footyBoard 7

Professional Led Display Scoreboard Software

USER MANUAL

www.footballscoreboardsoftware.com

arslan.ziya@gmail.com



LANGUAGE SUPPORT

footyBoard supports all languages. You can use special characters from any language such as Arabic, Chinese, Hebrew, and other Asian alphabets in the application.

Contents

1. Introduction 6
   1.1 What footyBoard 7 does 6
   1.2 How to read this guide 7
   1.3 Requirements 7
   1.4 Installation and upgrade 8
   1.5 Choosing the language 9
2. Licensing 10
   2.1 License modes and when the license is checked 10
   2.2 Route A: licensing this PC with a PC key 10
   2.3 Route B: creating a USB license stick 12
   2.4 What the license controls 14
   2.5 License models and prices 14
3. Monitor set-up and outputs 15
   3.1 Second monitor: the board on its own display 15
   3.2 Single screen: docking the control window next to the board 15
   3.3 NDI output 16
4. The main window 17
   4.1 Title bar 17
   4.2 Menu strip 18
5. Match control panel 19
   5.1 Display mode 19
   5.2 Sport mode and the Timer, Period & Score Settings 21
   5.3 Team names, logos and colours 28
   5.4 Score 28
   5.5 Free text lines 30
   5.6 Clock and periods 30
   5.7 Show Period and Show Clock 33
   5.8 Sin bin and cards 34
   5.9 Score by period 37
   5.10 Reset Score & Penalties and new match 38
   5.11 Shoot-out 39
   5.12 Designs 40
   5.13 Tool icons 42
6. Rugby Union 43
   6.1 Periods and clock 43
   6.2 Score types 43

6.3 Cards and sin bin....44
6.4 Typical match....45
7. Rugby League....46
7.1 Periods and clock....46
7.2 Score types....46
7.3 Cards and sin bin....47
7.4 Tackle counter and possession....47
7.5 Typical match....49
8. Rugby Sevens....51
8.1 Periods and clock....51
8.2 Score types....51
8.3 Cards and sin bin....51
8.4 Typical match....52
9. Touch / Tag Rugby....53
9.1 Periods and clock....53
9.2 Score types....53
9.3 Cards and sin bin....53
9.4 Touch counter and possession....54
9.5 Typical match....54
10. American Football....55
10.1 Periods and clock....55
10.2 Score types....55
10.3 Down, distance and ball on....56
10.4 Possession and time-outs....58
10.5 Play clock....59
10.6 Settings....60
10.7 Typical match....60
11. Aussie Rules....62
11.1 Periods and clock....62
11.2 Score: goals and behinds....62
11.3 Interchange counter....63
11.4 Typical match....64
12. Gaelic Football....65
12.1 Periods and clock....65
12.2 Score: goals and points....65
12.3 Cards....66
12.4 Typical match....67
13. Hurling / Camogie....69

13.1 Periods and clock 69
13.2 Score: goals and points 69
13.3 Cards 69
13.4 Typical match 70
14. International Rules 71
14.1 Periods and clock 71
14.2 Score: goals, overs and behinds 71
14.3 Cards and sin bin 72
14.4 Typical match 72
15. Background images and videos 73
15.1 Standard board: background video and middle-layer image 73
15.2 Info graphics: the shared background 73
15.3 Score event, card and substitution: background per graphic 74
15.4 Other backgrounds 75
16. Info graphics 76
16.1 Banner 78
16.2 Announce 81
16.3 Goal: the score event graphic 85
16.4 Yellow Card and Red Card 90
16.5 Substitution and Multiple 93
16.6 Home Team and Guest Team: the squad editor 99
16.7 Player pictures 102
16.8 Referees 104
16.9 Sponsors 106
16.10 Team Database 108
16.11 VAR 109
17. Statistics and score by period 110
17.1 Timeline 110
17.2 Stats 113
17.3 Standings 115
17.4 Results and Fixtures 118
17.5 Score By Period 121
17.6 Download from the internet 122
18. Media player 123
19. Sponsored mode 127
20. Advertisement mode 135
20.1 Settings 137
20.2 Media Player 139

20.3 Camera ... 140
20.4 Screen Capture ... 142
20.5 Banner ... 144
21. Chroma Key mode ... 148
21.1 Info tab ... 148
21.2 Media Player, Camera and Screen Capture ... 152
21.3 Designs ... 152
21.4 Settings: key colour ... 152
22. Settings ... 155
22.1 Screen Properties ... 155
22.2 Board Design ... 157
22.3 Remote Control ... 161
22.4 Language ... 164
23. Remote control from a phone ... 167
23.1 Opening the page ... 167
23.2 The page ... 167
23.3 The boxes of the sport modes ... 168
23.4 Language of the page ... 170
23.5 Diagnostic bar ... 171
24. External play clock window ... 172
25. Troubleshooting ... 173
25.1 Log folder and support ... 173
25.2 Safety copies and damaged files ... 173
25.3 Files written by an upgrade ... 173
25.4 Symptoms ... 174
26. Appendix A: Remote API summary ... 175
26.1 Request format ... 175
26.2 Reading the state ... 175
26.3 Names, text lines and score ... 176
26.4 Clock, periods and views ... 177
26.5 Score events, sin bin and counters ... 177
26.6 American Football ... 178
26.7 Statistics and media ... 178
27. Appendix B: Files, dialogs and known limitations ... 179
27.1 Files and folders ... 179
27.2 Dialogs and pickers ... 179
27.3 Known limitations ... 180

1. Introduction

1.1 What footyBoard 7 does

footyBoard 7 is a scoreboard and match-graphics application for the oval-ball and Gaelic codes. You run the match from a control window on the operator PC; the application renders the scoreboard in a separate board window that you place on a second display, a projector or an LED wall, or send over the network as an NDI video stream.

One installation covers nine sports. You choose the sport mode once in the settings and the control panel, the board and the phone page show what that sport needs:

Mode	Periods (preset)	What is special
Rugby Union	2 x 40, extra time 2 x 10, kicking competition	Score by type, sin bin with yellow, 20-minute red and red card
Rugby League	2 x 40, extra time 2 x 5	Tackle counter, possession, sin bin
Rugby Sevens	2 x 7, extra time 2 x 5	Sin bin with two-minute yellow card
Touch / Tag Rugby	2 x 20	Touch counter, possession, sin bin
American Football	4 x 15, overtime, count-down clock	Down and distance, ball on, play clock, time-outs, possession
Aussie Rules	4 x 20, clock runs on	Goals and behinds, interchange counter
Gaelic Football	2 x 35 or 2 x 30, extra time, penalty shoot-out	Goals and points, caution, black card
Hurling / Camogie	2 x 35 or 2 x 30, extra time, penalty shoot-out	Goals and points, caution, black card
International Rules	4 x 18, clock runs on	Goals, overs and behinds, sin bin

Besides the score and the clock the board shows score events with the player's name and picture, cards, substitutions, team line-ups, referees, the timeline of the match, statistics, league tables, results and fixtures, the score by period, sponsor images, scrolling texts, announcements and video clips.

The application has four display modes, each with its own look and its own control page:

- Standard (St): the full-screen scoreboard with names, logos, score, clock, two free text lines and the elements of the sport mode (sin-bin rows, score breakdown, counters, down and distance and so on).
- Sponsored (Sp): the Standard scoreboard plus a strip at the top or bottom for sponsor images or scrolling texts.
- Advertisement (Ad): a scoreboard box, up to two banners and a large area for a video playlist, a camera or a captured screen region.
- Chroma Key (CK): a compact scorebug and info graphics on a solid key colour, meant to be keyed over a live picture in a vision mixer.

BOARD OUTPUT **CONTROL PANEL**

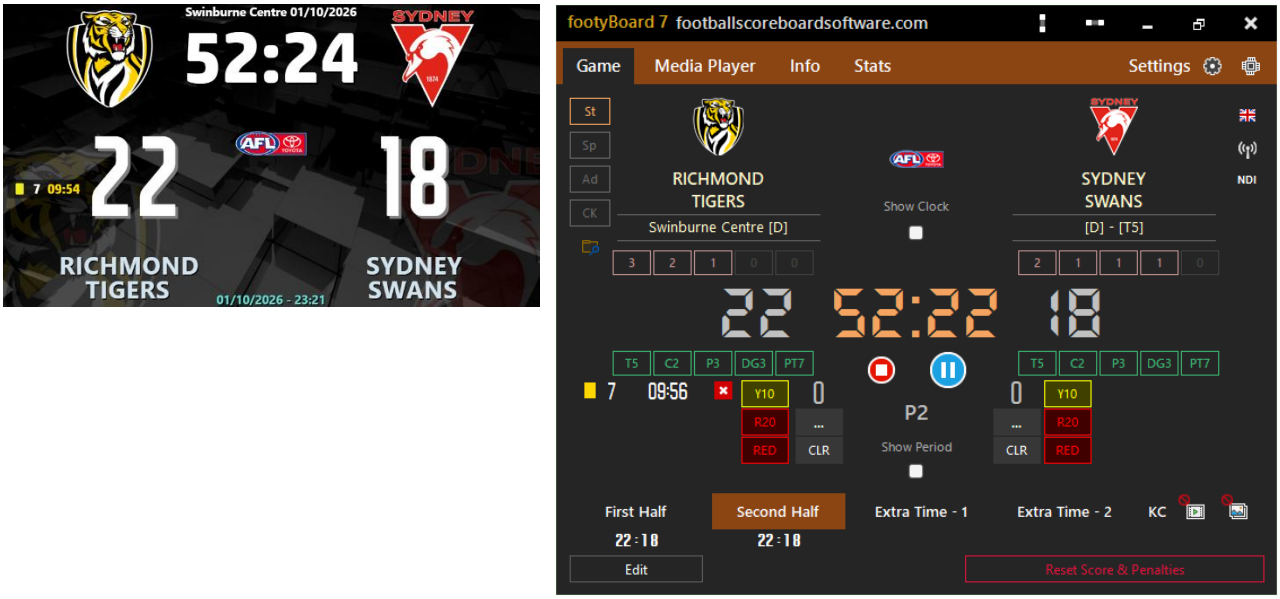


Figure 1. The Standard board in the second half of a Rugby Union match and the control panel that drives it.

1.2 How to read this guide

Chapters 1 to 5 describe what every mode has in common. Chapters 6 to 14 describe one sport mode each: periods and clock, score types, the score breakdown, cards and sin bin, the controls that only this mode has and a typical match from kick-off to the final whistle. The chapters after that cover the graphics, the media player, the other display modes, the settings, the remote control and troubleshooting. Appendix A is a summary of the remote control API.

- A pair block shows the board output on the left and the control panel that produced it on the right.
- A numbered picture is followed by a table with the same numbers: the control as it looks, its name and what it does.
- Names of buttons and labels are written as the English interface shows them. In another interface language the captions differ; the places are the same.

> **Note:** The pictures show the program as the setup installs it: the teams, logos, texts, squads, sponsors, statistics and media files are the sample data of a new installation, with scores and clocks set for the pictures. The program ran in a documentation harness with a licensed look; a new installation runs in Demo until a license is entered (chapter 2).

1.3 Requirements

- Windows, 64-bit. The setup refuses a 32-bit Windows.
- Microsoft .NET Framework 4.7.2 or later and the Microsoft Edge WebView2 runtime. The setup checks both; when one is missing it offers the download link and ends.
- Administrator rights for the setup. The desktop shortcut starts the program as administrator.
- A second display output or an NDI receiver for the board. The operator window and the board window can also share one screen; chapter 3 shows both set-ups.
- Optional: a webcam or a capture card for the Advertisement and Chroma Key modes.
- A network connection is only needed for the remote control from a phone.

1.4 Installation and upgrade

Run the setup file footyBoard7Setup.exe and follow the wizard. The application installs into C:\footyBoard7; the folder cannot be chosen. The setup installs the fonts of the program, opens port 1907 in the Windows firewall for the remote control and creates a Start menu entry and two desktop shortcuts: footyBoard7 and footyBoard7 Help (this guide as a PDF file).

When you install a newer version over an existing one, your data is kept:

Kept on upgrade	Replaced on upgrade
Settings (start.xml, config.xml, configSp.xml, configAd.xml, configCK.xml) and the license file	The program and its libraries
Teams, players, referees, sponsors, playlists, statistics, standings, results and fixtures (common\data)	Images, fonts, scripts and the pages of the remote control
The design in use, your saved designs and the design list (common\vizrt)	The factory design templates
Your edits of the interface texts and of the titles (lang.xml, title.xml)	The factory copy of the interface texts (langFactory.xml)
Your media files	This help file and the API description

What a newer version adds is merged into your files when the program starts: new interface texts are added to lang.xml and new board elements are added to your Standard designs. Before the first change the program keeps a copy of the file with the ending .bak_premigration and writes what it added to a log file (chapter 25.3).

> **Note:** New factory designs of a later version are installed, but they do not appear in the design list of an upgraded system, because the list is one of the files that are kept.

Start the application from the desktop shortcut. A small status card appears while the components load, then the control window opens in the lower right corner of the screen and the board window opens at its configured position. At the very first start the board is 960 x 540 pixels at the top left of the main screen, the display mode is Standard, the sport mode is Rugby Union and the interface language follows the language of Windows (English when Windows uses a language the program does not have).



Figure 2. The status card shown while the application starts.

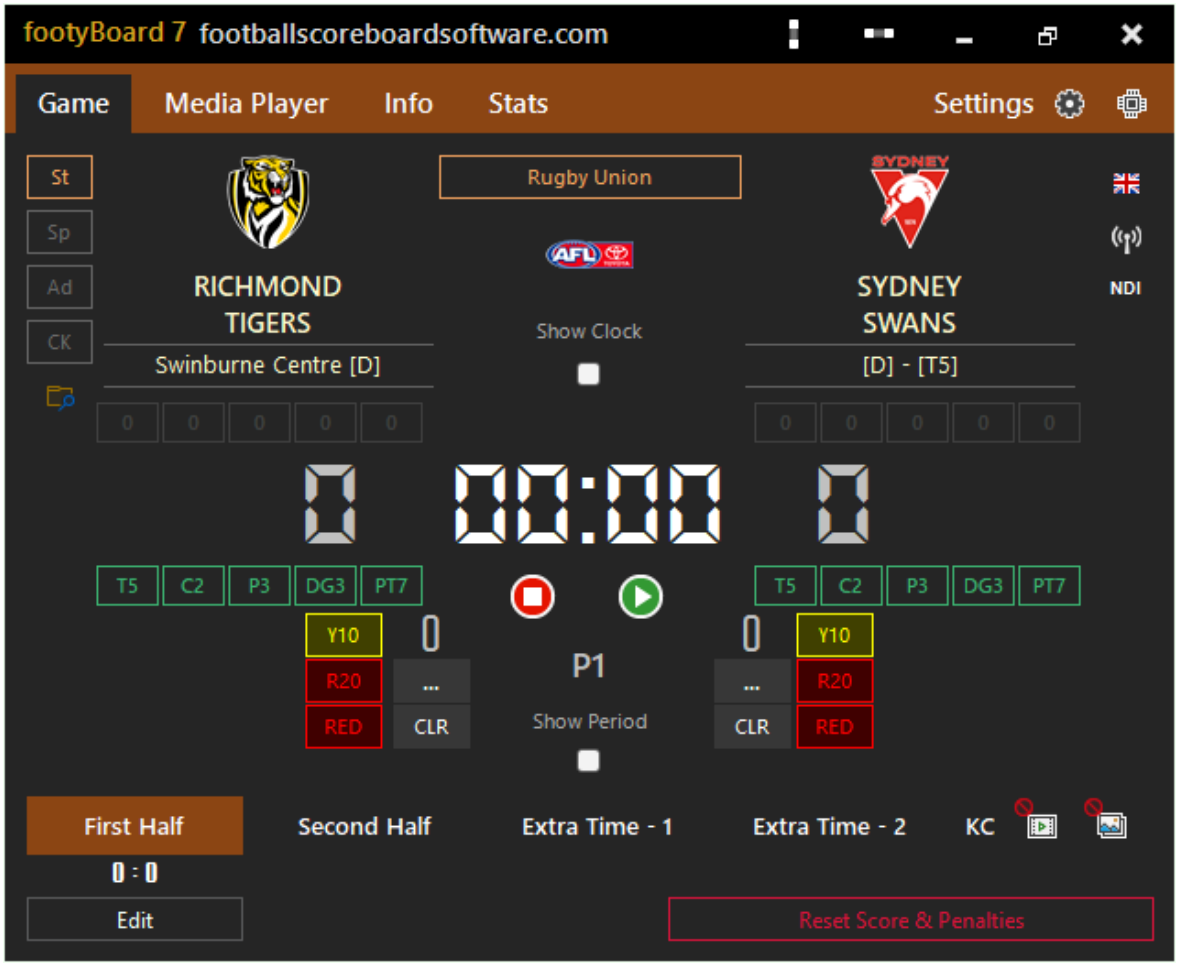


Figure 3. The control window as it opens on a new installation: the Game page with the sample teams.

Only one copy of footyBoard 7 runs at a time. A second start does not open a second copy; it brings the running control window to the front.

1.5 Choosing the language

The operator interface is available in 46 languages. Open Settings > Language (or click the flag at the top right of the Game page), pick the language in the Select Language list and click the save icon next to the list. A message asks you to restart the application; the new language is used after the restart, on the control window and on the phone page. Chapter 22.4 describes the language page and the titles printed on the board graphics.

> **Note:** The texts added for the sport modes in 2026 (counter, possession, American Football, the phone page) were translated as drafts and have not been reviewed by native speakers. You can correct any text on the Language page.

2. Licensing

2.1 License modes and when the license is checked

footyBoard 7 runs in one of three modes:

- Demo: no license found. Everything can be tried; the restrictions are listed in chapter 2.4.
- PC license: a key that is bound to the Computer ID of this PC. You enter it once under Settings > License (route A below). The key is stored in the file rb7license.xml in the program folder.
- USB license: a key that is stored on a USB stick, in the file rb7license.xml in the root folder of the stick. The stick licenses whichever PC it is plugged into (route B below).

The license is checked when the application starts: first the USB sticks, then the PC key when no stick with a license was found. A stick that you plug in later is not noticed; restart the application with the stick plugged in. The icon at the right end of the menu strip shows the result: a lock (no license), a USB symbol or a CPU symbol (PC license). The icon is an indicator only and cannot be clicked.

A key can carry an expiry date. After that date, or when the clock of the PC was set back to a time before the last run, the program falls back to Demo.

> **Note:** If Windows does not answer the hardware query at start, the program starts in Demo and shows the notice "License check unavailable - Windows WMI error". Restart the PC; if the notice stays, run winmgmt /verifyrepository in an administrator command prompt.

2.2 Route A: licensing this PC with a PC key

1. Open Settings. The License page is shown first; the Computer ID of this PC is in the CPU ID field.
2. Click the copy button next to the Computer ID and paste the ID into your order or e-mail to the vendor.
3. When you receive the license key, paste it into the License Key field. A valid key turns the field green at once.
4. Click Save. The program shows "License Key Valid. Please Restart Application."; a wrong key is reported as "License Key Not Valid!" and the field goes back to the stored key.
5. Restart the application. The license stays on this PC; copying the installation folder to another computer does not move the license.

The ? button beside the License button shows what the current key contains: whether it is valid, the largest board size, the expiry date and the license model. The information icon beside the Computer ID opens a short explanation of the PC license.



Figure 4. The License page (the Computer ID is masked in this guide).

No.	Control	Name	What it does
1		**License Info**	Shows a licence information message: whether the current licence (PC or USB) is valid, its maximum output resolution, expiry date, model, whether the GPU, extra media player and record & replay options are enabled, and the result of the run date check.
2		**PC Licence Help**	Opens the help page common\xml\CPULicense.html in the message window: how to read this computer's device ID, order a licence key for it and enter the key here. The icon on the button shows a tick while the key typed in the field is valid for this computer and a question mark otherwise.
3	XXXXXXXXXXX	**Computer ID**	The device id of this PC, read at the start of the program. It is read only; the copy button beside it copies it for the licence order. It is masked in this guide.
4		**Copy Computer ID**	Copies this computer's device ID (the Computer ID field) to the clipboard so it can be pasted into an order or an e-mail.

No.	Control	Name	What it does
5		**License Key**	The PC licence key is pasted here. While typing, the field turns green when the key matches the Computer ID and is not expired, pink when it is expired and grey when it does not match. Save writes a valid key to rb7license.xml in the program folder; the program must be restarted.
6		**Create USB License**	Opens the USB License Creator page inside the work area, where a purchased licence key is saved onto a USB stick that then unlocks any computer it is plugged into.
7		**Save**	Checks the licence key typed in the License Key field against this computer's device ID. When it matches and is not expired, the key is saved on this PC (the licence file), MaxResolution is written to start.xml and a success message appears; the key field turns green. An expired key turns the field pink without a message and nothing is saved. A key that does not match shows a warning and the field is reloaded with the key already stored on this PC.

2.3 Route B: creating a USB license stick

1. Plug the USB stick into the operator PC.
2. Open Settings and click the USB icon (Create USB License). The USB License Creator opens and lists the sticks it finds.
3. Select the stick in the Select USB Device list. Its USB ID appears in the USB ID field; the copy button copies it. A key that is already on the stick is shown in the key field.
4. Send the USB ID to the vendor and paste the key you receive into the License Key field.
5. Click Save. The program checks the key against the stick and writes the license onto the stick.
6. Restart the application with the stick plugged in. The License page then shows USB License Detected.

The stick can now be used on any PC that runs footyBoard 7. Plug it in before you start the application.

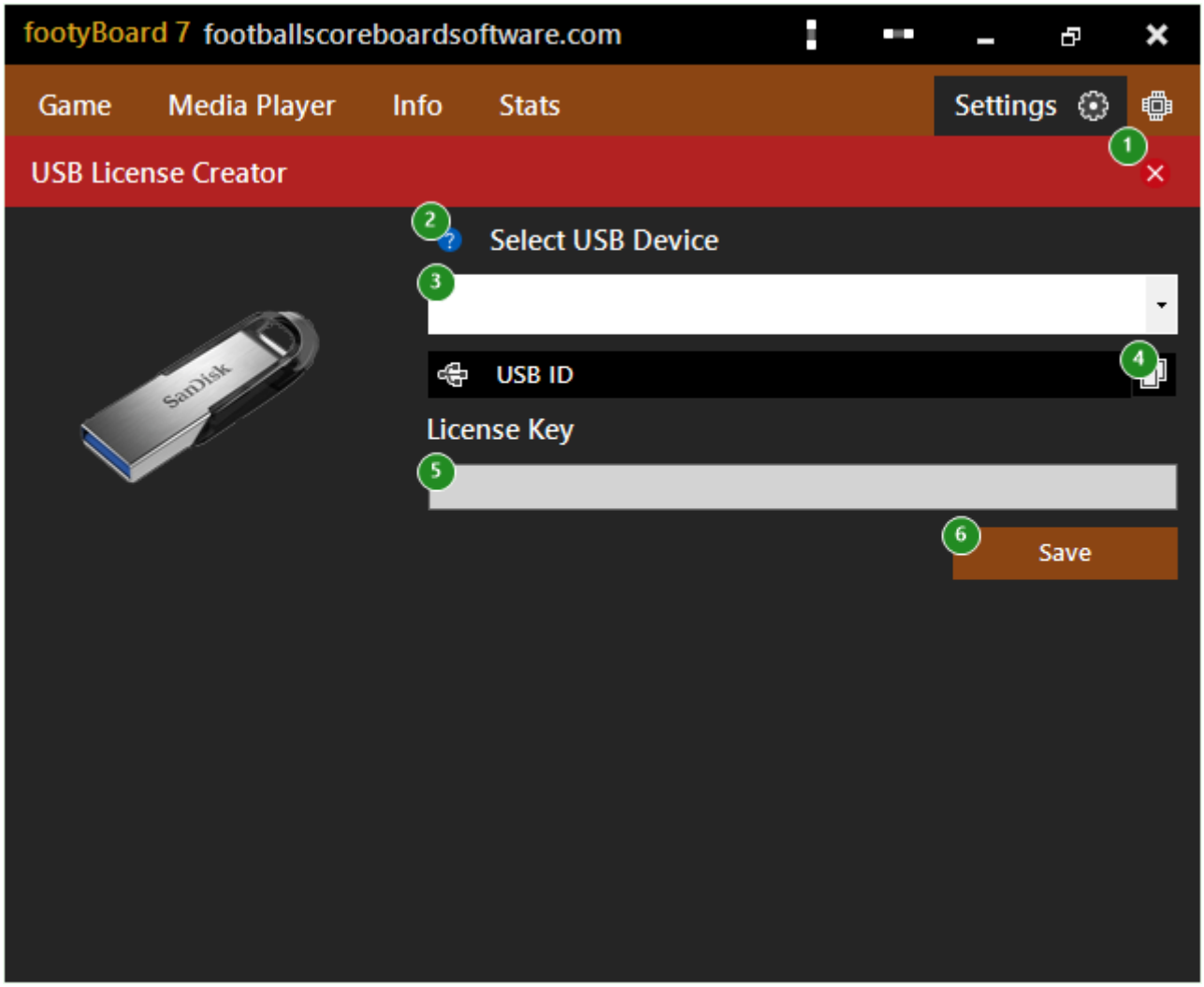
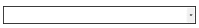


Figure 5. The USB License Creator (no stick was attached when the picture was made).

No.	Control	Name	What it does
1		**Close**	Closes the USB License Creator page and returns to Settings (Escape does the same).
2		**USB Licence Help**	Opens the help page common\xml\USBLicense.html in the message window: how to read the device ID of the stick, order a licence key for it and save the key onto the stick.
3		**Select USB Device**	Selects the USB stick to license from the sticks found when the page opened (drive letter and label, with License Key Found when a key is already on it); its device ID is shown and any licence key already stored on the stick is loaded into the key field. A stick plugged in later is not listed until the page is opened again.
4		**Copy Stick ID**	Copies the device ID of the selected USB stick to the clipboard so it can be pasted into an order or an e-mail.
5		**License Key**	The licence key for the selected stick is typed or pasted here. While typing, the field turns green when the key matches the stick's device ID and is not expired, pink when it is expired and grey when it does not match; the key is written to the stick only with Save.

No.	Control	Name	What it does
6		**Save**	Checks the licence key typed against the device ID of the selected USB stick. When it matches and is not expired, the key is saved onto the stick (the licence file in its root) so that it unlocks any computer it is plugged into, and a success message appears; the key field turns green. An expired key turns the field pink without a message and nothing is saved; a key that does not match shows a warning; a missing stick or no selected stick shows an error.

2.4 What the license controls

- Board size: the Max Resolution row under Settings > Screen Properties shows the largest board size your key allows; Width and Height cannot be set above it and are reduced to it at start.
- Functions of the license model: GPU screen capture, the extra media player and Record & Replay are marked on the License page (GPU, eMP) when the key has them.

Without a license (Demo):

Restriction	Detail
DEMO in the clock	The board clock shows the word DEMO for one second every ten seconds, in every display mode.
Clock after five minutes	Once five minutes are played the clock shows DM instead of the minutes (DM:07). Events that are recorded in that state get the minute 0.
Home logo	The home team logo cannot be selected or removed.
DEMO label	A magenta DEMO label lies over the media area of the Advertisement board, over the info and statistics graphics and over the media player picture.
Home score by remote control	The API commands set_home_score_up and set_home_score_down are refused with a message on the PC. The score buttons of the panel are not locked.

The board size is not limited in Demo. Entering a valid key removes the DEMO clock text and opens the locked functions at once; the DEMO labels and the license icon change after the restart.

2.5 License models and prices

The program distinguishes the license models by the key. The ? button on the License page shows the model of the current key. For the available license models, their prices and ordering, contact the vendor.

3. Monitor set-up and outputs

The board window is a separate window that you place where the spectators see it. There are two normal ways to arrange the operator window and the board, and a third output over the network.

3.1 Second monitor: the board on its own display

Connect the display to the PC and extend the Windows desktop onto it. Then set the position and size of the board under Settings > Screen Properties:

- L: Left and T: Top: the position of the board window on the desktop, in pixels. With a full-HD main screen the second display starts at Left 1920, Top 0. Negative values are not accepted, so the second display has to be arranged to the right of or below the main screen in the Windows display settings.
- W: Width and H: Height: the size of the board window, normally the resolution of the display (1920 x 1080 for full HD). The maximum is set by your license.

Click a value to edit it; the change is saved when you leave the cell and the board moves at once.

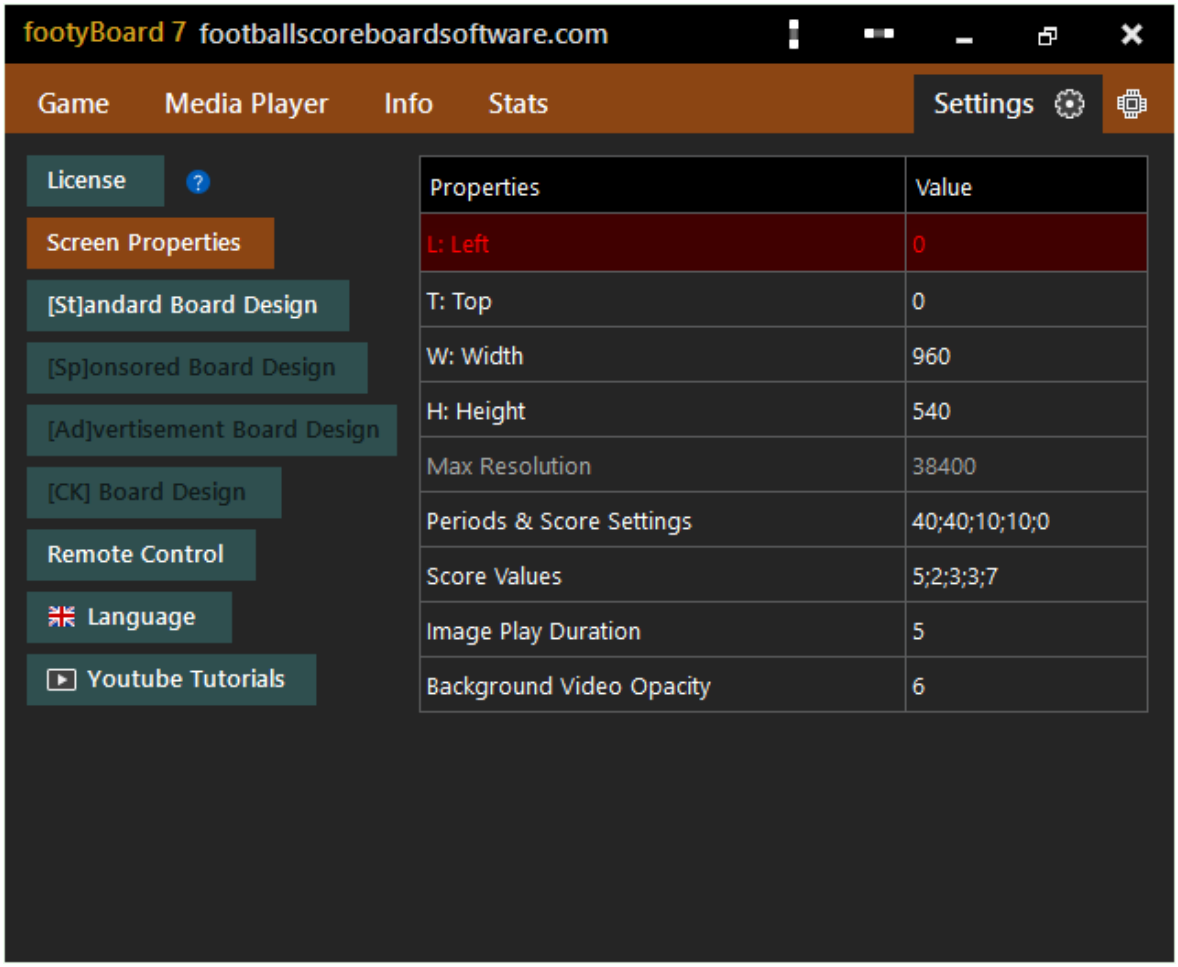


Figure 6. Settings > Screen Properties with the board of a new installation (960 x 540 at the top left of the main screen).

3.2 Single screen: docking the control window next to the board

The control window is 640 x 524 pixels, stays on top of other windows and opens in the lower right corner of the screen. When the operator PC has only one screen, the window can be docked so that both the panel and the board stay visible. The two dock buttons in the title bar do this:

- Vertical dock: the control window becomes a column at the right edge of the screen, 640 pixels wide and as high as the working area. A second click returns it to its normal size and place.
- Horizontal dock: the control window becomes a strip along the bottom of the screen, as wide as the screen and 524 pixels high. A second click returns it.

The small button at the bottom right of the Game page, and a double-click on an empty area of the Game page, also return the window to its compact size in the lower right corner. The window can be moved by its title bar and resized at its edges.

3.3 NDI output

The NDI button at the top right of the Game page starts and stops an NDI stream of the board. Other computers on the network (vision mixers, streaming software, NDI monitors) see the stream under the sender name of the installation.

- What is sent: the board window itself, at its configured Width x Height and up to 60 frames per second, whichever graphic it shows: the scoreboard, an info graphic or the media player. A board that is larger than the operator screen is sent in full size. The stream has no transparency.
- Sender name: RB7_NDI on a new installation. The name is stored in start.xml (NDI / SenderName) and cannot be changed in the interface.
- The button blinks red while the stream runs. It turns amber when the stream stopped by itself (click to start it again) and grey when NDI is not available on this PC; a notice then says why.

4. The main window

The main window has no Windows frame; it has its own title bar and hosts every control page in the area below the brown menu strip.



Figure 7. The title bar and the menu strip of the main window.

No.	Control	Name	What it does
1		**Vertical dock**	Toggles the operator window between the compact 640 x 524 size in the bottom right corner of the screen and a full-height column (640 wide) along the right edge of the screen.
2		**Horizontal dock**	Toggles the operator window between the compact 640 x 524 size in the bottom right corner of the screen and a full-width strip (524 high) along the bottom of the screen.
3		**Minimize**	Minimizes the operator window to the taskbar.
4		**Maximize**	Maximizes the operator window, or restores it to its previous size when it is already maximized.
5		**Close**	Closes the application after a confirmation question; all outputs are shut down in order.
6	Game	**Game**	Game: opens the control panel with score, clock, period, team names and the mode's counters, and puts the scoreboard back on the board output.
7	Media Player	**Media Player**	Media Player: opens the media player page with its playlists and the URL list for playing videos and images on the board.
8	Info	**Info**	Info: opens the Info pages (line-ups, referees, goal, cards and other information graphics).
9	Stats	**Stats**	Stats: opens the Stats pages (statistics, results, standings and score by period).
10	Settings	**Settings**	Settings: opens the Settings pages. While a media clip is playing the button shows the elapsed time of the clip instead of the caption.
11		**Licence icon**	Icon at the right of the menu bar that shows the licence state: a lock for no licence, a USB stick for a USB licence and a CPU for a PC licence (the tooltip says which). A click does nothing.

4.1 Title bar

The title bar shows the product name on the left. The buttons at its right end are, from left to right: Vertical dock, Horizontal dock (chapter 3.2), Minimize, Maximize / restore and Close.

Close asks "The Application Will Be Closed! Are You Sure?" with Yes and No. Yes saves the team names and text lines, stops the remote control, running sources and the NDI stream in an orderly way and closes the application. Alt+F4 and closing from the Windows task bar ask the same question.

4.2 Menu strip

- Game: the match control panel (chapter 5 and the chapter of your sport mode).
- Media Player: the video player with playlists (chapter 18).
- Info: on-air info graphics such as score events, cards, substitutions, line-ups and announcements (chapter 16).
- Stats: timeline, match statistics, standings, results, fixtures and the score by period (chapter 17).
- Sp / Ad / CK: the control page of the selected display mode. The button shows the abbreviation of the current mode and is hidden in Standard mode (chapters 19 to 21).
- Settings: license, screen properties, board design, remote control and language (chapter 22).
- The icon at the right end shows the license state (chapter 2.1).

While a clip is playing, the Settings button shows the elapsed time of the clip instead of its caption. The mode button blinks while a camera, capture or playlist source is active in the Advertisement or Chroma Key mode.

5. Match control panel

The Game page is where you run the match. What you change here is sent to the board immediately. This chapter describes the controls that every sport mode has; the chapters 6 to 14 describe what each mode adds.

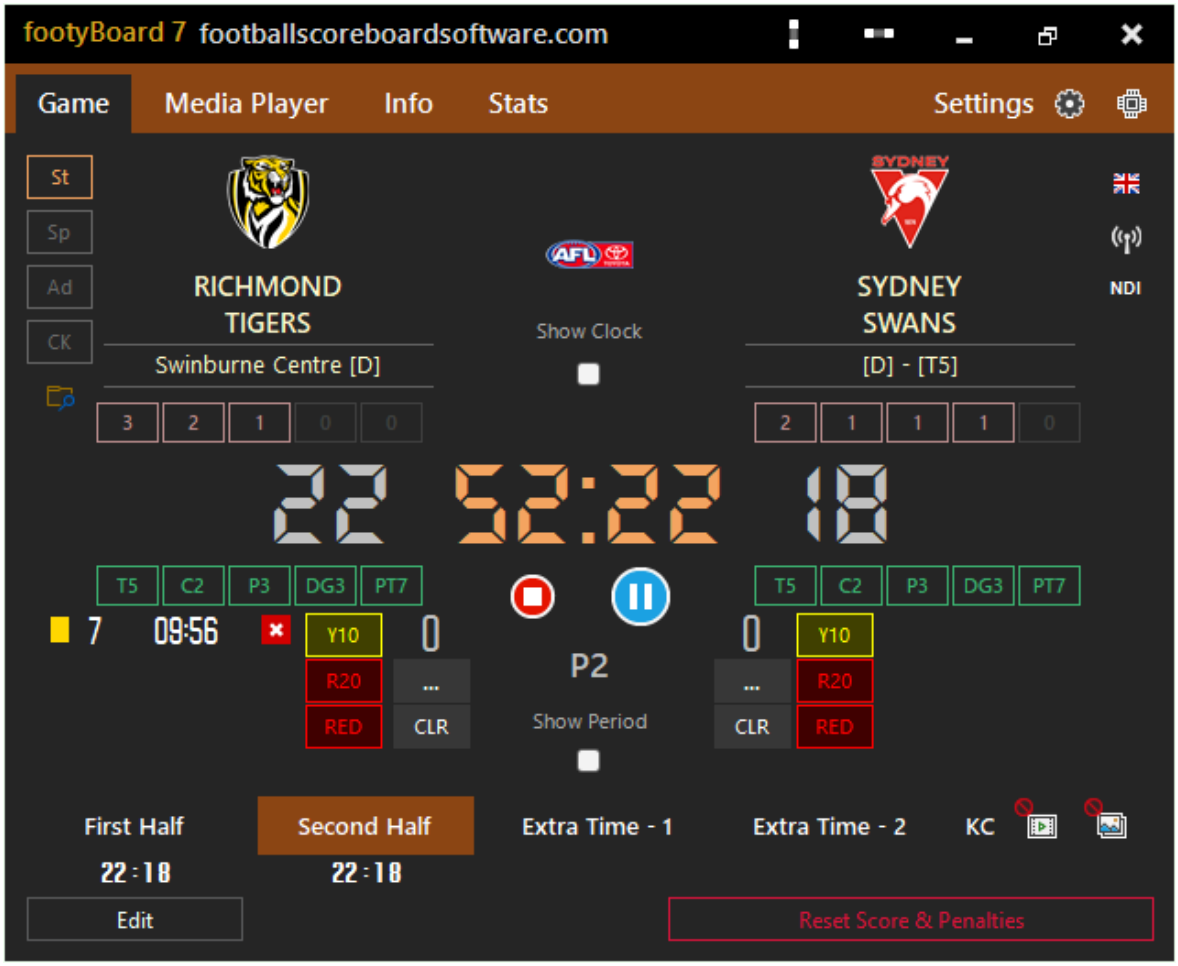


Figure 8. The Game page in Rugby Union during the second half.

5.1 Display mode

The four small buttons at the top left (St, Sp, Ad, CK) select the display mode. The board window changes at once and the control page of the mode appears in the menu strip. Sources that are running in a mode (camera, capture, playlist) are stopped when you leave that mode and have to be started again by hand when you come back.

The folder icon under the four buttons opens the list of saved designs (chapter 5.12).

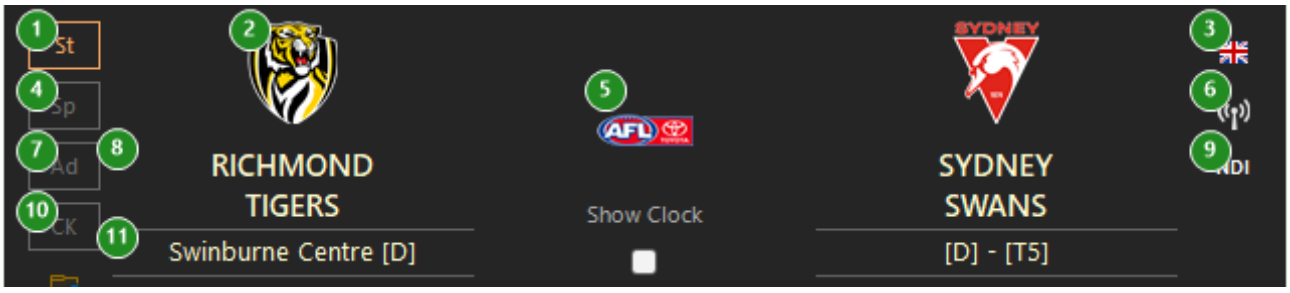


Figure 9. The display mode buttons, the home team block and the tool icons of the Game page.

No.	Control	Name	What it does
1		**Standard View**	Standard View: switches the board to the Standard display mode and shows the standard scoreboard design; the mode is saved as DisplayMode in start.xml and the active button is shown in orange.
2		**Home Logo**	Shows the home team logo; a click opens a file dialog (it starts in media\downloads\images) to choose a new image, which is saved as LogoHome in start.xml and shown on the board. In the demo version the message "License Required" is shown instead.
3		**Language Settings**	Language Settings: opens the language page where the panel language and the board captions are chosen and edited. The button shows the flag of the current language.
4		**Sponsored View**	Sponsored View: switches the board to the Sponsored display mode, showing the scoreboard together with the sponsor scroll text or slide show (whichever the Sponsored settings start with); the mode is saved as DisplayMode in start.xml.
5		**Board Logo**	Shows the board logo (the emblem between the two team logos); a click opens a file dialog (it starts in media\downloads\images) to choose a new image, which is saved as LogoBoard in start.xml and shown on the board.
6		**Remote Control**	Remote Control: opens the remote control window with the addresses, the port 1907 and the commands for controlling the board from another device.
7		**Advertisement View**	Advertisement View: switches the board to the Advertisement display mode, showing the scoreboard with the advertisement banners (scroll text, slide show or media, as set for each banner) around it; the mode is saved as DisplayMode in start.xml.
8		**Home name**	The home team name, up to two lines, shown on the board at once (and in the score by period table); saved as NameHome in start.xml when the program closes or the settings are saved. The background turns black when more than two lines are typed. Replaced by the kick sequence box during the kicking competition. Can be set by the remote control.
9		**NDI**	Start/Stop NDI Camera Stream: starts sending the board window that is shown as an NDI network video stream (the sender name comes from start.xml NDI/SenderName, RB7_NDI on a new installation); a second click stops it. The button blinks red while the stream runs, is dark when it is off, grey when NDI is not available on this PC (a notice says why) and amber when the stream has died (a click restarts it).
10		**Chroma Key View**	Chroma Key View: switches the board to the Chroma Key display mode with the current CK design, a keyed output for vision mixers; the mode is saved as DisplayMode in start.xml.

