes, you will get a “download complete” notification on your device. You can tap the notification, or tap the downloaded `Frames-release.apk` file in the browser’s Downloads screen, to install the demo version of Frames.

You must have the **Settings** | **Apps & Notifications** | **Special App Access** | **Install unknown apps** option set to install Frames after downloading it from our web site. After the install completes, you can reset this option again.

Note that the demo version is the exact same program you can download from the Play Store. When running as the demo version (that is, not licensed through the Play Store), Frames allows you to score up to six games per bowler, and up to 30 total games.

The *Purchase* menu item on the main Frames screen allows you to upgrade to the full version through the Google Play Store when you are ready to purchase a license.

Installing Frames on a New Device

The license you purchase in the Google Play Store is based on your device's Google account (an email address).

If you use the same account on your new device that you used on your old device, you should be able to install Frames on your new device from the Play Store, and Frames should run as the registered version.

If you use a different account on your new device, you will have to repurchase Frames for your new device.

Running Frames

To run Frames, click or tap the Frames icon in the installed or downloaded applications list on your device. When you run Frames, the main Frames screen is displayed.

Note that Frames for Android can run in two different modes: **multi-player**, which allows you to score for more than one bowler at a time, and **single-player**, in which you can only score for a single bowler at a time. By default, Frames runs in multi-player mode; use the *Options* menu item on the main screen to switch modes. The main and event screens look slightly different, depending on the mode Frames is running in.

The Main Screen

You use the **Event**, **Alley** and **Pattern** lists to select an item when you are starting an event. When Frames is in single-player mode, you can also use the **Bowler** and **Ball** lists to select the bowler and ball to use for the event. In multi-player mode, these lists are not used when starting an event.

You can use the **Event**, **Alley**, **Pattern**, **Bowler** and **Ball** lists when generating statistics or viewing your scores; the selected items in these lists will limit the games included in the statistics or scores.

Note that all of the item lists also have an *Edit list* item that allows you to add, modify, and delete items from the list. The *Edit list* entry is always the last entry in each of the lists.

You enter the number of the lane you are going to start on in the **Lane Number** field when you are starting an event. You can also use this field to limit the games included in the statistics report or scores display to games bowled on the lane number you enter in this field.

The **Start Date** field is used for two reasons: to specify the date for an event you are about to score, and to specify a starting date for a statistics report or for the scores display. If you do not enter a date in this field when you start an event, the current date is used.

The **End Date** field is only used to specify an ending date for a statistics report or when displaying your scores.

Main Screen Buttons and Menu Items

The following menu items and buttons are accessible from the main Frame screen.

Start

The *Start* button and menu item starts an event (to begin scoring). You must have already selected an event, an alley, a pattern and entered the starting lane number in the lane number field. If Frames is in

The screenshot shows the 'Frames Demo Version' main screen. It features a dark header with the title and a menu icon. Below the header, there are two sections for selections. The first section, 'Selections for Event Start, Statistics and Scores', includes dropdown menus for 'Event' (No selection), 'Alley' (No selection), and 'Pattern' (No selection), followed by a 'Lane Number' field. The second section, 'Selections for Statistics and Scores Only', includes dropdown menus for 'Start Date' (Default), 'End Date' (Default), 'Bowler' (No selection), and 'Ball' (Select a bowler). At the bottom, there are four buttons: 'Start', 'Stats', 'Scores', and 'Clear'.

single-player mode, you must also have selected a bowler, as well (selecting a ball is optional). In multi-player mode, the **Bowler** and **Ball** lists are not used when starting an event.

Statistics

The *Statistics* button and menu item generates a statistics report and allows you to display graphs and spare details for a single bowler. You must have selected a bowler in the **Bowler** list before you can select this menu item. You can limit the games included in the statistics report by selecting items in the other lists (such as event or pattern) or by specifying a starting date, ending date and/or lane number in the corresponding fields.

Scores

The *Scores* button and menu item displays the series you have bowled, and also allows you to replay and edit games, and delete series or individual games. You must have selected a bowler in the **Bowler** list before you can select this menu item. You can limit the series included in the series display by selecting items in the item lists (such as event or pattern), or by specifying a starting date, ending date and/or lane number in the corresponding fields.

Clear

The *Clear* button and menu items reset all of the fields on the Main screen. The lists are changed to “Not selected”, the date fields are set to the “Default” value and the lane number field is cleared.

About

The *About* menu item displays information about the current version of Frames you are running and our web site address.

Register

The *Register* menu item displays the Register dialog that allows you to enter a registration key that converts the demo version of Frames into the standard version (this menu item is not normally used).

Purchase

The *Purchase* menu item displays the Google Play store so you can purchase a Frames license.

Options

The *Options* menu item displays the Options dialog, which allows you to modify the available program options. See the [Settings Options](#) section later in this document for details on the options that are available.

Export/Import Data

The *Export data* and *Import data* menu items allow you to export your bowling to, and import your data from, an export file in a location in external store that you select. See the [Data Backup and Restoration](#) section earlier in this document for more details on these menu items.

Export Messages

The *Export messages* menu item copies the internal debug messages file to a location you specify on your Android device. The default name for this text file is **Messages.txt**. If you have an issue with Frames, Warily Software support may request that you provide this file for debugging purposes.

Setting Options

You use the Options screen to modify Frames' preference options. To display the Options screen from the main screen, select the *Options* menu item. Note that the *Options* menu item is also available on the Game and Statistics screens.

The following options can be set on this screen:

Start each frame with all pins down

By default, Frames sets all pins “up” at the start of each frame while you are scoring; if you set this option, the pins will all be set “down” at the start of each frame.

Show maximum score while scoring

If you set this option, the maximum score you can get (that is, if you struck in all remaining frames of the game) is displayed in the tenth frame of the score sheet while you are bowling.

Ignore 12th frame for doubles

By default, Frames uses all frames from each game when calculating your double and “after strike pocket” percentages; if you set this option, twelfth frames (after two strikes in the tenth frame) will not be used when calculating these percentages. This option is intended for college or tournament bowlers that use the twelfth frame for a test shot.