No.	Control	Name	What it does
11	Swinburne Centre [D]	**Extra text 1**	Free text for the first lower line of the board under the team names, shown at once. [D] and [T] are replaced on the board by the current date and time, [D5] or [T5] by their first five characters. Saved as ExtraText01 in start.xml when the program closes or the settings are saved; the background turns black when the text has more than one line. Can be set by the remote control.

5.2 Sport mode and the Timer, Period & Score Settings

The button at the top centre shows the name of the sport mode. Click it to open the Timer, Period & Score Settings. The button is hidden while the clock runs, so stop the clock first.

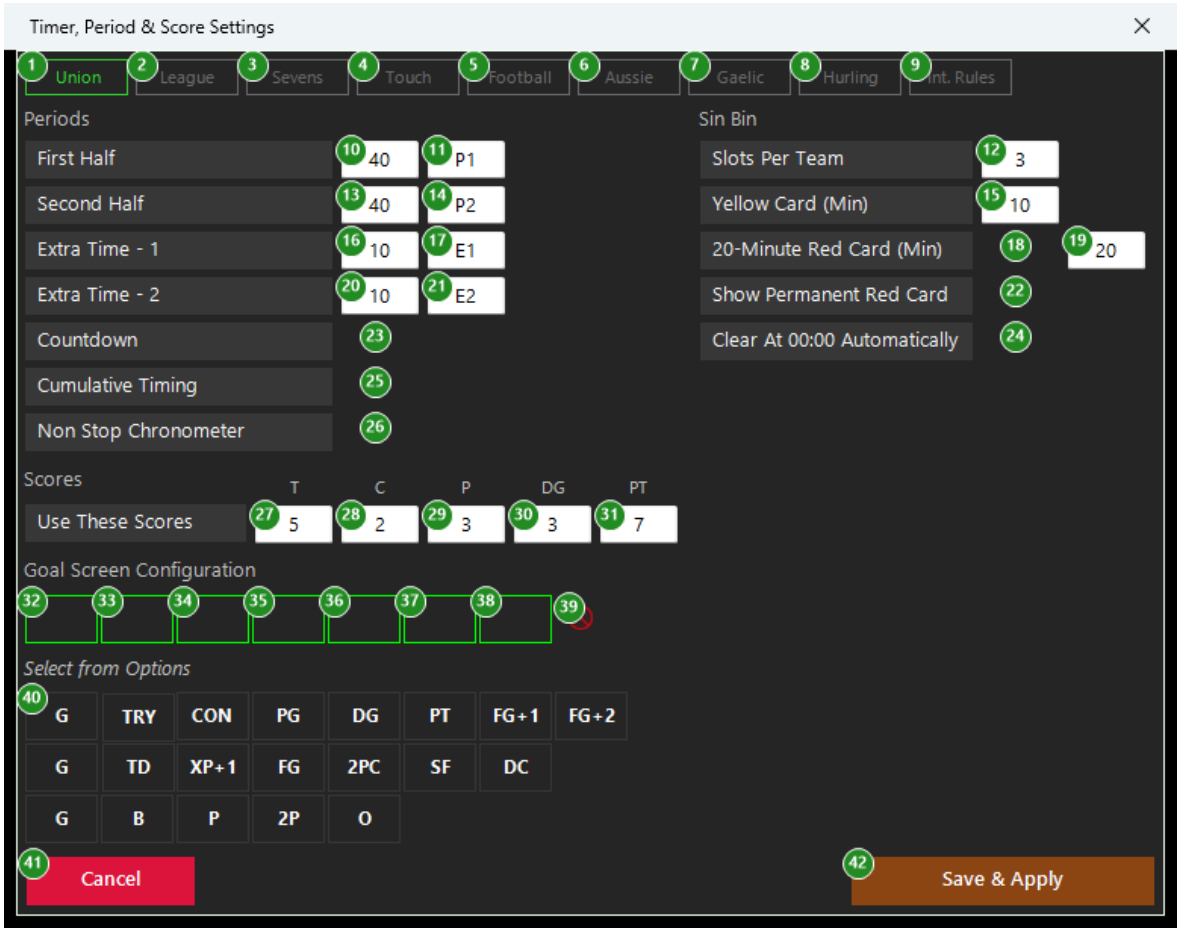
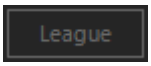
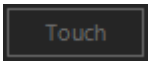
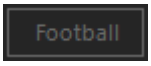
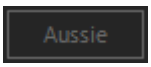
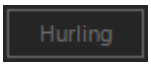
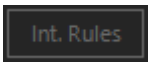
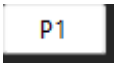
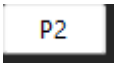


Figure 10. Timer, Period & Score Settings in Rugby Union. The twenty buttons under Select from Options are the catalogue of all score types; one of them is listed.

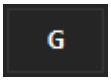
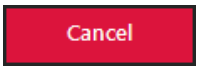
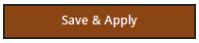
No.	Control	Name	What it does
1		**Union**	Rugby Union (tooltip): selects the mode and loads its defaults into the window: periods First Half, Second Half, Extra Time - 1, Extra Time - 2 (40, 40, 10, 10 min; labels P1, P2, E1, E2), Cumulative Timing on, score values T 5, C 2, P 3, DG 3, PT 7, sin bin with yellow card 10 min, 20-minute red card (on) and permanent red card, kicking competition as the fifth period, and the goal screen slots Try, Conversion, Penalty Goal, Drop Goal, Penalty Try. The selected mode is green. Nothing is saved until Save & Apply.
2		**League**	Rugby League (tooltip): selects the mode and loads its defaults into the window: periods First Half, Second Half, Extra Time - 1, Extra Time - 2 (40, 40, 5, 5 min), Cumulative Timing on, score values T 4, C 2, PG 2, FG 1, FG 2, sin bin with yellow card 10 min, 20-minute red card (off) and permanent red card, the Counter box (label Tackle, maximum 6) with possession, and the goal screen slots Try, Conversion, Penalty Goal, Field Goal +1, Field Goal +2. The selected mode is green. Nothing is saved until Save & Apply.
3		**Sevens**	Rugby Sevens (tooltip): selects the mode and loads its defaults into the window: periods First Half, Second Half, Extra Time - 1, Extra Time - 2 (7, 7, 5, 5 min), Cumulative Timing on, score values T 5, C 2, P 3, DG 3, PT 7, sin bin with yellow card 2 min, 20-minute red card (off) and permanent red card, and the goal screen slots Try, Conversion, Penalty Goal, Drop Goal, Penalty Try. The selected mode is green. Nothing is saved until Save & Apply.
4		**Touch**	Touch / Tag Rugby (tooltip): selects the mode and loads its defaults into the window: periods First Half and Second Half (20 min each), one score value TD 1, sin bin with yellow card 2 min, 20-minute red card (off) and permanent red card, the Counter box (label Touch, maximum 6) with possession, and the goal screen slot Touchdown. The selected mode is green. Nothing is saved until Save & Apply.
5		**Football**	American Football (tooltip): selects the mode and loads its defaults into the window: periods Q1 to Q4 and Overtime (15 min each; labels Q1 to Q4, OT), Countdown on, score values TD 6, PAT 1, 2PT 2, FG 3, S 2, no sin bin, the American Football box (play clock 40 / 25 s, 3 timeouts per half, 2 in overtime), possession and down / to go / ball on, score by period as points per period, and the goal screen slots Touchdown, Extra Point, Two-Point Conversion, Field Goal, Safety. The selected mode is green. Nothing is saved until Save & Apply.
6		**Aussie**	Aussie Rules (tooltip): selects the mode and loads its defaults into the window: periods Q1 to Q4 (20 min each), Non Stop Chronometer on, score values G 6 and B 1 with the score shown as goals.behinds, no sin bin, the Interchange box (limit 75 per team, counted for the whole match), and the goal screen slots Goal and Behind. The selected mode is green. Nothing is saved until Save & Apply.

No.	Control	Name	What it does
7		**Gaelic**	Gaelic Football (tooltip): selects the mode and loads its defaults into the window: periods First Half, Second Half, Extra Time - 1, Extra Time - 2 (35, 35, 10, 10 min) with the presets Inter-county 2x35 and Club 2x30, Cumulative Timing on, score values G 3, P 1, 2P 2 with the score shown as goals-points (total), sin bin with yellow card (caution), black card 10 min and permanent red card, penalty shoot-out as the fifth period, and the goal screen slots Goal, Point, Two-Pointer. The selected mode is green. Nothing is saved until Save & Apply.
8		**Hurling**	Hurling / Camogie (tooltip): selects the mode and loads its defaults into the window: periods First Half, Second Half, Extra Time - 1, Extra Time - 2 (35, 35, 10, 10 min) with the presets Hurling 2x35 and Camogie 2x30, Cumulative Timing on, score values G 3 and P 1 with the score shown as goals-points (total), sin bin with yellow card (caution), black card 10 min and permanent red card, penalty shoot-out as the fifth period, and the goal screen slots Goal and Point. The selected mode is green. Nothing is saved until Save & Apply.
9		**Int. Rules**	International Rules (tooltip): selects the mode and loads its defaults into the window: periods Q1 to Q4 (18 min each), Non Stop Chronometer on, score values G 6, O 3, B 1 with the score shown as goals.overs.behinds (total), sin bin with yellow card 10 min and permanent red card, and the goal screen slots Goal, Over, Behind. The selected mode is green. Nothing is saved until Save & Apply.
10		**First Half / Q1**	Length in minutes of period 1 (0 to 999). The caption next to the row is the period name of the mode (First Half, or Q1 in American Football, Aussie Rules and International Rules). Choosing a mode or a preset fills the box with the default; the value is saved to start.xml (PERIOD/P1) with Save & Apply; an invalid value turns the box red and blocks saving.
11		**Period 1 label**	The short label of period 1 shown on the board and the period button (P1, or Q1 in American Football, Aussie Rules and International Rules). Choosing a mode resets it; saved to start.xml (PERIOD/P1Text) with Save & Apply.
12		**Slots Per Team**	Sin Bin box (shown in every mode except American Football and Aussie Rules): how many players of a team can be in the sin bin at the same time, 1 to 4, default 3. A number outside the range is pulled to the limit when saving. Saved to start.xml (SINBIN/Slots) with Save & Apply.
13		**Second Half / Q2**	Length in minutes of period 2 (0 to 999). The caption next to the row is the period name of the mode (Second Half, or Q2 in American Football, Aussie Rules and International Rules). Choosing a mode or a preset fills the box with the default; the value is saved to start.xml (PERIOD/P2) with Save & Apply; an invalid value turns the box red and blocks saving.
14		**Period 2 label**	The short label of period 2 shown on the board and the period button (P2, or Q2 in American Football, Aussie Rules and International Rules). Choosing a mode resets it; saved to start.xml (PERIOD/P2Text) with Save & Apply.

No.	Control	Name	What it does
15	10	**Yellow Card (Min)**	First card row of the Sin Bin box: the minutes of the timed yellow card, 1 to 99 (10 in Rugby Union, Rugby League and International Rules, 2 in Sevens and Touch). Hidden in Gaelic Football and Hurling / Camogie, where the yellow card is a caution. Saved to start.xml (SINBIN/YellowMinutes) with Save & Apply; an invalid value turns the box red and blocks saving.
16	10	**Extra Time - 1 / Q3**	Length in minutes of period 3 (0 to 999). The caption next to the row is the period name of the mode (Extra Time - 1, or Q3 in American Football, Aussie Rules and International Rules); the row is hidden in Touch, which has two periods. Choosing a mode or a preset fills the box with the default; the value is saved to start.xml (PERIOD/P3) with Save & Apply; an invalid value turns the box red and blocks saving.
17	E1	**Period 3 label**	The short label of period 3 shown on the board and the period button (E1, or Q3 in American Football, Aussie Rules and International Rules); hidden in Touch. Choosing a mode resets it; saved to start.xml (PERIOD/P3Text) with Save & Apply.
18	☑	**20-Minute Red Card (Min) / Black Card (Min) / Show Permanent Red Card**	Second card row of the Sin Bin box: enables the card of the row on the panel. The row is the 20-minute red card in Rugby Union (on by default), Rugby League, Sevens and Touch (off by default), the black card in Gaelic Football and Hurling / Camogie, and the permanent red card in International Rules. Unchecking disables the minute box next to it. Saved to start.xml (SINBIN) with Save & Apply.
19	20	**20-Minute Red Card (Min) / Black Card (Min)**	Second card row of the Sin Bin box: the minutes of the 20-minute red card (Rugby Union, Rugby League, Sevens, Touch; default 20) or of the black card (Gaelic Football, Hurling / Camogie; default 10), 1 to 99. The box is disabled while the card is unchecked and hidden in International Rules. Saved to start.xml (SINBIN) with Save & Apply; an invalid value turns the box red and blocks saving.
20	10	**Extra Time - 2 / Q4**	Length in minutes of period 4 (0 to 999). The caption next to the row is the period name of the mode (Extra Time - 2, or Q4 in American Football, Aussie Rules and International Rules); the row is hidden in Touch, which has two periods. Choosing a mode or a preset fills the box with the default; the value is saved to start.xml (PERIOD/P4) with Save & Apply; an invalid value turns the box red and blocks saving.
21	E2	**Period 4 label**	The short label of period 4 shown on the board and the period button (E2, or Q4 in American Football, Aussie Rules and International Rules); hidden in Touch. Choosing a mode resets it; saved to start.xml (PERIOD/P4Text) with Save & Apply.
22	☑	**Show Permanent Red Card**	Third card row of the Sin Bin box: when checked the permanent red card button (RED, counts as a red card of the team) is used on the panel. Shown in Rugby Union, Rugby League, Sevens, Touch, Gaelic Football and Hurling / Camogie; International Rules has the red card in the second row. Saved to start.xml (SINBIN/PermanentRed) with Save & Apply.

No.	Control	Name	What it does
23	☐	**Countdown**	Clock option: when checked the match clock counts down from the period length to 00:00 instead of counting up. Set by the mode (on for American Football, off for the others) and editable; saved to start.xml with Save & Apply.
24	☐	**Clear At 00:00 Automatically**	Sin Bin box: when checked a sin bin row is removed by itself when its time reaches 00:00, otherwise the operator removes it. Off by default in every mode. Saved to start.xml (SINBIN/AutoClear) with Save & Apply.
25	☑	**Cumulative Timing**	Clock option: when checked the second period starts at the minute where the first ended (40 to 80) instead of at 00:00. Set by the mode (on for the rugby and GAA modes, off for American Football, Aussie Rules, Touch and International Rules) and editable; saved to start.xml with Save & Apply.
26	☐	**Non Stop Chronometer**	Clock option: when checked the clock does not stop at the end of a period and runs on (time-on). Set by the mode (on for Aussie Rules and International Rules, off for the others) and editable; saved to start.xml with Save & Apply.
27	5	**Score value 1**	Points of score type 1 of the mode (0 to 99); the short name above the box names the type and the tooltip its full name: T in the rugby modes (5, or 4 in League), TD in American Football (6) and Touch (1), G in Aussie Rules (6), the GAA modes (3) and International Rules (6). Choosing a mode fills the default. Saved to start.xml (SCORES/S1) with Save & Apply; a value of 0 hides the score button on the panel, and the values are locked while scores are counted.
28	2	**Score value 2**	Points of score type 2 of the mode (0 to 99); the short name above the box names the type and the tooltip its full name: C in the rugby modes (2), PAT in American Football (1), B in Aussie Rules (1), P in the GAA modes (1), O in International Rules (3); hidden in Touch. Choosing a mode fills the default. Saved to start.xml (SCORES/S2) with Save & Apply; a value of 0 hides the score button on the panel, and the values are locked while scores are counted.
29	3	**Score value 3**	Points of score type 3 of the mode (0 to 99); the short name above the box names the type and the tooltip its full name: P in Union and Sevens (3), PG in League (2), 2PT in American Football (2), 2P in Gaelic Football (2), B in International Rules (1); hidden in Aussie Rules, Touch and Hurling. Choosing a mode fills the default. Saved to start.xml (SCORES/S3) with Save & Apply; a value of 0 hides the score button on the panel, and the values are locked while scores are counted.
30	3	**Score value 4**	Points of score type 4 of the mode (0 to 99); the short name above the box names the type and the tooltip its full name: DG in Union and Sevens (3), FG in League (1, the one-point field goal), FG in American Football (3); hidden in the other modes. Choosing a mode fills the default. Saved to start.xml (SCORES/S4) with Save & Apply; a value of 0 hides the score button on the panel, and the values are locked while scores are counted.

No.	Control	Name	What it does
31		**Score value 5**	Points of score type 5 of the mode (0 to 99); the short name above the box names the type and the tooltip its full name: PT in Union and Sevens (7), FG in League (2, the two-point field goal), S in American Football (2); hidden in the other modes. Choosing a mode fills the default. Saved to start.xml (SCORES/S5) with Save & Apply; a value of 0 hides the score button on the panel, and the values are locked while scores are counted.
32		**Goal screen slot 1**	Slot 1 of the Goal Screen Configuration: shows the score type that the Info > Goal page gets as its first button. The seven slots are filled in order by the Select from Options buttons and emptied all together by the erase button; choosing a mode fills them with the score types of that mode. A click on a slot does nothing. The slots are saved to start.xml with Save & Apply, and the board titles of the score types are rewritten in English when the slots were changed by hand.
33		**Goal screen slot 2**	Slot 2 of the Goal Screen Configuration: shows the score type that the Info > Goal page gets as its second button. The seven slots are filled in order by the Select from Options buttons and emptied all together by the erase button; choosing a mode fills them with the score types of that mode. A click on a slot does nothing. The slots are saved to start.xml with Save & Apply, and the board titles of the score types are rewritten in English when the slots were changed by hand.
34		**Goal screen slot 3**	Slot 3 of the Goal Screen Configuration: shows the score type that the Info > Goal page gets as its third button. The seven slots are filled in order by the Select from Options buttons and emptied all together by the erase button; choosing a mode fills them with the score types of that mode. A click on a slot does nothing. The slots are saved to start.xml with Save & Apply, and the board titles of the score types are rewritten in English when the slots were changed by hand.
35		**Goal screen slot 4**	Slot 4 of the Goal Screen Configuration: shows the score type that the Info > Goal page gets as its fourth button. The seven slots are filled in order by the Select from Options buttons and emptied all together by the erase button; choosing a mode fills them with the score types of that mode. A click on a slot does nothing. The slots are saved to start.xml with Save & Apply, and the board titles of the score types are rewritten in English when the slots were changed by hand.
36		**Goal screen slot 5**	Slot 5 of the Goal Screen Configuration: shows the score type that the Info > Goal page gets as its fifth button. The seven slots are filled in order by the Select from Options buttons and emptied all together by the erase button; choosing a mode fills them with the score types of that mode. A click on a slot does nothing. The slots are saved to start.xml with Save & Apply, and the board titles of the score types are rewritten in English when the slots were changed by hand.

No.	Control	Name	What it does
37		**Goal screen slot 6**	Slot 6 of the Goal Screen Configuration: shows the score type that the Info > Goal page gets as its sixth button. The seven slots are filled in order by the Select from Options buttons and emptied all together by the erase button; choosing a mode fills them with the score types of that mode. A click on a slot does nothing. The slots are saved to start.xml with Save & Apply, and the board titles of the score types are rewritten in English when the slots were changed by hand.
38		**Goal screen slot 7**	Slot 7 of the Goal Screen Configuration: shows the score type that the Info > Goal page gets as its seventh button. The seven slots are filled in order by the Select from Options buttons and emptied all together by the erase button; choosing a mode fills them with the score types of that mode. A click on a slot does nothing. The slots are saved to start.xml with Save & Apply, and the board titles of the score types are rewritten in English when the slots were changed by hand.
39		**Erase**	Erase icon next to the Goal Screen Configuration: empties all seven slots so they can be filled again from the Select from Options buttons. Single slots cannot be removed. The empty slots are saved with Save & Apply; the Info > Goal page then has no score type buttons.
40		**G**	Goal (tooltip): adds the Goal score type to the first free slot of the Goal Screen Configuration, so the Info > Goal page gets a button for it. The twenty buttons of the Select from Options rows are the catalogue of all score types; nothing happens when all seven slots are full. The slots are saved with Save & Apply.
41		**Cancel**	Cancel: closes the window without saving anything; the mode, values and slots shown stay as they were before.
42		**Save && Apply**	Save & Apply: checks all visible number boxes (invalid ones turn red with the allowed range in the tooltip; a warning names the range and nothing is saved), then refuses with a warning when the mode was changed while the clock is running, or when a score value was changed while scores are counted on the panel (reset the score first). A mode change that clears sin-bin rows or red cards asks for confirmation. Then the mode, period lengths and labels, clock options, score values, goal screen slots, sin bin, counter, American Football and interchange settings are written to start.xml (the board titles of the score types to title.xml when the slots were changed), the control panel and Info pages are rebuilt for the mode and the window closes. With the same mode the running match goes on; with a new mode the score counts are kept as a total only.

- The nine buttons at the top select the mode. Pressing one loads the presets of that sport into the form: period lengths, clock rules, score values, the cards and the settings of the mode. Nothing is saved until you click Save & Apply, so you can change any value first.
- Periods: the length of each period in minutes and the short label that goes to the board (P1, Q1, E1). Count-down, Cumulative Timing and Non Stop Chronometer set how the clock counts (chapter 5.6).
- Scores: the points of each score type of the mode.

- Goal Screen Configuration: the score types offered by the Info > Goal page and by the Chroma Key goal graphic (chapter 16.3). Pressing a mode button fills it with the score types of that mode; the red icon empties the row and the buttons under Select from Options add a type.
- The right column shows the settings that only this mode has: Sin Bin, Counter, American Football or Interchange. They are described in the chapter of the mode.
- A value outside its range is marked red and Save & Apply is refused until it is corrected.

Rules for a match in progress:

Situation	What happens
Saving with the same mode	The match goes on: names, text lines, the selected period, the clock and the score by period stay. A changed period length keeps the time shown. Switching count-down or cumulative timing starts the period again.
Changing the mode while the clock runs	Refused: "Stop The Clock Before Changing The Mode."
Changing the mode with sin-bin rows or red cards	The form asks; Yes clears the rows and red card counts of both teams.
Changing the mode in general	The totals are kept. The counts by type, the ball, the counter and the American Football state of the old mode are cleared and the first period is selected.
Changing score values while scores are counted	Refused: "The Score Values Cannot Be Changed While Scores Are Counted. Reset The Score First."

5.3 Team names, logos and colours

- Type the team names into the two boxes under the logos. Press Enter inside the box to write a name on two lines.
- Click a team logo to pick an image file (bmp, gif, jpg, png, webp); click the logo in the middle to set the competition or board logo. When the mouse rests on a logo a small delete icon appears next to it; click it to remove the image.
- Team colours (two per team) are set on the Info page; they are used by the Chroma Key scorebug and by the team list graphic.

5.4 Score

The score is counted by type. The total of a team is the sum of count x value of every score type, plus an adjustment.

- The green buttons under each total add one score of that type. Their captions are the short name and the value: T5 is a try worth 5 points.
- The row of small boxes above each total shows how many scores of each type were counted. Click a box to take one back; a box with 0 is dimmed.
- To correct a total directly, type it into the big score box (0 to 999). The difference to the counted scores is kept as an adjustment and shown as ADJ +2 or ADJ -3 beside the score. A text that is not a number from 0 to 999 is ignored.
- A score type is not counted when the total would pass 999.
- In a mode with a score breakdown (Aussie Rules, Gaelic Football, Hurling / Camogie, International Rules) the breakdown is shown beside the total and on the board, and the total is changed through the counts only, not by typing.

Scores are booked to the period that is selected when they are scored (chapter 5.9).

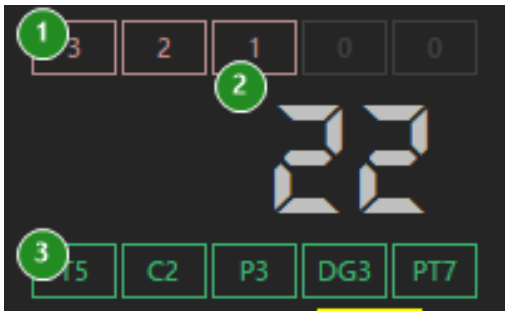


Figure 11. The score block of the home team: the count boxes, the total and the score type buttons.

No.	Control	Name	What it does
1		**Remove one Try**	The first of the five buttons above the home score. The five buttons are the five score types of the mode (Rugby Union: try, conversion, penalty goal, drop goal, penalty try; American Football: touchdown, extra point, two-point conversion, field goal, safety; the other modes their own types). Each shows how many of its type the home team has scored, and a click takes one away: the total score, the score of the selected period and the board follow. Disabled at 0; hidden when the mode does not have the type or its points are 0 in the settings; in Aussie Rules the GOALS and BEHINDS boxes take the place of the row.
2		**Home score**	The total score of the home team, sent to the board at once. In the modes without a score breakdown (the rugby modes, Touch, American Football) a whole number from 0 to 999 can be typed: the difference to the counted score types is kept as an adjustment and shown as ADJ +n under the score; other text is replaced by the total when the box is left. Read-only in Aussie Rules, Gaelic Football, Hurling and International Rules, where the total comes from the counted types only.
3		**T5**	The first of the five buttons under the home score. The five buttons are the five score types of the mode; the text is the short label and the points of the type from the settings (Rugby Union T5 C2 P3 DG3 PT7, American Football TD6 PAT1 2PT2 FG3 S2, Rugby League T4 C2 PG2 FG1 FG2, Touch TD1, Gaelic Football G3 P1 2P2, Hurling G3 P1, International Rules G6 O3 B1). A click adds one of the type to the home team: the total score, the count on the button above, the breakdown (1-12) and the score of the selected period follow and the board is updated. Nothing is added when the total would pass 999. Hidden when the mode does not have the type or its points are 0 in the settings; in Aussie Rules the GOALS and BEHINDS boxes take the place of the row.

Note: The score buttons only count. To show a score graphic with the player's name and picture use the Info > Goal page (chapter 16.3); that page shows the graphic and does not count.

5.5 Free text lines

The boxes under the team names hold two free text lines for the board, for example the venue and the round. They support date and time tokens:

Token	Result
[D]	Today's date in the short date format of Windows
[T]	The time of day as HH:mm:ss
[T5]	The first five characters of the time: HH:mm
[D5]	The first five characters of the date

Any number works: [T2] shows the hours only, [T8] the whole time.

5.6 Clock and periods

- The round Start/Pause and Stop buttons control the clock. After a pause the clock goes on exactly where it stopped. The first press of Stop pauses, the second press resets the clock to the start of the period.
- To set a time by hand, stop the clock, type the time as mm:ss into the clock box (one to three digits for the minutes, seconds 00 to 59) and start again. A text that is not a time does not start the clock: the box turns red and a notice says why.
- The period buttons select the period. The clock starts each period at its preset value. The period cannot be changed while the clock runs: pause it first.

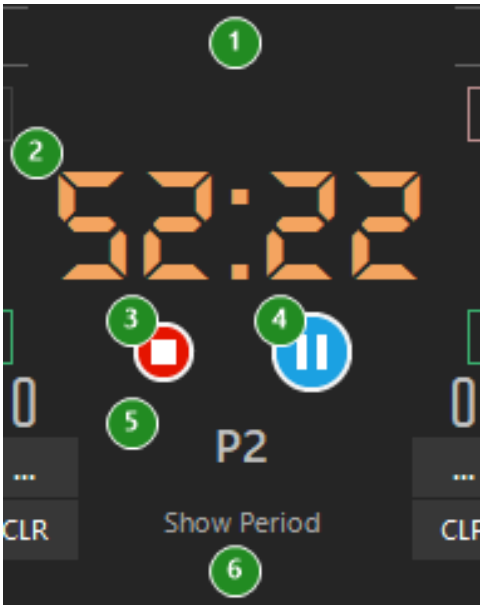


Figure 12. The clock block in the centre of the Game page.

No.	Control	Name	What it does
1	☐	**Show Clock**	Shows the time of day (hours and minutes) in the added-time field of the board, for example before kick-off; kept in start.xml (ShowClock). When Show Period is ticked as well, the field shows the added-time counter while it runs and is empty otherwise.

No.	Control	Name	What it does
2		**Clock**	Shows the match clock (mm:ss) that goes to the board; orange while it runs or is paused, white after a stop. While the clock is stopped a time (mm:ss) can be typed and the next Start runs from it; a text that is not a time is shown red and refused with a notice. A period selection or a second Stop writes the start of the period back.
3		**Stop**	Pauses the match clock when it runs; a click on a stopped clock resets it to the start of the selected period and clears the added time (the next start reads the clock box). The sin-bin rows are kept.
4		**Start / Pause**	Starts the match clock from the time shown in the clock box, or pauses it when it runs (the icon changes between play and pause). The sin-bin times run and pause with it. A text in the clock box that is not a time (mm:ss) is refused: it turns red and a notice is shown. While the clock runs the mode button is hidden.
5		**Period text**	Shows the label of the selected period that goes to the board: P1, P2, E1, E2, Q1 to Q4 or OT, or the text set in the settings (P1Text to P5Text), and the "Penalty" caption in the kicking competition. Another text can be typed and stays until the next period selection. The board shows it in the added-time field when Show Period is ticked.
6		**Show Period**	Shows the text of the period box (P1, Q1, E1, OT or the text typed there; "Penalty" in the kicking competition) in the added-time field of the board; kept in start.xml (ShowExtra). When Show Clock is ticked as well, the field shows the added-time counter while it runs and is empty otherwise. The remote control can toggle it.

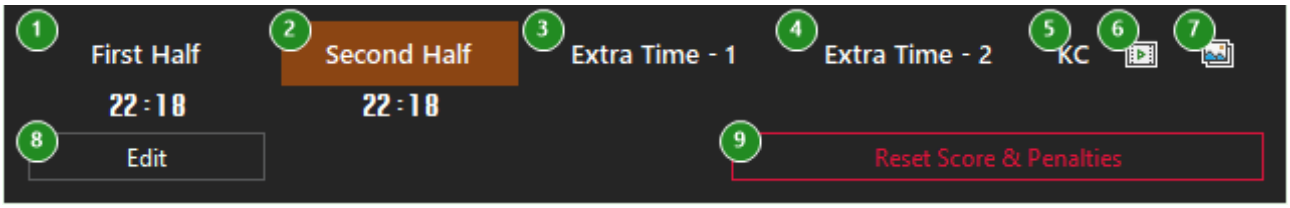
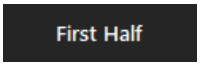
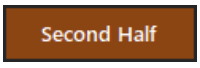
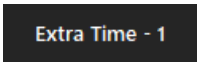
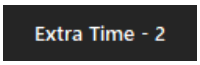
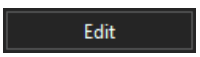


Figure 13. The period row and the bottom row of the Game page.

No.	Control	Name	What it does
1		**First Half**	Selects the first period of the mode (First Half; Q1 in American Football, Aussie Rules and International Rules): the clock stops and shows the start of the period (00:00, or the length of the period when the mode counts down), the added time is cleared and the period text box gets the label of the period for the board (P1 or Q1, or the text set in the settings). In American Football both teams get their time-outs back. Not available while the clock runs; the sin-bin rows stay.

No.	Control	Name	What it does
2		**Second Half**	Selects the second period of the mode (Second Half; Q2 in American Football, Aussie Rules and International Rules): the clock stops and shows the start of the period (40:00 in the rugby and GAA modes, where the clock continues from the end of the first half; 00:00 or the length of the period in the other modes), the added time is cleared and the period text box gets the label of the period for the board. Not available while the clock runs; the sin-bin rows stay.
3		**Extra Time - 1**	Selects the third period of the mode: the first period of extra time in the rugby and GAA modes (the clock continues from 80:00 in Rugby Union), Q3 in American Football, Aussie Rules and International Rules. The clock stops and shows the start of the period, the added time is cleared and the period text box gets the label of the period for the board (E1 or Q3). In American Football both teams get their time-outs back. Hidden in Touch, which has two halves only. Not available while the clock runs.
4		**Extra Time - 2**	Selects the fourth period of the mode: the second period of extra time in the rugby and GAA modes, Q4 in American Football, Aussie Rules and International Rules. The clock stops and shows the start of the period, the added time is cleared and the period text box gets the label of the period for the board (E2 or Q4). Hidden in Touch, which has two halves only. Not available while the clock runs.
5		**KC**	The fifth period button. In Rugby Union it is the kicking competition (KC), in Gaelic Football and Hurling the penalty shoot-out (PEN): the team name boxes are replaced by the kick sequences with the scored and missed buttons, the clock shows 00:00 and the period text box gets the "Penalty" caption; a score changed meanwhile is written to the last timed period. In American Football it is overtime (OT), a timed period with its own length and its own number of time-outs. Hidden in Rugby League, Rugby Sevens, Touch, Aussie Rules and International Rules. Not available while the clock runs.
6		**Background Video**	Select Background Layer Video File: opens a file dialog (mp4, webm, ogg; it starts in media\videos) to choose the video that plays as the background layer of the board; the path is saved as BackVideoFile in start.xml and the board is redrawn.
7		**Middle Image**	Select Middle Layer Image File: opens a file dialog to choose the image shown on the middle layer of the board; the path is saved as MiddleImageFile in start.xml and the board is redrawn.
8		**Edit**	Opens the "Score by period" window, where the score of each period (the running total in most modes, the points of the quarter in American Football) can be corrected cell by cell; a corrected cell is marked with * in the row under the period buttons and the table is sent to the board. A double click on a period score under a period button opens the window too.

No.	Control	Name	What it does
9		**Reset Score & Penalties**	After the question "Reset the scores, score counts, sin bin, interchange and period scores?" sets the match back: both scores with their type counts and adjustments, the sin-bin rows and the red card counts, the interchange counts, the tackle or touch count and the possession, down, distance, yard line, play clock and time-outs, the period scores with their corrections and the kick sequences. The clock, the selected period, the team names and the settings are not changed.

How the clock counts is set in the Timer, Period & Score Settings:

Setting	Meaning
Countdown	The clock counts from the length of the period down to 00:00 (American Football). Without it the clock counts up.
Cumulative Timing	A period starts where the period before it ended: with halves of 40 minutes the second half runs from 40:00 to 80:00. Without it every period starts at 00:00.
Non Stop Chronometer	The clock runs on after the end of the period (Aussie Rules, International Rules). Without it the clock holds at the end of the period and the time after it is counted by the added-time counter under the clock.

A clock of 100 minutes or more (100:00) and totals of three digits keep the size of the design as long as they fit; their font is reduced on the board only when the longer text would touch a logo, another text or the edge of the board.

5.7 Show Period and Show Clock

The box under the clock holds the label of the selected period (P1, Q3, E1); you can type another text into it. Two check boxes decide what the board shows in the field under its clock:

Show Period	Show Clock	The board shows
off	off	nothing
on	off	the text of the box, for example P2
off	on	the time of day (hours and minutes), for example before kick-off
on	on	the added-time counter while it runs, otherwise nothing

BOARD OUTPUT **CONTROL PANEL**

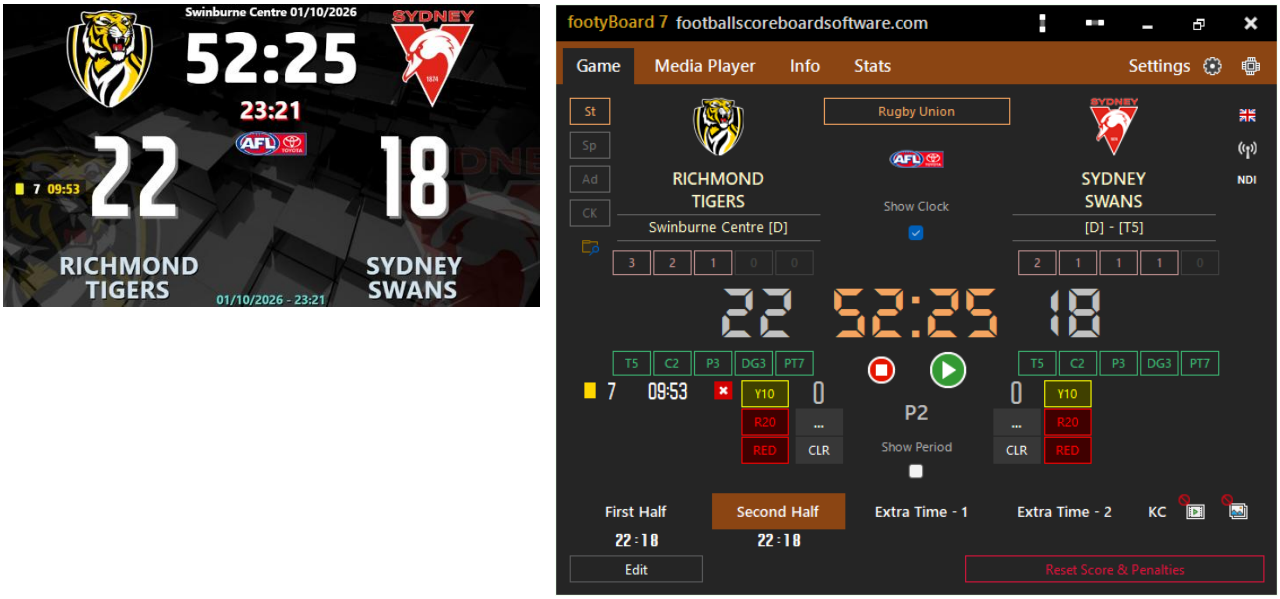


Figure 14. Show Clock ticked: the board shows the time of day under the clock.

BOARD OUTPUT **CONTROL PANEL**

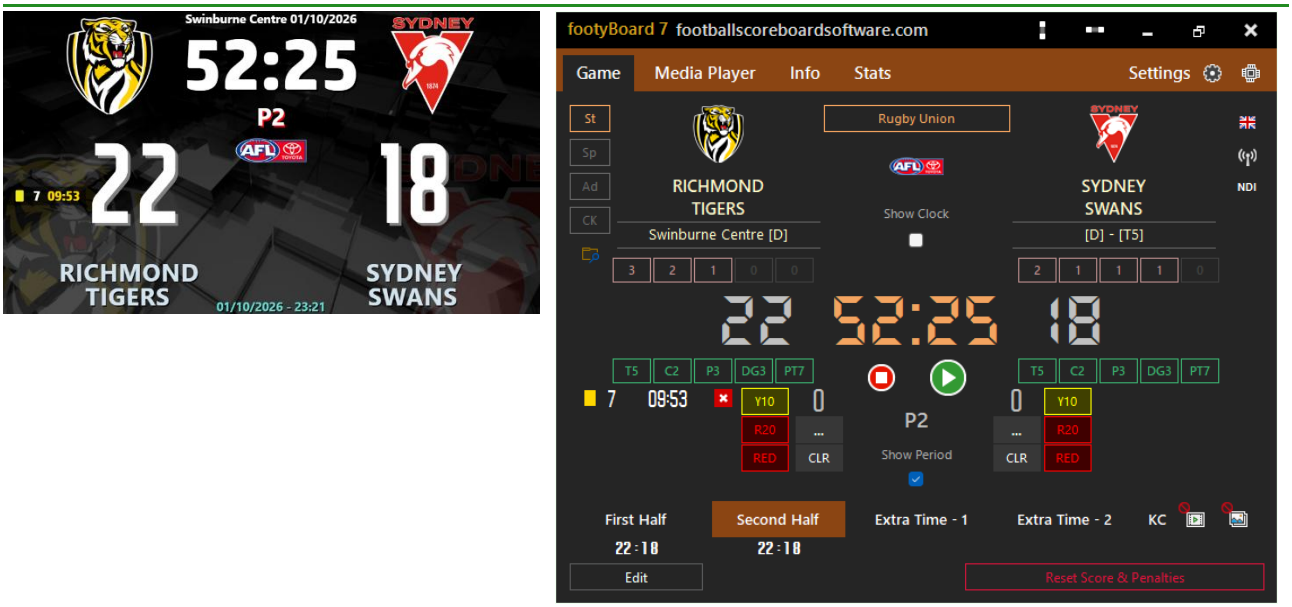


Figure 15. Show Period ticked: the board shows the period label P2.

5.8 Sin bin and cards

Seven modes have a sin bin: the rugby modes, Gaelic Football, Hurling / Camogie and International Rules. Each team has its own block under the score buttons:

- Type the shirt number into the number box, or pick it from the list of the squad (the ... button), and click the card button. The captions show the card and its minutes: Y10 is a yellow card of ten minutes, R20 the 20-minute red card, RED the permanent red card, B10 the black card. The number box shows 0 at the start; a card given from the panel without a number is recorded for number 0 (a card sent by the API without a number has an empty number).

- The card appears as a row with the number and the remaining time. The small x at the end of a row removes that row; CLR removes all rows of the team after a confirmation.
- While the clock stands, double-click the number or the time of a row to correct it.

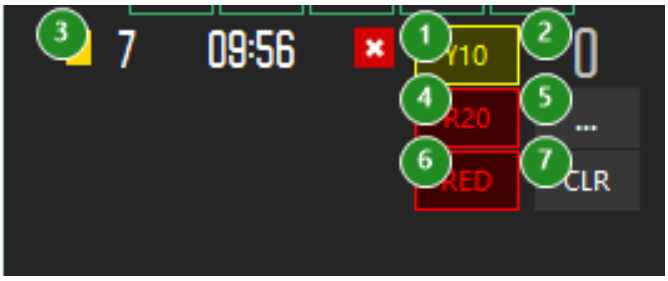
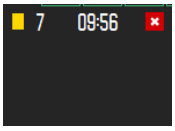


Figure 16. The sin bin block of the home team with a yellow card for number 7.

No.	Control	Name	What it does
1		**Y10**	The first of the three card buttons of the home team. The three buttons are the cards of the mode in order, the text is the short label and the minutes from the settings: Y10, R20, RED in Rugby Union and Rugby League (Y2 in Rugby Sevens and Touch; the 20-minute red is on by default in Union only), Y, B10, RED in Gaelic Football and Hurling (the yellow is a caution without time), Y10 and RED in International Rules. A click adds a row for the number in the home player number box to the home sin bin: a timed card runs with the match clock and is shown on the board, a permanent red card raises the red card count on the board, a caution is listed without time. A card switched off in the settings has no button; American Football and Aussie Rules have no sin bin.
2		**Home player number**	Sin-bin modes only. The shirt number of the home player who gets the next card: type it or pick it from the "..." list; the card buttons add a sin-bin row with this number. The box starts with 0 and keeps the last number; it is not saved.
3		**Home sin bin**	Sin-bin modes only. One row per card of the home team: the card icon, the player number, the time and a cross. The time counts down with the match clock (mm:ss); a 20-minute red card shows REPL when its time is over, a permanent red card has no time, the second caution of the same number (GAA) shows x2. A click on the cross removes the row; while the clock is stopped a double click on the number or the time edits it (the time must be mm:ss). A row whose time is over flashes red until it is removed, unless auto clear is on in the settings. The board shows the rows with the shortest remaining time, up to the slots of the settings; "+n not shown" below the grid counts the others. Stop and a period selection keep the rows; Reset Score and a change of mode clear them.

No.	Control	Name	What it does
4		**R20**	The second of the three card buttons of the home team. The three buttons are the cards of the mode in order, the text is the short label and the minutes from the settings: Y10, R20, RED in Rugby Union and Rugby League (Y2 in Rugby Sevens and Touch; the 20-minute red is on by default in Union only), Y, B10, RED in Gaelic Football and Hurling (the yellow is a caution without time), Y10 and RED in International Rules. A click adds a row for the number in the home player number box to the home sin bin: a timed card runs with the match clock and is shown on the board, a permanent red card raises the red card count on the board, a caution is listed without time. A card switched off in the settings has no button; American Football and Aussie Rules have no sin bin.
5		**...**	Sin-bin modes only. Opens the list of the home squad numbers read from common\data\playersHome.xml (the Players page); choosing a number writes it into the home player number box for the next card. Nothing opens when the file has no players.
6		**RED**	The third of the three card buttons of the home team. The three buttons are the cards of the mode in order, the text is the short label and the minutes from the settings: Y10, R20, RED in Rugby Union and Rugby League (Y2 in Rugby Sevens and Touch; the 20-minute red is on by default in Union only), Y, B10, RED in Gaelic Football and Hurling (the yellow is a caution without time), Y10 and RED in International Rules. A click adds a row for the number in the home player number box to the home sin bin: a timed card runs with the match clock and is shown on the board, a permanent red card raises the red card count on the board, a caution is listed without time. A card switched off in the settings has no button; American Football and Aussie Rules have no sin bin.
7		**CLR**	Sin-bin modes only. Removes all sin-bin rows of the home team after the question "Clear all sin-bin rows of this team?"; the red card count of the team on the board goes back to 0 with the rows. Does nothing when there are no rows.

Rules of the sin bin:

Rule	Detail
The timers run with the match clock	They stop when the clock stops and go on when it starts. No part of a second is lost at a pause.
A score does not end a sin bin	Rows are not removed by a score, by Stop, by a period change or by the end of a period.
End of the time	The row stays at 00:00 and flashes until you remove it. With "Clear At 00:00 Automatically" ticked in the settings the row is removed by itself.
20-minute red card	When its time is over the row shows REPL: a replacement may come on.
Permanent red card	A row without a timer. It counts as a red card of the team.

Rule	Detail
Caution (Gaelic games)	A row without a timer; the player stays on the field. The second caution of the same number is marked x2. The program does not turn it into another card; you give the next card yourself.
More rows than slots	The board shows as many timed rows per team as the setting Slots Per Team allows (1 to 4, preset 3). Further rows stay on the panel and are marked Not Shown.

The settings of the sin bin are in the Timer, Period & Score Settings: Slots Per Team, the minutes of each timed card, check boxes that switch a card on or off, and Clear At 00:00 Automatically.

American Football and Aussie Rules have no sin bin. In these modes the number of red cards of a team (0 to 4) is set with the radio buttons on the Info page.

5.9 Score by period

The line under the period buttons shows the score of each period as home : guest. Every mode shows the score at the end of each period; American Football shows the points scored in each period.

Click Edit beside the line, or double-click the line, to open the Score By Period dialog.

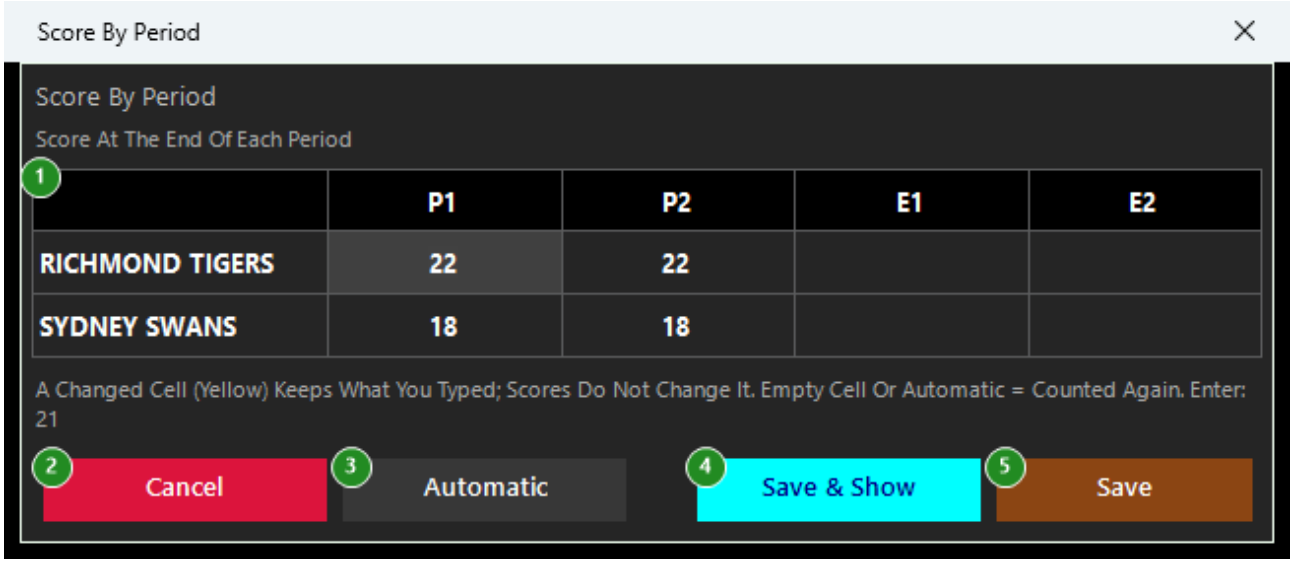
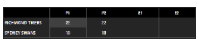


Figure 17. The Score By Period dialog in Rugby Union.

No.	Control	Name	What it does
1		**Score by period table**	Two rows (home and guest team) and one column per period of the mode. A cell shows the score at the end of the period (rugby, Aussie Rules, GAA, International Rules) or the points scored in the period (American Football). Double-click, F2 or typing edits a cell: a number (21), the breakdown of the mode (3.3) or both (3.3 (21)) are accepted; an edited cell is yellow and keeps what was typed even when the score changes; an empty cell goes back to automatic; an invalid entry is red. A cumulative value lower than the previous period is marked and a warning line appears but does not stop saving.

No.	Control	Name	What it does
2	Cancel	**Cancel**	Cancel: closes the Score by period window and drops the cells changed in it. On the Stats page, where the table is a tab, the button reads Reload and reloads the table from the panel instead.
3	Automatic	**Automatic**	Puts the selected cell back to automatic: the value typed by the operator is dropped and the cell shows the score counted by the program again (white instead of yellow). Nothing is applied until Save.
4	Save & Show	**Save && Show**	Save & Show: applies the changed cells like Save and then shows the Score by period table on the board.
5	Save	**Save**	Save: applies the changed cells to the panel's period score table and closes the window (on the Stats page the tab stays open and shows the saved state). Nothing is saved while a cell is marked red as invalid; the first invalid cell is selected and a warning names the accepted forms.

- Type into a cell to correct it. A corrected cell is shown in yellow and keeps what you typed; later scores do not change it. On the panel it is marked with a star.
- To make a cell automatic again, empty it, or select it and click Automatic.
- In a mode with a breakdown you can type the value (21), the breakdown (3.3) or both (3.3 (21)).
- A value that is lower than the value of the period before is marked and named in a warning line. It is a warning only; saving is not blocked.
- Save stores the corrections. Save & Show also shows the table as a full-screen graphic on the board. Cancel closes without changes.

While the dialog is open the match cannot be operated on the control panel. The same table is on the Stats page (chapter 17.5), where it stays open after saving.

A score counted during the kicking competition or the penalty shoot-out is booked to the last timed period (Extra Time - 2 after extra time).

A score that was entered while the wrong period was selected stays in that period. Correct the cells in the dialog, or remove the score and count it again in the right period.

5.10 Reset Score & Penalties and new match

Reset Score & Penalties at the bottom right asks for a confirmation and then clears the scores, the counts by type, the adjustments, the sin bin, the interchange counts, the score by period with its corrections, the ball and the counter, the American Football state, the marks of a shoot-out and the red card counts. The clock, the selected period and the team names are not changed.

A new match does the same and also stops the clock and returns to the start of the first period. It has no button on the control panel; it is available on the phone page (New Match) and as the API command new_match.

Neither of them clears the timeline of the Stats page; Delete All on the timeline does that.

> **Note:** Nothing of the running match is saved on disk. After a restart of the program or a power loss the scores, the clock, the sin bin and the other match values start at zero. Team names and text lines are kept.

5.11 Shoot-out

Rugby Union (KC, the kicking competition), Gaelic Football and Hurling / Camogie (PEN, the penalty shoot-out) have a fifth period button for the shoot-out. It can be selected while the clock stands.

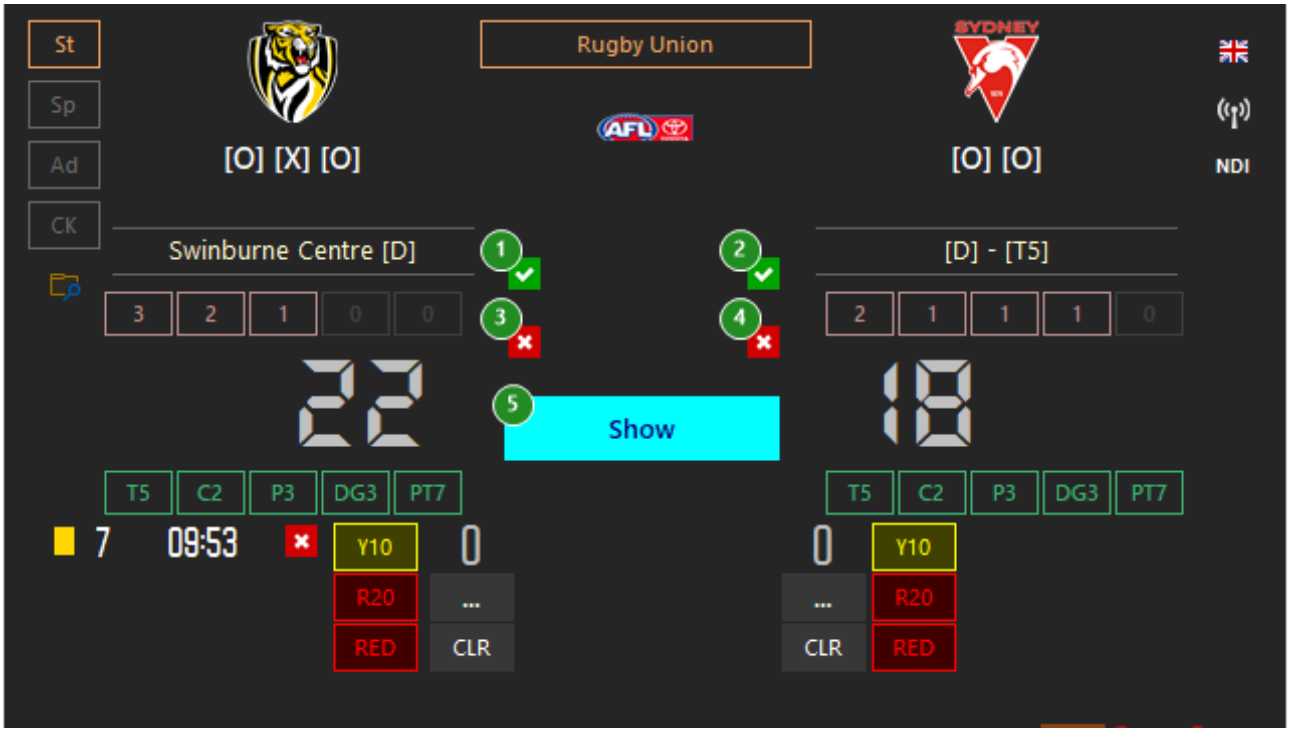


Figure 18. The kicking competition selected in Rugby Union: the tick and cross buttons under the team names.

No.	Control	Name	What it does
1		**Home Kick Scored**	Records a scored kick for the home team in the kicking competition (penalty shoot-out in Gaelic Football and Hurling) by adding an [O] mark to the home kick sequence; only the last five kicks are kept. The board shows the marks after Show.
2		**Guest Kick Scored**	Records a scored kick for the guest team in the kicking competition (penalty shoot-out in Gaelic Football and Hurling) by adding an [O] mark to the guest kick sequence; only the last five kicks are kept. The board shows the marks after Show.
3		**Home Kick Missed**	Records a missed kick for the home team in the kicking competition (penalty shoot-out in Gaelic Football and Hurling) by adding an [X] mark to the home kick sequence; only the last five kicks are kept. The board shows the marks after Show.
4		**Guest Kick Missed**	Records a missed kick for the guest team in the kicking competition (penalty shoot-out in Gaelic Football and Hurling) by adding an [X] mark to the guest kick sequence; only the last five kicks are kept. The board shows the marks after Show.
5		**Show**	Show: sends the kick sequences of the kicking competition (penalty shoot-out) to the board, where the marks take the place of the team names; in Chroma Key mode the CK page is rebuilt for it.

- The team name boxes are replaced by the shoot-out boxes and the clock shows 00:00.

- For each kick click the green tick of the team for a scored kick or the red mark for a missed one. The last five kicks of each team are kept. The erase icon of a box clears the marks of that team.
- Click Show to put the shoot-out on the board. Changes reach the board only when you click Show again.
- Select another period to return to the normal scoreboard.

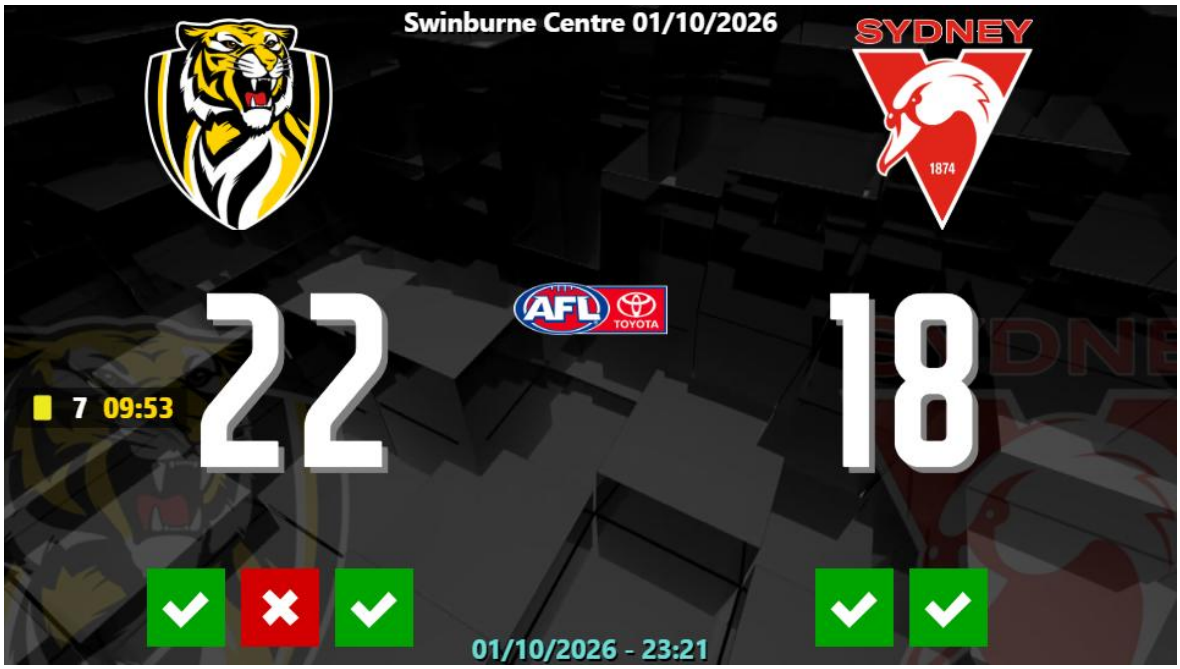


Figure 19. The kicking competition on the board after Show.

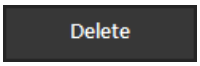
5.12 Designs

The folder icon under the display mode buttons opens the design list: every design saved for the current display mode, with a live preview of the selected one. Select a design and click Apply. The pencil icon renames a design; Delete removes it after a second click and cannot be undone. The factory designs cannot be renamed or deleted. Designs are created in Settings > Board Design (chapter 22.2).



Figure 20. The list of saved board designs with the preview of the selected one.

No.	Control	Name	What it does
1	✕	**Close**	Closes the design picker without changing the current design. Escape or clicking outside the window does the same.

No.	Control	Name	What it does
2		**Design list**	Lists the saved designs of the active display mode by name. Clicking a row shows a live preview of the board with that design in the preview pane; the selection is used by Apply, Rename and Delete.
3		**Delete**	Delete: removes the selected saved design from the list and deletes its files in common\vizrt\storage. Click once to arm the button (it turns red) and a second time to delete; the built-in factory designs cannot be deleted.
4		**Rename**	Rename: starts editing the name of the selected design in the list; the new name is written to the designs list when the edit ends. The built-in factory designs cannot be renamed.
5		**Apply**	Apply: makes the selected design the current design of the active display mode (CURRENT in start.xml), copies its layout over the Game page of the mode (for Advertisement also the banner and scoreboard placement in the Ad configuration) and redraws the board.

Three Standard designs are delivered. The pictures show the same Rugby Union match in design 2 and design 3; design 1 is the picture of chapter 1.1.

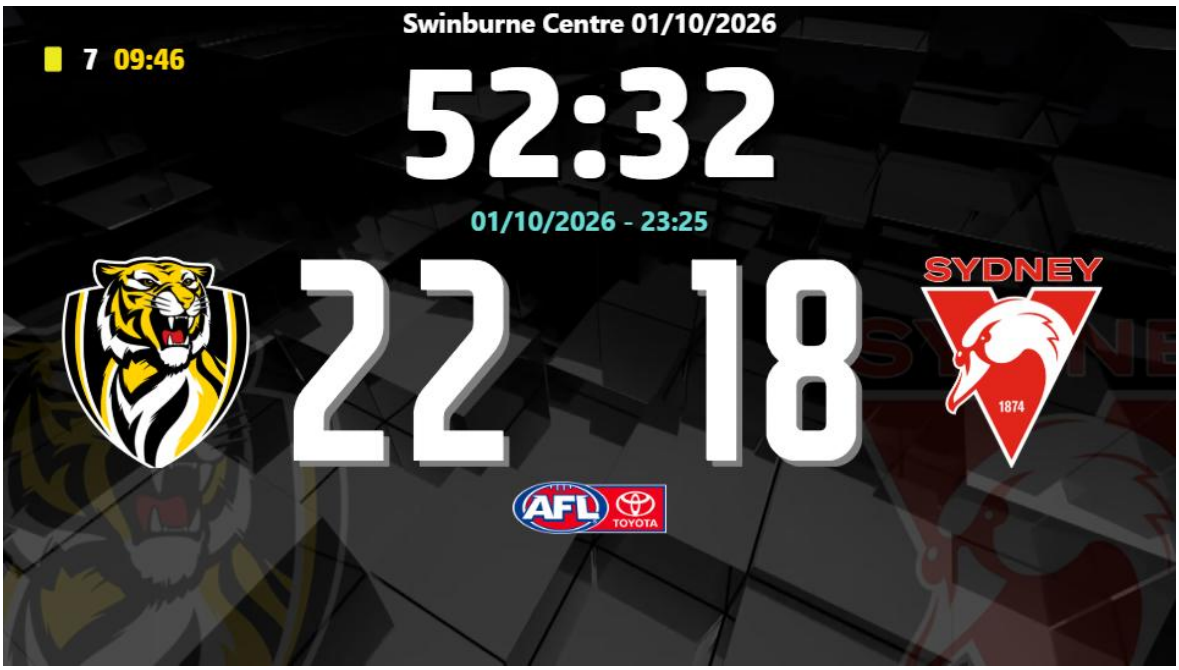


Figure 21. Standard design 2: the clock at the top, the scores between the logos.



Figure 22. Standard design 3: the logos beside the scores, the clock at the bottom.

5.13 Tool icons

- The flag at the top right opens the Language settings, the antenna icon below it the Remote Control settings, the NDI button starts the NDI stream (chapter 3.3).
- The two icons at the right end of the period button row choose the background video and the middle-layer image of the Standard board (chapter 15.1).
- The small button at the bottom right returns the control window to its compact size.

6. Rugby Union

BOARD OUTPUT **CONTROL PANEL**

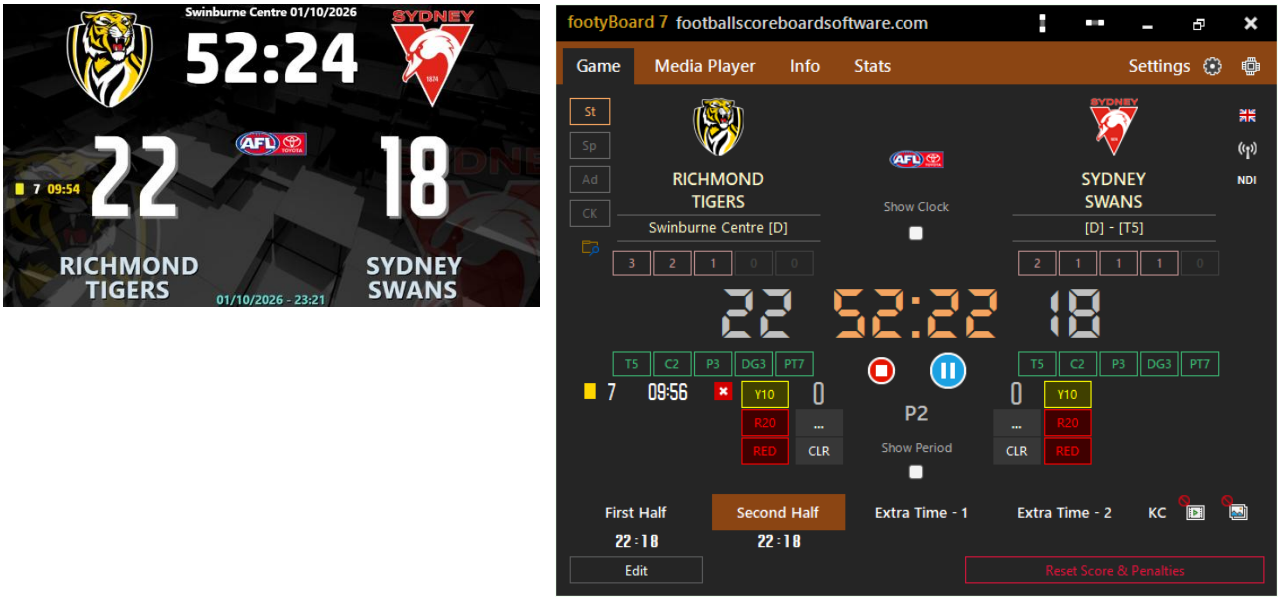


Figure 23. Rugby Union: a yellow card for home number 7 on the board and on the panel.

6.1 Periods and clock

Button	Preset length	Board label
First Half	40 minutes	P1
Second Half	40 minutes	P2
Extra Time - 1	10 minutes	E1
Extra Time - 2	10 minutes	E2
KC	Kicking competition, no clock	

The clock counts up with cumulative timing: the second half runs from 40:00 to 80:00, extra time from 80:00 to 90:00 and from 90:00 to 100:00. At the end of a period the clock holds and the added-time counter counts the time played after it.

6.2 Score types

Button	Score type	Preset value
T5	Try	5
C2	Conversion	2
P3	Penalty Goal	3
DG3	Drop Goal	3

Button	Score type	Preset value
PT7	Penalty Try	7

The values can be changed in the Timer, Period & Score Settings. Rugby Union has no score breakdown; the board shows the totals.

6.3 Cards and sin bin

Button	Card	Rule
Y10	Yellow Card	Sin bin, 10 minutes
R20	20-Minute Red Card	Timed, 20 minutes; REPL when the time is over. It can be switched off in the settings.
RED	Red Card	Permanent, no timer. It can be switched off in the settings.

The general rules of the sin bin are in chapter 5.8.

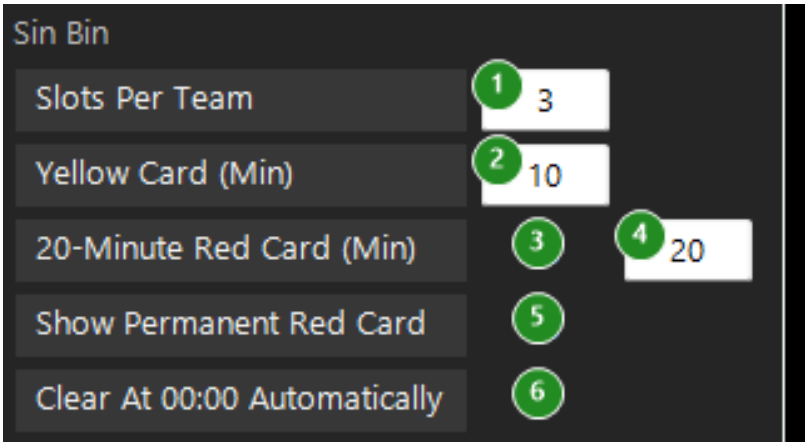


Figure 24. The Sin Bin section of the settings in Rugby Union.

No.	Control	Name	What it does
1	3	**Slots Per Team**	Sin Bin box (shown in every mode except American Football and Aussie Rules): how many players of a team can be in the sin bin at the same time, 1 to 4, default 3. A number outside the range is pulled to the limit when saving. Saved to start.xml (SINBIN/Slots) with Save & Apply.
2	10	**Yellow Card (Min)**	First card row of the Sin Bin box: the minutes of the timed yellow card, 1 to 99 (10 in Rugby Union, Rugby League and International Rules, 2 in Sevens and Touch). Hidden in Gaelic Football and Hurling / Camogie, where the yellow card is a caution. Saved to start.xml (SINBIN/YellowMinutes) with Save & Apply; an invalid value turns the box red and blocks saving.

No.	Control	Name	What it does
3		**20-Minute Red Card (Min) / Black Card (Min) / Show Permanent Red Card**	Second card row of the Sin Bin box: enables the card of the row on the panel. The row is the 20-minute red card in Rugby Union (on by default), Rugby League, Sevens and Touch (off by default), the black card in Gaelic Football and Hurling / Camogie, and the permanent red card in International Rules. Unchecking disables the minute box next to it. Saved to start.xml (SINBIN) with Save & Apply.
4		**20-Minute Red Card (Min) / Black Card (Min)**	Second card row of the Sin Bin box: the minutes of the 20-minute red card (Rugby Union, Rugby League, Sevens, Touch; default 20) or of the black card (Gaelic Football, Hurling / Camogie; default 10), 1 to 99. The box is disabled while the card is unchecked and hidden in International Rules. Saved to start.xml (SINBIN) with Save & Apply; an invalid value turns the box red and blocks saving.
5		**Show Permanent Red Card**	Third card row of the Sin Bin box: when checked the permanent red card button (RED, counts as a red card of the team) is used on the panel. Shown in Rugby Union, Rugby League, Sevens, Touch, Gaelic Football and Hurling / Camogie; International Rules has the red card in the second row. Saved to start.xml (SINBIN/PermanentRed) with Save & Apply.
6		**Clear At 00:00 Automatically**	Sin Bin box: when checked a sin bin row is removed by itself when its time reaches 00:00, otherwise the operator removes it. Off by default in every mode. Saved to start.xml (SINBIN/AutoClear) with Save & Apply.

6.4 Typical match

1. Before the match: open the settings with the mode button, press Union, check the period lengths and click Save & Apply. Type the team names, pick the logos and fill the two text lines.
2. Select First Half and press Start at kick-off.
3. Count each score with the green buttons: T5 for a try, C2 for the conversion. A wrong click is taken back with the count box above the total.
4. For a yellow card type the shirt number into the number box of the team and click Y10. Remove the row when the player is back on the field.
5. At half time press Pause, select Second Half and press Start again for the second half. The clock starts at 40:00.
6. If the match goes to extra time select Extra Time - 1 and Extra Time - 2 in the same way. For a kicking competition select KC, mark each kick and click Show (chapter 5.11).
7. After the match, Reset Score & Penalties clears the values for the next match.

7. Rugby League

BOARD OUTPUT **CONTROL PANEL**

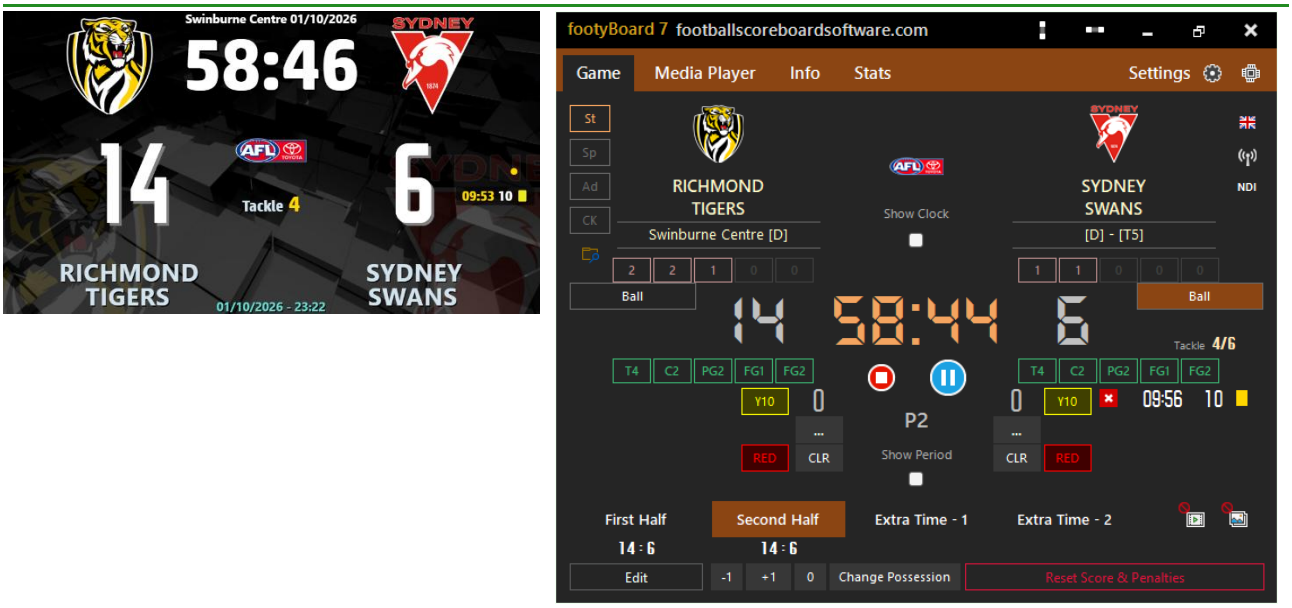


Figure 25. Rugby League: the guest team has the ball on its fourth tackle; a guest player is in the sin bin.

7.1 Periods and clock

Button	Preset length	Board label
First Half	40 minutes	P1
Second Half	40 minutes	P2
Extra Time - 1	5 minutes	E1
Extra Time - 2	5 minutes	E2

The clock counts up with cumulative timing, as in Rugby Union. There is no shoot-out button.

7.2 Score types

Button	Score type	Preset value
T4	Try	4
C2	Conversion	2
PG2	Penalty Goal	2
FG1	Field Goal +1 (a field goal)	1
FG2	Field Goal +2 (a field goal from outside the 40 m line, NRL)	2

Rugby League has no score breakdown.

7.3 Cards and sin bin

Button	Card	Rule
Y10	Yellow Card	Sin bin, 10 minutes
R20	20-Minute Red Card	Switched off in the preset; it can be switched on in the settings.
RED	Red Card	Permanent, no timer

7.4 Tackle counter and possession

- Ball: the button beside the score of each team gives the ball to that team; the button of the team that has the ball is lit. Click the lit button to take the ball away (nobody has it).
- The tackle count stands under the Ball button of the team that has the ball, for example Tackle 3/6. It turns red at the limit.
- The buttons in the bottom row count: -1, +1 and 0 (back to zero). +1 does nothing at the limit.
- Change Possession gives the ball to the other team and starts the count at zero. This is the button for the hand-over after the last tackle.
- Giving the ball to the other team with a Ball button also starts the count at zero.

On the board the counter (Tackle 4) and a dot beside the team that has the ball are shown. The name of the counter and its limit are set in the Timer, Period & Score Settings under Counter: Label (Tackle) and Max Value (6).

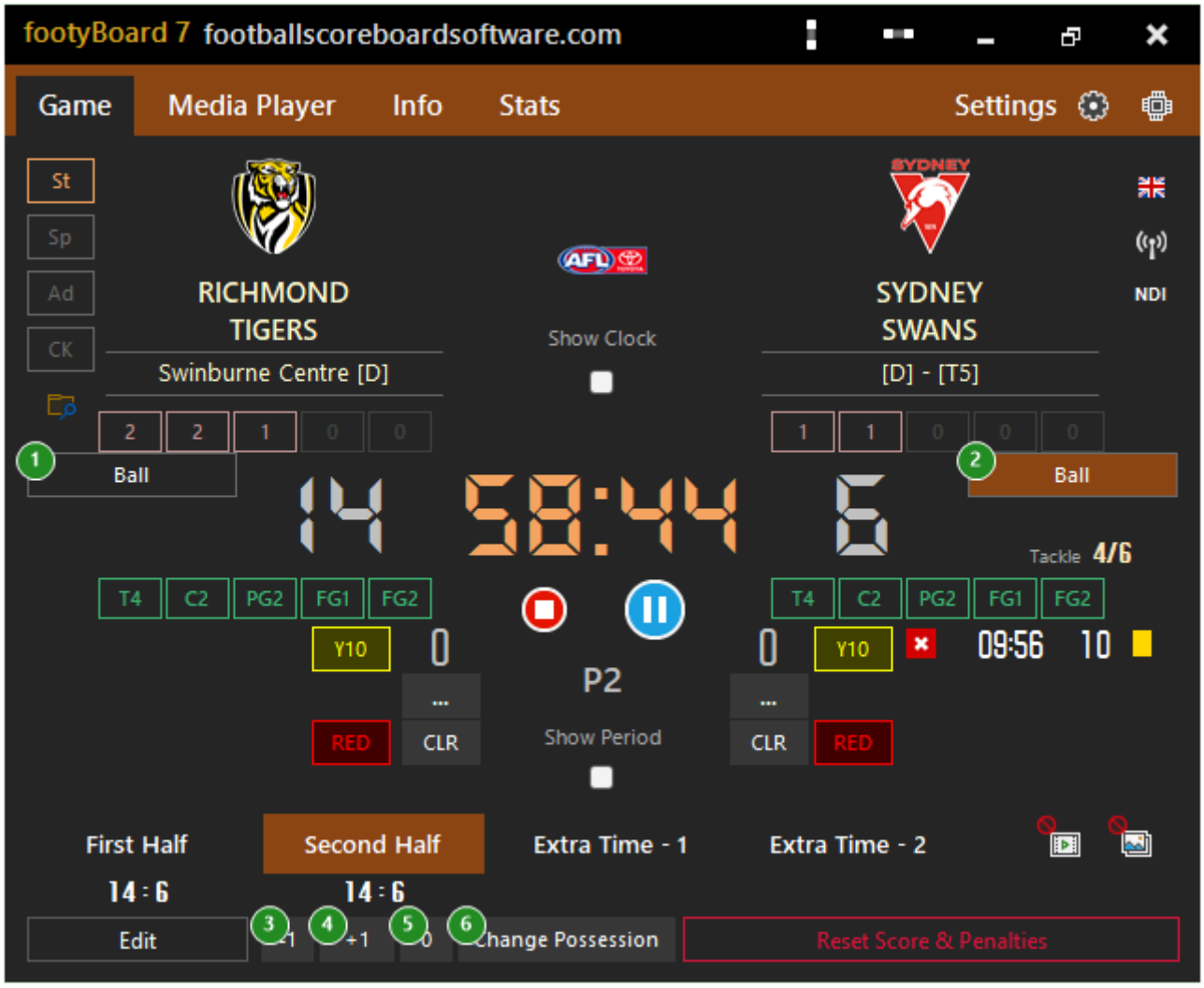


Figure 26. The Ball buttons, the tackle count and the counter buttons in Rugby League.

No.	Control	Name	What it does
1	Ball	**Ball**	Rugby League, Touch and American Football only. Gives the ball to the home team: the button lights up (brown), the board shows the possession mark beside the home team, and in Rugby League and Touch the tackle or touch count moves under the home team and starts at 0. A click on the lit button takes the ball away (nobody has it).
2	Ball	**Ball**	Rugby League, Touch and American Football only. Gives the ball to the guest team: the button lights up (brown), the board shows the possession mark beside the guest team, and in Rugby League and Touch the tackle or touch count moves under the guest team and starts at 0. A click on the lit button takes the ball away (nobody has it).
3	-1	**-1**	Rugby League (tackle count) and Touch (touch count) only. Takes one off the count shown under the team that has the ball, on the panel and on the board. Disabled when the count is 0.
4	+1	**+1**	Rugby League (tackle count) and Touch (touch count) only. Adds one to the count shown under the team that has the ball, on the panel and on the board. At the limit of the settings (Counter / Max, 6 by default, 0 = no limit) the count turns red and the button is disabled.

No.	Control	Name	What it does
5	0	**0**	Rugby League (tackle count) and Touch (touch count) only. Sets the count shown under the team that has the ball back to 0, on the panel and on the board.
6	Change Possession	**Change Possession**	Rugby League, Touch and American Football only. Gives the ball to the other team (from nobody to the home team): the Ball button of that team lights up, the board shows the possession mark beside that team, and in Rugby League and Touch the tackle or touch count starts again at 0 under that team.



Figure 27. The Counter section of the settings in Rugby League.

No.	Control	Name	What it does
1	Tackle	**Label**	Counter box (shown in Rugby League and Touch): the caption of the counter on the panel and the board, Tackle (League) or Touch (Touch) by default; any text can be typed. Saved to start.xml (COUNTER/Label) with Save & Apply.

7.5 Typical match

1. Press League in the settings and click Save & Apply. Enter names, logos and text lines.
2. Select First Half and press Start at kick-off. Click the Ball button of the team that receives the ball.

3. After each tackle click +1. After the last tackle, or after an error that turns the ball over, click Change Possession.
4. Count the scores with the green buttons (T4, C2, PG2, FG1, FG2). After a score give the ball to the team that receives the kick-off.
5. For a sin bin type the number and click Y10.
6. At half time pause the clock, select Second Half and start again.

8. Rugby Sevens

BOARD OUTPUT **CONTROL PANEL**

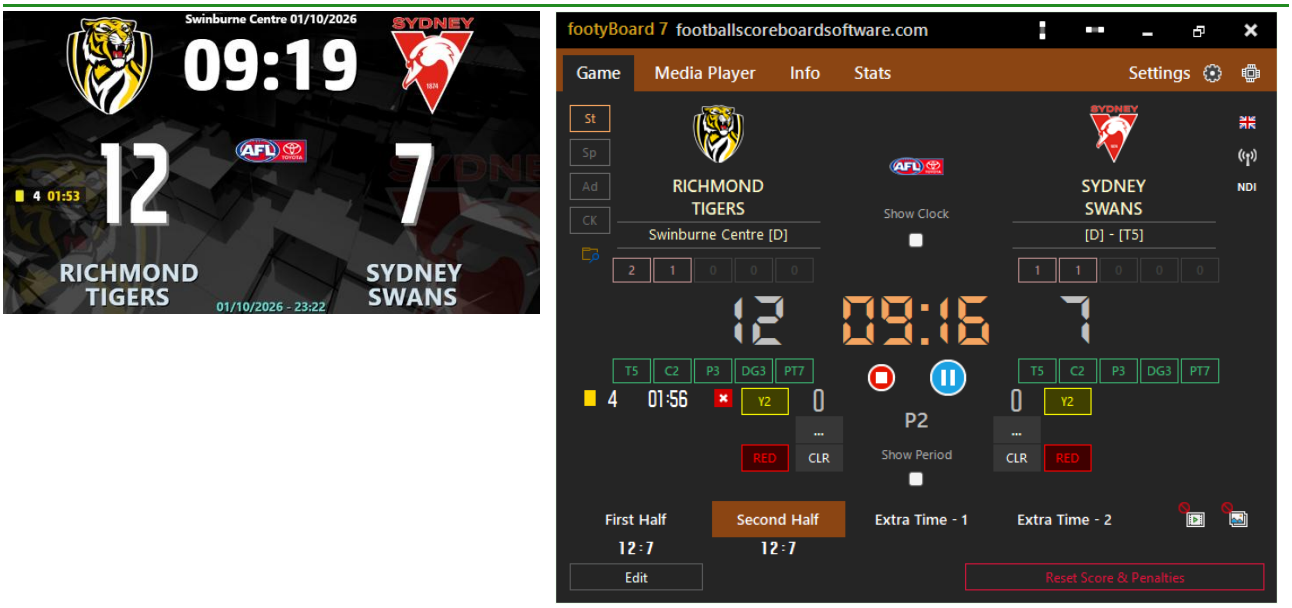


Figure 28. Rugby Sevens in the second half with a two-minute yellow card.

8.1 Periods and clock

Button	Preset length	Board label
First Half	7 minutes	P1
Second Half	7 minutes	P2
Extra Time - 1	5 minutes	E1
Extra Time - 2	5 minutes	E2

The clock counts up with cumulative timing: the second half runs from 07:00 to 14:00. For a final with halves of ten minutes change the two period lengths in the settings.

8.2 Score types

The score types and values of Rugby Union: Try 5 (T5), Conversion 2 (C2), Penalty Goal 3 (P3), Drop Goal 3 (DG3), Penalty Try 7 (PT7). There is no score breakdown.