Run in single-player mode

By default, Frames runs in multi-player mode, which allows you to score for more than one bowler at a time. If you are using Frames to score for only one bowler at a time, you can set this option to simplify starting events. Note that you must restart Frames to change from multi to single player mode, or from single to multi player mode.

Scores lists newest series first

By default, Frames lists your scores in chronological order (oldest first). Set this option to list your scores in reverse chronological order (newest first).

Do not limit font size

By default, Frames limits the size of the fonts it uses to ensure that the text it displays is not so big that it overlaps other text on the screen. If you set this option, Frames does not limit the size of the fonts it uses. (Note that this option is only available if you invoked the Options screen from the main screen menu.)

This screen has a *Save* menu item and button to save your changes, and a *Cancel* menu item and button to discard any changes. You can also use the *Escape* button to discard your changes.

Adding, Modifying and Deleting List Items

You can use the *Edit list* item at the end of each of the lists on the main Frames screen to add new bowlers, alleys, patterns, events, and balls to the Frames database. When you select the *Edit list* item in any of the lists, the Edit screen is displayed.

To modify an existing item, just tap it to display the entity-specific screen for the selected item.

The *New* button and menu item on the Edit screen allows you to add a new item; the *Done* menu item or button returns you to the previous screen.

To delete an item, you must tap or click it, and then delete it using the entity-specific screen. Note that if you delete an item, all games that refer to that item will also be deleted. For example, if you delete a ball, all games in which the ball was used for one or more frames will also be deleted.

The following sections describe the specific screens that are displayed when you add or modify an item.

Alley Screen

This screen allows you to add, modify or delete an alley.

For each alley, you need to specify the alley name, the lane count, which is the number of lanes the alley has (must be an even number between two and 254), the lane type (wood, synthetic, etc) and, optionally, the alley's phone number (just for reference).

After you have finished on this screen, use the *Save* menu item or button to store your changes or the *Cancel* menu item or button to discard any changes you have made. You can delete the alley you are modifying using the *Delete* button or menu item.

Ball Screen

This screen allows you to add, modify or delete a ball. Note that there is a separate list of bowling balls for each bowler.

For each ball you add, you can enter the ball name, its surface (dull, polished, etc), and its purchase date.

After you have finished on this screen, use the *Save* menu item or button to store your changes or the *Cancel* menu item or button to discard any changes you have made. You can delete the ball you are modifying using the *Delete* button or menu item.

Bowler Screen

This screen allows you to add, modify or delete a bowler.

For each bowler, you enter the bowler name and whether or not the bowler is left-handed. Frames needs to know if a bowler is left-handed so it can correctly number the boards on the approach (for setting position) and on the lane (for setting target) for that bowler.

After you have finished on this screen, use the *Save* menu item or button to store your changes or the *Cancel* menu item or button to discard any changes you have made. You can delete the bowler you are modifying using the *Delete* button or menu item.

Event Screen

Adding or modifying an event displays the Event screen. An event is a specific league or tournament, although you could also set up an event to record practice games. You can also delete an event from this screen.

An event can be tied to a specific alley and/or oil pattern. For example, if your Thursday night league always bowls in the same alley and on the same oil pattern, you can select the alley and pattern on the Event screen for that event, so each time you select the league event on the main screen, the correct alley and pattern will be automatically selected for you.

If you leave an event's alley and/or pattern as *Select at game time*, selecting the event will not change the alley/pattern selection on the main Frames screen, and you will have to set the alley or pattern manually when starting the event.

In multi-player mode, the **Roster** field displays the first bowler in the list of bowlers for the event (or *No bowlers specified* if the roster is empty). If you tap or click the Roster field, the Roster screen is displayed so you can set the default roster for the event (see the next section for details on the Roster screen). Note that even if you set a default roster for an event, you will always have an opportunity to change the roster when you start the event.

In single-player mode, the **Roster** field is replaced by a **Bowler** list; if you select a Bowler in this list, that bowler will be automatically selected for you on the main screen when you select the event.

The **Move Type** list is for leagues and tournaments that change lanes after each game. The available selections are *Same pair*, *One pair right*, *One pair left*, *Custom* and *Single Lane*. You will always have an opportunity to change the lane number after a game; the move type setting simply allows Frames to intelligently set the **Lane Number** field on the Next Game screen. If you set the event's move type to *Custom*, you will have to enter the lane number manually after every game.

The **Scoring Type** is how the event is scored. The possible values are *League* and *Match Play*. League scoring is standard league scoring, with each bowler in the event bowling one frame, in order, and switching lanes at the top of the roster. Match play scoring is TV-style two-man match play, where the first bowler bowls one frame, and then each bowler bowls two frames each, one frame on each lane. A match play event must have exactly two bowlers on the roster when you start the event. Note that this field is not available in single-player mode; any event created or modified in single-player mode will have its scoring type set to league.

The **Game Count** value can be any number between one and 255; you will want to set this for the maximum number of games for the event. You can always stop scoring after any game.

After you have finished on this screen, use the *Save* menu item or button to store your changes, or use the *Cancel* menu item or button to discard any changes you have made. You can delete the event you are modifying using the *Delete* button or menu item.

Setting an Event's Roster

In multi-player mode, selecting the *Edit list* item in the **Roster** list on the Event screen displays the Roster screen. This screen allows you to set the default roster (list of bowlers) for the event. Note that you can always change the roster when you start an event, even if you have set a default roster for the event.

The list of available bowlers is in the "drop down" list at the top of the screen. You can use the *Edit list* item in this list to add new bowlers, if necessary.

The bowlers on the roster are listed on the lower part of the screen. Tap on a name to remove that bowler from the list; to clear the entire list, use the *Clear* button or menu item. If you select a new bowler from the drop down list, that bowler will be added to the end of the roster's list of bowlers.

Once you have set the correct roster for the event you are starting, use the *Save* menu item or button to set the event's default roster, or the *Cancel* menu item or button to discard any changes.