8.3 Cards and sin bin

Button	Card	Rule
Y2	Yellow Card	Sin bin, 2 minutes
R20	20-Minute Red Card	Switched off in the preset
RED	Red Card	Permanent, no timer

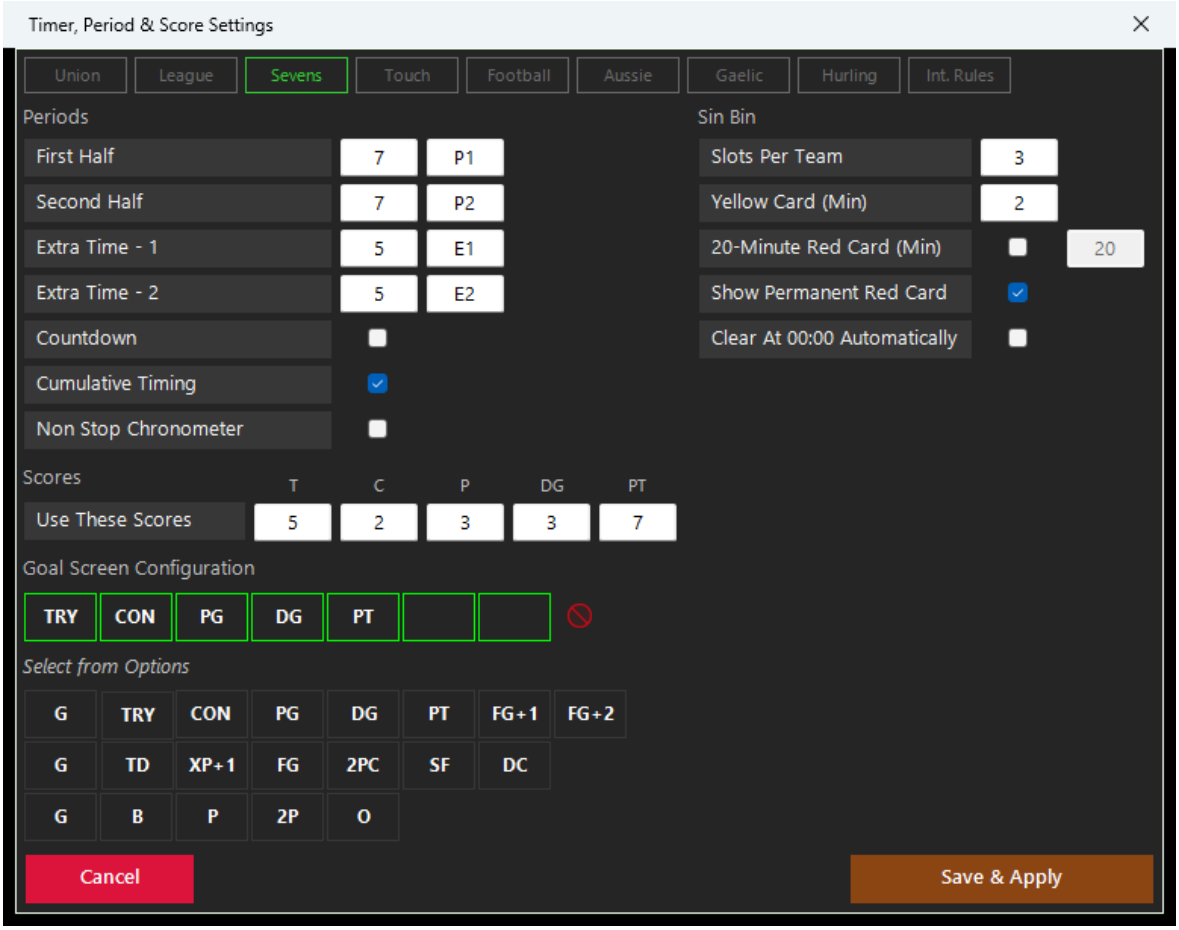


Figure 29. The settings of Rugby Sevens.

8.4 Typical match

1. Press Sevens in the settings and click Save & Apply.
2. Select First Half and press Start. Count tries and conversions with T5 and C2.
3. For a yellow card type the number and click Y2; the two minutes run with the match clock.
4. At half time pause, select Second Half and start again. In a tournament, Reset Score & Penalties prepares the panel for the next match; the clock and the period are set with the period buttons.

9. Touch / Tag Rugby

BOARD OUTPUT **CONTROL PANEL**

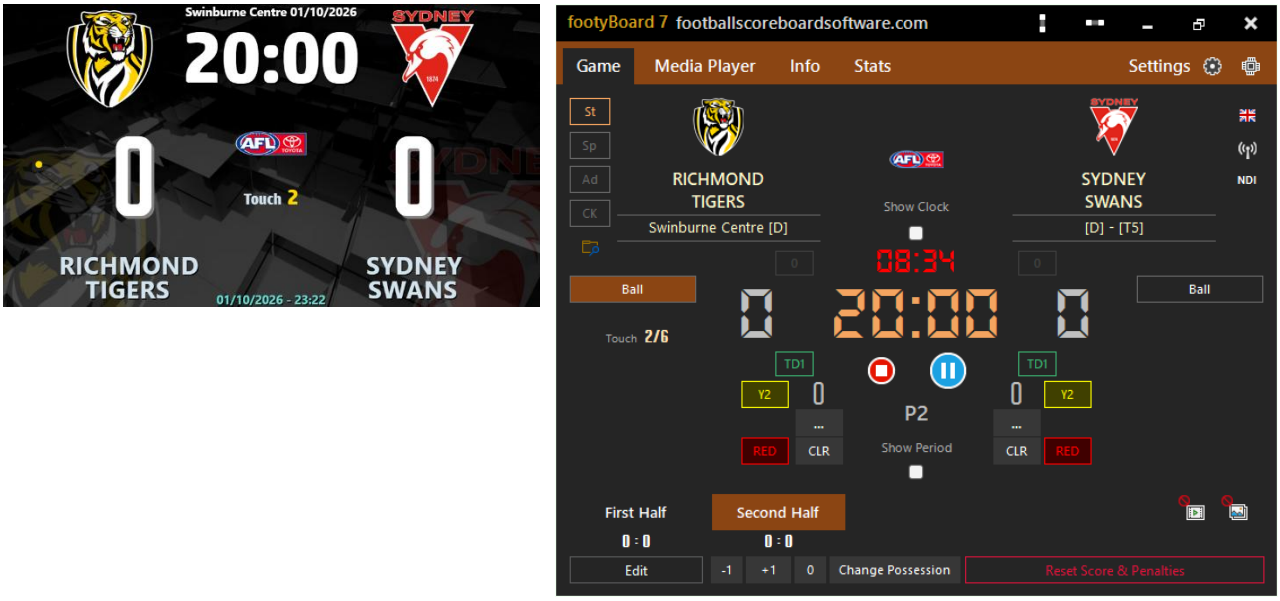


Figure 30. Touch: the home team has the ball on its second touch.

9.1 Periods and clock

Button	Preset length	Board label
First Half	20 minutes	P1
Second Half	20 minutes	P2

The clock counts up and every half starts at 00:00. The mode has no extra time and no shoot-out button.

9.2 Score types

One score type: Touchdown, worth 1 point (TD1). The FIT rules call it a try; the sin bin of the rules lasts four possessions of the other team, which the two-minute card approximates. The rules know no extra time but a drop-off; the mode has no period for it, use the clock and the counter as they are. For a competition that counts more for some touchdowns use the score box to correct the total, or change the value in the settings.

9.3 Cards and sin bin

Button	Card	Rule
Y2	Yellow Card	Sin bin, 2 minutes
R20	20-Minute Red Card	Switched off in the preset
RED	Red Card	Permanent, no timer

9.4 Touch counter and possession

The controls are the ones of Rugby League (chapter 7.4) with the counter named Touch: a Ball button beside each score, the count under the Ball button of the team that has the ball (Touch 2/6), -1, +1, 0 and Change Possession in the bottom row. The name and the limit are set in the settings under Counter.

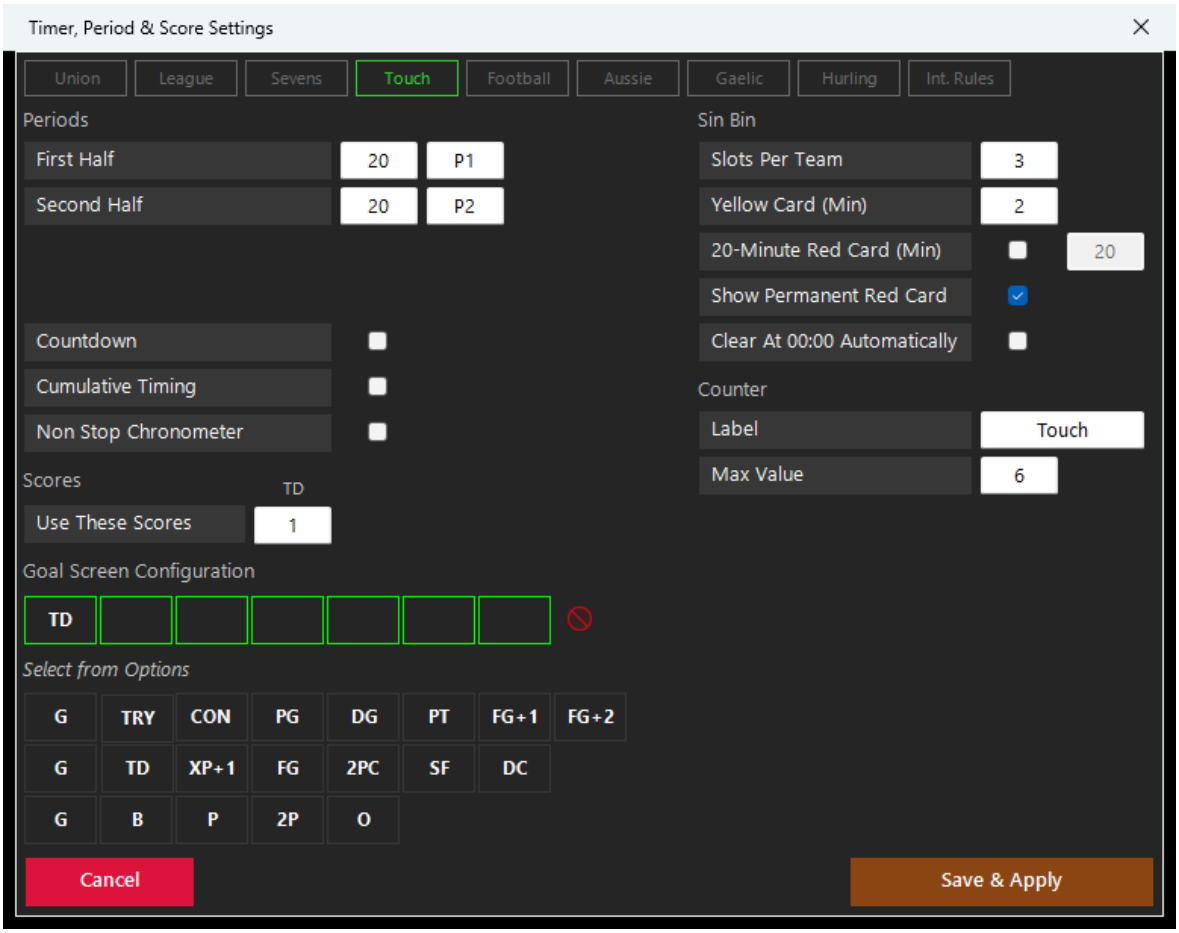


Figure 31. The settings of Touch / Tag Rugby.

9.5 Typical match

1. Press Touch in the settings and click Save & Apply.
2. Select First Half, press Start and click the Ball button of the team that taps off.
3. Click +1 after each touch. After the sixth touch, or after a turnover, click Change Possession.
4. Count a touchdown with TD1 and give the ball to the other team.
5. At half time pause the clock, select Second Half and start again.

10. American Football

BOARD OUTPUT **CONTROL PANEL**

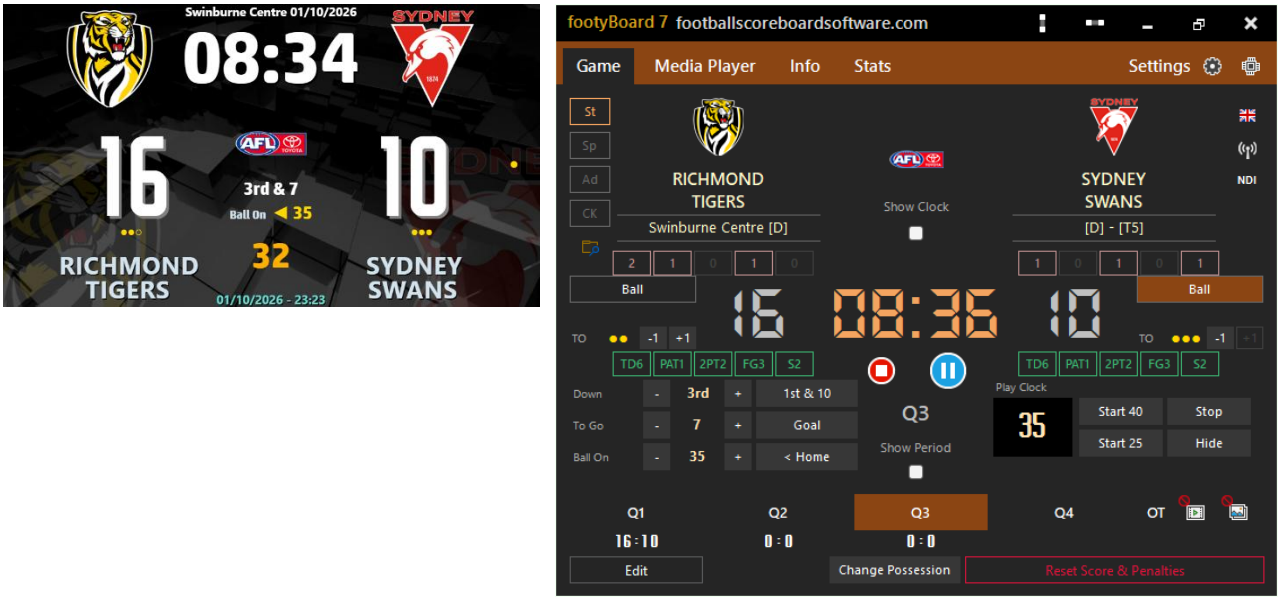


Figure 32. American Football in the third quarter: 3rd & 7 on the home 35, the guest team has the ball, the home team has used one time-out and the play clock runs.

10.1 Periods and clock

Button	Preset length	Board label
Q1 to Q4	15 minutes each	Q1 to Q4
OT	Overtime, 15 minutes	OT

The clock counts down from the length of the quarter to 00:00. The score by period shows the points scored in each quarter, and its full-screen table has a total column.

10.2 Score types

Button	Score type	Preset value
TD6	Touchdown	6
PAT1	Extra Point +1	1
2PT2	Two-Point Conversion	2
FG3	Field Goal	3
S2	Safety	2

There is no score breakdown and no sin bin. The number of red cards of a team can be set on the Info page.

10.3 Down, distance and ball on

The block on the left under the score buttons holds three rows, each with -, the value, + and a quick button:

Row	Range	Quick button
Down	1st to 4th	1st & 10: sets the first down with 10 yards to go
To Go	1 to 99 yards, or Goal	Goal: switches goal to go on and off. A step with - or + after Goal shows the number again without changing it.
Ball On	Yard line 1 to 50	The half of the field: < Home or Guest >. A click changes the half.

The board shows 3rd & 7 and Ball On with an arrow to the half of the field the ball is in; the home team is on the left of the board. A change of possession does not change the down and the distance.

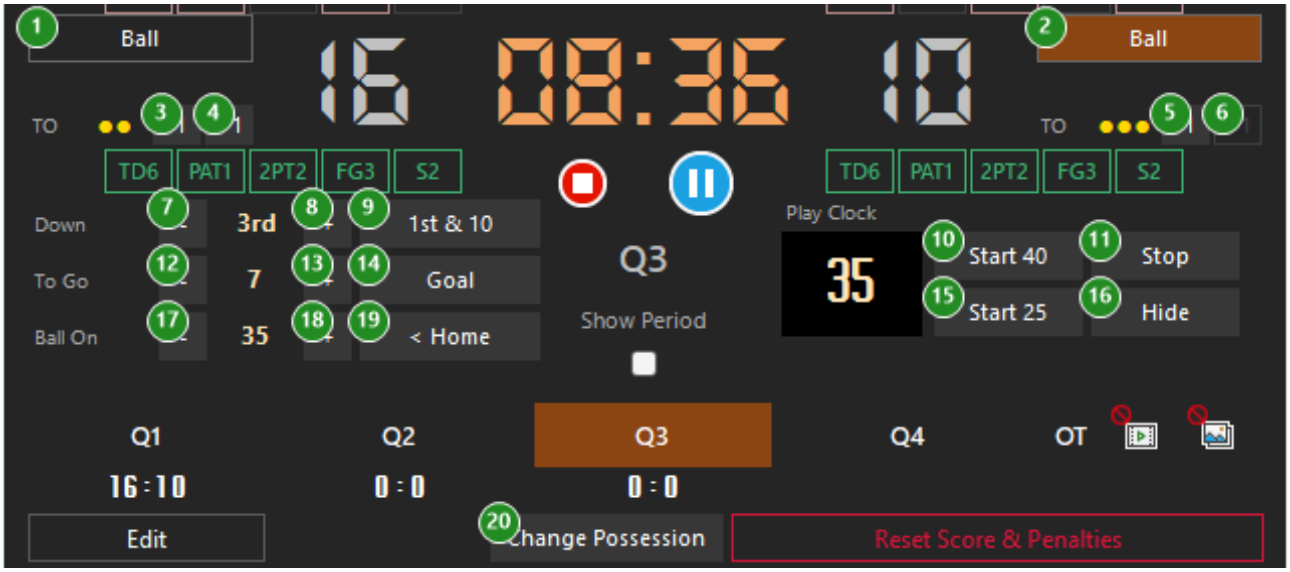
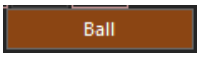
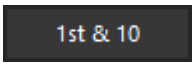
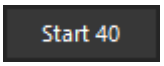
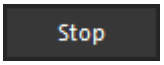


Figure 33. The American Football block of the Game page: possession and time-outs, down, distance and ball on, the play clock.

No.	Control	Name	What it does
1	Ball	**Ball**	Rugby League, Touch and American Football only. Gives the ball to the home team: the button lights up (brown), the board shows the possession mark beside the home team, and in Rugby League and Touch the tackle or touch count moves under the home team and starts at 0. A click on the lit button takes the ball away (nobody has it).

No.	Control	Name	What it does
2		**Ball**	Rugby League, Touch and American Football only. Gives the ball to the guest team: the button lights up (brown), the board shows the possession mark beside the guest team, and in Rugby League and Touch the tackle or touch count moves under the guest team and starts at 0. A click on the lit button takes the ball away (nobody has it).
3		**-1**	American Football only. The home team takes a time-out: one lamp goes out on the panel and on the board (with more than three time-outs the panel shows 2/4) and the match clock is paused when it runs. Disabled when no time-out is left. The number per half and for overtime comes from the settings; both teams get them all back at Q1, Q3 and OT.
4		**+1**	American Football only. Gives a used time-out back to the home team: one lamp lights again on the panel and on the board (with more than three time-outs the panel shows 2/4). Disabled when the team has all its time-outs. The match clock is not restarted.
5		**-1**	American Football only. The guest team takes a time-out: one lamp goes out on the panel and on the board (with more than three time-outs the panel shows 2/4) and the match clock is paused when it runs. Disabled when no time-out is left. The number per half and for overtime comes from the settings; both teams get them all back at Q1, Q3 and OT.
6		**+1**	American Football only. Gives a used time-out back to the guest team: one lamp lights again on the panel and on the board (with more than three time-outs the panel shows 2/4). Disabled when the team has all its time-outs. The match clock is not restarted.
7		**-**	American Football only. Goes back one down (4th to 1st); the down and the distance ("2nd & 7") are shown next to the button and on the board. Disabled at 1st.
8		**+**	American Football only. Goes to the next down (1st to 4th); the down and the distance ("2nd & 7") are shown next to the button and on the board. Disabled at 4th.
9		**1st & 10**	American Football only. Sets the down to 1st and the distance to 10 yards (a "& Goal" is ended); the panel and the board show "1st & 10". The yard line of the ball and the possession are not changed.
10		**Start 40**	American Football only. Starts the play clock from the long value of the settings (40 seconds by default; the number on the button), always from the full value and independent of the match clock; the seconds run on the panel and on the board. At 0 the play clock stops and flashes red until the next button.
11		**Stop**	American Football only. Stops the play clock; the remaining seconds stay on the panel and on the board. At 0 it ends the flashing.

No.	Control	Name	What it does
12	-	-	American Football only. One yard less to go (1 to 99); the down and the distance ("2nd & 7") are shown next to the button and on the board. From "Goal" the first click shows the kept yards again. Nothing happens below 1.
13	+	+	American Football only. One yard more to go (1 to 99); the down and the distance ("2nd & 7") are shown next to the button and on the board. From "Goal" the first click shows the kept yards again. Nothing happens above 99.
14	Goal	**Goal**	American Football only. Shows "& Goal" instead of the yards to go on the panel and on the board; the button is lit while it is on. A second click shows the kept yards again.
15	Start 25	**Start 25**	American Football only. Starts the play clock from the short value of the settings (25 seconds by default; the number on the button), always from the full value and independent of the match clock; the seconds run on the panel and on the board. At 0 the play clock stops and flashes red until the next button.
16	Hide	**Hide**	American Football only. Stops the play clock and takes it off the board; the panel shows --. The next Start shows it again.
17	-	-	American Football only. Moves the yard line of the ball one yard down (1 to 50); the value is shown next to the button and on the board with an arrow to the half of the field the ball is in. Nothing happens below 1.
18	+	+	American Football only. Moves the yard line of the ball one yard up (1 to 50); the value is shown next to the button and on the board with an arrow to the half of the field the ball is in. Nothing happens above 50.
19	< Home	**< Home**	American Football only. Switches the half of the field the ball is in between the home half and the guest half; the button reads "< Home" or "Guest >" and the board shows the yard line with an arrow in that direction (no arrow at the 50). The down, the distance and the possession are not changed.
20	Change Possession	**Change Possession**	Rugby League, Touch and American Football only. Gives the ball to the other team (from nobody to the home team): the Ball button of that team lights up, the board shows the possession mark beside that team, and in Rugby League and Touch the tackle or touch count starts again at 0 under that team.

10.4 Possession and time-outs

- Ball: the button beside the score of each team gives the ball to that team; Change Possession in the bottom row gives it to the other team. The board shows a dot beside the team that has the ball.
- TO: under each Ball button a lamp shows every time-out the team has left. -1 uses a time-out and stops the game clock. With no time-out left nothing happens. +1 gives a time-out back (undo); it does not start the clock again.

- Both teams have all their time-outs again when Q1 or Q3 is selected (a new half), when OT is selected (the number for overtime) and when you come back from overtime. Selecting the quarter that is already selected changes nothing.
- With more than three time-outs per half in the settings the panel shows numbers (2/4) instead of lamps.

10.5 Play clock

The block on the right is the play clock. It counts down in whole seconds by itself: the game clock does not start or stop it, and it does not touch the game clock.

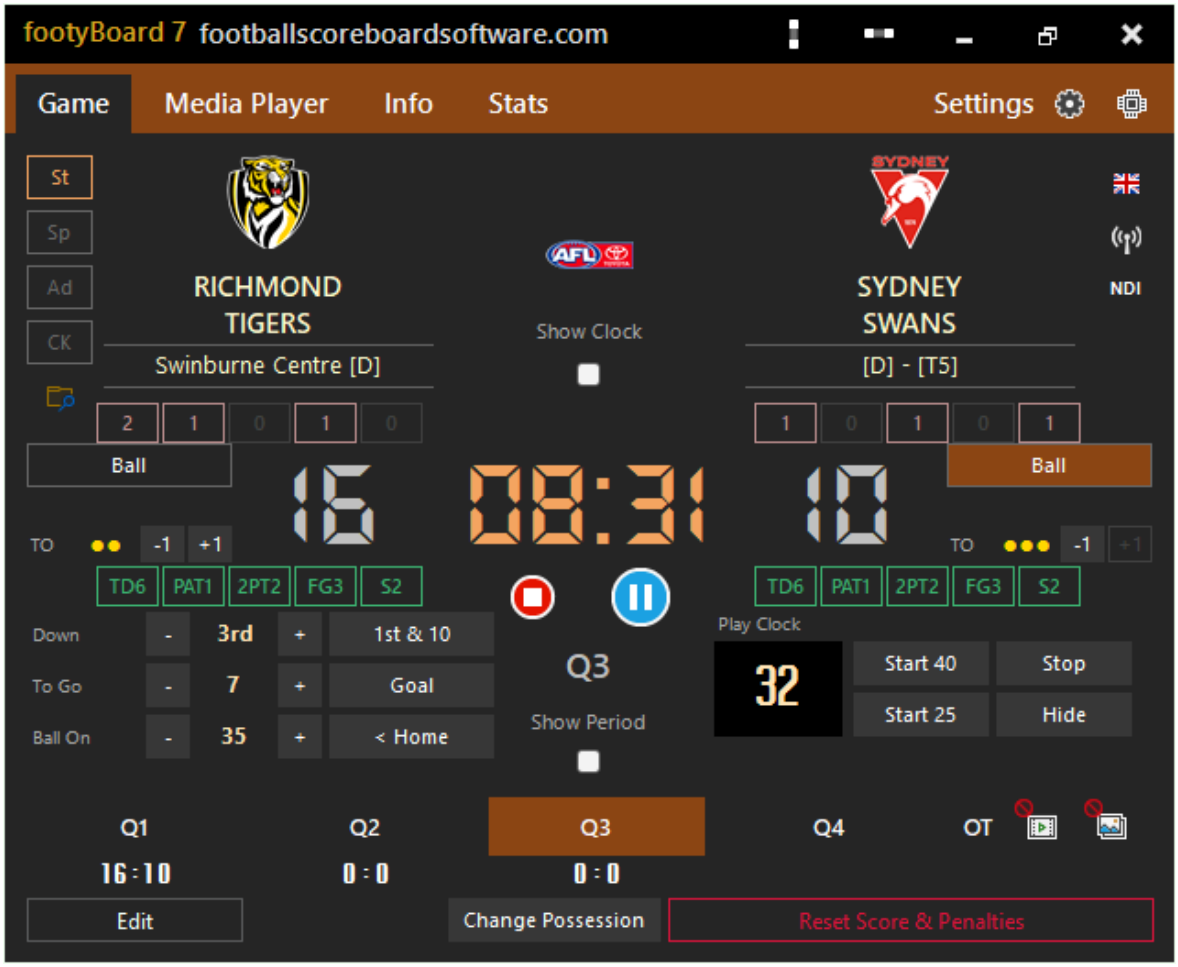


Figure 34. The play clock stopped: the value stays on the panel and on the board.

Button	Effect
Start 40	Starts the play clock from the long value
Start 25	Starts the play clock from the short value
Stop	Stops the play clock; the value stays on the board
Hide	Removes the play clock from the board

A start button always starts from the full value, also while the play clock runs. At 0 the play clock stops and flashes red on the panel and on the board until you press one of its buttons.

10.6 Settings

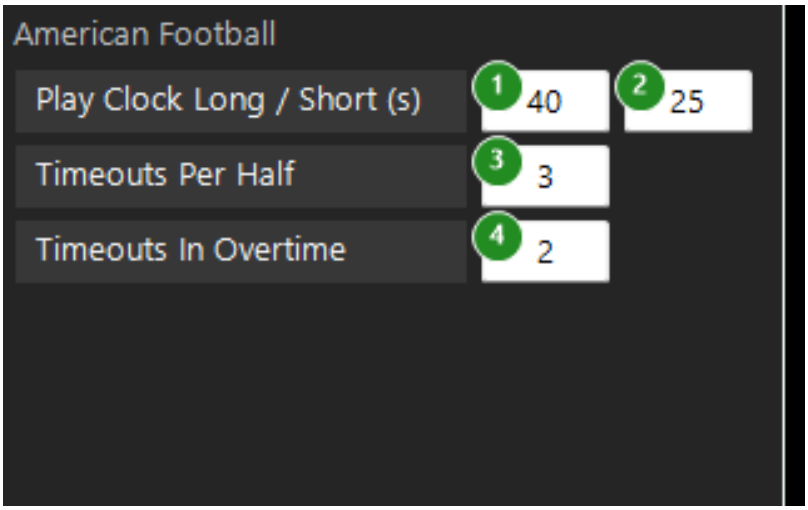


Figure 35. The American Football section of the settings.

No.	Control	Name	What it does
1	40	**Play Clock Long / Short (s)**	American Football box (shown only in that mode), first box: the long play clock in seconds (1 to 99, default 40). Saved to start.xml (AF/PlayClockLong) with Save & Apply; an invalid value turns the box red and blocks saving.
2	25	**Play Clock Long / Short (s)**	American Football box (shown only in that mode), second box: the short play clock in seconds (1 to 99, default 25). Saved to start.xml (AF/PlayClockShort) with Save & Apply; an invalid value turns the box red and blocks saving.
3	3	**Timeouts Per Half**	American Football box (shown only in that mode): the number of time-outs each team has per half (0 to 9, default 3). Saved to start.xml (AF/TimeoutsPerHalf) with Save & Apply; an invalid value turns the box red and blocks saving.
4	2	**Timeouts In Overtime**	American Football box (shown only in that mode): the number of time-outs each team has in overtime (0 to 9, default 2). Saved to start.xml (AF/TimeoutsOT) with Save & Apply; an invalid value turns the box red and blocks saving.

The American Football section holds Play Clock Long / Short in seconds (40 and 25), Timeouts Per Half (3) and Timeouts In Overtime (2). When you change the number of time-outs during a half, the time-outs already used stay used.

10.7 Typical match

1. Press Football in the settings and click Save & Apply. Enter names, logos and text lines.
2. Select Q1. At kick-off press Start and give the ball to the receiving team with its Ball button.
3. When the offence starts a series click 1st & 10 and set Ball On to the yard line and the half.
4. After each play set the down with + and the distance with - and +. For a new first down click 1st & 10. Inside the 10-yard line click Goal.

5. Start the play clock with Start 40 after a play, or Start 25 after an administrative stoppage. Hide it during breaks.
6. For a time-out click -1 of the team; the game clock stops. Start the clock again with the Start button when play resumes.
7. Count the scores with TD6, PAT1, 2PT2, FG3 and S2. After a score or a turnover click Change Possession.
8. At the end of a quarter select the next quarter; selecting Q3 gives the time-outs back. For overtime select OT.

11. Aussie Rules

BOARD OUTPUT **CONTROL PANEL**

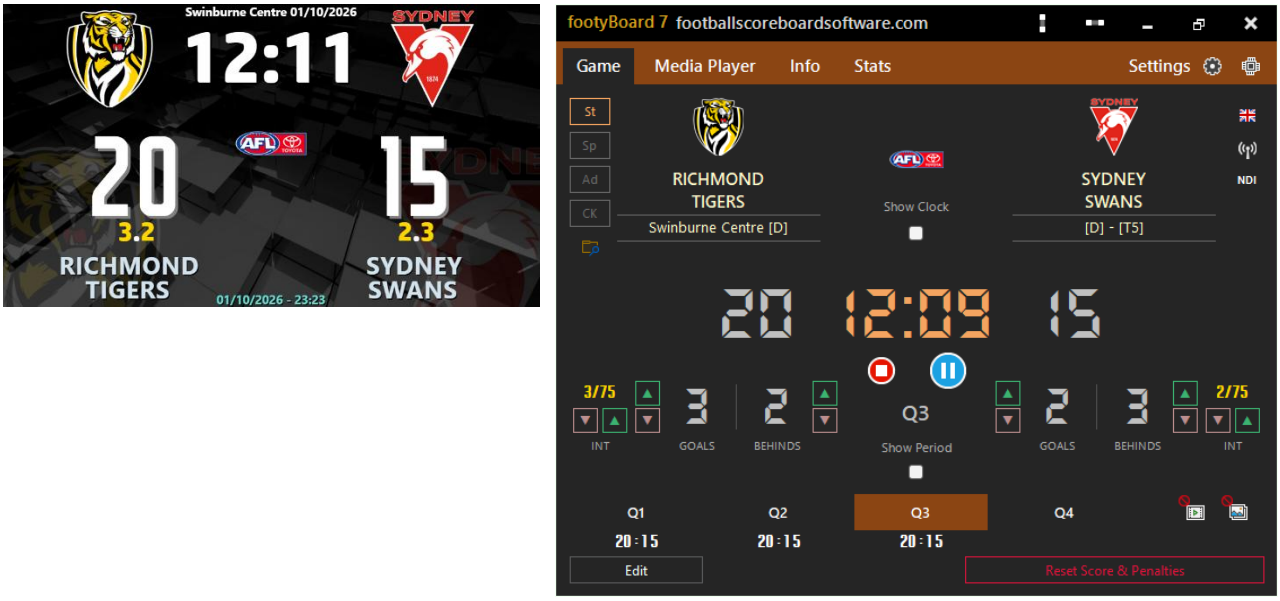


Figure 36. Aussie Rules in the third quarter with the goals and behinds of both teams and the interchange counters.

11.1 Periods and clock

Button	Preset length	Board label
Q1 to Q4	20 minutes each	Q1 to Q4

The clock counts up, every quarter starts at 00:00 and the clock runs on after the end of the quarter (time-on), until you stop it. The mode has no extra-time period; for a drawn final (two halves of three minutes plus time-on) use Q4 again and the clock.

11.2 Score: goals and behinds

Instead of score buttons the panel has two boxes for each team: GOALS and BEHINDS, each with an up and a down arrow. A goal is worth 6 points, a behind 1 point. The total is calculated from the two boxes and cannot be typed.

The board shows the total and, under it, the breakdown goals.behinds: 12.8 stands for 12 goals and 8 behinds, a total of 80.

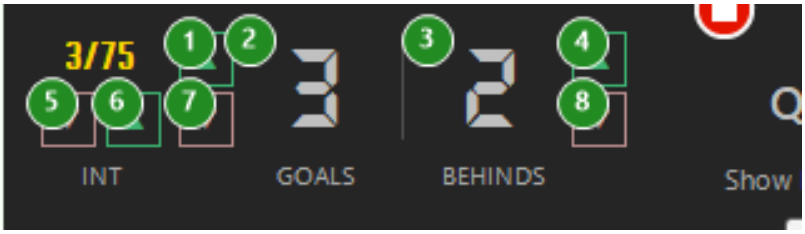


Figure 37. The GOALS, BEHINDS and INT boxes of the home team in Aussie Rules.

No.	Control	Name	What it does
1		▲	Aussie Rules only. Adds one goal (6 points by default, the value comes from the settings) to the home GOALS count; the total score, the breakdown (12.8) on the board and the score of the selected period follow. Nothing is added when the total would pass 999.
2		**GOALS**	Aussie Rules only. Shows the number of goals of the home team. A whole number typed here (0 or more) sets the count directly; the total score, the breakdown (12.8) on the board and the period score follow. Reset Score sets it to 0.
3		**BEHINDS**	Aussie Rules only. Shows the number of behinds of the home team. A whole number typed here (0 or more) sets the count directly; the total score, the breakdown (12.8) on the board and the period score follow. Reset Score sets it to 0.
4		▲	Aussie Rules only. Adds one behind (1 point) to the home BEHINDS count; the total score, the breakdown (12.8) on the board and the score of the selected period follow. Nothing is added when the total would pass 999.
5		▼	Aussie Rules only. Takes one off the home interchange count (INT) shown beside the score and on the board. Disabled when the count is 0.
6		▲	Aussie Rules only. Adds one to the home interchange count (INT) shown beside the score and on the board. At the limit of the settings (75 by default, 0 = no limit) the count is shown red but counting goes on; with the setting "per period" the count is kept for each quarter and the title reads INT Q3.
7		▼	Aussie Rules only. Takes one goal (6 points by default, the value comes from the settings) off the home GOALS count; the total score, the breakdown (12.8) on the board and the score of the selected period follow. Disabled when the count is 0.
8		▼	Aussie Rules only. Takes one behind (1 point) off the home BEHINDS count; the total score, the breakdown (12.8) on the board and the score of the selected period follow. Disabled when the count is 0.

11.3 Interchange counter

The INT counter at the outer side of each team counts the interchanges with an up and a down arrow. With a limit it reads 38/75 and turns red when the limit is reached; the counter goes on counting above the limit and does not block.

The settings under Interchange are Limit Per Team (75; 0 means no limit) and Count Per Period: with it the counter starts at zero in every quarter, without it the counter counts the whole match.

The board element of the interchange counter is part of the Standard designs but hidden in the factory designs; switch it on in the design editor if you want it on the board (chapter 22.2).

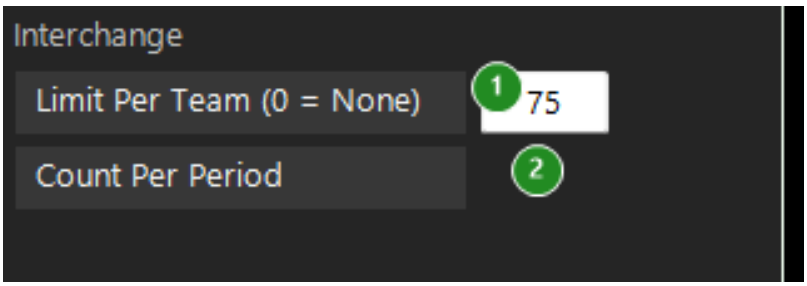


Figure 38. The Interchange section of the settings in Aussie Rules.

No.	Control	Name	What it does
1	75	**Limit Per Team (0 = None)**	Interchange box (shown in Aussie Rules): the number of interchanges allowed per team, 0 to 999, default 75; 0 means no limit. Saved to start.xml (INTERCHANGE/Limit) with Save & Apply; an invalid value turns the box red and blocks saving.
2	☐	**Count Per Period**	Interchange box (Aussie Rules): when checked the interchange counter starts from zero in every period, otherwise it counts for the whole match. Saved to start.xml (INTERCHANGE/PerPeriod) with Save & Apply.

Aussie Rules has no sin bin. The number of red cards of a team can be set on the Info page.

11.4 Typical match

1. Press Aussie in the settings and click Save & Apply.
2. Select Q1 and press Start at the first bounce.
3. Click the up arrow of GOALS or BEHINDS for each score. A wrong click is taken back with the down arrow.
4. Click the up arrow of INT for each interchange.
5. At the end of the quarter press Stop, select the next quarter and start again.

12. Gaelic Football

BOARD OUTPUT **CONTROL PANEL**

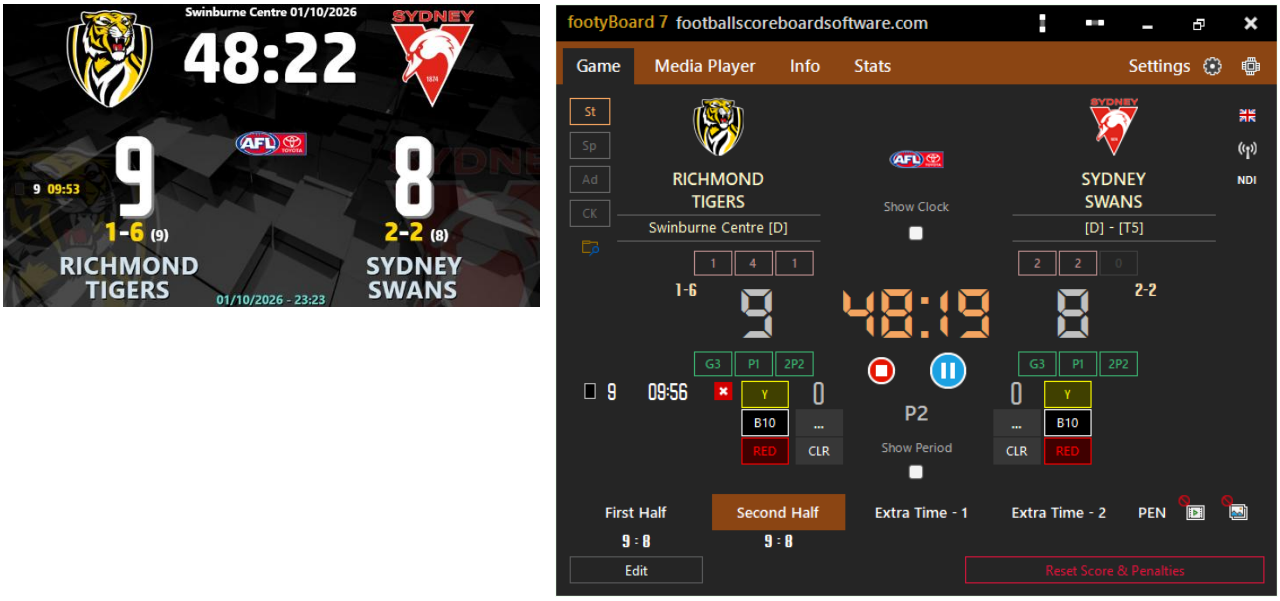


Figure 39. Gaelic Football: the breakdown goals-points under each total, a black card for home number 9.

12.1 Periods and clock

Button	Preset length	Board label
First Half	35 minutes	P1
Second Half	35 minutes	P2
Extra Time - 1	10 minutes	E1
Extra Time - 2	10 minutes	E2
PEN	Penalty shoot-out, no clock	

Two preset buttons in the settings write the period lengths: Inter-county 2x35 and Club 2x30. The button whose minutes match the boxes is marked. The clock counts up with cumulative timing.

12.2 Score: goals and points

Button	Score type	Preset value
G3	Goal	3
P1	Point	1
2P2	Two-Pointer	2

The board shows the total and the breakdown goals-points with the total in brackets: 1-11 (14). The points part counts a point as 1 and a two-pointer as 2. In this mode the total follows the counts; it is changed with the score buttons, not by typing.

12.3 Cards

Button	Card	Rule
Y	Yellow Card	A caution: the player stays on the field. The row has no timer and takes no place on the board. A second caution of the same number is marked x2.
B10	Black Card	Sin bin, 10 minutes
RED	Red Card	Permanent, no timer

Each card can be switched off in the settings.



Figure 40. The settings of Gaelic Football: the two presets and the cards.

No.	Control	Name	What it does
1	Inter-county 2x35	**Preset 1**	First preset of the mode, shown only for the GAA modes: Inter-county 2x35 (Gaelic Football) or Hurling 2x35 (Hurling / Camogie). Writes the period lengths of the preset (35, 35, 10, 10) into the period boxes; the preset whose lengths match the boxes is shown green. Nothing is saved until Save & Apply.
2	Club 2x30	**Preset 2**	Second preset of the mode, shown only for the GAA modes: Club 2x30 (Gaelic Football) or Camogie 2x30 (Hurling / Camogie). Writes the period lengths of the preset (30, 30, 10, 10) into the period boxes; the preset whose lengths match the boxes is shown green. Nothing is saved until Save & Apply.
3	3	**Slots Per Team**	Sin Bin box (shown in every mode except American Football and Aussie Rules): how many players of a team can be in the sin bin at the same time, 1 to 4, default 3. A number outside the range is pulled to the limit when saving. Saved to start.xml (SINBIN/Slots) with Save & Apply.
4	☑	**Yellow Card (Caution)**	First card row of the Sin Bin box. The box is shown only in Gaelic Football and Hurling / Camogie, where the yellow card is a caution without time: checked means the yellow card button is used on the panel. In the other sin bin modes the first row is the timed yellow card and has a minute box instead. Saved to start.xml (SINBIN) with Save & Apply.

No.	Control	Name	What it does
5	☑	**20-Minute Red Card (Min) / Black Card (Min) / Show Permanent Red Card**	Second card row of the Sin Bin box: enables the card of the row on the panel. The row is the 20-minute red card in Rugby Union (on by default), Rugby League, Sevens and Touch (off by default), the black card in Gaelic Football and Hurling / Camogie, and the permanent red card in International Rules. Unchecking disables the minute box next to it. Saved to start.xml (SINBIN) with Save & Apply.
6	10	**20-Minute Red Card (Min) / Black Card (Min)**	Second card row of the Sin Bin box: the minutes of the 20-minute red card (Rugby Union, Rugby League, Sevens, Touch; default 20) or of the black card (Gaelic Football, Hurling / Camogie; default 10), 1 to 99. The box is disabled while the card is unchecked and hidden in International Rules. Saved to start.xml (SINBIN) with Save & Apply; an invalid value turns the box red and blocks saving.
7	☑	**Show Permanent Red Card**	Third card row of the Sin Bin box: when checked the permanent red card button (RED, counts as a red card of the team) is used on the panel. Shown in Rugby Union, Rugby League, Sevens, Touch, Gaelic Football and Hurling / Camogie; International Rules has the red card in the second row. Saved to start.xml (SINBIN/PermanentRed) with Save & Apply.
8	☐	**Clear At 00:00 Automatically**	Sin Bin box: when checked a sin bin row is removed by itself when its time reaches 00:00, otherwise the operator removes it. Off by default in every mode. Saved to start.xml (SINBIN/AutoClear) with Save & Apply.

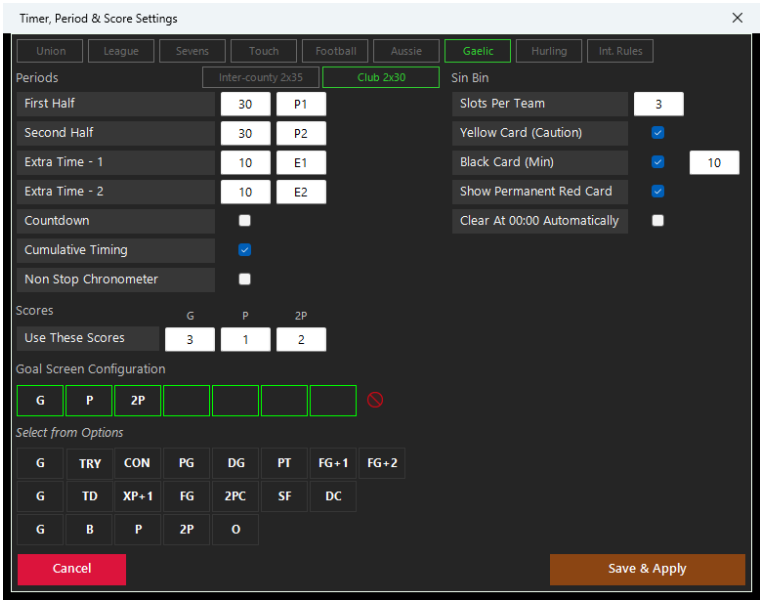


Figure 41. The club preset selected: halves of 30 minutes.

12.4 Typical match

1. Press Gaelic in the settings, choose Inter-county 2x35 or Club 2x30 and click Save & Apply.
2. Select First Half and press Start at the throw-in.
3. Count each score: G3 for a goal, P1 for a point, 2P2 for a two-pointer.

4. For a black card type the number and click B10. For a caution click Y; the row is a note for you and stays until you remove it.
5. At half time pause, select Second Half and start again. For extra time select Extra Time - 1 and Extra Time - 2.
6. For a penalty shoot-out select PEN, mark each kick and click Show (chapter 5.11).

13. Hurling / Camogie

BOARD OUTPUT **CONTROL PANEL**

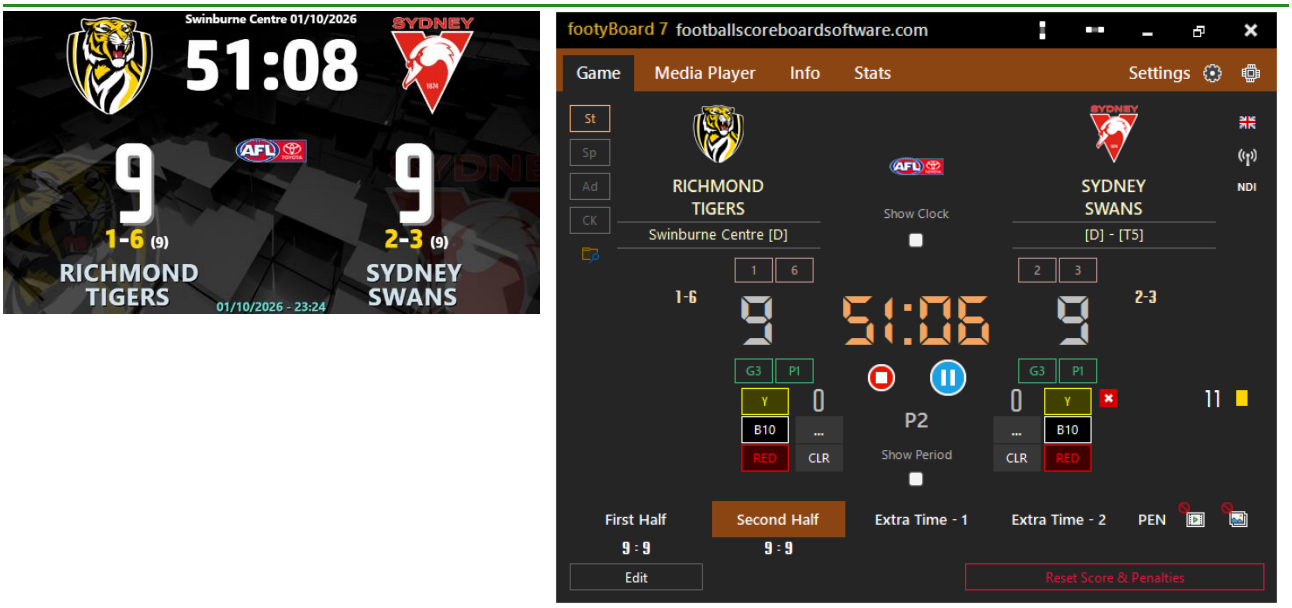


Figure 42. Hurling: goals and points of both teams, a yellow card for guest number 11.

13.1 Periods and clock

The periods are those of Gaelic Football: two halves, two periods of extra time of 10 minutes and the PEN button. The presets are Hurling 2x35 and Camogie 2x30. The clock counts up with cumulative timing.

> **Note:** Use the PEN button (penalty shoot-out) only when the rules of your competition decide a drawn match that way.

13.2 Score: goals and points

Button	Score type	Preset value
G3	Goal	3
P1	Point	1

The breakdown is goals-points with the total in brackets, for example 2-15 (21).

13.3 Cards

The cards of Gaelic Football: Yellow Card as a caution (Y), Black Card with 10 minutes (B10) and Red Card (RED).

> **Note:** The GAA hurling rules have the black card at inter-county senior, under-20 and minor level only, and the camogie rules have no black card. The Camogie 2x30 preset switches the black card off and the Hurling 2x35 preset on; for a club hurling match untick Black Card yourself.

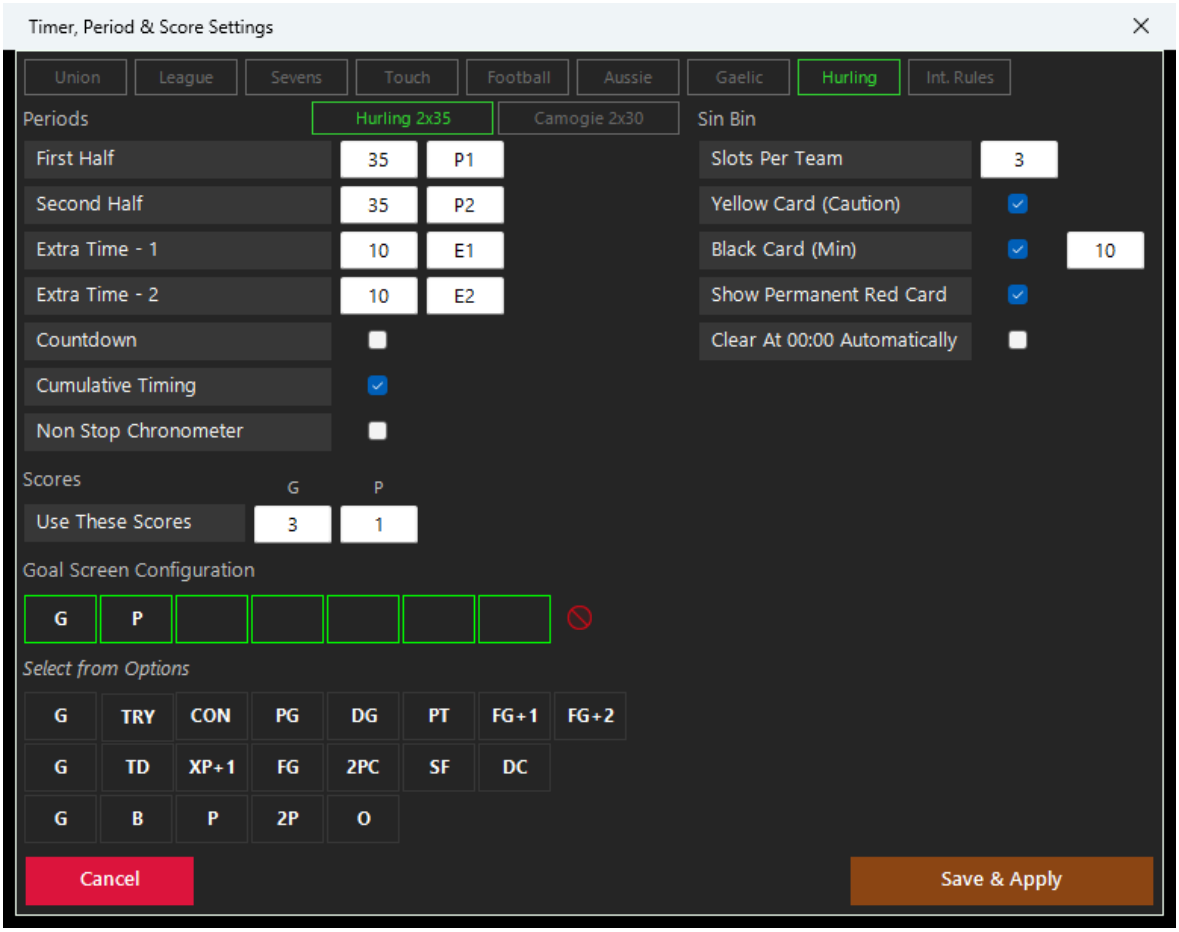


Figure 43. The settings of Hurling / Camogie.

13.4 Typical match

The match is run as in Gaelic Football (chapter 12.4) with the two score buttons G3 and P1.

14. International Rules

BOARD OUTPUT **CONTROL PANEL**

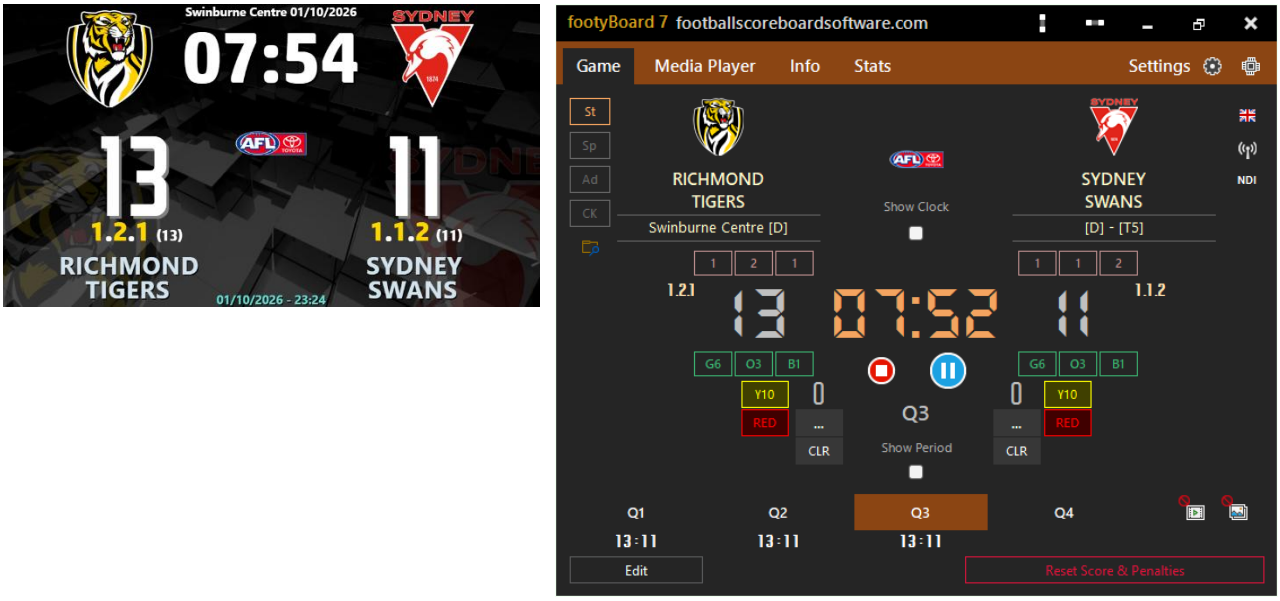


Figure 44. International Rules in the third quarter with the breakdown goals.overs.behinds.

14.1 Periods and clock

Button	Preset length	Board label
Q1 to Q4	18 minutes each	Q1 to Q4

The clock counts up, every quarter starts at 00:00 and the clock runs on after the end of the quarter, as in Aussie Rules.

14.2 Score: goals, overs and behinds

Button	Score type	Preset value
G6	Goal	6
O3	Over	3
B1	Behind	1

The board shows the total and the breakdown goals.overs.behinds with the total in brackets: 1.7.3 (30).

14.3 Cards and sin bin

Button	Card	Rule
Y10	Yellow Card	Sin bin, 10 minutes
RED	Red Card	Permanent, no timer

The mode has no interchange counter.

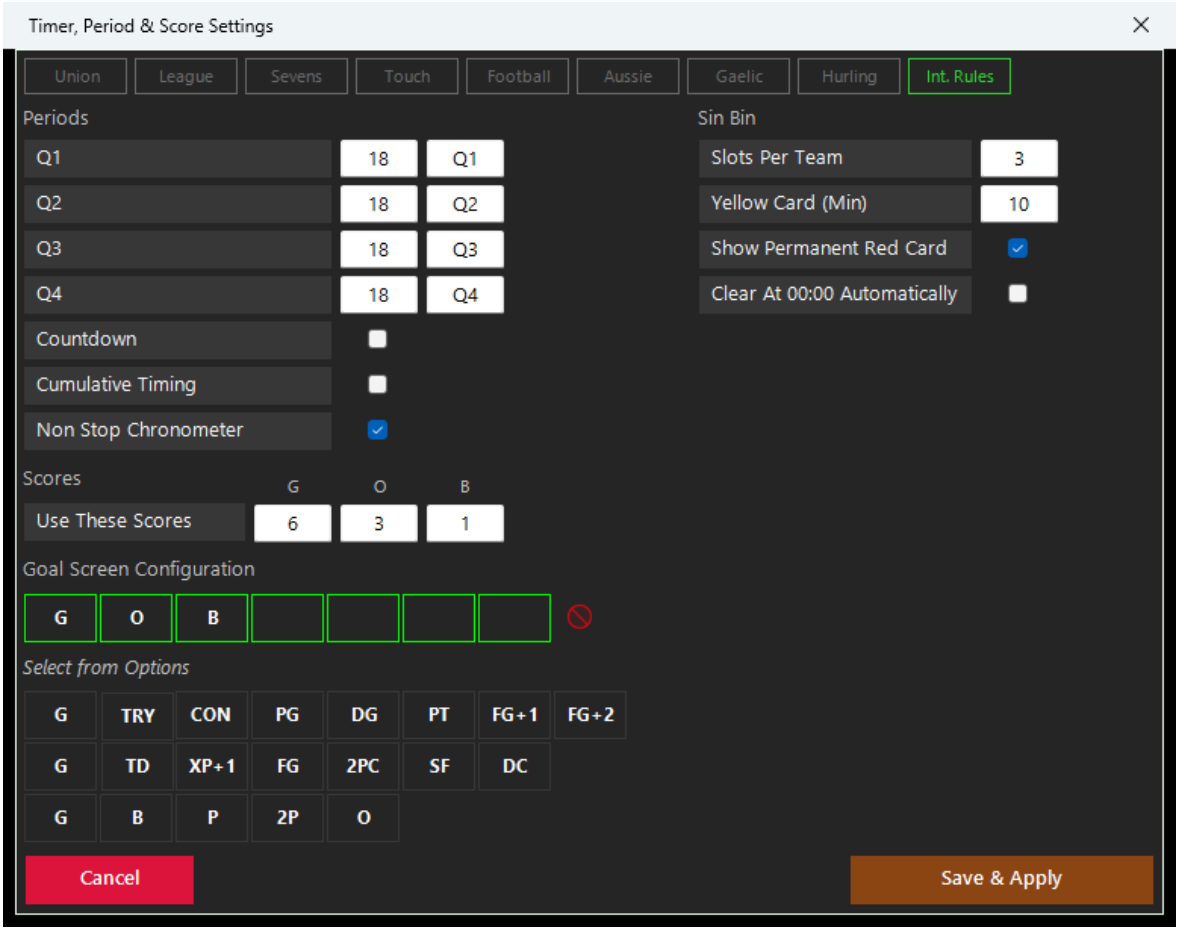


Figure 45. The settings of International Rules.

14.4 Typical match

1. Press Int. Rules in the settings and click Save & Apply.
2. Select Q1 and press Start.
3. Count each score with G6, O3 and B1.
4. For a yellow card type the number and click Y10.
5. At the end of the quarter press Stop, select the next quarter and start again.

15. Background images and videos

15.1 Standard board: background video and middle-layer image

The two icons at the right end of the period button row on the Game page set a video that plays behind the whole Standard board and an image that is drawn on the middle layer, between the video and the scoreboard elements. Each icon opens a file dialog (video: mp4, webm, ogg; image: bmp, gif, jpg, png, webp); the small delete icon inside it removes the file again and redraws the board. The video plays without sound and repeats. Its opacity is set under Settings > Screen Properties > Background Video Opacity (0 to 10).

15.2 Info graphics: the shared background

The gear button on the Info page opens the background options for the team list, the line-up slide and the referee list. Three choices are available: the background video of the scoreboard, a plain black background, or a video file of your own; with the third choice a Select File button appears and the name of the chosen file is shown next to it.

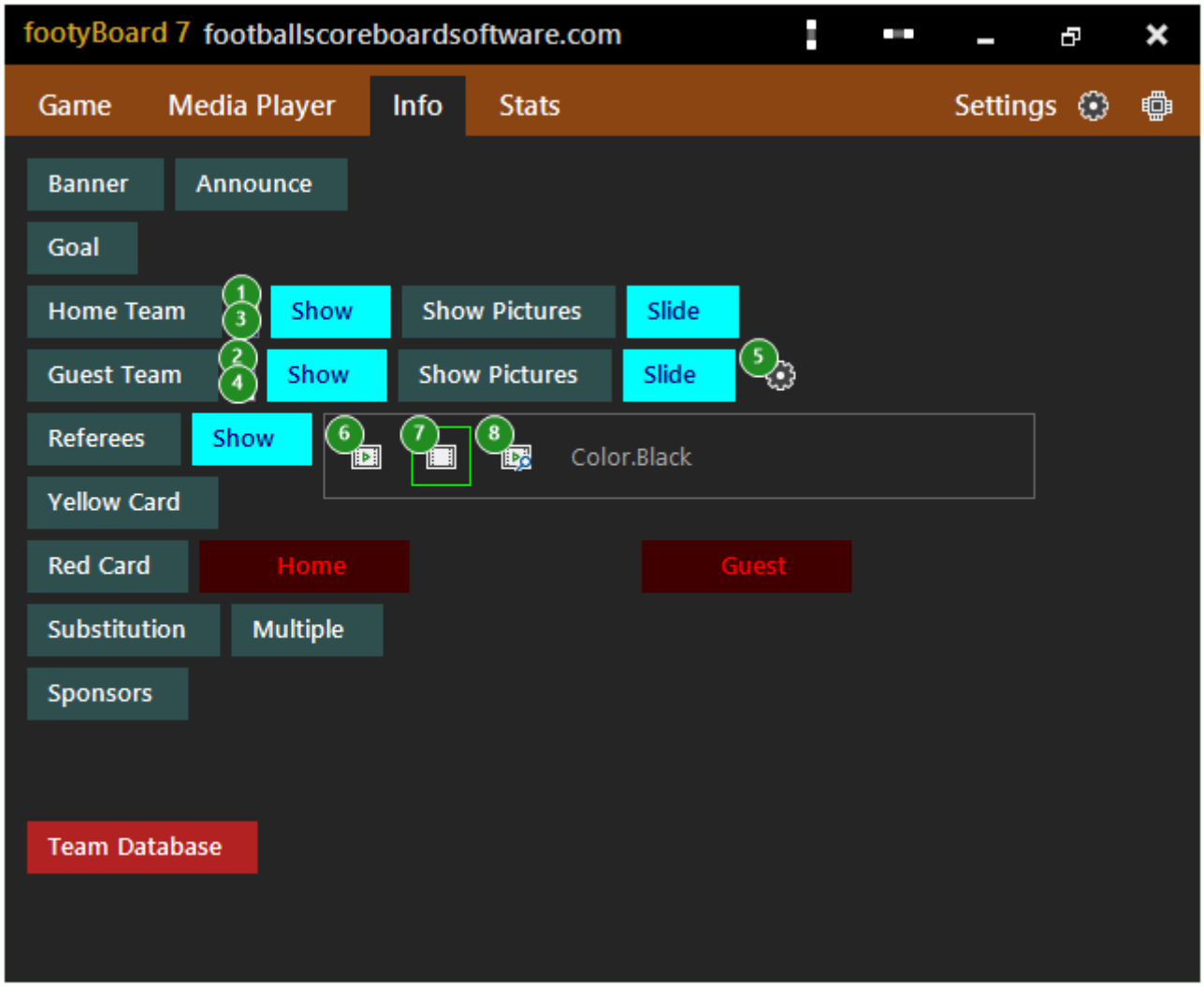


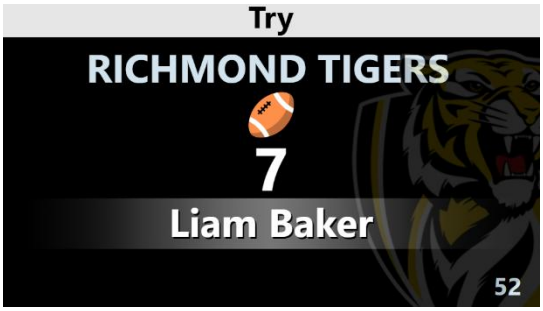
Figure 46. The Info page with the background options and the team colours expanded.

No.	Control	Name	What it does
1		**Home Colour 1**	Opens the colour picker for the first colour of the home team and saves all four team colours in start.xml (BOARD/Color11 to Color22). The first colour fills the title and number cells of the home team list and line-up slide, the second is their text colour; the chroma-key board uses the same colours.
2		**Guest Colour 1**	Opens the colour picker for the first colour of the guest team and saves all four team colours in start.xml (BOARD/Color11 to Color22). The first colour fills the title and number cells of the guest team list and line-up slide, the second is their text colour; the chroma-key board uses the same colours.
3		**Home Colour 2**	Opens the colour picker for the second colour of the home team and saves all four team colours in start.xml (BOARD/Color11 to Color22). The first colour fills the title and number cells of the home team list and line-up slide, the second is their text colour; the chroma-key board uses the same colours.
4		**Guest Colour 2**	Opens the colour picker for the second colour of the guest team and saves all four team colours in start.xml (BOARD/Color11 to Color22). The first colour fills the title and number cells of the guest team list and line-up slide, the second is their text colour; the chroma-key board uses the same colours.
5		**Background Options**	Shows or hides the background panel with the three background buttons and the file button for the team list, line-up slide and referee graphics.
6		**Scoreboard Background**	Uses the scoreboard's own background video behind the team list, line-up slide and referee graphics. The choice is marked with a green border and saved in config.xml (BACK/List). As long as no file has been chosen with the file button, the page comes up with the black background every time the program starts and saves that choice.
7		**Black Background**	Uses a plain black background behind the team list, line-up slide and referee graphics. The choice is marked with a green border and saved in config.xml (BACK/List).
8		**Custom Background**	Uses a video file of your own behind the team list, line-up slide and referee graphics and reveals the file button next to it; the name of the saved file appears in the box. The choice is marked with a green border and saved in config.xml (BACK/List).

15.3 Score event, card and substitution: background per graphic

The editors for the score event, the cards and the substitutions have the same three background buttons in their lower row: Use Scoreboard Background, Use Black Background and Use Selected Background.

BOARD OUTPUT



CONTROL PANEL

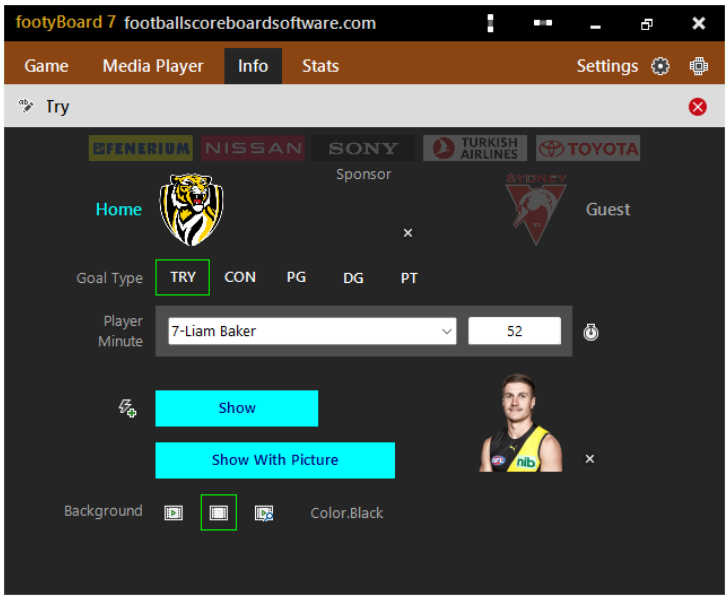


Figure 47. A score event over the background video of the scoreboard.

Note: Select a video file as the background of these graphics: the background is played as a video.

15.4 Other backgrounds

- Banner and announcement have their own background buttons in their editors (chapter 16).
- The sponsor strip and the scrolling texts of the Sponsored and Advertisement modes use a background colour set in their style panels (chapters 19 and 20).
- The Chroma Key board uses the key colour instead of a background (chapter 21.4).

16. Info graphics

The Info page collects the graphics that you show during the match on top of the board. The buttons on the left open the editor of each graphic: Banner, Announce, Goal, Home Team, Guest Team, Referees, Yellow Card, Red Card, Substitution, Multiple, Sponsors and Team Database.

A graphic is a page in a window above the board. It stays until you click Game in the menu strip or show another graphic or a clip. Esc closes an editor. The small edit icon in the title bar of an editor opens the titles of the board graphics (chapter 22.4).

Common controls on the Info page:

- Home Team / Guest Team with Show, Show Pictures and Slide: show the line-up as a list, open the player picture player, or show the team slide.
- Referees > Show: shows the referee list.
- The four colour buttons set the two colours of each team.
- The radio buttons beside the Red Card button set the number of red cards of each team (0 to 4). They are shown only in a mode without sin bin (American Football, Aussie Rules); in the other modes the red card count comes from the permanent red rows of the sin bin.
- The gear button opens the background options (chapter 15.2).

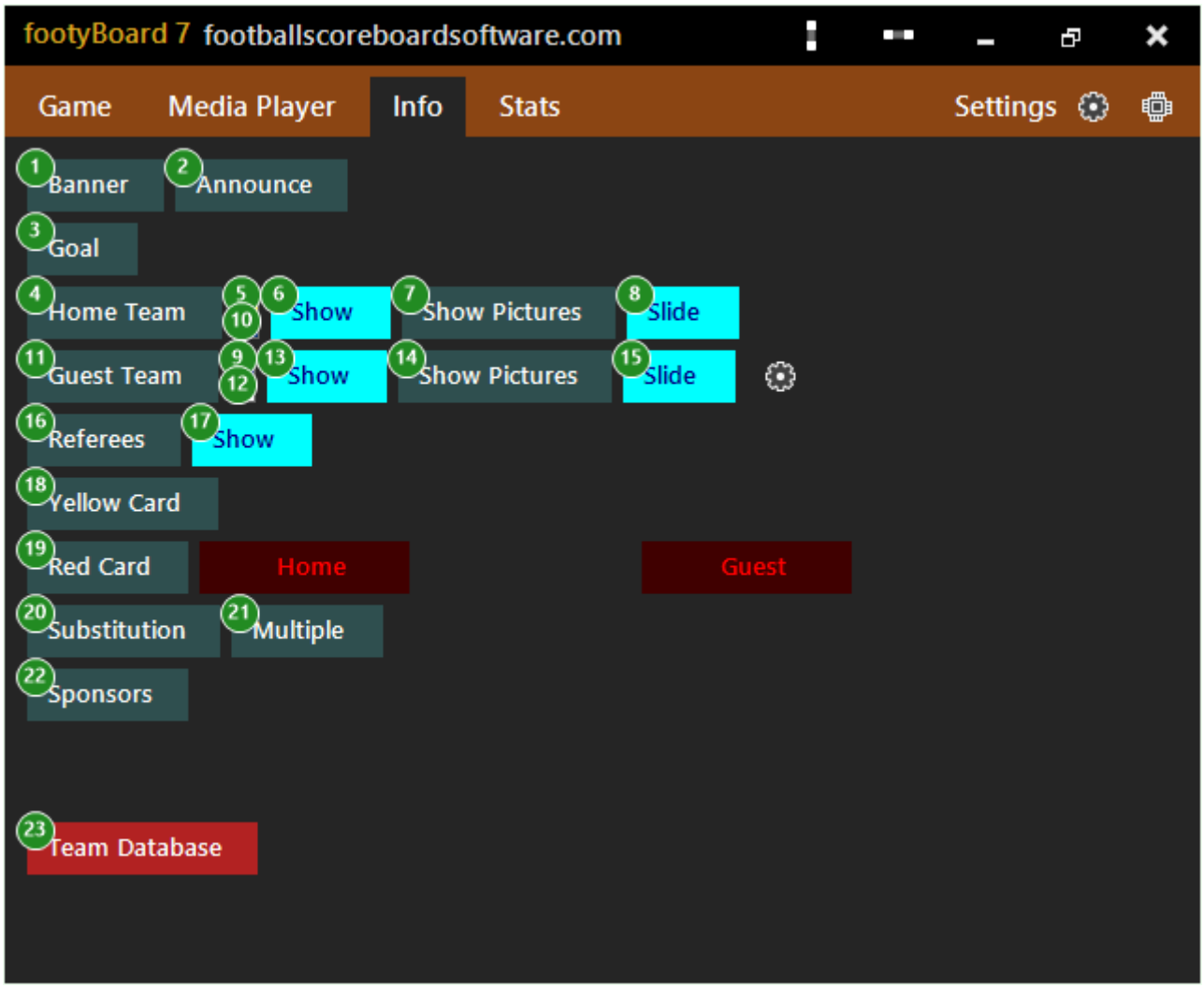
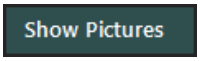
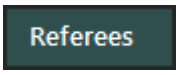
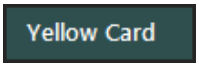
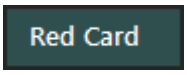
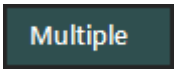
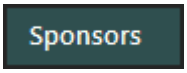


Figure 48. The Info page.

No.	Control	Name	What it does
1	Banner	**Banner**	Opens the Banner page, where the three-line banner text for the board is edited and shown.
2	Announce	**Announce**	Opens the Announce page, where announcement texts for the board are edited and shown.
3	Goal	**Goal**	Opens the Goal page, where a scoring event graphic (the score types of the current sport mode) is prepared and shown. The page only shows the graphic; it does not count the score.
4	Home Team	**Home Team**	Opens the Home Team players page, where the home team squad is entered and edited.
5		**Home Colour 1**	Opens the colour picker for the first colour of the home team and saves all four team colours in start.xml (BOARD/Color11 to Color22). The first colour fills the title and number cells of the home team list and line-up slide, the second is their text colour; the chroma-key board uses the same colours.
6	Show	**Show**	Shows the home team player list (Starting XI, Substitutes, Trainer) on the board with the saved background choice and the home team colours; a running video or picture on the board is stopped first.
7	Show Pictures	**Show Pictures**	Opens the Show Pictures page for the home team, where the pictures and clips of the players are played on the board one by one or as a playlist.
8	Slide	**Slide**	Shows the home team line-up slide on the board with the saved background choice; a running video or picture on the board is stopped first.
9		**Guest Colour 1**	Opens the colour picker for the first colour of the guest team and saves all four team colours in start.xml (BOARD/Color11 to Color22). The first colour fills the title and number cells of the guest team list and line-up slide, the second is their text colour; the chroma-key board uses the same colours.
10		**Home Colour 2**	Opens the colour picker for the second colour of the home team and saves all four team colours in start.xml (BOARD/Color11 to Color22). The first colour fills the title and number cells of the home team list and line-up slide, the second is their text colour; the chroma-key board uses the same colours.
11	Guest Team	**Guest Team**	Opens the Guest Team players page, where the guest team squad is entered and edited.
12		**Guest Colour 2**	Opens the colour picker for the second colour of the guest team and saves all four team colours in start.xml (BOARD/Color11 to Color22). The first colour fills the title and number cells of the guest team list and line-up slide, the second is their text colour; the chroma-key board uses the same colours.
13	Show	**Show**	Shows the guest team player list (Starting XI, Substitutes, Trainer) on the board with the saved background choice and the guest team colours; a running video or picture on the board is stopped first.

No.	Control	Name	What it does
14		**Show Pictures**	Opens the Show Pictures page for the guest team, where the pictures and clips of the players are played on the board one by one or as a playlist.
15		**Slide**	Shows the guest team line-up slide on the board with the saved background choice; a running video or picture on the board is stopped first.
16		**Referees**	Opens the Referees page, where the match officials are entered.
17		**Show**	Shows the referee list on the board with the saved background choice; a running video or picture on the board is stopped first.
18		**Yellow Card**	Opens the Card page preset to a yellow card, where the card graphic is prepared and shown. The card graphic is independent of the sin bin and of the red card count on the scoreboard.
19		**Red Card**	Opens the Card page preset to a red card, where the card graphic is prepared and shown. The card graphic is independent of the sin bin and of the red card count on the scoreboard.
20		**Substitution**	Opens the Substitution page for a single player change.
21		**Multiple**	Opens the Multiple substitution page, where several player changes are shown together in one graphic.
22		**Sponsors**	Opens the Sponsors page, where the sponsor logos used on the graphics are managed.
23		**Team Database**	Opens the Team Database list, where saved teams are viewed, renamed, deleted or copied into the home or guest squad.

16.1 Banner

A banner with up to three text rows, the two team logos and the sponsor logo. Type the rows, choose one of the four presets for the third row (buttons 1 to 4; the third row you type is stored in the selected preset when you click Show), pick the background and click Show.

While the third row has the focus two clock buttons appear. Show Clock writes a token that shows the time of day on the board, without seconds and, after a second click, with seconds. Show Remaining Time writes a count-down to the time of day typed into the small time box, for example to the kick-off at 15:00. Neither of them is the match clock.

BOARD OUTPUT **CONTROL PANEL**

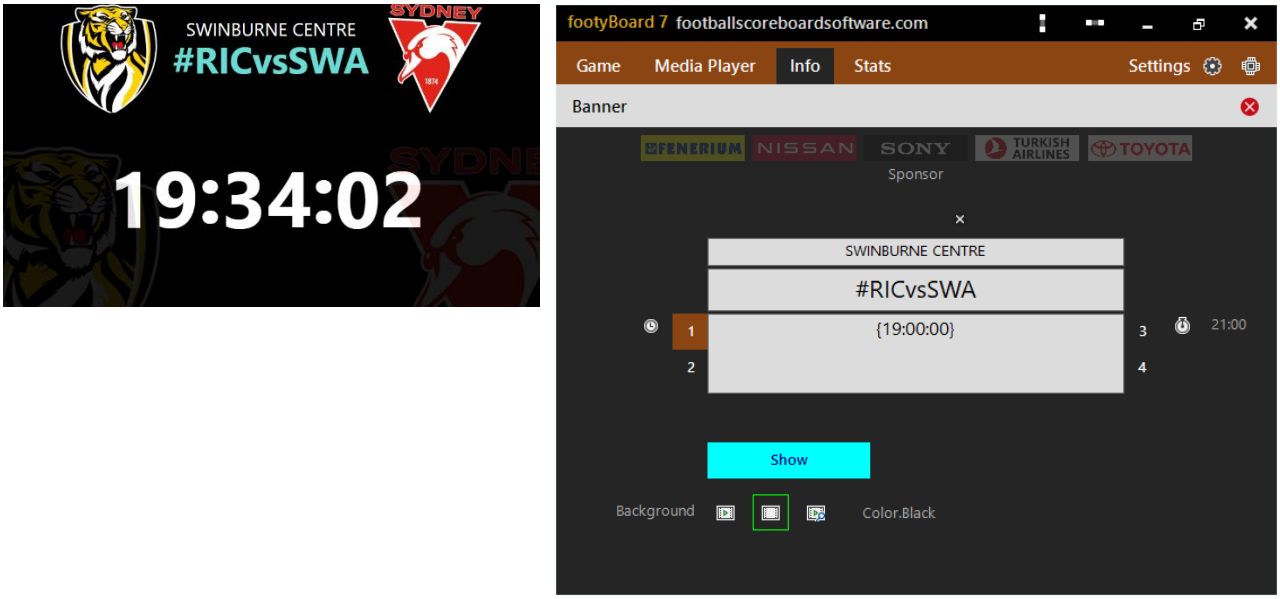


Figure 49. The banner editor and the banner on the board.

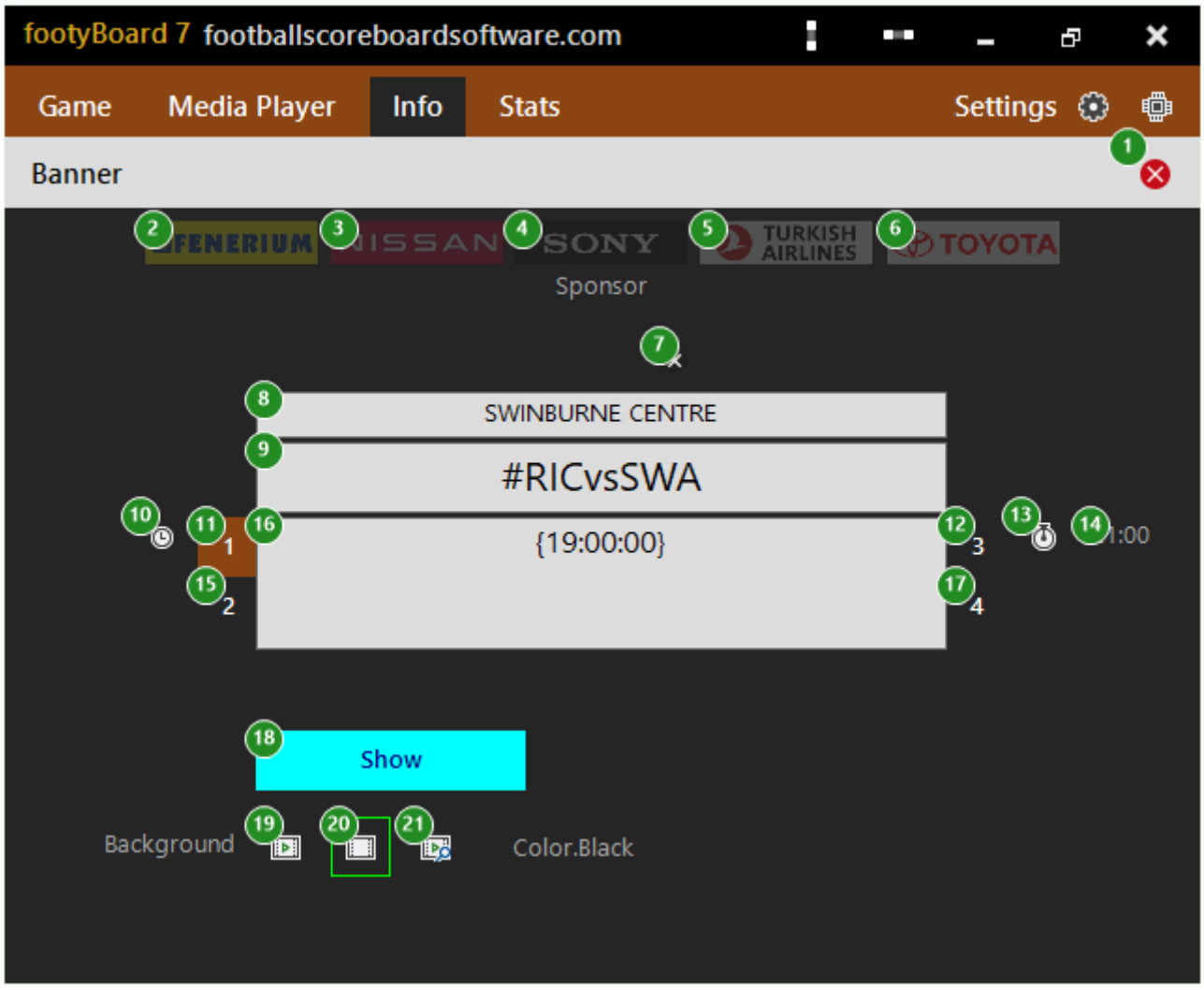
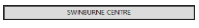
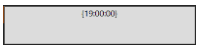


Figure 50. The controls of the banner editor.