Note that the same Roster screen is displayed when you start an event in multi-player mode. The list of bowlers will be pre-filled with the default roster for the event. You can make any changes necessary and then use the *Start* menu item or button to begin scoring the event, or use the *Cancel* menu item or button to return to the main screen without starting the event. (In single-player mode, the Roster screen is never displayed.)

Pattern Screen

The Pattern screen is displayed when you are adding or modifying an oil pattern. You can also delete an existing pattern from this screen.

There are two required fields on this screen: the pattern name and the pattern's length. Frames does not currently use the pattern length for reporting.

After you have finished on this screen, use the *Save* menu item or button to store your changes or the *Cancel* menu item or button to discard any changes you have made. You can delete the pattern you are modifying using the *Delete* button or menu item.

Scoring Games

After you have added at least one event, alley, and pattern to Frames, you can begin scoring a game.

Starting an New Event

On the main Frames screen, select the correct event, alley and pattern, then enter the lane number the first game will begin on in the **Lane Number** field. When you select an event, the correct alley and/or pattern will be automatically selected if you had tied that event to an alley and/or an oil pattern when you created or last modified the event.

If Frames is in single-player mode, you must also select a bowler, and you can optionally select a ball, on the main screen. In multi-player mode, the **Bowler** and **Ball** lists on the main screen are not used when you start an event.

If you want Frames to use the current date for the game, you do not have to set the **Start Date** field. However, if you are going to enter games you have already bowled on a prior date, select the correct date using the **Start Date** field. You can just touch anywhere on the **Start Date** field to modify it.

Then, select the *Start* menu item, or tap the *Start* button, to display the Roster screen (in multi-player mode) or begin scoring (in single-player mode).

Setting the Event Roster

In multi-player mode, the Roster screen allows you to set the roster for the event you are starting. Please see the [Setting an Event's Roster](#) section earlier in this document for details on using the Roster screen.

Once you have set the correct roster for the event you are starting, use the Roster screen's *Start* menu item to start the event and display the Game screen. You can also use the *Escape* button or the *Cancel* menu item on the Roster screen to return to the main screen without starting the event.

Game Screen Layout

The Game screen has a lot of information on it, although it is very simple to use.

Note you may have to scroll down to see the entire Game screen on devices with smaller screens.

The **title bar** at the top of the screen shows the current bowler's name and the ball they are using the current lane. If you have not yet selected a ball for the current bowler, the ball name will be "<no ball selected>."

Underneath the title bar is the **score sheet**, where the current bowler's game score is displayed. If you have the *Display max score while scoring* option enabled, the maximum possible score the bowler can get (if they were to strike out) is always displayed in the tenth frame of the score sheet.

Under the score sheet is the **pin deck**, which displays the state of each pin (either up or down). The **pin deck header**, which is the black bar above the pins at the top of the pin deck, displays the current lane number, the **foul and pocket indicators**, and the lane cycle (first or second ball). Note that the foul indicator (the word "Foul") is red when it is on and light gray when it is off, and the pocket indicator (the word "Pocket") is yellow when it is on and light gray when it is off.

Underneath the pin deck is the **target slider**, which allows you to select a target board from one to 39 (numbered based on whether the bowler is left-handed or right-handed), and the **position slider**, where you can set your foot position from five boards off the lane on the right to five boards off the lane on the left (from board -5 to 44). Both sliders always display the current values for both the left and the right lanes for the current bowler (the left lane value is displayed on the left of each slider, and the right lane value is shown on the right). You can click to the left or right of the indicator on either slider to move them one board in that direction, or you can swipe left or right to move the indicator more quickly.

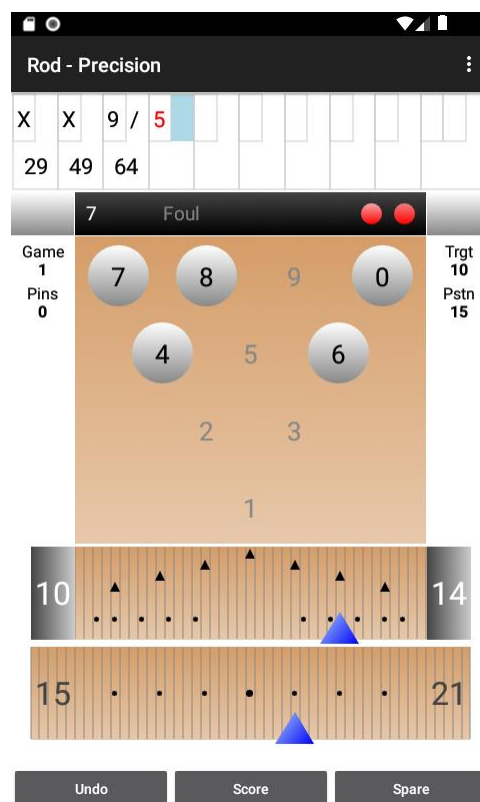
Under the position slider, there are **three buttons**: *Undo*, *Score*, and *Strike or Spare*. Use the *Undo* button to erase the most recent shot from the current game, and the *Score* button to add a new shot (based on the foul indicator or the pins on the pin deck) to the current game. Use the third button to add either a strike or a spare to the current game, depending on whether the current frame is on the first or second shot.

On the left side of the pin deck, Frames displays the current game number and the total pins (of completed games for this event) for the current bowler. On the right side of the pin deck, Frames displays the current target and position board number for the current bowler on the current lane.

Scoring a First Shot

To score your first ball of a frame:

- If necessary, select the correct ball for the bowler using the *Change ball* menu item.