No.	Control	Name	What it does
1		**Close**	Closes the Banner page (Escape does the same).
2		**Sponsor Logo 1**	Selects the first of the five sponsor logos of the Sponsors page for the banner and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
3		**Sponsor Logo 2**	Selects the second of the five sponsor logos of the Sponsors page for the banner and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
4		**Sponsor Logo 3**	Selects the third of the five sponsor logos of the Sponsors page for the banner and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
5		**Sponsor Logo 4**	Selects the fourth of the five sponsor logos of the Sponsors page for the banner and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
6		**Sponsor Logo 5**	Selects the fifth of the five sponsor logos of the Sponsors page for the banner and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
7		**Remove Sponsor Logo**	Removes the sponsor logo from the banner and the other info graphics (start.xml BOARD/LogoSponsor is cleared); the five sponsor pictures are dimmed.
8		**Banner Line 1**	The first line of the banner. It is applied and stored in config.xml (BANNER/Row01) when Show is pressed; the stored value is reloaded whenever a preset button is clicked.
9		**Banner Line 2**	The second line of the banner. It is applied and stored in config.xml (BANNER/Row02) when Show is pressed; the stored value is reloaded whenever a preset button is clicked.
10		**Show Clock**	Puts the clock placeholder {00:00} into the third banner line so the banner shows the current time; clicking again switches to {00:00:00}, the form with seconds, and back. Shown while the third line has the focus.
11		**Preset 1**	Selects banner preset 1 (marked brown) and loads its stored third line into the text field; the first two lines are reloaded from their stored values. The third line shown next is stored back into this preset.
12		**Preset 3**	Selects banner preset 3 (marked brown) and loads its stored third line into the text field; the first two lines are reloaded from their stored values. The third line shown next is stored back into this preset.

No.	Control	Name	What it does
13		**Show Remaining Time**	Puts the time from the time field in curly brackets into the third banner line, for example {21:00}, so the banner shows a countdown to that time; clicking again switches to the form with seconds and back. Shown while the third line has the focus.
14		**Target Time**	The target time (hh:mm) that the Show Remaining Time button puts into the third line as a countdown. An entry that is not a valid time is replaced by 23:59 when the field is left.
15		**Preset 2**	Selects banner preset 2 (marked brown) and loads its stored third line into the text field; the first two lines are reloaded from their stored values. The third line shown next is stored back into this preset.
16		**Banner Line 3**	The third line of the banner, which may hold a clock placeholder {00:00} or a countdown target such as {21:00} instead of text. It is applied and stored under the active preset when Show is pressed.
17		**Preset 4**	Selects banner preset 4 (marked brown) and loads its stored third line into the text field; the first two lines are reloaded from their stored values. The third line shown next is stored back into this preset.
18		**Show**	Shows the banner on the board with the three text lines, the selected background and the sponsor logo; a clock or countdown placeholder in the third line is shown as a live time. The three lines are stored in config.xml (BANNER/Row01, Row02 and the third line under the active preset Row031 to Row034).
19		**Scoreboard Background**	Use Scoreboard Background: shows the banner on the scoreboard's own background video. The choice is marked with a green border and saved in config.xml (BACK/BANNER). As long as no file has been chosen with the file button, the page comes up with the black background each time it is opened.
20		**Black Background**	Use Black Background: shows the banner on a plain black background. The choice is marked with a green border and saved in config.xml (BACK/BANNER).
21		**Selected Background**	Use Selected Background: shows the banner on an image or video file of your own and reveals the file button next to it; the name of the saved file appears in the box. The choice is marked with a green border and saved in config.xml (BACK/BANNER).

16.2 Announce

A full-screen announcement, for example a safety message or a welcome text. Type the text, choose one of four presets (buttons 1 to 4; stored when you click Show), pick the visual style and click Show. The style list offers Standart, Gradient, Shape, Stripe-H, Stripe-V and Stroke; every style except Standart has a style panel behind the gear button with font, size, weight, position and colours. The logo of the team you click in the editor is shown with the text.

BOARD OUTPUT **CONTROL PANEL**

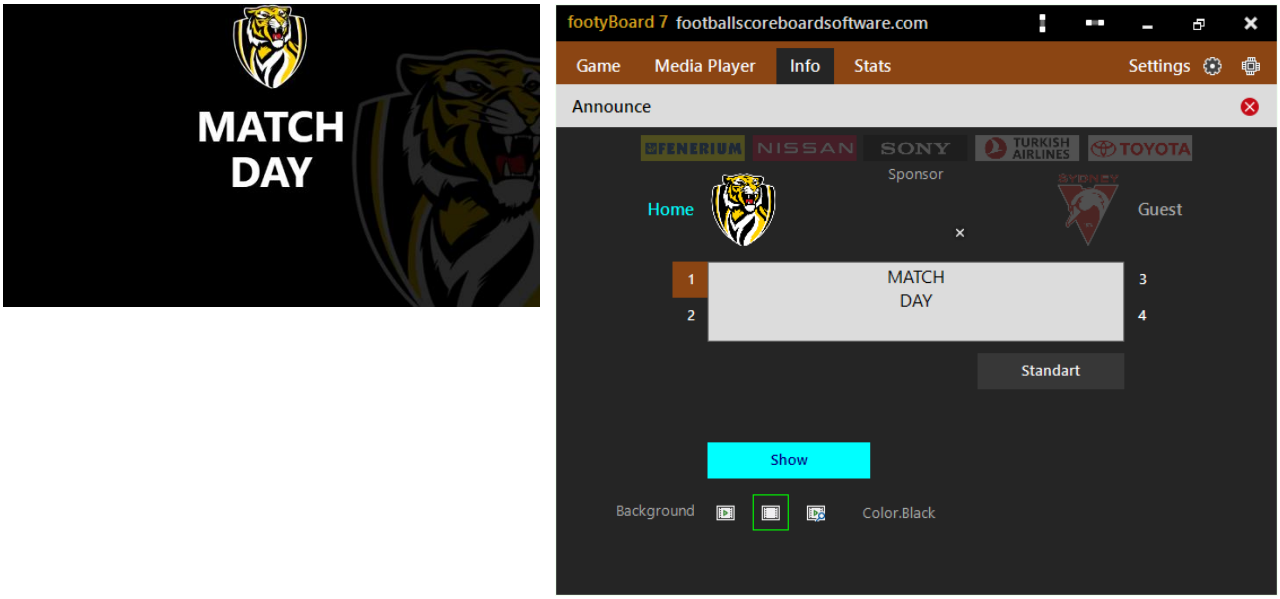


Figure 51. The announcement editor and the announcement on the board.

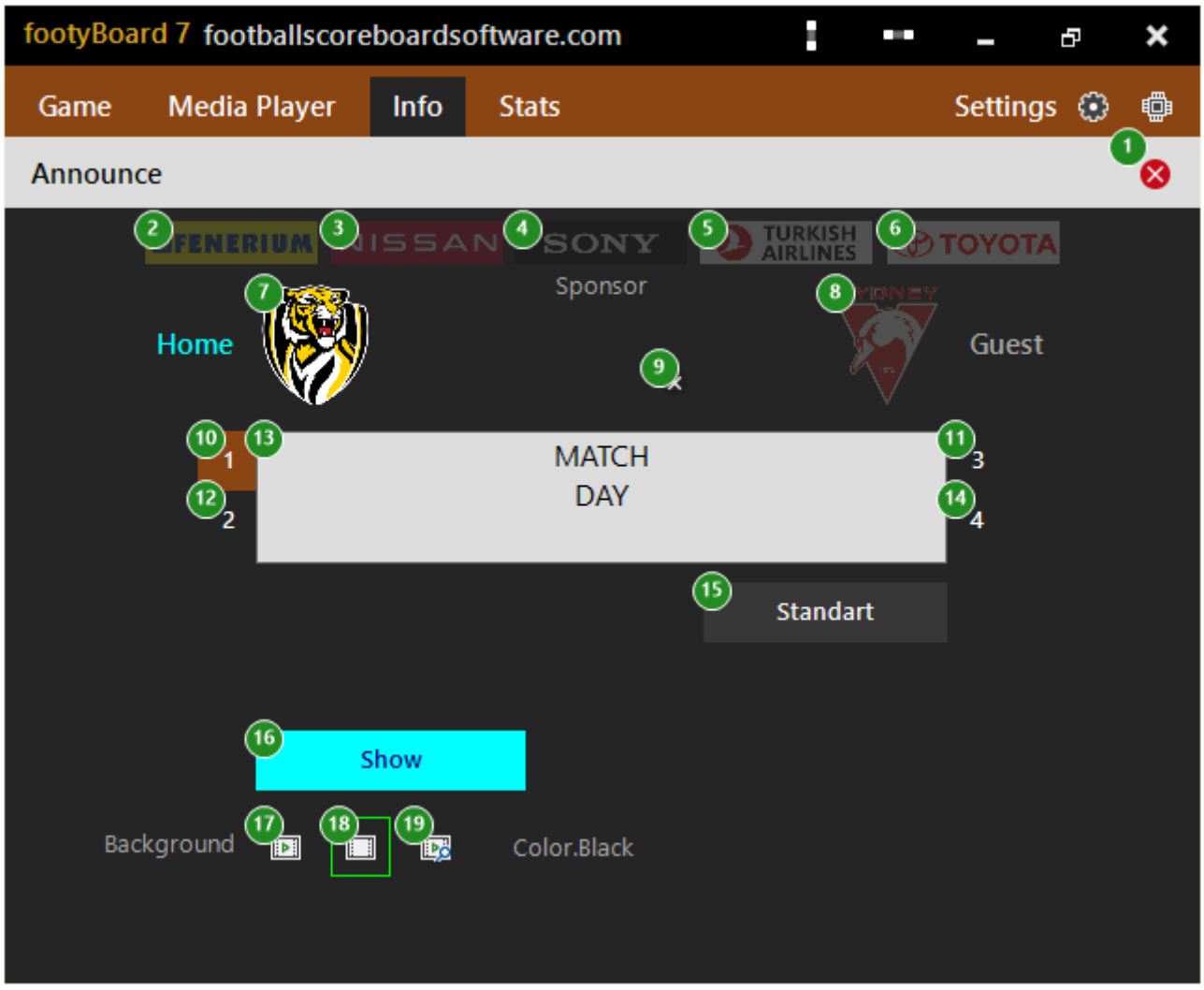
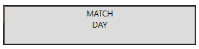
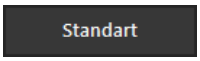


Figure 52. The controls of the announcement editor.

No.	Control	Name	What it does
1		**Close**	Closes the Announce page (Escape does the same).
2		**Sponsor Logo 1**	Selects the first of the five sponsor logos of the Sponsors page for the announcement and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
3		**Sponsor Logo 2**	Selects the second of the five sponsor logos of the Sponsors page for the announcement and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
4		**Sponsor Logo 3**	Selects the third of the five sponsor logos of the Sponsors page for the announcement and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
5		**Sponsor Logo 4**	Selects the fourth of the five sponsor logos of the Sponsors page for the announcement and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
6		**Sponsor Logo 5**	Selects the fifth of the five sponsor logos of the Sponsors page for the announcement and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
7		**Home Logo**	Selects the home team so that its logo is shown on the announcement; the guest logo is dimmed. The home team is selected when the page opens.
8		**Guest Logo**	Selects the guest team so that its logo is shown on the announcement; the home logo is dimmed.
9		**Remove Sponsor Logo**	Removes the sponsor logo from the announcement and the other info graphics (start.xml BOARD/LogoSponsor is cleared); the five sponsor pictures are dimmed.
10		**Preset 1**	Selects announcement preset 1 (marked brown) and loads its stored text into the text field; the text shown next is stored back into this preset.
11		**Preset 3**	Selects announcement preset 3 (marked brown) and loads its stored text into the text field; the text shown next is stored back into this preset.
12		**Preset 2**	Selects announcement preset 2 (marked brown) and loads its stored text into the text field; the text shown next is stored back into this preset.
13		**Announcement Text**	The announcement text, several lines allowed. A time in curly brackets, for example {21:00}, is shown as a countdown to that time. The text is applied and stored in the active preset when Show is pressed.

No.	Control	Name	What it does
14		**Preset 4**	Selects announcement preset 4 (marked brown) and loads its stored text into the text field; the text shown next is stored back into this preset.
15		**Style**	Shows the name of the current announcement style (Standart, Gradient, Shape, Stripe-H, Stripe-V or Stroke) and opens the style list when clicked.
16		**Show**	Shows the announcement on the board with the text, the selected style, background, team logo and sponsor logo; a running video or picture on the board is stopped first. The text is stored in config.xml under the active preset (ANNOUNCE/Tab01 to Tab04).
17		**Scoreboard Background**	Use Scoreboard Background: shows the announcement on the scoreboard's own background video. The choice is marked with a green border and written to config.xml, but it is not read back: every time the page is opened it comes up with the black background, or with the scoreboard background once a file has been chosen with the file button.
18		**Black Background**	Use Black Background: shows the announcement on a plain black background. The choice is marked with a green border and written to config.xml, but it is not read back: every time the page is opened it comes up with the black background, or with the scoreboard background once a file has been chosen with the file button.
19		**Selected Background**	Use Selected Background: shows the announcement on an image or video file of your own and reveals the file button next to it; the name of the saved file appears in the box. The choice is marked with a green border and written to config.xml, but it is not read back when the page is opened again.

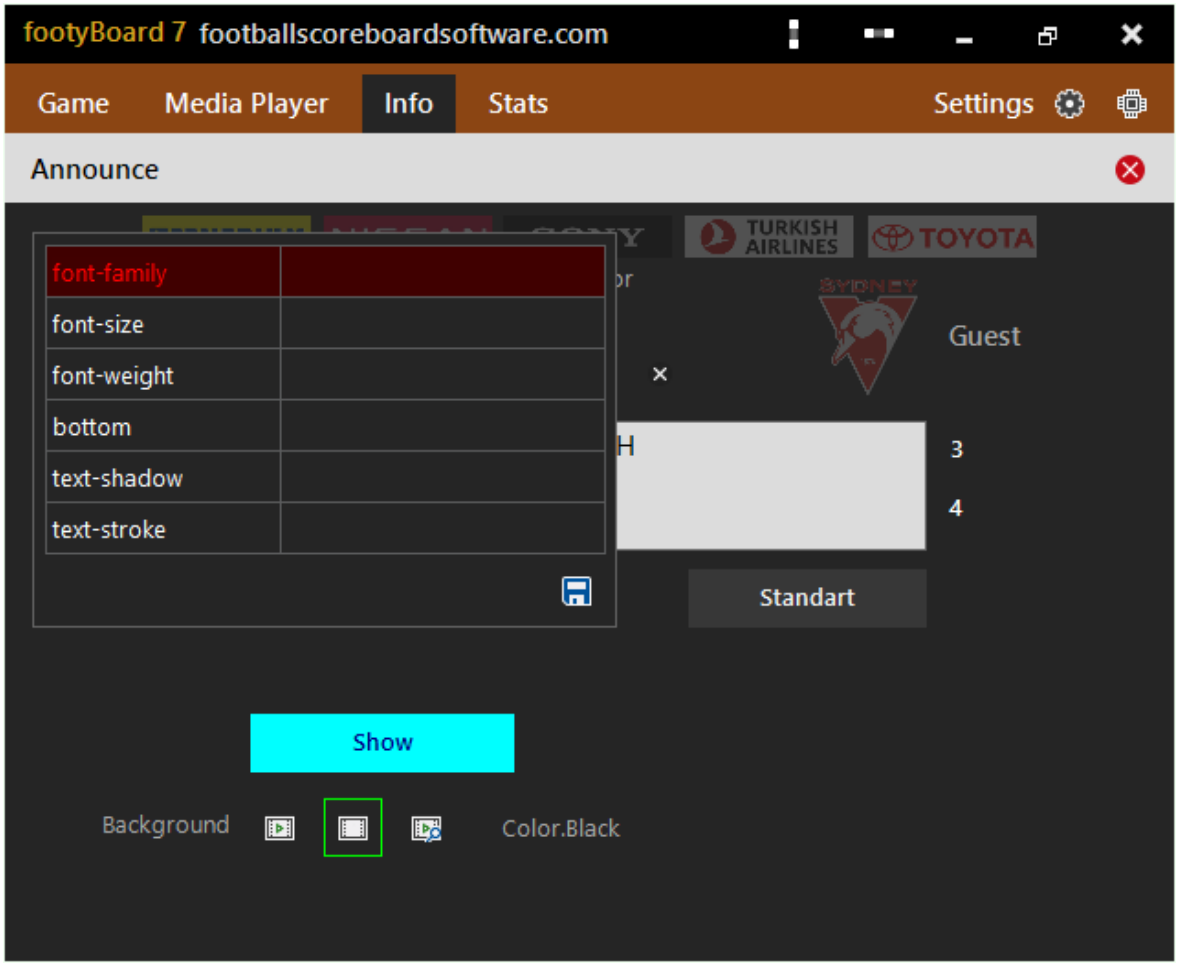


Figure 53. The style panel of the announcement (gear button): display mode, font and colours.

16.3 Goal: the score event graphic

The Goal button opens the graphic for every score type of the sport mode.

BOARD OUTPUT **CONTROL PANEL**

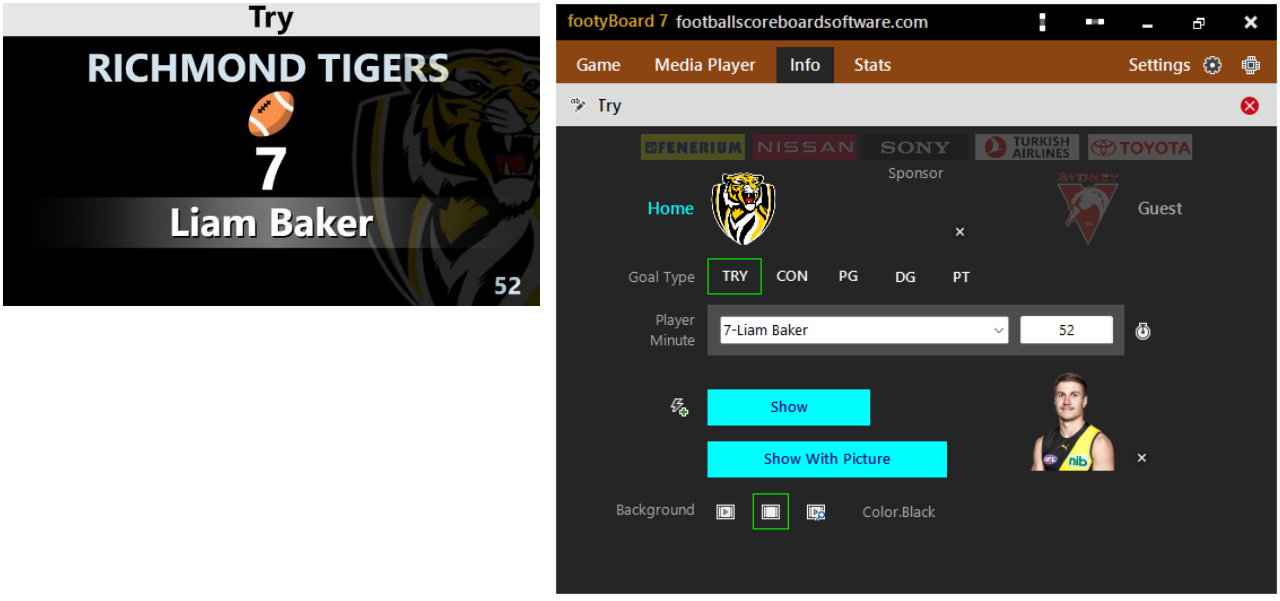


Figure 54. A try of home number 7 shown with Show.

BOARD OUTPUT **CONTROL PANEL**

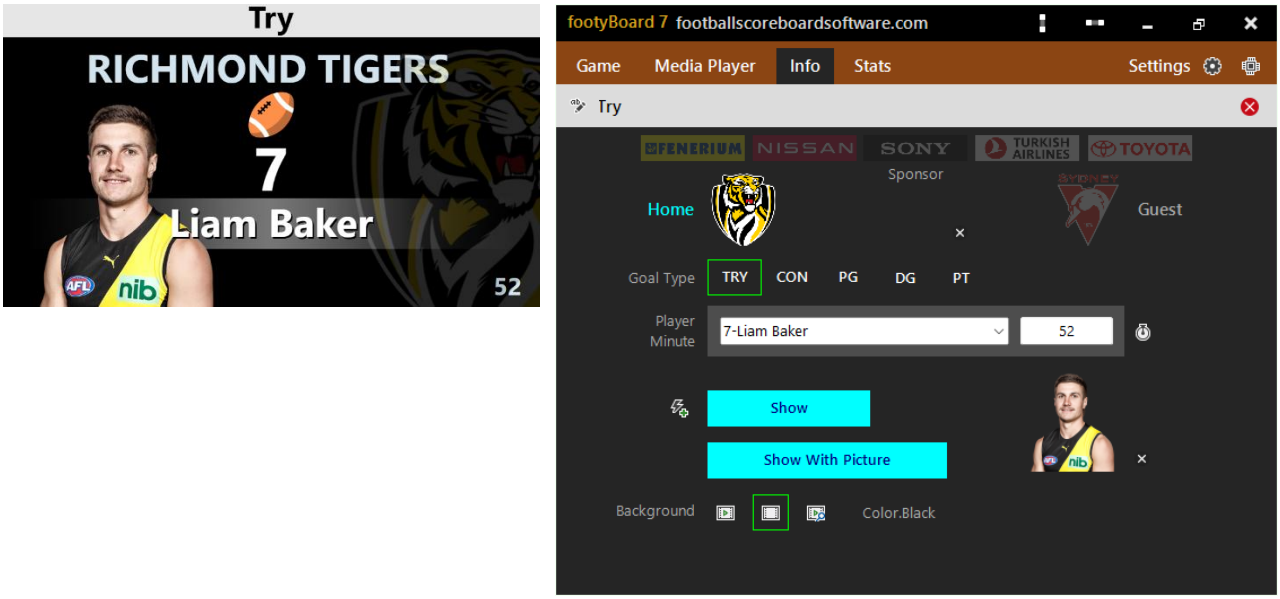


Figure 55. The same event with Show With Picture.

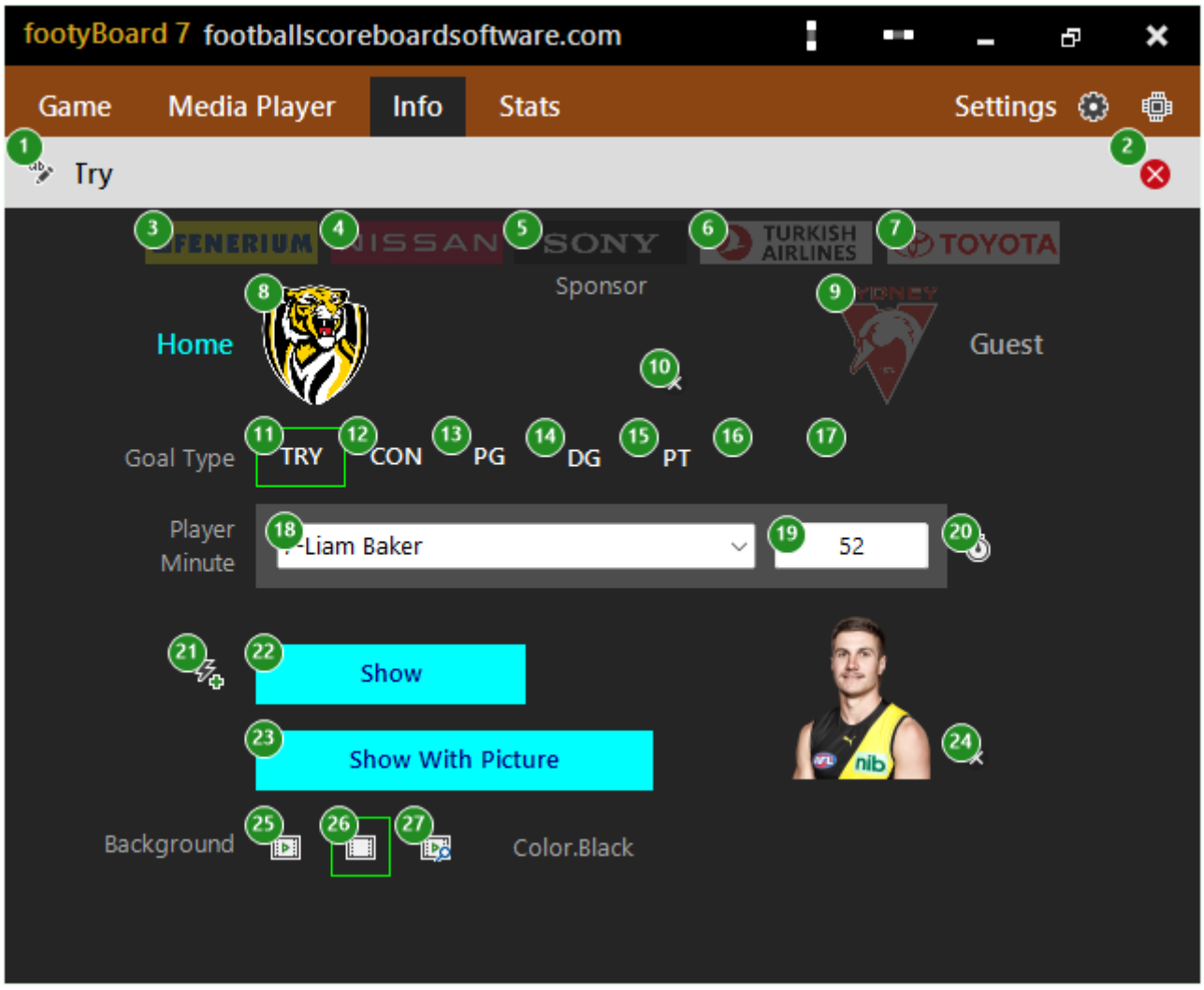
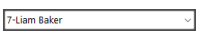


Figure 56. The controls of the score event editor.

No.	Control	Name	What it does
1		**Edit Title**	Opens the Title tab of the language page in Settings, where the caption texts shown on the goal graphic (one per score type) and the other info graphics are changed.
2		**Close**	Closes the Goal page (Escape does the same).
3		**Sponsor Logo 1**	Selects the first of the five sponsor logos of the Sponsors page for the goal graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
4		**Sponsor Logo 2**	Selects the second of the five sponsor logos of the Sponsors page for the goal graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
5		**Sponsor Logo 3**	Selects the third of the five sponsor logos of the Sponsors page for the goal graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
6		**Sponsor Logo 4**	Selects the fourth of the five sponsor logos of the Sponsors page for the goal graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
7		**Sponsor Logo 5**	Selects the fifth of the five sponsor logos of the Sponsors page for the goal graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
8		**Home Logo**	Selects the home team for the event: its logo is shown at full strength, its player list is loaded and the previous player entry and picture are cleared. The home team is selected when the page opens.
9		**Guest Logo**	Selects the guest team for the event: its logo is shown at full strength, its player list is loaded and the previous player entry and picture are cleared.
10		**Clear Sponsor**	Removes the sponsor logo from the goal graphic and the other info graphics (start.xml BOARD/LogoSponsor is cleared); the five sponsor pictures are dimmed.
11		**Score Type 1**	Selects the first score type of the current sport mode (for example Try, Goal or Touchdown) for the graphic and marks it with a green border; the page title changes to the title text of that type. The seven buttons are the score types chosen in the Timer, Period and Score Settings (GOALS section of start.xml); a button without a type is empty and disabled. The selected team is kept; the score is not counted.

No.	Control	Name	What it does
12	CON	**Score Type 2**	Selects the second score type of the current sport mode for the graphic and marks it with a green border; the page title changes to the title text of that type. The seven buttons are the score types chosen in the Timer, Period and Score Settings (GOALS section of start.xml); a button without a type is empty and disabled. The selected team is kept; the score is not counted.
13	PG	**Score Type 3**	Selects the third score type of the current sport mode for the graphic and marks it with a green border; the page title changes to the title text of that type. The seven buttons are the score types chosen in the Timer, Period and Score Settings (GOALS section of start.xml); a button without a type is empty and disabled. The selected team is kept; the score is not counted.
14	DG	**Score Type 4**	Selects the fourth score type of the current sport mode for the graphic and marks it with a green border; the page title changes to the title text of that type. The seven buttons are the score types chosen in the Timer, Period and Score Settings (GOALS section of start.xml); a button without a type is empty and disabled. The selected team is kept; the score is not counted.
15	PT	**Score Type 5**	Selects the fifth score type of the current sport mode for the graphic and marks it with a green border; the page title changes to the title text of that type. The seven buttons are the score types chosen in the Timer, Period and Score Settings (GOALS section of start.xml); a button without a type is empty and disabled. The selected team is kept; the score is not counted.
16		**Score Type 6**	Selects the sixth score type of the current sport mode for the graphic and marks it with a green border; the page title changes to the title text of that type. The seven buttons are the score types chosen in the Timer, Period and Score Settings (GOALS section of start.xml); a button without a type is empty and disabled. The selected team is kept; the score is not counted.
17		**Score Type 7**	Selects the seventh score type of the current sport mode for the graphic and marks it with a green border; the page title changes to the title text of that type. The seven buttons are the score types chosen in the Timer, Period and Score Settings (GOALS section of start.xml); a button without a type is empty and disabled. The selected team is kept; the score is not counted.
18		**Player**	Player list of the selected team (Starting XI, Substitutes and Other Players, sorted by number): pick the scorer or type a shirt number and name. Picking a listed player loads that player's picture; typing does not clear it.
19		**Minute**	The minute text shown on the graphic, for example Minute 37 or 40+2; it can be typed or filled by the minute button. For the events summary only the digits and the plus sign are kept. The field is emptied each time the page opens.
20		**Match Minute**	Fills the minute field with the word Minute and the current match minute of the control panel clock when it is empty, or clears it when it has a value; the player field is narrowed or widened to make room.

No.	Control	Name	What it does
21		**Add to Match Timeline**	Add to Match Timeline: switches on or off whether a scoring event shown from this page is also added to the match events summary. A green border means it is on; the setting is shared with the Card and Substitution pages and saved in start.xml (BOARD/Add2Events).
22		**Show**	Show: puts the scoring event graphic on the board with the title of the selected score type, the team name and logo, shirt number, player name, minute and sponsor logo; a running video or picture on the board is stopped first. The player field must not be empty (it flashes red otherwise). When Add to Match Timeline is on, the event is added to the summary of the selected team, always as a goal event. The score itself is not changed.
23		**Show With Picture**	Show With Picture: puts the scoring event graphic on the board including the player photo (a _Goal variant of the picture file is used when it exists), together with the title of the score type, team, shirt number, name, minute and sponsor logo. The player field must not be empty (it flashes red otherwise). When Add to Match Timeline is on, the event is added to the summary; the second and third score type get their own event symbols, and the second type is credited to the other team. The score itself is not changed.
24		**Clear Picture**	Removes the player picture so that Show With Picture shows the graphic without a photo.
25		**Scoreboard Background**	Use Scoreboard Background: shows the goal graphic on the scoreboard's own background video. The choice is marked with a green border and saved in config.xml (BACK/Goal).
26		**Black Background**	Use Black Background: shows the goal graphic on a plain black background. The choice is marked with a green border and saved in config.xml (BACK/Goal).
27		**Selected Background**	Use Selected Background: shows the goal graphic on an image or video file of your own and reveals the file button next to it; the name of the saved file appears in the box. The choice is marked with a green border and saved in config.xml (BACK/Goal).

- Click the home or the guest logo to choose the team.
- Goal Type: up to seven buttons with the score types. They are the types of the row Goal Screen Configuration in the Timer, Period & Score Settings (chapter 5.2): TRY, CON, PG, DG and PT in Rugby Union, TD, XP+1, 2PC, FG and SF in American Football, G and B in Aussie Rules and so on.
- Player: pick the player from the squad list (sorted by number) or type a number and a name.
- Minute: the small button beside the box fills in the current match minute or empties the box.
- Show puts the graphic on the board; Show With Picture adds the player's picture.
- The list icon (Add to Match Timeline) adds a row to the timeline of the Stats page with every Show while it is lit. The same switch is used by the card and substitution editors.

> **Note:** Showing a score event does not count the score. Count the score with the buttons of the Game page. The phone page has the option Count the Score Too, which does both.

> **Note:** On a new installation the Goal Type buttons are filled from the score types of the saved mode at the first start; Save & Apply in the Timer, Period & Score Settings writes your own choice of up to seven types.

The minute of an event follows the clock: with a clock that counts up it is the running minute (12:34 is minute 13); with a count-down clock it is the played minute of the match (in the second quarter of 15 minutes, 12:26 on the clock is minute 18).

16.4 Yellow Card and Red Card

Choose the team, the card type (yellow or red), the player and the minute, then Show or Show With Picture. The card graphics are independent of the sin bin of the Game page: showing a card here does not add a sin-bin row, and a sin-bin card does not show this graphic.

BOARD OUTPUT **CONTROL PANEL**

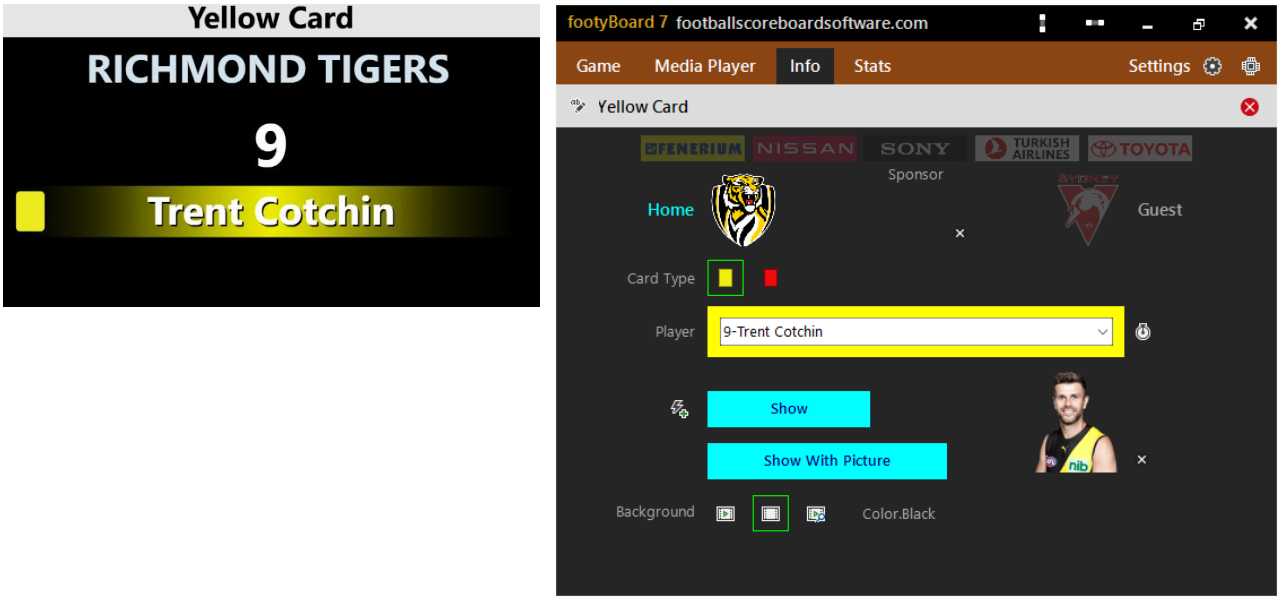


Figure 57. A yellow card shown from the Yellow Card page.

BOARD OUTPUT **CONTROL PANEL**

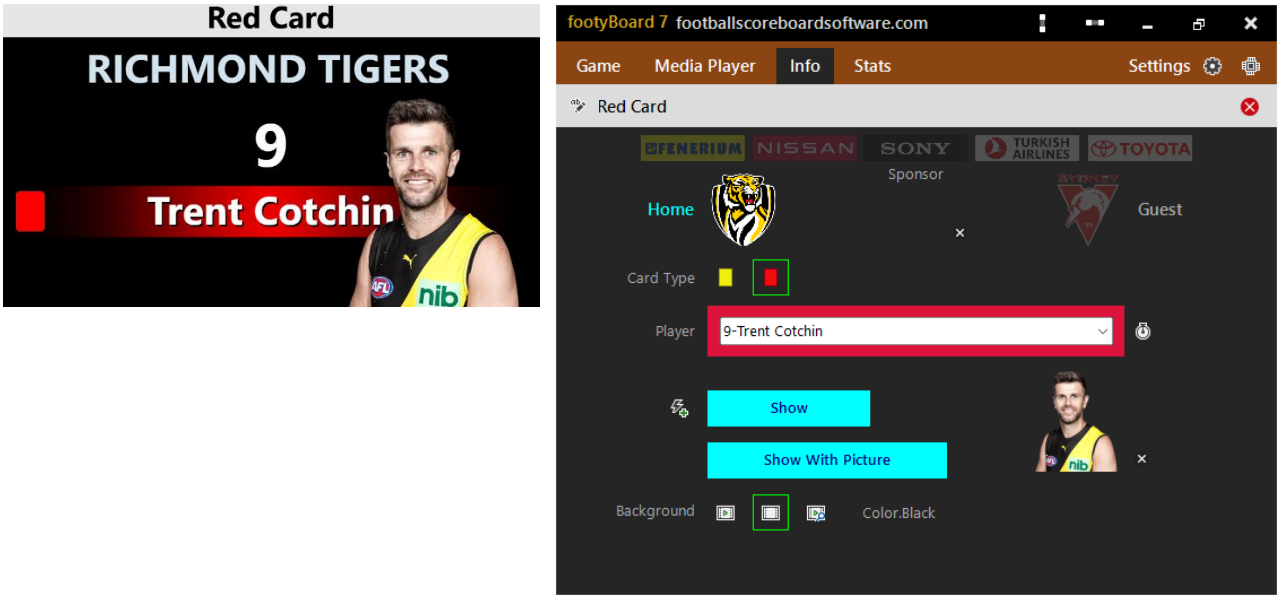


Figure 58. A red card with the player picture.

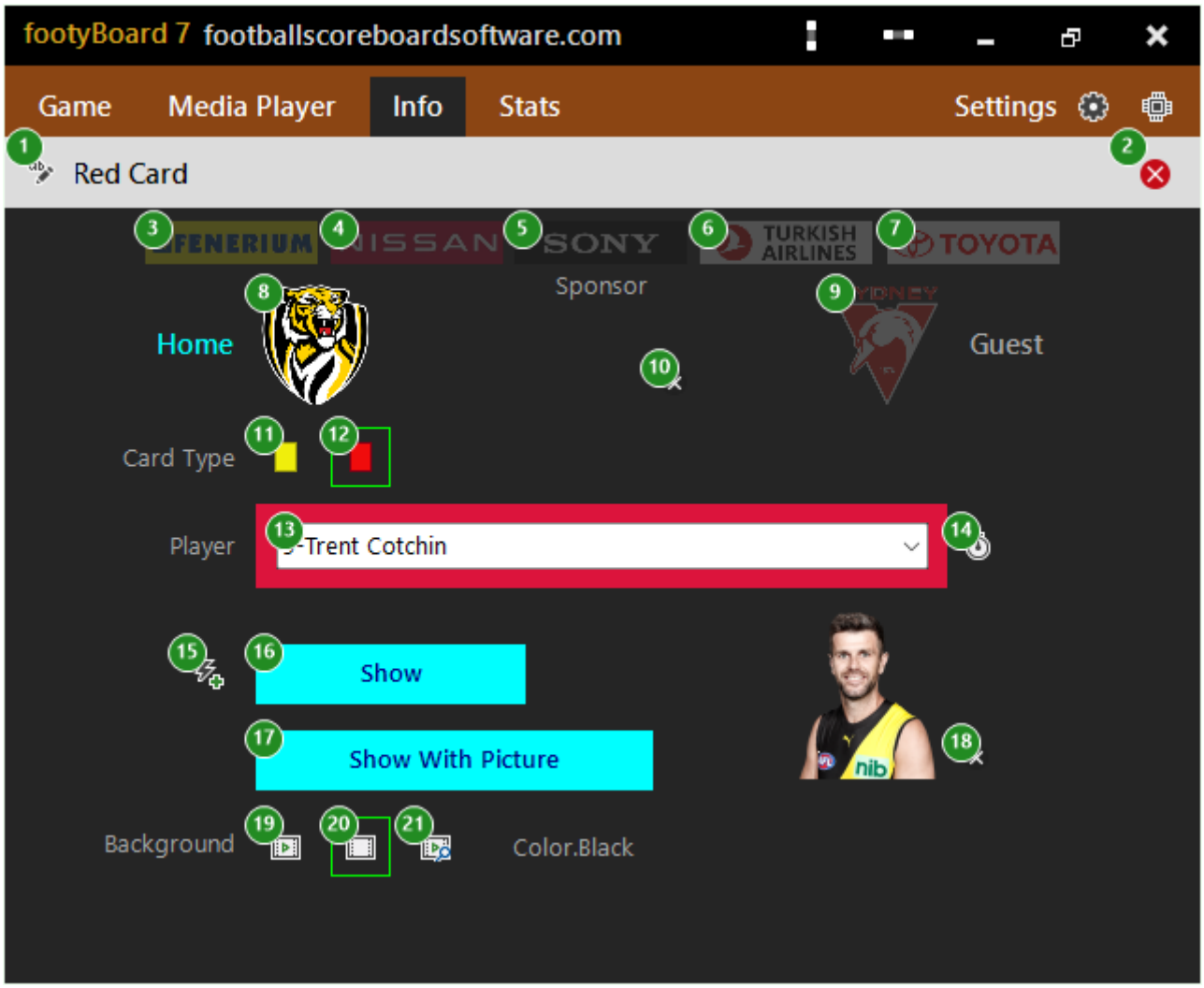


Figure 59. The controls of the card editor.

No.	Control	Name	What it does
1		**Edit Title**	Opens the Title tab of the language page in Settings, where the caption texts shown on the card and the other info graphics are changed.
2		**Close**	Closes the Card page (Escape does the same).
3		**Sponsor Logo 1**	Selects the first of the five sponsor logos of the Sponsors page for the card graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
4		**Sponsor Logo 2**	Selects the second of the five sponsor logos of the Sponsors page for the card graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
5		**Sponsor Logo 3**	Selects the third of the five sponsor logos of the Sponsors page for the card graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.

No.	Control	Name	What it does
6		**Sponsor Logo 4**	Selects the fourth of the five sponsor logos of the Sponsors page for the card graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
7		**Sponsor Logo 5**	Selects the fifth of the five sponsor logos of the Sponsors page for the card graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
8		**Home Logo**	Selects the home team for the card: its logo is shown at full strength, its player list is loaded and the previous player entry and picture are cleared. The home team is selected when the page opens.
9		**Guest Logo**	Selects the guest team for the card: its logo is shown at full strength, its player list is loaded and the previous player entry and picture are cleared.
10		**Clear Sponsor**	Removes the sponsor logo from the card graphic and the other info graphics (start.xml BOARD/LogoSponsor is cleared); the five sponsor pictures are dimmed.
11		**Yellow Card**	Selects a yellow card: the page title becomes Yellow Card, the colour bars turn yellow and the yellow card symbol is used on the graphic. The card page only shows the graphic; it does not change the sin bin or the red card count.
12		**Red Card**	Selects a red card: the page title becomes Red Card, the colour bars turn red and the red card symbol is used on the graphic. The card page only shows the graphic; it does not change the sin bin or the red card count.
13		**Player**	Player list of the selected team (Starting XI, Substitutes and Other Players, sorted by number): pick the booked player or type a shirt number and name. Picking a listed player loads that player's picture, typing clears it.
14		**Match Minute**	Fills the minute field with the current match minute of the control panel clock when it is empty, or clears it when it has a value; the player field is narrowed or widened to make room. On the first opening of the page the minute field ends up empty, on later openings it is prefilled.
15		**Add to Match Timeline**	Add to Match Timeline: switches on or off whether a card shown from this page is also added to the match events summary (as a yellow, second yellow or red card event). A green border means it is on; the setting is shared with the Goal and Substitution pages and saved in start.xml (BOARD/Add2Events).
16		**Show**	Show: puts the card graphic on the board with the team name and logo, shirt number, player name, minute, card symbol and sponsor logo; a running video or picture on the board is stopped first. The player field must not be empty (it flashes red otherwise); when Add to Match Timeline is on, the card is also added to the events summary.