- Set the target and position sliders to match the bowler's foot position and target on the lane, using your finger. Note that you do not have to put your finger on the slider's value indicator (the triangle at the bottom of the slider) – you can slide your finger on any part of the slider to change the value quickly, or tap the slider to move the setting one board at a time in either direction.
- Turn off the pocket indicator if the bowler's first shot missed the pocket by touching the word "Pocket" on the pin deck.
- Note that if you score a shot, and the one, two or three pin is still up, the pocket indicator is turned off for the shot automatically when you score the shot.
- Touch each pin, or drag your finger across multiple pins, to toggle the state of the pins on the screen to match the actual pin fall of the bowler's first shot.
- Turn on the foul indicator if the bowler fouled. You do not have to set the pins for a foul.
- Touch the **Score** button to score the shot.
- If the bowler struck, you do not have to knock down all the pins on the screen – just touch the **Strike** button to score a strike.
- Splits and washouts are automatically detected and shown in red (splits) or blue (washouts) on the score sheet.

Scoring a Second Shot

On a second shot, only the pin fall and foul indicator are recorded – all the other settings on the screen are ignored – so simply knock down the pins on the screen to match the result of the bowler's spare attempt, or tap the foul indicator, and press the **Score** button.

If the bowler converts the spare, you can just press the **Spare** button (the **Strike** button changes into the **Spare** button for the second shot of a frame).

Replaying Previous Frames

At any time during a game, you can swipe or tap on the scoresheet to replay previous frames in the current game. You cannot edit them directly, however; to change a frame, you must use the Undo button to erase back to the shot you want to change, and then rescore the deleted shots.

Independent Lane Settings

The ball, target and position settings are set per lane – each lane has its own settings. If you change any of these three settings on one lane, they will not automatically change on the other. This is to allow a bowler to use different balls and/or different lines on each lane – Frames remembers where each bowler is standing, where they are aiming, and what ball they are throwing on each lane.

When you change the ball for a bowler on one lane, Frames will ask if you want to change to the new ball on only the current lane or on both lanes.

Game Screen Menu Items

The following menu items are available on the Game screen while you are scoring a game.

Abort Event

The *Abort event* menu item will abort the current event, and discard all games you are currently scoring. Completed games are not affected.

Change Ball

The *Change ball* menu item allows you to change the ball for the current bowler. Selecting this menu item displays the Ball screen, listing the balls for the current bowler (you can add new bowling balls, if necessary). Simply tap the desired ball on the Ball screen to select it and return to scoring.

Select Bowler

If you are scoring for more than one bowler, you can use the *Select bowler* menu item to select a different bowler (to change a score, for example). Selecting this menu item displays the games of all bowlers on the event roster. Simply tap the game of the bowler you want to switch to; this will select that bowler and return you to the Game screen. Use the *Cancel* menu item to return to the Game screen without switching bowlers.

Remove Bowler

The *Remove bowler* menu item allows you to remove a bowler from the event roster. The bowler's current game will be discarded (any completed games will not be lost), and the bowler will be removed from the roster. Note that this menu item is not available if you are scoring for only one bowler.

Options

The *Options* menu item displays the Options screen.

Completing a Game or an Event

When you have scored the last bowler's last shot of a game, Frames displays a "Game Complete" screen where you can enter the next game's starting lane number. The screen also displays the completed game's score for all bowlers, as well as each bowler's total pins and the grand total.

The event's move type (*Same pair*, *One pair left*, *One pair right*, *Custom* or *Single Lane*) is used to set the **Next Lane Number** field on this screen. If the event's move type is *Custom*, this field will be blank, and you will have to enter the lane number for the next game.

After verifying or changing the next lane number, you can use the *Continue* menu item or button to start the next game. The *Abort* menu item allows you to stop scoring the current event, the *Back* menu item or button allows you to return to the just-completed game, and the *Change roster* menu item or button allows you to change the list of bowlers for the next game. Note that the *Change Roster* button only appears if you are scoring multiple bowlers for the event.

When you complete the last game in an event, Frames will display the "Event Complete" screen, which will include the final pin counts for all bowlers. You can use the *Back* menu item to return to the game or *Finish* to complete the event and go back to the main Frames screen.

Generating Statistics and Graphs

After you get some games stored in Frames, you can then generate statistical reports. Obviously, the more games you have stored, the more meaningful the statistics will be.

You can generate statistics for all of a bowler's games, or for a subset of their games. You use the fields on the Main screen to select the criteria for the statistics report, and then use the *Statistics* menu item.

For example, if you want to know what you averaged for two weeks in a particular league, you can:

- Use the *Clear* button or menu item to reset all of the current selections on the main screen.
- Select the desired bowler in the **Bowler** list.
- Select the desired league in the **Event** list.
- Tap the **Start Date** field to set it to the first day of the two-week period.
- Tap the **End Date** field to set it to the last day of the two-week period.
- Tap the *Statistics* button or menu item.

The Statistics screen will then be displayed, with statistics that include all games bowled in the specified league for those two weeks.

Statistics Screen

The Statistics screen displays the following statistics for the games included in the report:

- **Game Count:** the number of games included in the statistics.
- **Average:** the average for the games included in the statistics.
- **High Game:** the highest game score.
- **High Series:** the highest series total pins.
- **Low Game:** the lowest game score.
- **Low Series:** the lowest series total pins.
- **First Ball Avg:** the average number of pins knocked down by the first shot of each frame.
- **Strike %:** the ratio of the number of strikes to the number of strike shots.
- **Double %:** the ratio of strikes after a strike (a double) to the number of double attempts.
- **Pocket %:** the ratio of the number of strike attempts with the Pocket Indicator on to the number of strike shots taken.
- **After X Pocket %:** the ratio of the number of strike shots with the Pocket Indicator is on after a strike to the number of double attempts.
- **Pocket Strike %:** (or “carry” percentage) the ratio of the number of strikes when the Pocket Indicator is on to the number of strike attempts when the Pocket Indicator is on.
- **All Spare %:** the ratio of the number of spares to the number of spare attempts.
- **Single Pin Spare %:** the ratio of the number of single pin spares to the number of single pin spare attempts.
- **Makeable Spare %:** the ratio of the number of converted makeable (non-split, non-washout) spares to the number of makeable spare attempts.
- **Split %:** the ratio of the number of splits to the number of strike shots.
- **Split Spare %:** the ratio of the number of converted splits to the number of split spare attempts.
- **Washout %:** the ratio of the number of washouts to the number of strike shots. A “washout” is defined to be a spare leave that would be a split, except the head pin is still up.
- **Washout Spare %:** the ratio of the number of converted washouts to the number of washout spare attempts.

Statistics - Rod		
Game Number		
All games		
Statistic	Value	Counts
Game Count	195	
Average	216.0	
High Game	300	
High Series	760	
Low Game	157	
Low Series	534	
First Ball Avg	9.3	
Strike %	57	(1250/2189)
Double %	58	(668/1142)
Pocket %	81	(1765/2189)
After X Pocket %	82	(933/1142)
Pocket Strike %	70	(1234/1765)

Done Graph Spares

The percentage statistics also include the counts used to calculate them; in the example screen shown here, the Strike Percentage is 57%, which is 1,250 strikes out of 2,189 attempts.

You can use the **Game Number** list, in the upper right corner of the screen, to further limit the games included in the report. By default, the game number is *All games*, which means that all games in each event are included in the statistics. If you select a game number in the **Game Number** list, then only that game number from each series is included in the report. For example, if you select **Game 2** in the **Game Number** list, only the second game from each series will be included in the statistics displayed.

Use the *Graph* menu item or button to display a graph of the events or games included in the statistics report. Use the *Spare* button or the *Spare details* menu item to display a list of the spares you have left (and their conversion percentages) in the games included in the statistics report.

Graph Screen

The Graph screen displays a graph of either events or games and the aggregate average for those events or games. Scores are displayed using a green line, and the aggregate average is a red line.

Slide your finger slowly to the left or right on the screen to change the selected game or event. You can also tap on the screen to move the selection one game or event in that direction.

The selected event's or game's date, score and the current average will be displayed at the bottom of the screen. In the example screen shown here, the vertical white line is the specific event being displayed; the event is a 572 series bowled on September 10, 2010, and the current aggregate average is 203.

Graph Types

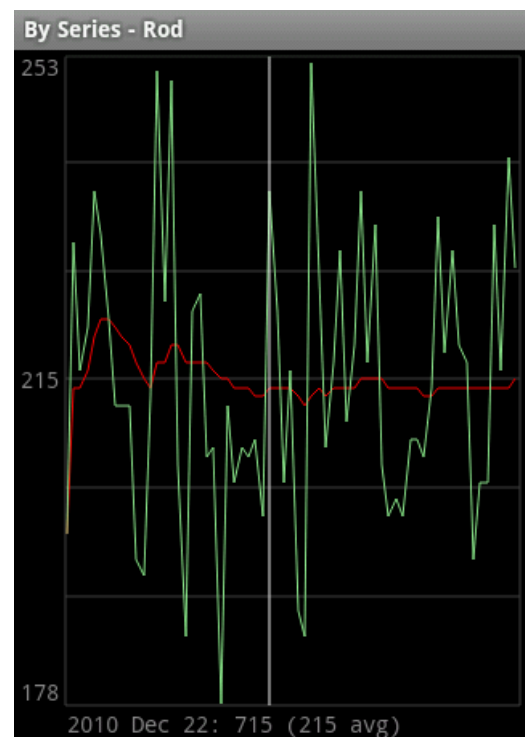
You can switch to other graph types by selecting one of the graph type menu items.

By series displays the average score for each series bowled, and the aggregate average for the bowler.

By game displays the game score for each game bowled, and the aggregate average.

By lane shows the bowler's average by lane pair. Note that if you did not limit the included games to a single alley (by selecting an alley on the main screen before selecting the Statistics menu item), the lane pair averages can include scores from the same lane numbers in multiple alleys.

By score displays the percentage of games bowled by score. Scores are grouped in ten-pin increments – for example, all games with a score between 190 and 199 are grouped together.



Spare Details Screen

The Spare Details screen lists the spares the bowler has left, sorted to display the most common leaves first.

The numbers of the pins in the spare leave are listed on the left, followed by the conversion percentage and the number of times you converted and attempted the spare.

The nice thing about this screen is it shows you exactly what spares you are leaving and what ones you are missing most often. You can use this information when you practice to improve your spare game.

Reviewing, Replaying and Editing Games

In addition to statistics and graphs, you can use Frames to review, replay or edit the games already bowled. You use the fields on the main screen to select the games you want to review (the same way you do for selecting games for the Statistics screen), and then use the *Scores* menu item to display the scores by series.

Scores Screen

When you select the *Scores* menu item on the main screen, Frames will display the Scores screen, which lists the series bowled that match the criteria you selected on the main screen. (A “series” in this case is the combined games bowled for an occurrence of an event, however many games that may be.)

For each series, the date the series was bowled, the total number of pins, and the number of games in the series are displayed.

You can select a series on this screen to display the games in the series, the *Statistics* button or menu item to generate a report for all games in all of the series listed on this screen, or the *Delete* button or menu item to delete all of the games in all of the series displayed on the screen. (For details about statistics, see the [Generating Statistics and Graphs](#) section earlier in this document.)

Scores - Rod		
Date	Score	Games
2010 Sep 6 19:04	596	3
2010 Sep 8 18:48	696	3
2010 Sep 13 18:47	651	3
2010 Sep 15 18:41	668	3
2010 Sep 20 18:49	714	3
2010 Sep 22 18:47	699	3
2010 Sep 27 18:28	669	3
2010 Sep 29 18:43	639	3
2010 Oct 1 18:43	640	3

Done Statistics Delete

Game List Screen

When you click or tap a series on the Scores screen, the Game List screen is displayed. On this screen, the date the game was bowled on, the game number (in its event), the lanes the game was bowled on and the event it was bowled in is displayed above each game’s score sheet.

You can select a game by tapping it to display the Game screen for the selected game, so you replay each frame of the game.

Replaying Games

When you are replaying a game, the Game screen shows the same information you entered when the game was originally bowled. When you select a frame on the score sheet (by swiping or tapping on the scoresheet), the frame’s lane number, ball, pin fall, foul and pocket indicators, the lane target and the

approach position is displayed. (Remember, for second shots of a frame, only the pin fall and the foul indicator is recorded.)