No.	Control	Name	What it does
17	Show With Picture	**Show With Picture**	Show With Picture: puts the card graphic on the board including the player photo (a _Card variant of the picture file is used when it exists), together with team, shirt number, name, minute, card symbol and sponsor logo. The player field must not be empty (it flashes red otherwise); when Add to Match Timeline is on, the card is also added to the events summary.
18	✕	**Clear Picture**	Removes the player picture so that Show With Picture shows the graphic without a photo.
19		**Scoreboard Background**	Use Scoreboard Background: shows the card graphic on the scoreboard's own background video. The choice is marked with a green border and saved in config.xml (BACK/Card). As long as no file has been chosen with the file button, the page comes up with the black background each time it is opened.
20		**Black Background**	Use Black Background: shows the card graphic on a plain black background. The choice is marked with a green border and saved in config.xml (BACK/Card).
21		**Selected Background**	Use Selected Background: shows the card graphic on an image or video file of your own and reveals the file button next to it; the name of the saved file appears in the box. The choice is marked with a green border and saved in config.xml (BACK/Card).

16.5 Substitution and Multiple

Substitution shows one change: pick Player In and Player Out and click Show, or Show With Picture for both pictures. Multiple builds a list of several changes of one team with Add and Delete and shows them in one graphic.

BOARD OUTPUT **CONTROL PANEL**

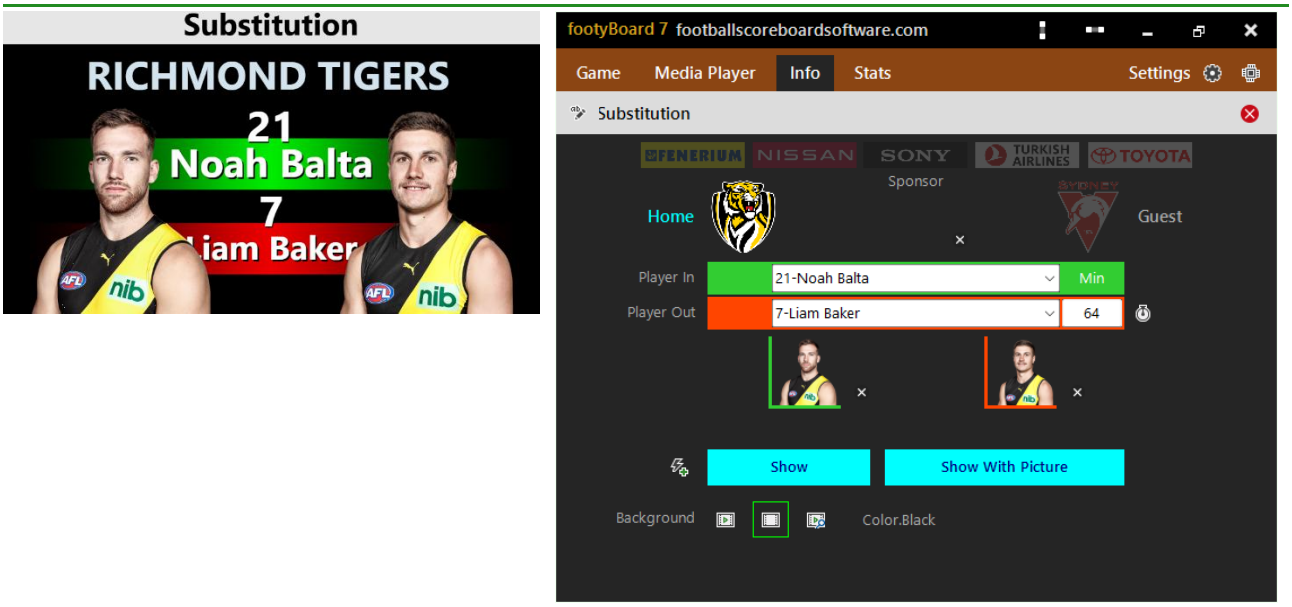


Figure 60. A substitution with the pictures of both players.

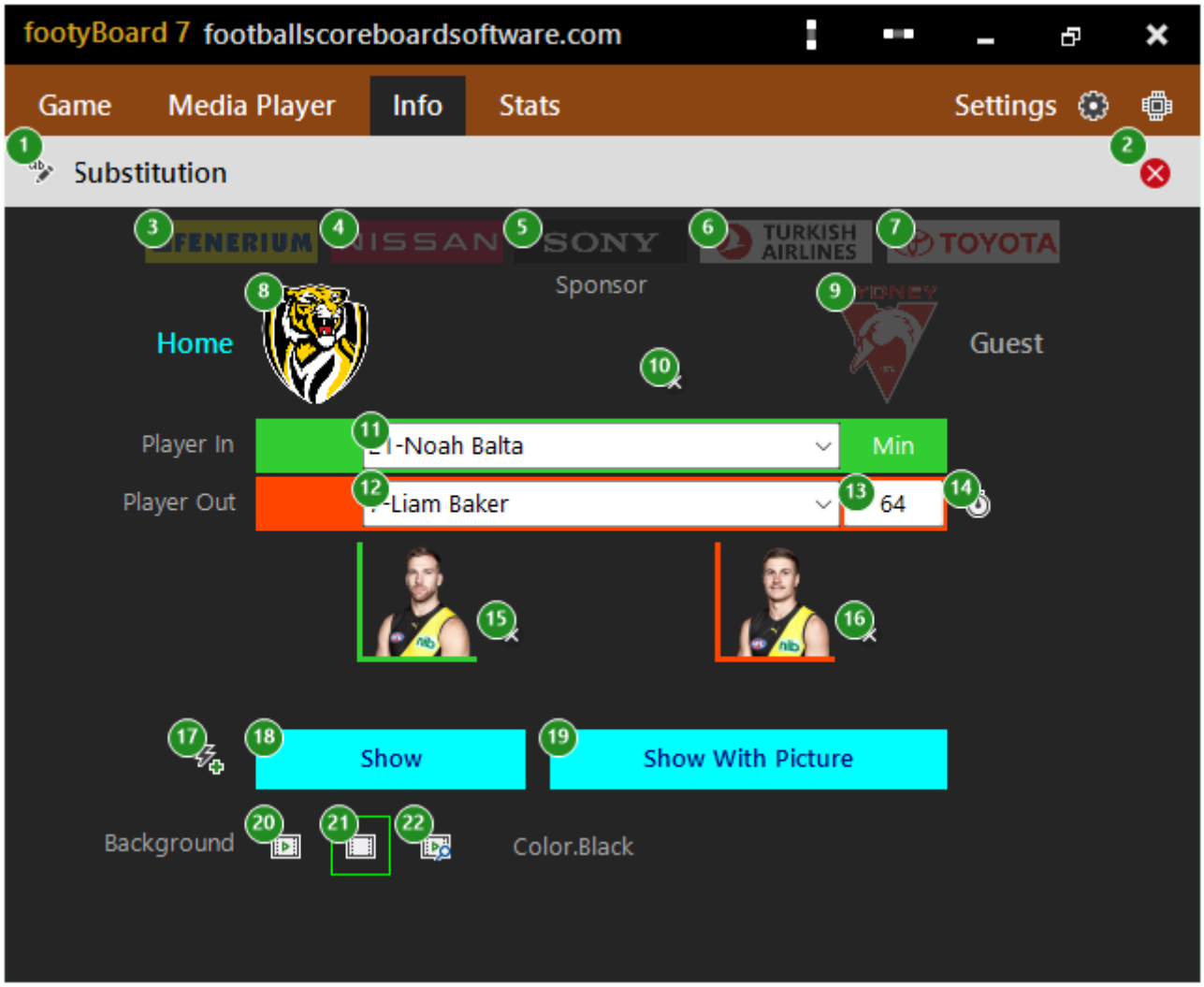


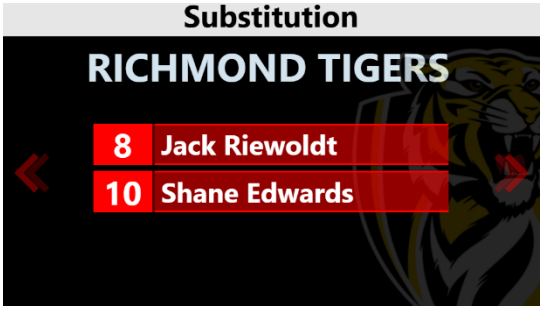
Figure 61. The controls of the substitution editor.

No.	Control	Name	What it does
1		**Edit Title**	Opens the Title tab of the language page in Settings, where the caption texts shown on the substitution graphic and the other info graphics are changed.
2		**Close**	Closes the Substitution page (Escape does the same).
3		**Sponsor Logo 1**	Selects the first of the five sponsor logos of the Sponsors page for the substitution graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
4		**Sponsor Logo 2**	Selects the second of the five sponsor logos of the Sponsors page for the substitution graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
5		**Sponsor Logo 3**	Selects the third of the five sponsor logos of the Sponsors page for the substitution graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.

No.	Control	Name	What it does
6		**Sponsor Logo 4**	Selects the fourth of the five sponsor logos of the Sponsors page for the substitution graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
7		**Sponsor Logo 5**	Selects the fifth of the five sponsor logos of the Sponsors page for the substitution graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
8		**Home Logo**	Selects the home team for the substitution: its logo is shown at full strength, its player list is loaded into both fields and both player entries and pictures are cleared. The home team is selected when the page opens.
9		**Guest Logo**	Selects the guest team for the substitution: its logo is shown at full strength, its player list is loaded into both fields and both player entries and pictures are cleared.
10		**Clear Sponsor**	Removes the sponsor logo from the substitution graphic and the other info graphics (start.xml BOARD/LogoSponsor is cleared); the five sponsor pictures are dimmed.
11		**Player In**	Player list of the selected team for the player coming on: pick a player or type a shirt number and name. Picking a listed player loads that player's picture.
12		**Player Out**	Player list of the selected team for the player going off: pick a player or type a shirt number and name. Picking a listed player loads that player's picture.
13		**Minute**	The minute shown on the graphic; it is prefilled with the current match minute when the page opens and can be typed over or filled and hidden with the minute button. For the events summary only the digits and the plus sign are kept.
14		**Match Minute**	Fills the minute field with the current match minute of the control panel clock and shows the field when it is empty, or clears and hides the field when it has a value.
15		**Clear Picture In**	Removes the picture of the player coming on so that Show With Picture shows the graphic without that photo.
16		**Clear Picture Out**	Removes the picture of the player going off so that Show With Picture shows the graphic without that photo.
17		**Add to Match Timeline**	Add to Match Timeline: switches on or off whether a substitution shown from this page is also added to the match events summary. A green border means it is on; the setting is shared with the Goal and Card pages and saved in start.xml (BOARD/Add2Events).

No.	Control	Name	What it does
18	Show	**Show**	Show: puts the substitution graphic on the board with the team name and logo, the player coming on (green marker), the player going off (red marker), the minute and the sponsor logo; a running video or picture on the board is stopped first. Both player fields must be filled (an empty one flashes red); when Add to Match Timeline is on, the change is also added to the events summary with the minute.
19	Show With Picture	**Show With Picture**	Show With Picture: puts the substitution graphic on the board including the photos of both players, together with team, minute and sponsor logo. Both player fields must be filled (an empty one flashes red); when Add to Match Timeline is on, the change is also added to the events summary, but with the shirt number of the player going off in place of the minute.
20		**Scoreboard Background**	Use Scoreboard Background: shows the substitution graphic on the scoreboard's own background video. The choice is marked with a green border and saved in config.xml (BACK/Substitution). As long as no file has been chosen with the file button, the page comes up with the black background each time it is opened.
21		**Black Background**	Use Black Background: shows the substitution graphic on a plain black background. The choice is marked with a green border and saved in config.xml (BACK/Substitution).
22		**Selected Background**	Use Selected Background: shows the substitution graphic on an image or video file of your own and reveals the file button next to it; the name of the saved file appears in the box. The choice is marked with a green border and saved in config.xml (BACK/Substitution).

BOARD OUTPUT



CONTROL PANEL

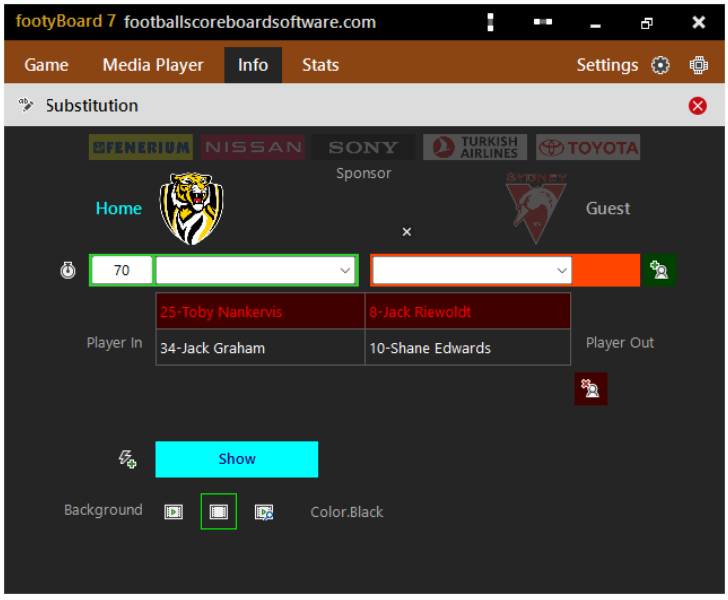


Figure 62. Two substitutions in one graphic (Multiple).

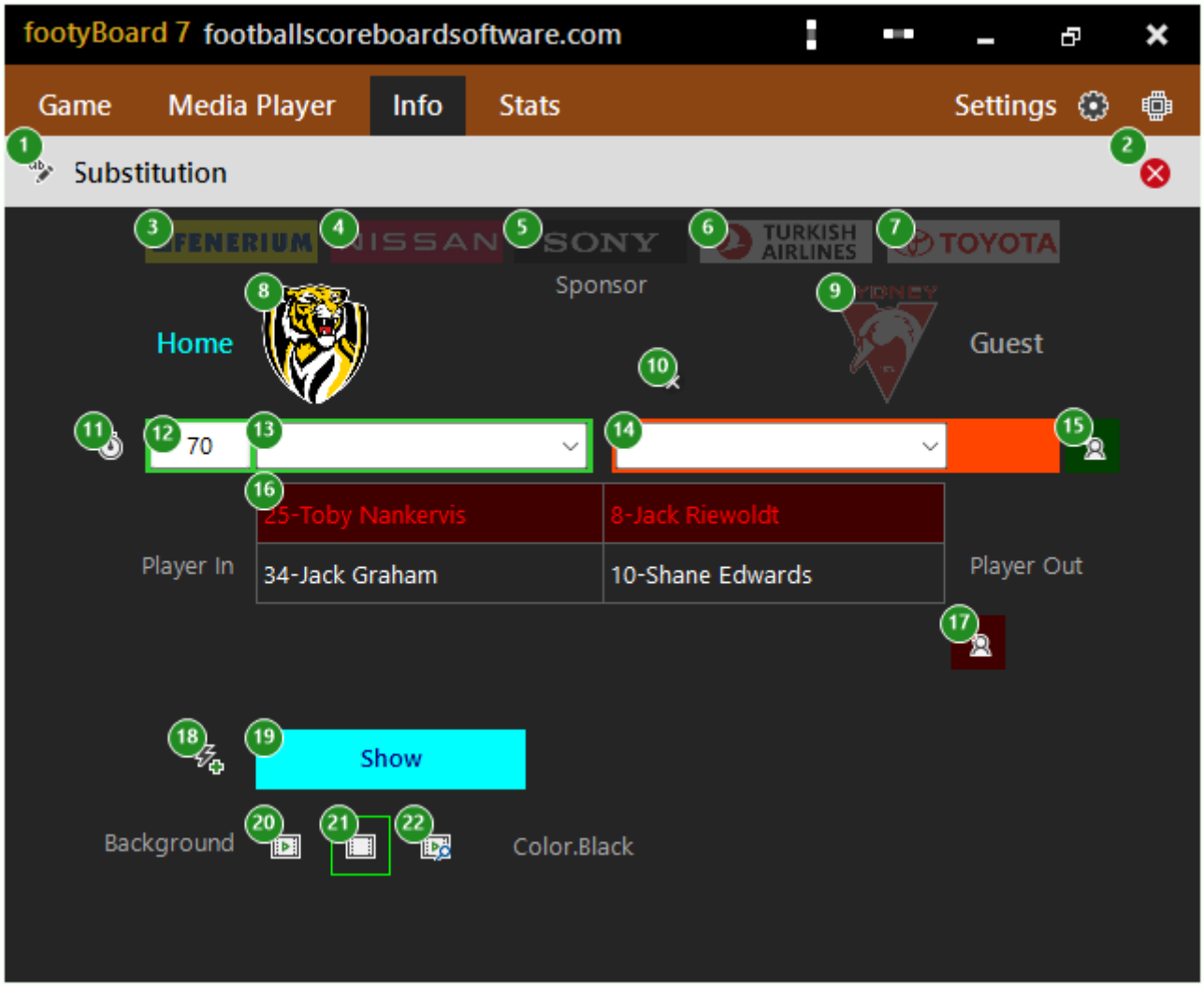


Figure 63. The controls of the Multiple editor.

No.	Control	Name	What it does
1		**Edit Title**	Opens the Title tab of the language page in Settings, where the caption texts shown on the substitution graphic and the other info graphics are changed.
2		**Close**	Closes the Multiple substitution page (Escape does the same).
3		**Sponsor Logo 1**	Selects the first of the five sponsor logos of the Sponsors page for the multiple substitution graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
4		**Sponsor Logo 2**	Selects the second of the five sponsor logos of the Sponsors page for the multiple substitution graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.

No.	Control	Name	What it does
5		**Sponsor Logo 3**	Selects the third of the five sponsor logos of the Sponsors page for the multiple substitution graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
6		**Sponsor Logo 4**	Selects the fourth of the five sponsor logos of the Sponsors page for the multiple substitution graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
7		**Sponsor Logo 5**	Selects the fifth of the five sponsor logos of the Sponsors page for the multiple substitution graphic and the other info graphics (saved in start.xml BOARD/LogoSponsor); the chosen logo is shown at full strength and in the preview, the others are dimmed.
8		**Home Logo**	Selects the home team: its logo is shown at full strength, its players are loaded into the two lists and the pair table is emptied. The home team is selected when the page opens.
9		**Guest Logo**	Selects the guest team: its logo is shown at full strength, its players are loaded into the two lists and the pair table is emptied.
10		**Clear Sponsor**	Removes the sponsor logo from the multiple substitution graphic and the other info graphics (start.xml BOARD/LogoSponsor is cleared); the five sponsor pictures are dimmed.
11		**Match Minute**	Fills the minute field with the current match minute of the control panel clock and shows the field when it is empty, or clears and hides the field when it has a value.
12		**Minute**	The minute shown on the graphic for all pairs; it is prefilled with the current match minute when the page opens and can be typed over or filled and hidden with the minute button. For the events summary only the digits and the plus sign are kept.
13		**Player In**	Drop-down list of the selected team's players from which the player coming on is picked before Add Pair; players already in the table are left out. Typing a name is not accepted by Add Pair.
14		**Player Out**	Drop-down list of the selected team's players from which the player going off is picked before Add Pair; players already in the table are left out. Typing a name is not accepted by Add Pair.
15		**Add Pair**	Adds the player coming on and the player going off chosen in the two lists as a new pair to the table and removes both players from the two lists. Both players must be picked from the lists and must differ; otherwise the focus just moves to the missing list.

No.	Control	Name	What it does
16		**Substitution Pairs**	The pairs to be shown, one row per change with the columns In and Out (number and name). A click selects a row for Remove Pair; the cells cannot be edited. The table is emptied when the page opens or the team is changed.
17		**Remove Pair**	Removes the selected pair from the table and puts its players back into the two lists.
18		**Add to Match Timeline**	Add to Match Timeline: switches on or off whether the substitutions shown from this page are also added to the match events summary, one event per pair. A green border means it is on; the setting is shared with the Goal and Card pages and saved in start.xml (BOARD/Add2Events).
19		**Show**	Show: puts all pairs of the table on the board in one graphic with the team name and logo, the minute and the sponsor logo; a running video or picture on the board is stopped first. At least one pair must be in the table (the Player In list flashes red otherwise); when Add to Match Timeline is on, each pair is added to the events summary.
20		**Scoreboard Background**	Use Scoreboard Background: shows the multiple substitution graphic on the scoreboard's own background video. The choice is marked with a green border and saved in config.xml (BACK/Multi).
21		**Black Background**	Use Black Background: shows the multiple substitution graphic on a plain black background. The choice is marked with a green border and saved in config.xml (BACK/Multi).
22		**Selected Background**	Use Selected Background: shows the multiple substitution graphic on an image or video file of your own and reveals the file button next to it; the name of the saved file appears in the box. The choice is marked with a green border and saved in config.xml (BACK/Multi).

16.6 Home Team and Guest Team: the squad editor

The squad editor holds the players of a team in four groups (Team Line-Up, Substitutes, Other Players, Trainer): number, name, a picture for the event graphics and a picture or clip for the player picture player. Insert Player and Delete Player edit the list, rows can be moved with the mouse, Save stores the squad and Save to Teams stores it in the team database under a name you choose. A small button inside the selected picture cell assigns a file. A file that is missing is written in red. Pictures are optional.

The line-up is shown on the board with Show (team name, line-up and substitutes in columns, the trainer) or Slide (one slide per player with number, name and picture).

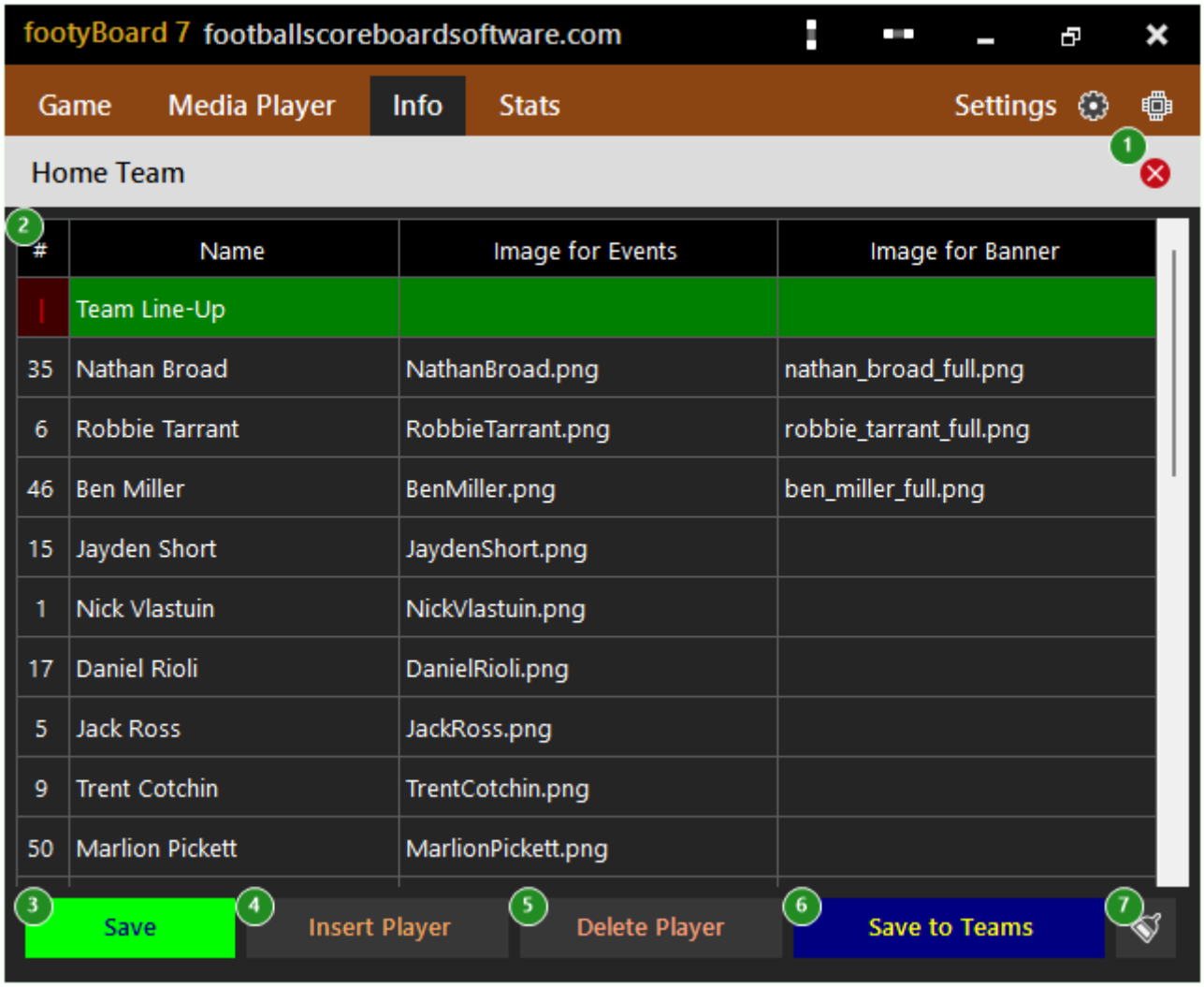
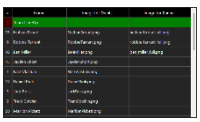


Figure 64. The squad editor of the home team.

No.	Control	Name	What it does
1		**Close**	Closes the player editor and returns to the panel behind it (Escape does the same). Unsaved changes are lost.
2		**Player Table**	The squad of the team: group heading rows (Starting XI, Substitutes, Other Players, Trainer) and under each one player row with the columns #, Name, Image for Events (the picture used on the goal, card and substitution graphics) and Image for Banner (the picture or clip used by Show Pictures). A cell is edited by typing or F2; an image cell shows a picture button and, when the file exists, a preview under the name; a missing file is written in red. A player row is moved to another place or group by dragging its number or name cell; the trainer group is excluded. Changes are kept only after Save.
3		**Save**	Saves the table to the player file of the team being edited (common\data\playersHome.xml, playersGuest.xml or the file of a saved team); empty rows are removed first. The button is lit green while there are unsaved changes.

No.	Control	Name	What it does
4	Insert Player	**Insert Player**	Inserts an empty player row at the end of the group (Starting XI, Substitutes, Other Players or Trainer) that contains the selected cell; only one trainer row is allowed. The change is kept only after Save.
5	Delete Player	**Delete Player**	Deletes the row of the selected cell from the table; group heading rows cannot be deleted. The change is kept only after Save.
6	Save to Teams	**Save to Teams**	Asks for a team name and stores the current table as a new team of the Team Database (common\data\teams.xml and a team_<id>.xml file), then confirms with a message. The name must not be empty.
7		**Clear All**	Clears all players from the table and leaves only the four empty group headings (Starting XI, Substitutes, Other Players, Trainer). Nothing is written to the file until Save is pressed.

BOARD OUTPUT **CONTROL PANEL**

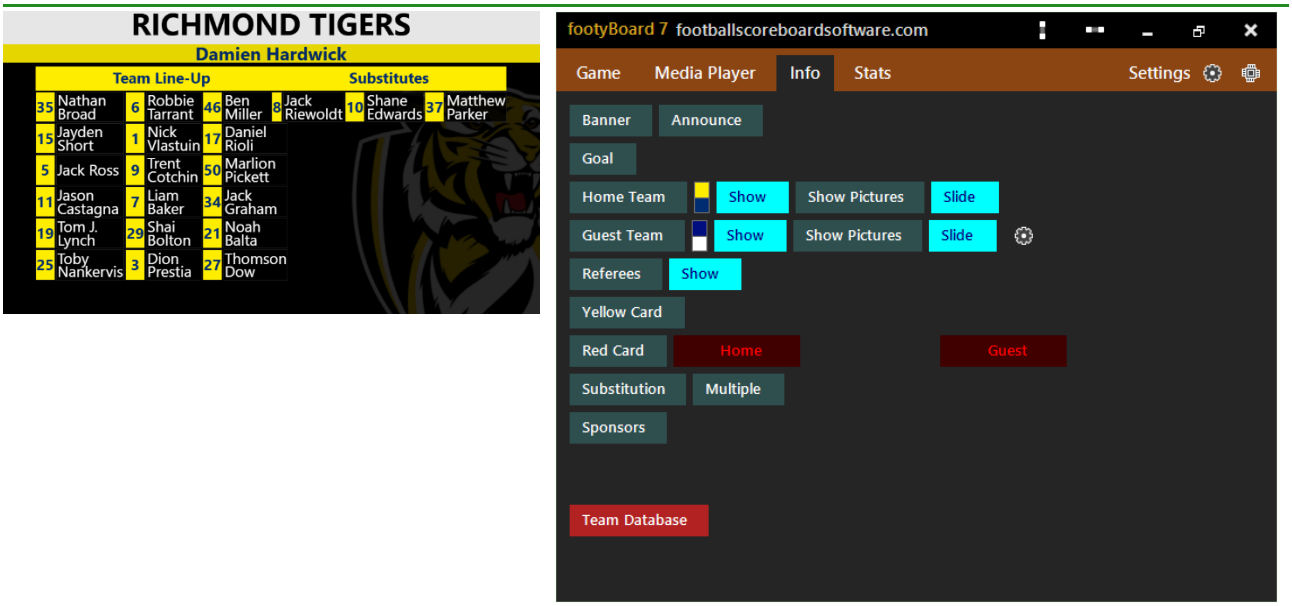


Figure 65. The line-up on the board (Info > Home Team > Show).

BOARD OUTPUT **CONTROL PANEL**

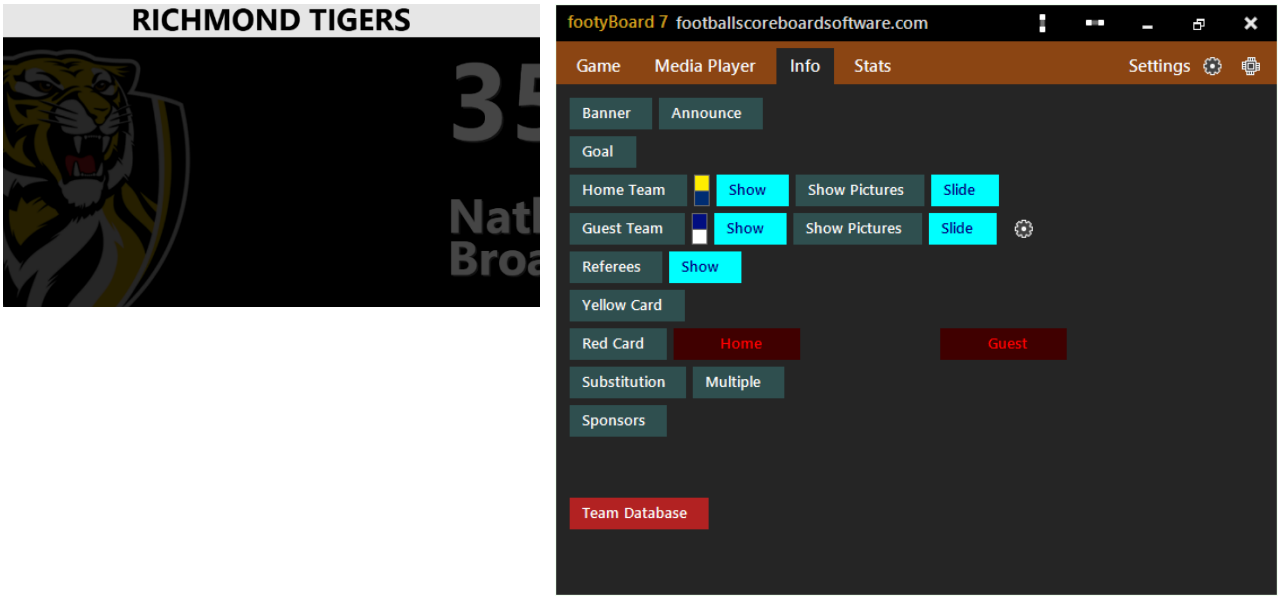


Figure 66. The team slide (Info > Home Team > Slide).

16.7 Player pictures

Show Pictures opens the player picture player. Load Team Line-Up, Substitutes or Trainer into the list, select a row and click Play to put that player's picture or clip on the board, or Start to run through the list; Slide shows a slide for the selected player. A list that was started repeats from the first row unless the option Return to Scoreboard Screen When Playlist Ends is lit. The display mode button chooses how the picture is fitted to the board.

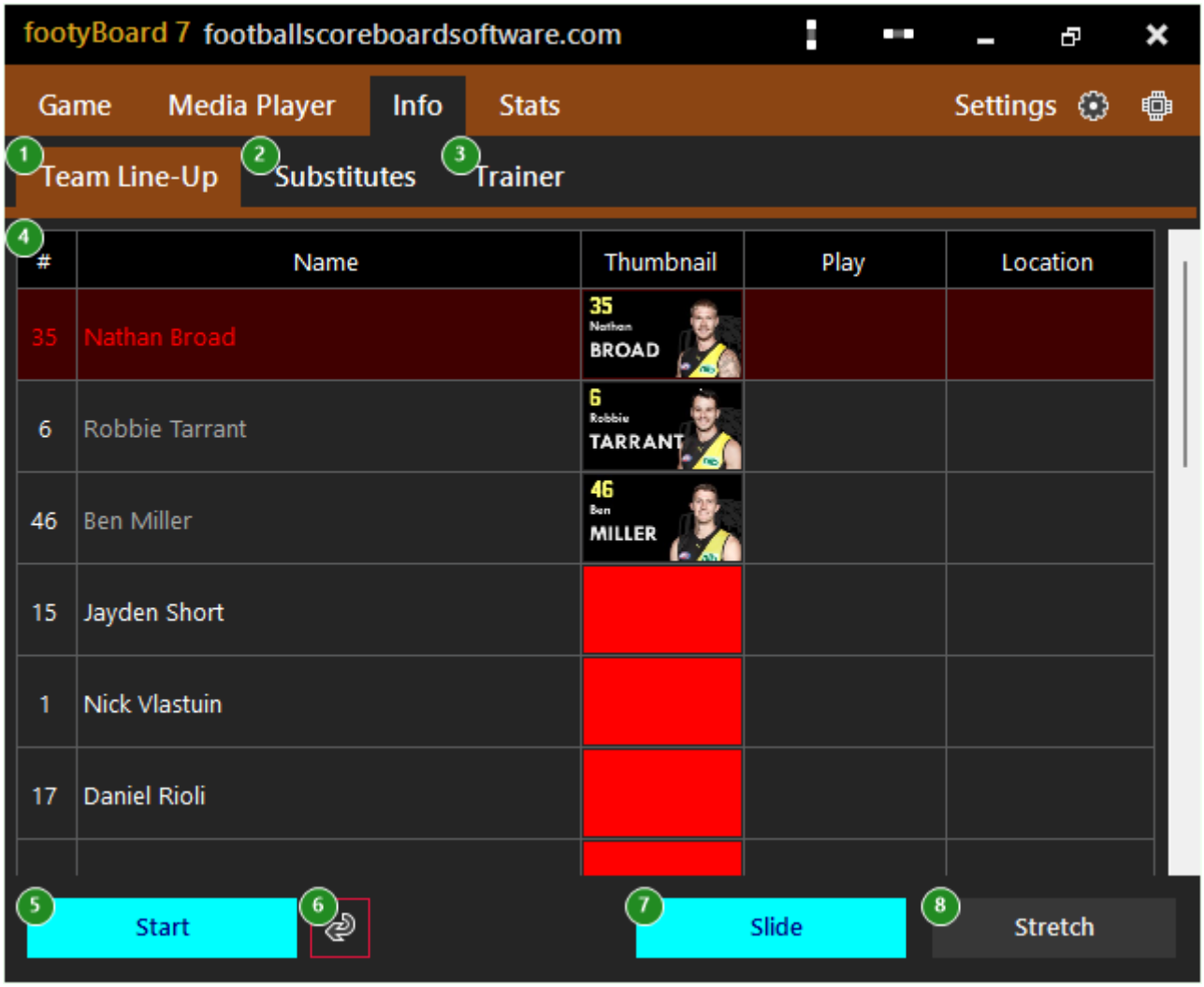


Figure 67. The player picture player.

No.	Control	Name	What it does
1	Team Line-Up	**Starting XI**	Loads the Starting XI of the selected team into the table so their pictures can be played one by one or as a playlist. Ignored while something is playing.
2	Substitutes	**Substitutes**	Loads the Substitutes of the selected team into the table so their pictures can be played one by one or as a playlist. Ignored while something is playing.
3	Trainer	**Trainer**	Loads the Trainer of the selected team into the table so the picture can be played. Ignored while something is playing.
4		**Player Picture Table**	The players of the loaded group with the columns #, Name, Preview (a thumbnail of the picture or clip from the Image for Banner column of the player editor), Play and Position (the playback position while the row is playing). A click selects a row; the row is highlighted dark red when its file exists and bright red when it is missing, and the Play button appears in its Play column. Names of still pictures are shown in grey.

No.	Control	Name	What it does
5	Start	**Start**	Starts playing the table from the selected row, one picture or clip after another; while it runs the button reads Finish and stops the playback. A row whose file is missing or cannot be played is skipped and logged; when no file can be played the playlist stops and the operator is told.
6		**Return to Scoreboard Screen When Playlist Ends**	Switches on or off whether the board returns to the scoreboard when the playlist reaches its end; a green border means it returns, a red border means the playlist starts again from the first row. The setting is kept for the session only.
7	Slide	**Slide**	Shows a player slide graphic on the board with the number, name and picture of the selected row; a running video or picture on the board is stopped first.
8	Stretch	**Display Mode**	Shows the current display mode of the board media player (for example Stretch) and opens the mode list when clicked.

16.8 Referees

The list of match officials with Insert, Delete and Save; rows can be moved with the mouse. On the board the first name is the referee and the others are the assistants.

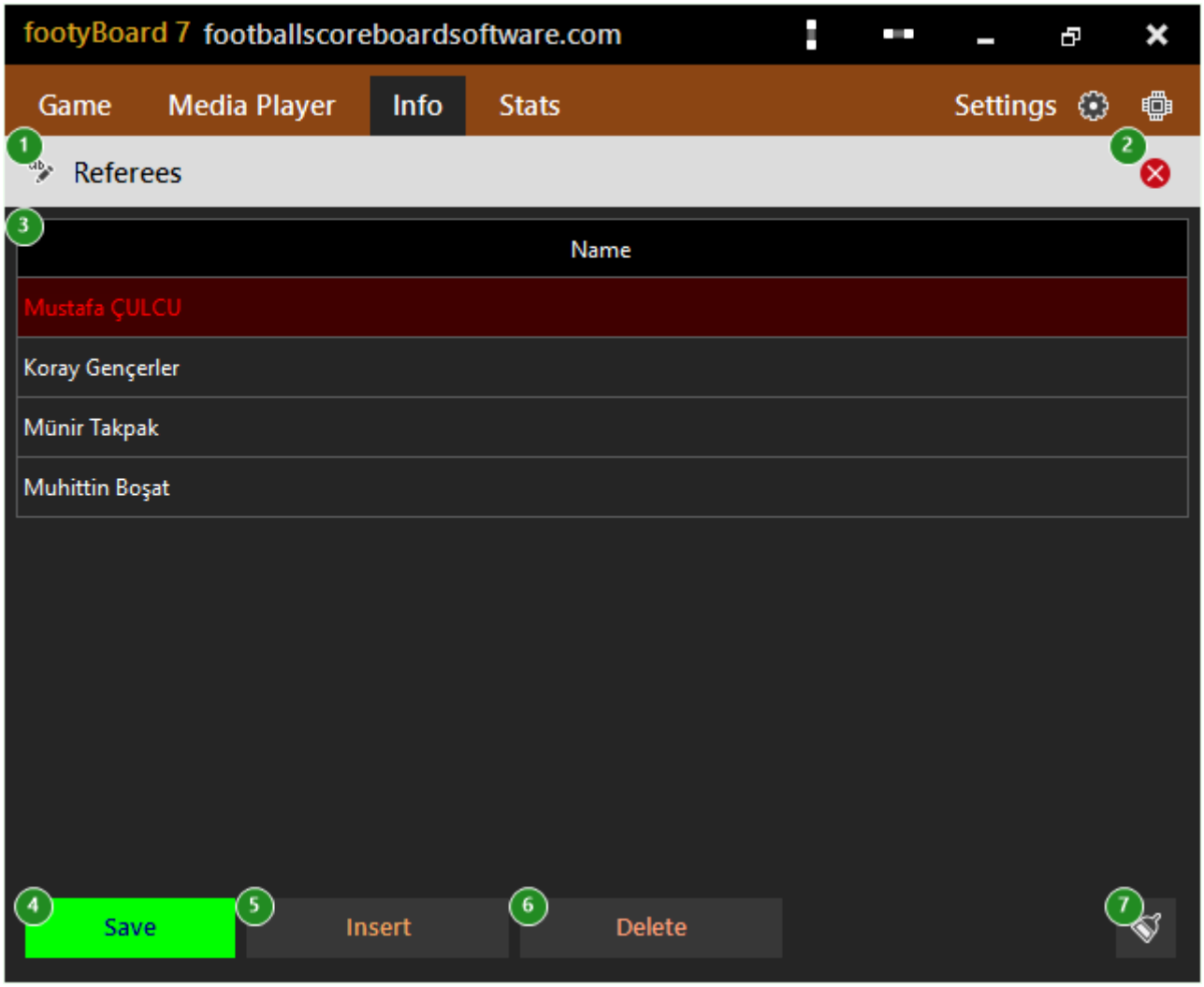
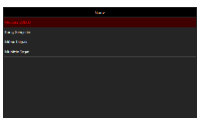
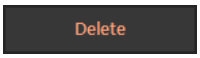


Figure 68. The referee list editor.

No.	Control	Name	What it does
1		**Edit Titles**	Opens the Title tab of the language page in Settings, where the caption texts of the referee graphic and the other info graphics are changed.
2		**Close**	Closes the referee page and returns to the panel behind it (Escape does the same). Unsaved changes are lost.
3		**Referee Table**	The list of match officials, one name per row in the order they appear on the referee graphic. A cell is edited by typing or F2; a row is moved by dragging it to another row. Changes are kept only after Save.
4		**Save**	Saves the table to common\data\referees.xml; empty rows are removed first. The button is lit green while there are unsaved changes.
5		**Insert**	Adds an empty referee row at the end of the table. The change is kept only after Save.
6		**Delete**	Deletes the row of the selected cell from the table; the first row cannot be deleted this way (clear its text and save instead). The change is kept only after Save.