Editing Games

While you are replaying a game, you can edit any shot in the game by selecting it in the scoresheet (by swiping or by tapping on the scoresheet), changing the pins, foul indicator, target, position, or ball, and then tapping the *Score* button. Any changes you make to the game will not be saved into the Frames database until you leave the Game screen (you will be prompted whether you want to save your changes or not).

Data Backup and Restoration

Backing up Your Data

You use the *Export data* menu item on the main Frames screen to have Frames copy all the data from Frames' internal database files to a single export file to a location you specify. The default exported file name is *FramesData.xml*.

The exported file is in eXtensible Markup Language (XML) format, and can be read by the Exporter program or re-imported back into Frames, if necessary.

New File Picker Screen

When you tap the *Export data* menu item, the Android system “new file picker” screen is displayed, as shown here.

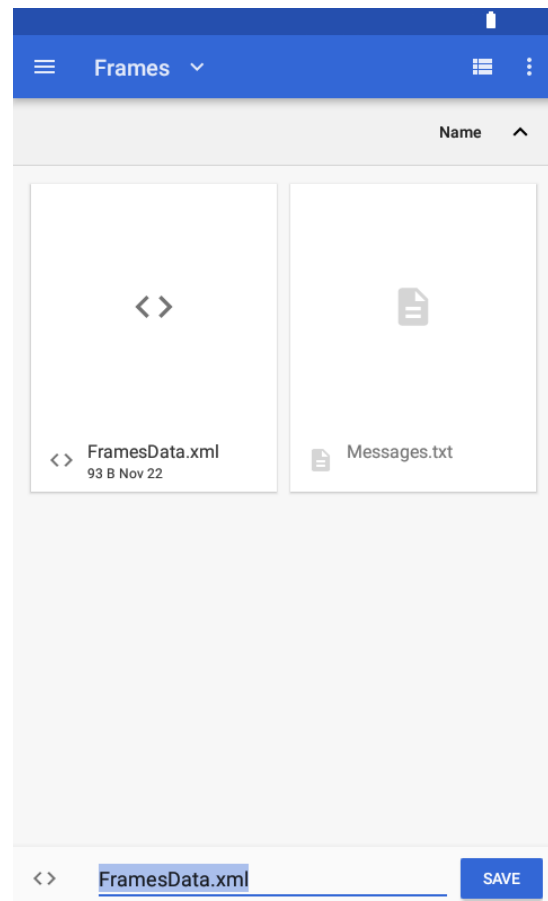
The new file picker allows you to select the location of where Frames should place the file by tapping the “three lines” menu at the top, left-hand corner of the screen. You can create a new folder in the current location by tapping the “three dots” menu at the top, right-hand corner of the screen.

Once you have navigated to the correct location, tap the **Save** button.

Overwriting an Existing File

If a `FramesData.xml` file already exists in the location you select, the system will force the new file to contain a incrementing number to make that file name unique. For example, if a `FramesData.xml` already exists, the new file name will be `FramesData (1).xml`.

*To overwrite the existing file, you must tap it in the file picker first before tapping the **Save** button.*



Copying the Exported File

To protect your data in case your Android device is lost or broken, you should export your data and copy the exported file to your desktop computer. Make sure you do an export from Frames (using the *Export data* menu item on the main Frames screen) right before copying the `FramesData.xml` file, so you are backing up the most recent data.

The easiest way to copy the Frames export XML file to your desktop computer is to connect your Android device to your computer using a USB cable, and then copy the file from the location you stored it in on your Android device to a directory on your desktop.

You must ensure that your device is sharing its file system with your desktop after you connect the USB cable from the device to your desktop computer, or you will not be able to access the data from your Android device on your desktop computer. This is called the “File Transfer”, “Disk drive” or “Media Device” connection type; you can set the connection type by tapping on the USB connection notification.

Restoring Your Data

You can use the *Import data* menu item on the main Frames screen to import your data into Frames.

*Note that importing an export file will **merge** the data in the export file with the data currently in your Frames database. Your existing Frames data is not deleted by the import process.*

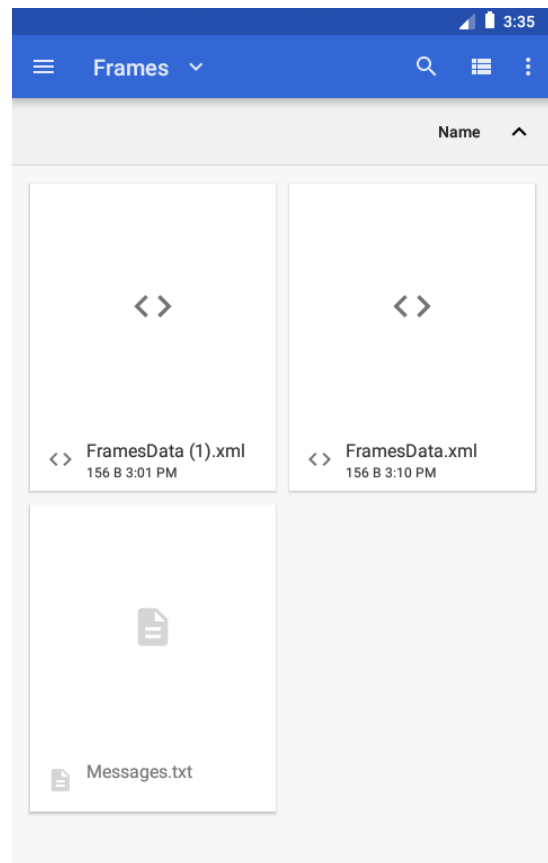
When you tap the *Import data* menu item on the main Frames screen, the Android system “existing file picker” screen will be displayed, as shown here.

The existing file picker allows you to navigate to the location of the XML file you want to import by tapping the “three lines” menu at the top, left-hand corner of the screen. Once you have navigated to the correct location, tap the file to be imported.

Moving Your Data to a New Device

You can use the export and import functions to copy your Frames data from your old Android device to your new device. To do this:

1. Export your data on your old device
2. Copy the export file from your old device to your desktop computer
3. Copy the export file from your desktop computer to your new device
4. Import the file into Frames on your new device



The Exporter Program

The Frames Exporter program allows you to print and export your game data on your desktop computer. It also can display and print the same bowling statistics that Frames itself displays. The Exporter program is written in Java, so it will run on both Windows and Macintosh computers.

Copying Your Frames Data

Because the Exporter program runs on your desktop computer, you must copy the Frames export file from your Android device to your desktop computer before running the Exporter program, so it will have access to your most recent games.

Please see the [Data Backup and Restoration](#) section earlier in this document for details on exporting your Frames data, and copying it to your desktop computer.

Installing on Microsoft Windows

If you are running on a Windows system, the Exporter program requires that you have installed the Java Runtime Environment (JRE) or Java Development Kit (JDK) on your desktop computer.

Check for Java on Your Computer

To check to see if Java is properly installed on your desktop computer, you will need to open a "Command Prompt" window. To do this, search for the word `cmd` on the Start menu and click the *Command Prompt* item in the search results.

Once the command window is open, type `java -version` and then press the Enter key. If you have Java installed, you will get a response similar to the following:

```
java version "16" 2021-03-16
Java(TM) SE Runtime Environment (build 16+36-2231)
Java HotSpot(TM) 64-Bit Server VM (build 16+36-2231, mixed mode, sharing)
```

If you get a "bad command" or "command not recognized" error message, you do not have Java installed on your computer.

To close the command window, type the command `exit` and press the Enter key.

Install Java (if necessary)

If you got an error message when you tried the `java -version` command, use your browser to visit:

<http://java.com>

You can download the latest version of Java for free from this web site.

After the Java install is complete, try the `java -version` command again (you may need to restart your computer after the install).

Download the Exporter Program

Once you have Java properly installed on your computer, download the Exporter program from the Downloads page of our web site (the file you will download is called `FramesExporter.jar`).

Create a Shortcut for the Exporter Program

To be able to run the Exporter program, you will need to create a shortcut. To do that, follow these steps:

- Right-click on the Windows desktop, and select *New | Shortcut* on the popup menu to display the “Create Shortcut” dialog.
- In the Location field, enter “`javaw -jar <directory>\FramesExporter.jar`” where `<directory>` is the directory (or folder) you downloaded the Exporter program to (you can use the *Browse* button to locate the directory). For example, if you downloaded the Exporter program to the `c:\Frames` directory, you would enter “`javaw -jar c:\Frames\FramesExporter.jar`” in the Location field.
- Click *Next*.
- In the Name field, enter “Frames Exporter”.
- Click *Finish*.

To run the Exporter program, double-click the new shortcut.

Installing Java on Macintosh Computers

If you are running on a Macintosh® system, you will need the Macintosh® Runtime for Java. If you do not have it installed already, you can visit the Apple support web site at:

<http://www.apple.com/support/>

You can then search for “Runtime for Java” to find instructions for downloading and installing Java on your system.

Once you have Java installed on your system, download the Exporter program from the Downloads page of our web site (the file you will download is called `FramesExporter.jar`).

You should then be able to double-click the program icon on the Macintosh® desktop to run it.

Running the Exporter Program

When you double-click the desktop icon for the Exporter program, you should see the main Exporter window:



Main Exporter Window

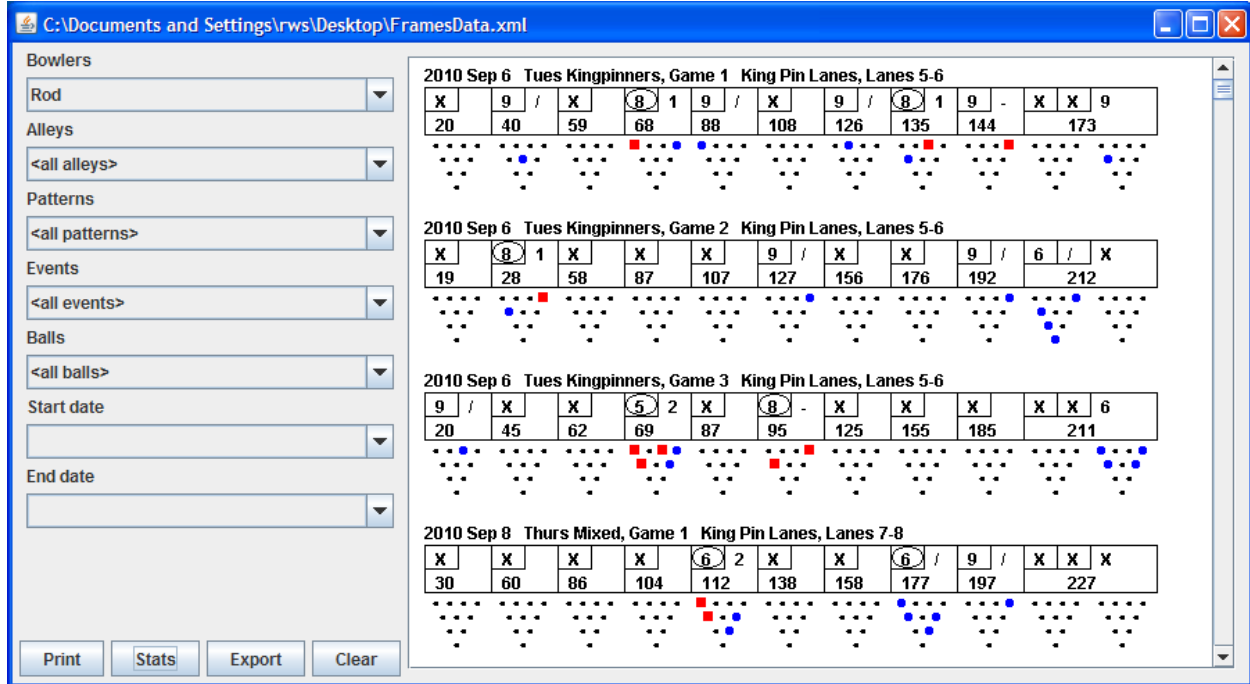
The first time you run the program, click the *Search* button to search your hard drive(s) for the `FramesData.xml` file you copied from your Android device. Once the Exporter program finds that file, it will store the location in a “properties” file so you will not have repeat the search each time you run the program.

You can also use the *Add* button to manually add the location of your export file, rather than having the Exporter program search for it.

Once the search completes (or you add a location), the location of the export file will be shown in the main window. To display your games, select the file in the list and click the *Show* button, or double-click the directory in the list. The Games List window is then displayed.

The Game List Window

The Game List window displays the lists of bowlers, alleys, patterns, events, balls, dates and games (only the dates you have actually bowled are included in the date lists).



The Game List window

For each game in the game list, a line containing details about the game (the date, event, game number, alley, and lane numbers) is displayed, followed by the game’s score sheet, and then the frame-by-frame pin fall. For each frame, the pins left after the first shot are blue circles, and the pins left after the second shot are red squares.

The lists on the left side of the window select what games are displayed on the right. For example, if you select an event in the Events list, only games that were bowled in that event are included in the Game list.

Only games that match all of the selections you make on the window will be displayed. For example, to display the games for a specific event in a specific month, select the event, select the first date in the month in the Start Date list, and select the last date in the month in the End Date list.

Displaying Statistics

The Exporter program can also display and print the same statistics that Frames itself displays. If you click the *Stats* button, the Exporter program will generate and display statistics for all games that match the selections you've made on the Game List window.

The screenshot shows a window titled "C:\Documents and Settings\rws\Desktop\FramesData.xml". On the left, there are several filter sections: "Bowlers" (Rod), "Alleys" (<all alleys>), "Patterns" (<all patterns>), "Events" (<all events>), "Balls" (<all balls>), "Start date", and "End date". At the bottom left are buttons for "Print", "Games", "Export", and "Clear". The main area displays a table of statistics:

Statistic	Value	Counts
Game Count	195	
Average	216.0	
High Game	300	
High Series	760	
Low Game	157	
Low Series	534	
First Ball Avg	9.3	
Strike %	57	(1250/2189)
Double %	58	(668/1142)
Pocket %	81	(1765/2189)
After X Pocket %	82	(933/1142)
Pocket Strike %	70	(1234/1765)
All Spare %	76	(661/867)
Single Pin Spare %	91	(499/551)
Makeable Spare %	87	(641/733)
Split %	6	(125/2189)
Split Spare %	13	(15/114)

Displaying statistics

After you click the *Stats* button, it changes to the *Games* button, so you can switch back to the list of games. The statistics are also copied to the system clipboard (in tab-delimited format), so you can paste them into a spreadsheet, a text document or an email.

Printing Your Games or Statistics

Clicking the *Print* button on the Game List window will print all of the games currently listed, or, if you are displaying statistics, the current statistics. After you click the *Print* button, a dialog will be displayed to allow you to select the printer to use.

The games will be printed exactly as they are displayed in the game list, nine games per page.

Exporting Your Games

Clicking the *Export* button on the Game List window will write the games listed in the games list to a file in Data Interchange Format (DIF), which is designed to be imported into a spreadsheet (like Microsoft Excel). You cannot export statistics using the Export button; however, each time the Exporter program generates new statistics, it copies them to the system clipboard (in tab-delimited format), so you can paste them into a spreadsheet program if you wish.

When you click the *Export* button, a dialog will be displayed to allow you to select the directory and file name for the new file. The default file name is `FramesData.dif`. Any existing file in the same directory with the same name will be automatically overwritten.

You can then just open the new file in your spreadsheet program to see your game data. Each game will be one row of the spreadsheet with the following columns:

Column Name	Description
Date	The date of the event the game was bowled in
Pattern	The oil pattern name
Alley	The name of the alley
Lane	Starting lane number
Event	The name of the event
Number	Game number within the event
Score	The game's final score
Frame information	Twelve occurrences of frame information (see the next table)

The game's Frame information consists of twelve occurrences (frames one through twelve) of the following columns:

Column Name	Description
Position	The board number where the bowler was standing
Target	The board number where the bowler was aiming
Pocket	TRUE if the first shot hit the pocket
Score	The score after this frame was complete
Ball	The name of the ball used for the first ball of this frame
Split	TRUE if the first shot left a split
S1 Pin Count	The number of pins knocked down by the first ball
S1 Pin Mask	The pins left after the first shot (see below)
S2 Pin Count	The number of pins knocked down by the second ball
S2 Pin Mask	The pins left after the second shot (see below)

The two pin mask fields are ten digits long, "1" for a standing pin and "0" for a knocked down pin, with the one pin as the far right digit and the ten pin the far left digit. For example, a shot that left the one, three, and ten pins would have a pin mask of `1000000101`. Note that some spreadsheets may truncate leading zeros, so a shot leaving the one, three, and seven pins would have a pin mask of `1000101`, instead of `0001000101`.

Converting Old Databases

The Exporter program can also be used to convert old Frames for Palm OS or Frames for Pocket PC databases to XML format, so they can be imported into Frames for Android.

To convert an old format database, use the *Search* or *Add* button on the main window to locate the directory containing the old Frames database, select the database location in the list on the main window, and then click the *Convert* button. A dialog will then be displayed so you can specify the destination (directory and file name) for the new XML file.

Once the conversion is complete, you can copy the new XML file to a directory on your Android device. Once the file is copied, you can import it into Frames using the *Import data* menu item on the main Frames screen.

Note the data from the new XML file will be merged with your existing data – your existing data will not be deleted.

Support

If you have problems running Frames or the Exporter program, please email us details of the problem at support@warilysoftware.com.

Messages File

Frames for Android maintains a debug trace file in its internal storage. The file is limited to 1,024 lines; the oldest lines are deleted when the file reaches the limit. If you have a problem with Frames, you should export this file using the *Export messages* menu item on the main Frames screen, and include the `Messages.txt` file with your email to support.

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