No.	Control	Name	What it does
7		**Clear All**	Clears all referees from the table. Nothing is written to the file until Save is pressed.

BOARD OUTPUT **CONTROL PANEL**

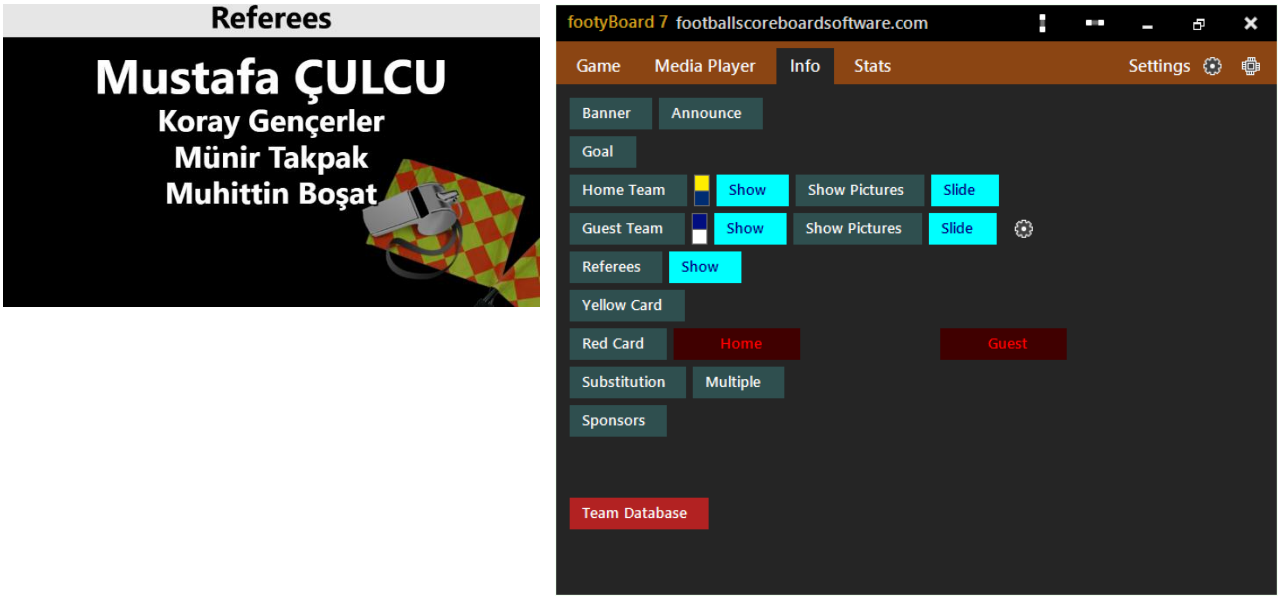


Figure 69. The referees on the board (Info > Referees > Show).

16.9 Sponsors

The list of sponsor images used by the banner, the announcement, the score event, card and substitution graphics, the Sponsored strip and the Advertisement banners. Insert Row adds image files, Delete Row removes the selected one and Clear All empties the list; every change is saved at once. Set Default marks the image that the info graphics show as sponsor logo and moves it to the top of the list.

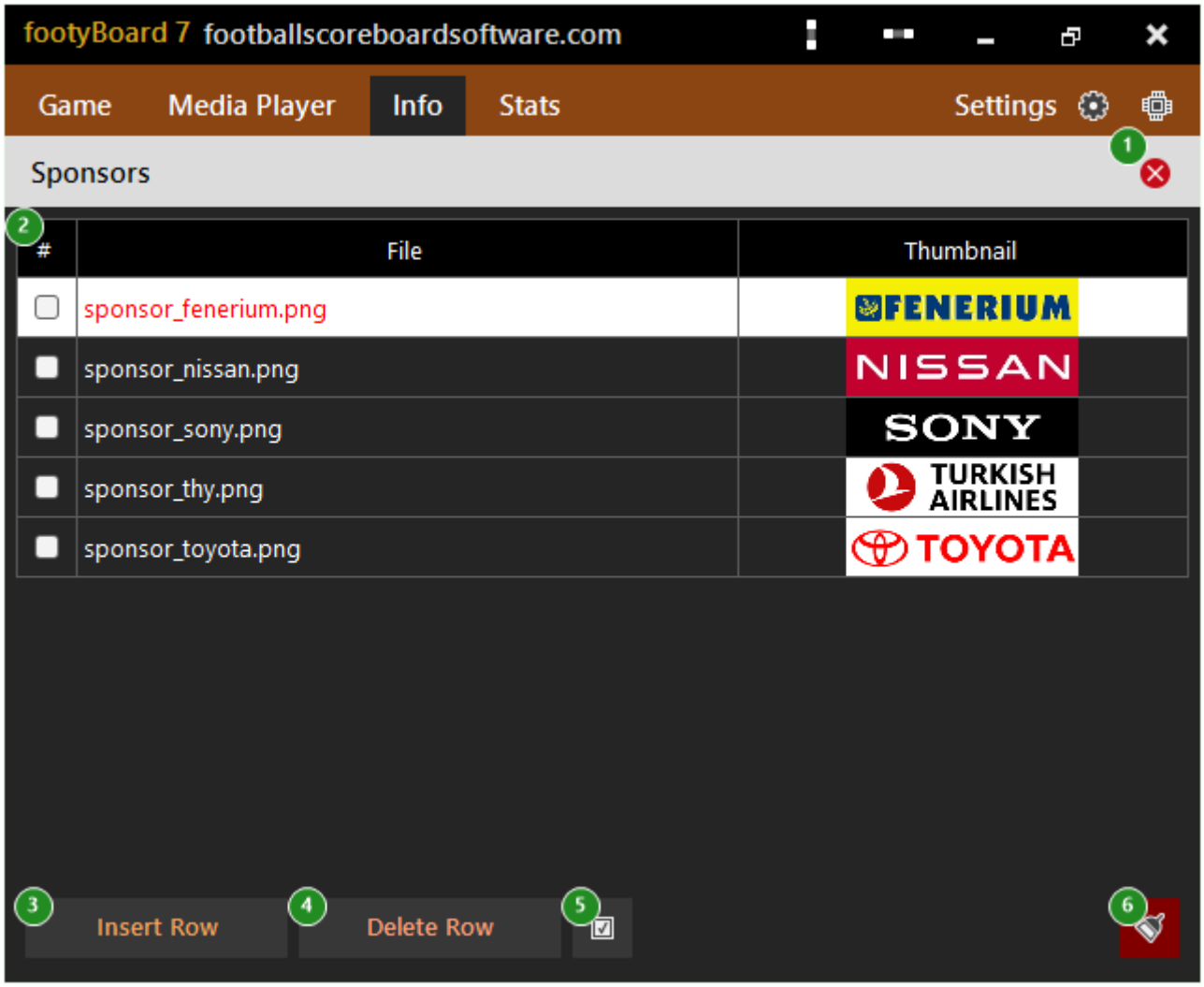
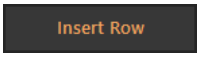
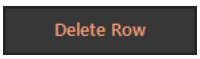


Figure 70. The sponsor image list.

No.	Control	Name	What it does
1		**Close**	Closes the Sponsors page and returns to the panel behind it (Escape does the same).
2		**Sponsor Logo Table**	The sponsor logos with a tick for the default, the file name and a thumbnail. A click selects a row for Delete Row and Set Default; dragging a row to another place changes the order and saves the list at once. The cells cannot be edited.
3		**Insert Row**	Insert Row: opens a file dialog to add one or more image files (bmp, gif, jpeg, jpg, png, webp) to the end of the sponsor logo list and saves the list. The first five entries of the list are the logos offered on the Goal, Card, Substitution, Banner and Announce pages.
4		**Delete Row**	Delete Row: removes the selected image from the sponsor logo list and saves the list to common\data\sponsors.xml.
5		**Set Default**	Set Default: ticks the selected image as the default sponsor logo, makes it the logo used by the info graphics (start.xml BOARD/LogoSponsor), moves it to the top of the list and saves the list. Clicking it on the current default unticks it and clears the logo; that untick is only written to the list file with the next save.

No.	Control	Name	What it does
6		**Clear All**	Clear All: removes every image from the sponsor logo list and saves the empty list to common\data\sponsors.xml.

16.10 Team Database

Every squad you saved with Save to Teams appears here. Select a team and click Set Home or Set Guest to load its squad, after a confirmation; the team name and the logo on the Game page are not changed. Delete removes a saved team after a confirmation.

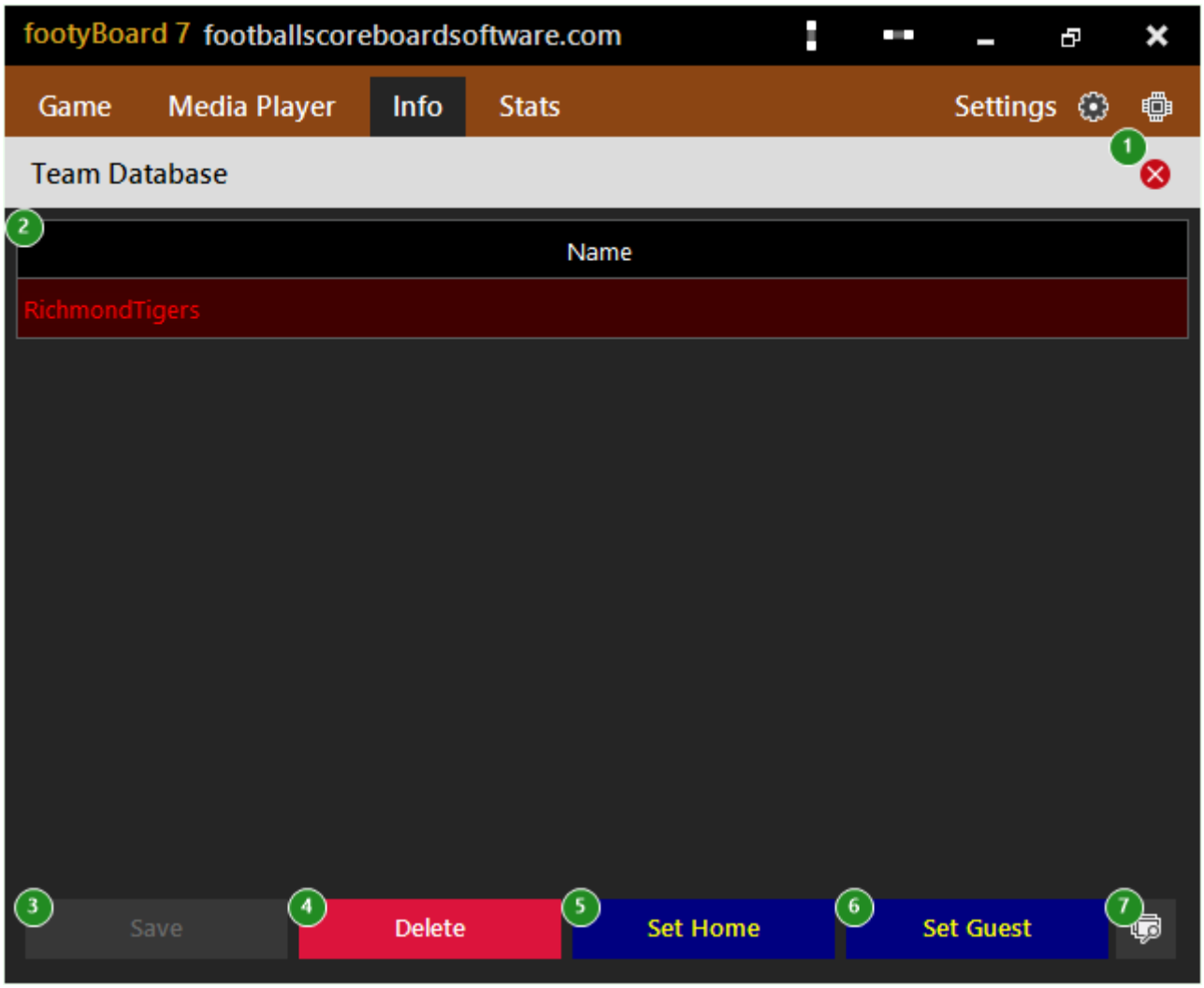
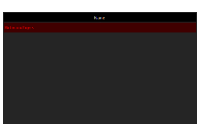
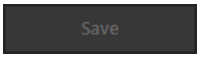
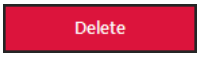


Figure 71. The team database.

No.	Control	Name	What it does
1		**Close**	Closes the Team Database page and returns to the panel behind it (Escape does the same).
2		**Team Table**	The saved teams of the Team Database in alphabetical order, one name per row. A click selects the team for Show, Delete, Set Home and Set Guest; the name is edited by typing or F2 and kept after Save.

No.	Control	Name	What it does
3		**Save**	Saves the team names edited in the table to common\data\teams.xml; rows with an empty name are skipped. The button is lit green while there are unsaved changes.
4		**Delete**	Deletes the selected team from the team list (common\data\teams.xml) together with its stored squad file, after a confirmation prompt.
5		**Set Home**	Makes the selected team the home team of the match by copying its stored squad file over common\data\playersHome.xml, after a confirmation prompt; a success message follows. Refused with a message when the squad file is missing.
6		**Set Guest**	Makes the selected team the guest team of the match by copying its stored squad file over common\data\playersGuest.xml, after a confirmation prompt; a success message follows. Refused with a message when the squad file is missing.
7		**Show**	Opens the player editor with the squad of the selected team so it can be viewed and edited; Save there writes back to the team's own file, not to the match squads.

16.11 VAR

The VAR graphic of soccerBoard 7 is not available in footyBoard 7: its button is hidden on the Info page and on the Chroma Key page. The design editor still lists a graphic named VAR.

17. Statistics and score by period

The Stats page has six buttons: Timeline, Stats, Standings, Results, Fixtures and Score By Period. Each table is shown on the board with its Show button, from the phone page and with the API command stats.

17.1 Timeline

The match timeline lists the events of the match with the minute and a description, home events on the left and guest events on the right. Rows are added by the info graphics while Add to Match Timeline is lit and can be inserted or deleted by hand; every change is saved at once. The event type of a row is set with the icon picker. The funnel button opens a filter that decides which kinds of events go to the board; the list itself always shows every row. Show puts the timeline on the board with the logos, names and totals.

Delete All empties the timeline after a second click. A new match and Reset Score & Penalties do not clear it.

> **Note:** The event icons of the timeline are the ball, the ball with an exclamation mark, the ball with a tick, the ball with a cross, a substitution, the cards and a cancel mark. The program gives the three marked balls no fixed meaning; use them as your competition needs (for example conversion scored and missed).

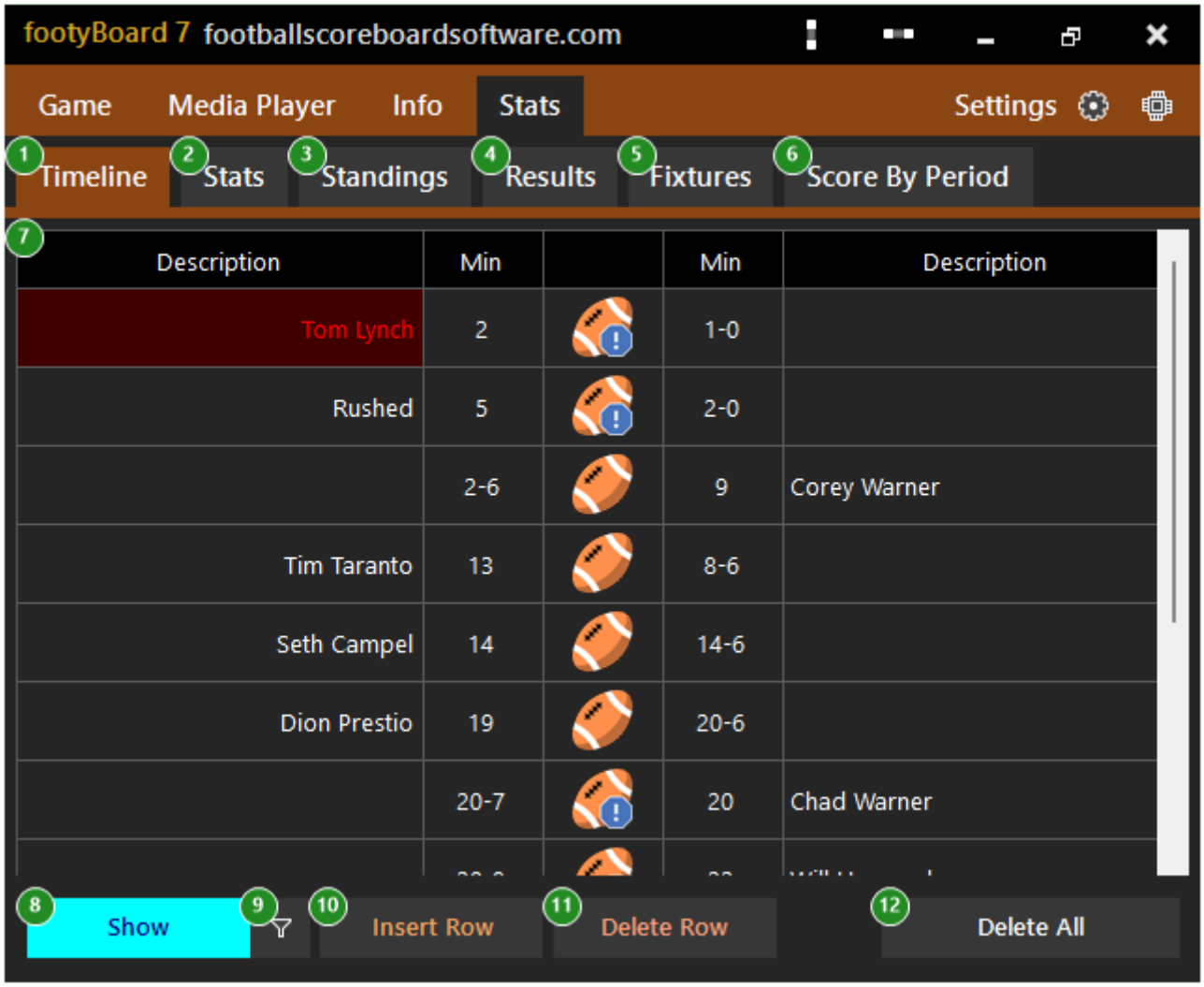
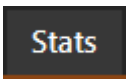
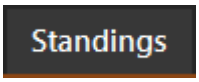
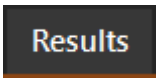
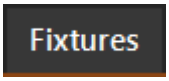
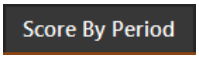
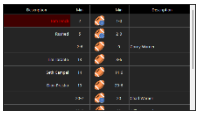
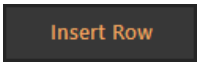
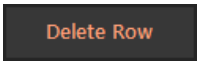


Figure 72. The timeline page. The sample timeline of a new installation is shown.

No.	Control	Name	What it does
1		**Timeline**	Timeline: opens the match timeline page, where the list of match events (scores, cards, substitutions with minute and description) is edited and sent to the board.
2		**Stats**	Stats: opens the match statistics page, where the home and guest values of the statistics rows are edited and sent to the board.
3		**Standings**	Standings: opens the league standings page, where the table (position, logo, team, P, W, D, L, Diff, Pts) is edited and sent to the board.
4		**Results**	Results: opens the results page, where match results with team names, logos and scores are edited and sent to the board.
5		**Fixtures**	Fixtures: opens the fixtures page, where the upcoming matches (without scores) are edited and sent to the board. It is the same page as Results with the score columns hidden.
6		**Score By Period**	Score By Period: opens the period score table with the values the control panel holds at the moment (points scored in each period, or the score at the end of each period, depending on the mode). A cell can be corrected (it turns yellow and keeps what was typed), an empty cell or Automatic takes the counted value again; Save keeps the corrections, Save and Show also puts the table on the board, Reload drops what was typed. A value lower than the previous period is only marked, not refused. The tab is placed before AI.
7		**Event list**	The rows of the match timeline: Description and Min of the home team on the left, the event icon in the middle, Min and Description of the guest team on the right. A cell is edited by typing or F2 (Shift+Enter makes a new line); every change is saved at once to common\data\dataEvents.xml. A click on the icon cell shows the Event Icon button. The Goal, Card and Substitution pages add their events here automatically when Add to Match Timeline is on.
8		**Show**	Show: puts the match timeline on the board, listing only the rows whose event type is switched on in the filter; rows without an icon are left out. On the Stats page the list goes to the Standard board; on the Chroma Key page the home and guest events go to the keyed output as two separate columns and only rows with both a description and a minute are taken. The remote command show_stats timeline does the same.
9		**Filter**	Opens or closes the event filter bar that decides which event types appear on the board when Show is pressed.
10		**Insert Row**	Insert Row: inserts an empty event row above the selected row (or at the end when nothing is selected) and saves the timeline (common\data\dataEvents.xml).
11		**Delete Row**	Delete Row: removes the selected event row and saves the timeline.

No.	Control	Name	What it does
12	Delete All	**Delete All**	Delete All: the first press arms the button (it turns red), the second press removes all event rows and saves the empty timeline; clicking into the list disarms it. The remote command clear_events_history clears the list without this question.

BOARD OUTPUT **CONTROL PANEL**

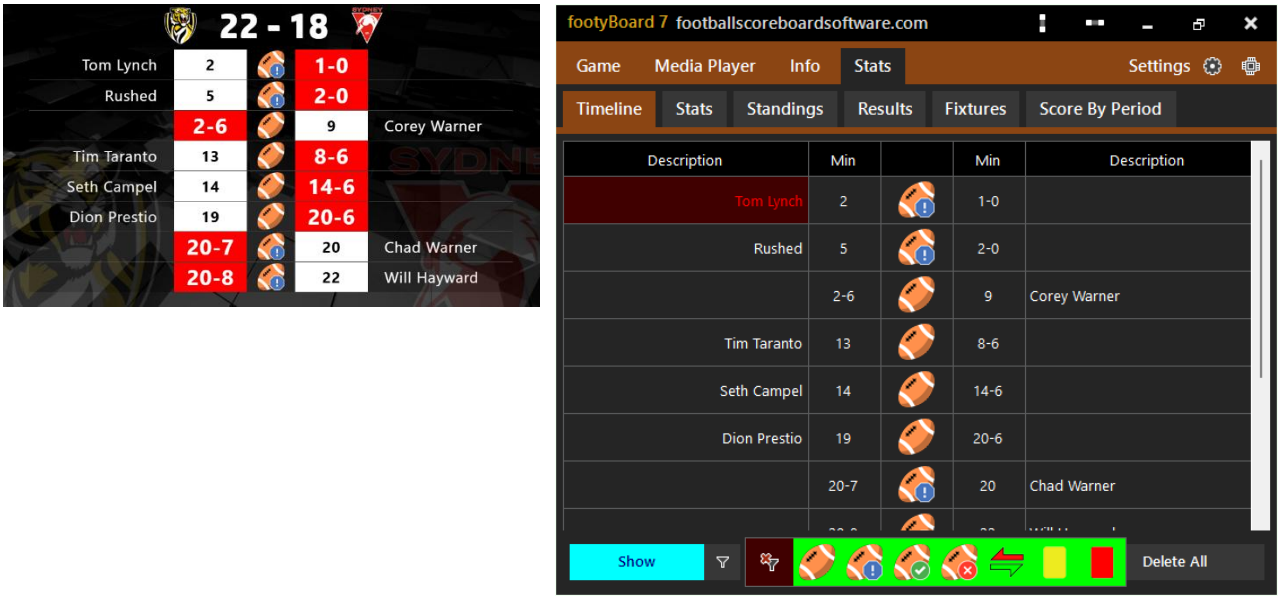


Figure 73. The timeline on the board, and the filter row that decides which events go there.

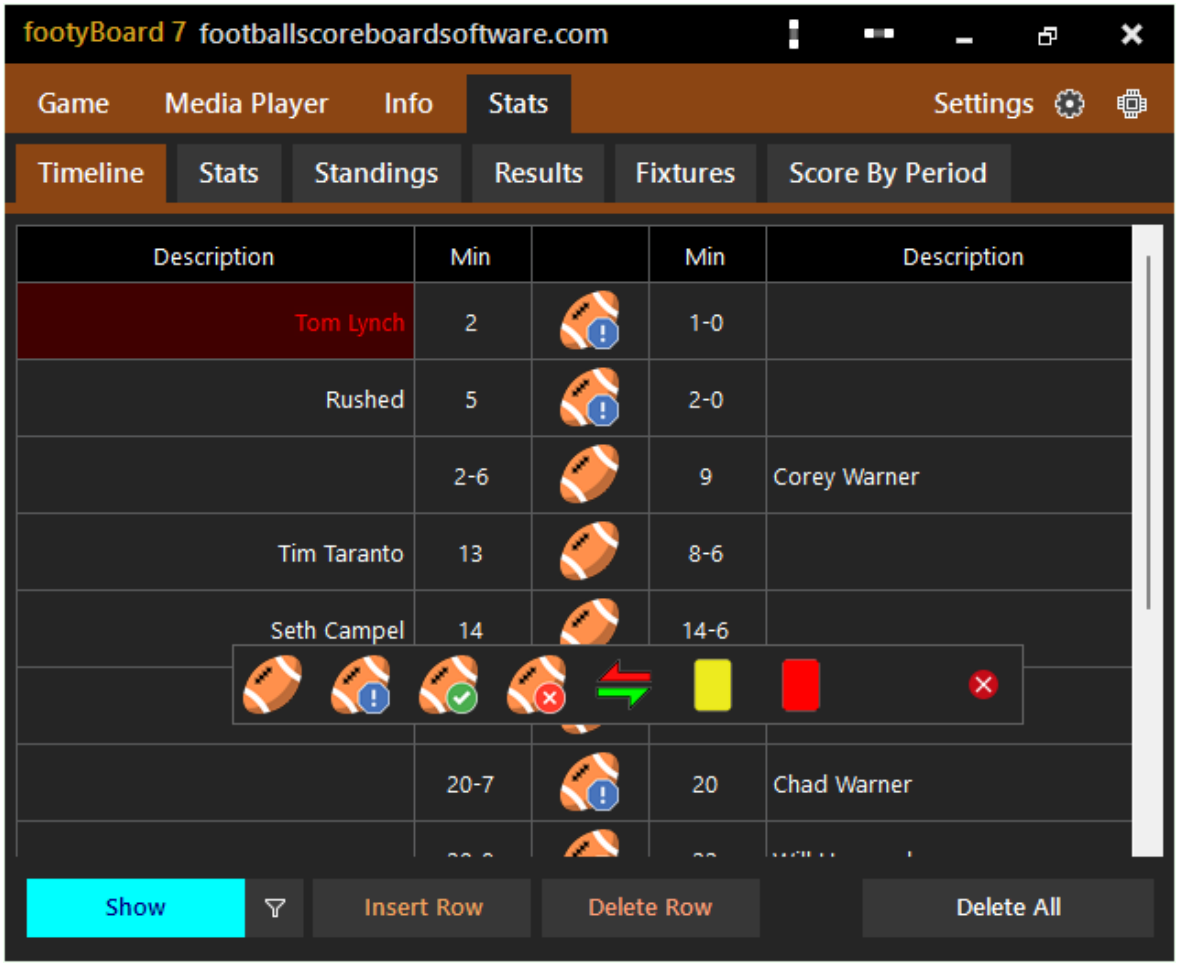
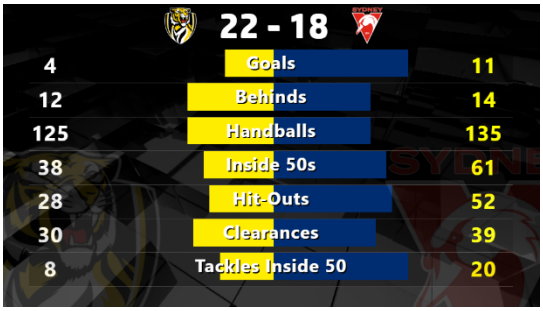


Figure 74. The event icon row of a new timeline row (the ... button).

17.2 Stats

A table of match statistics with a home value, the name of the statistic and a guest value per row. Insert Row and Delete Row edit the table; Show displays it.

BOARD OUTPUT



CONTROL PANEL

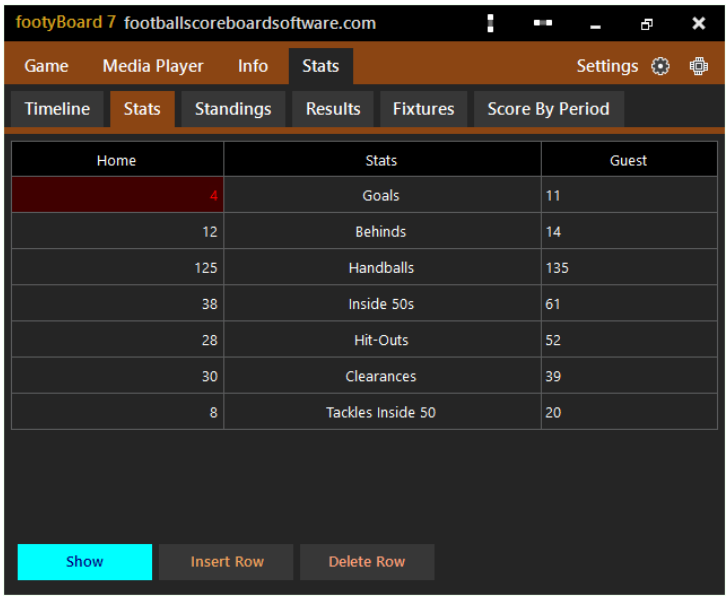


Figure 75. The statistics table and its board graphic.

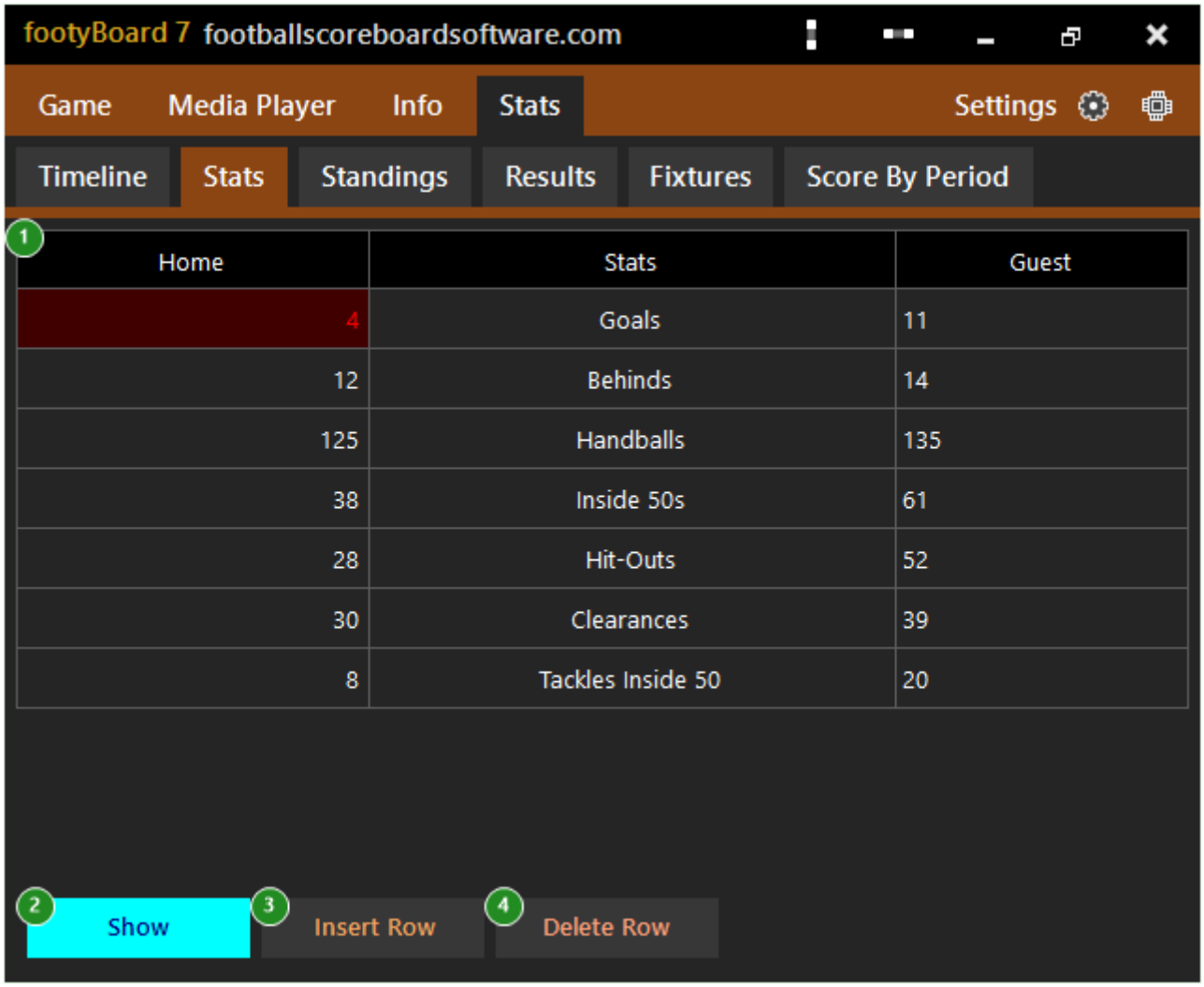
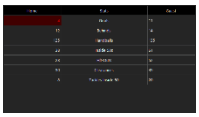
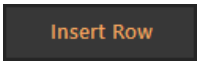
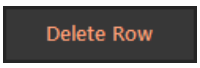


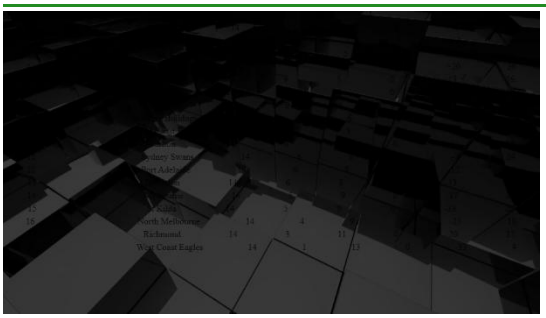
Figure 76. The controls of the Stats table.

No.	Control	Name	What it does
1		**Statistics table**	The rows are the statistics: Home value, Stats (the name, for example Possession), Guest value. Cells are edited by typing or F2 (Shift+Enter makes a new line); every change is saved at once to common\data\dataStats.xml.
2		**Show**	Show: puts the match statistics table (home value, name, guest value for every row) on the board. The remote command show_stats stats does the same with the saved file.
3		**Insert Row**	Insert Row: inserts an empty statistics row above the selected row (or at the end when nothing is selected) and saves the table (common\data\dataStats.xml).
4		**Delete Row**	Delete Row: removes the selected statistics row and saves the table.

17.3 Standings

The league table. Edit the rows in the grid, tick the columns that should appear on the board with the check boxes above the grid, give each team a logo from the logo strip at the bottom and click Save. Show displays the table.

BOARD OUTPUT **CONTROL PANEL**



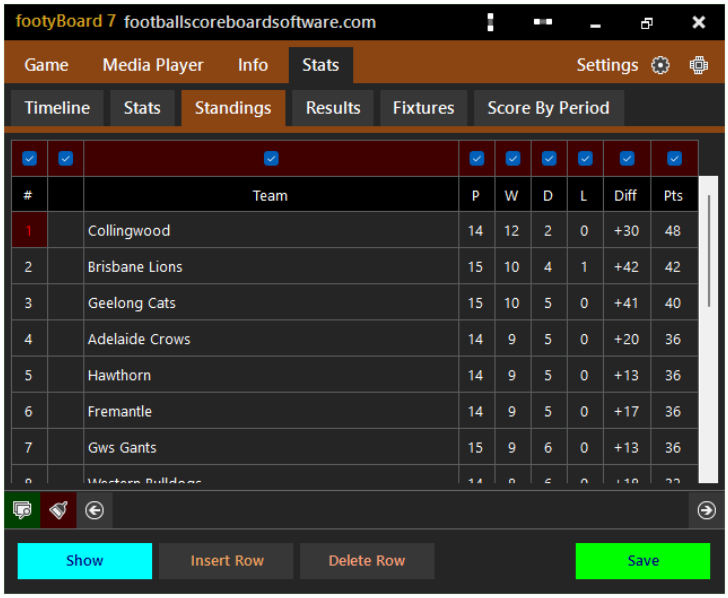


Figure 77. The standings editor and the table on the board.

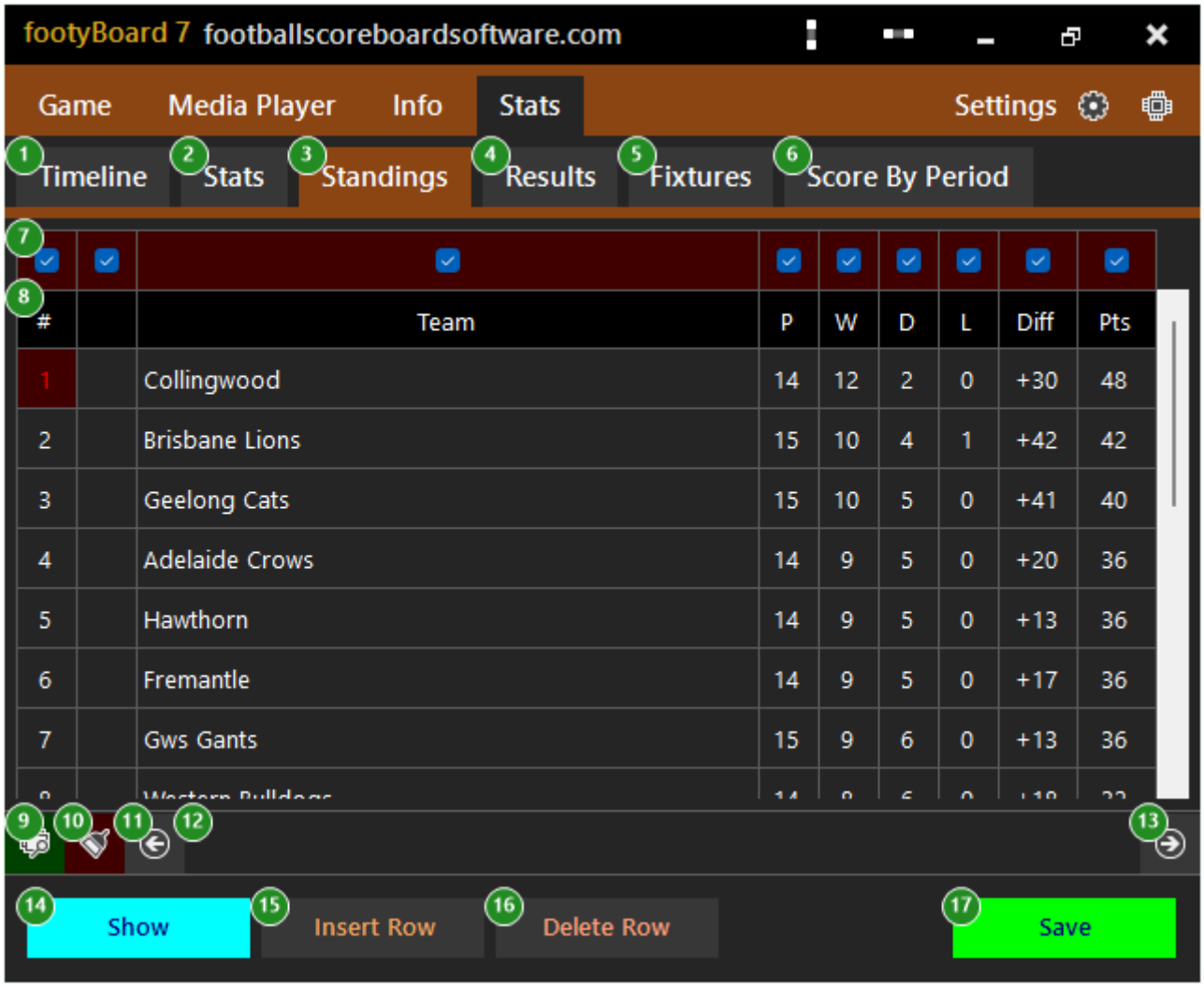
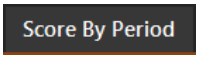
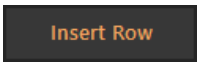
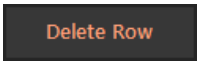


Figure 78. The controls of the standings editor.

No.	Control	Name	What it does
1	Timeline	**Timeline**	Timeline: opens the match timeline page, where the list of match events (scores, cards, substitutions with minute and description) is edited and sent to the board.
2	Stats	**Stats**	Stats: opens the match statistics page, where the home and guest values of the statistics rows are edited and sent to the board.
3	Standings	**Standings**	Standings: opens the league standings page, where the table (position, logo, team, P, W, D, L, Diff, Pts) is edited and sent to the board.
4	Results	**Results**	Results: opens the results page, where match results with team names, logos and scores are edited and sent to the board.
5	Fixtures	**Fixtures**	Fixtures: opens the fixtures page, where the upcoming matches (without scores) are edited and sent to the board. It is the same page as Results with the score columns hidden.

No.	Control	Name	What it does
6		**Score By Period**	Score By Period: opens the period score table with the values the control panel holds at the moment (points scored in each period, or the score at the end of each period, depending on the mode). A cell can be corrected (it turns yellow and keeps what was typed), an empty cell or Automatic takes the counted value again; Save keeps the corrections, Save and Show also puts the table on the board, Reload drops what was typed. A value lower than the previous period is only marked, not refused. The tab is placed before AI.
7		**Select Column**	The row of tick boxes above the table: a ticked box means the column below it is sent to the board with Show. The first box ticks or unticks all columns. The choice is saved at once (common\data\dataStandingsColumns.xml).
8		**Standings table**	The rows are the teams of the table: #, logo, Team, P, W, D, L, Diff, Pts. Cells are edited by typing or F2. To give a team a logo click a logo in the strip below and then a cell of the row, or drag the logo onto the row; rows can be reordered by dragging. Changes are kept only with Save.
9		**Select Picture**	Select Picture: opens a file dialog to add one or more logo images to the logo strip and saves the strip (dataLogos.xml, shared with the Results and Fixtures pages).
10		**Clear**	Clear: removes all logos from the logo strip and saves the empty strip (common\data\dataLogos.xml, shared with the Results and Fixtures pages).
11		**Scroll Left**	Scrolls the logo strip to the left while the button is held down.
12		**Logo strip**	The strip of team logos added with Select Picture (shared with the Results and Fixtures pages). A click picks a logo (the mouse pointer shows it) to stamp it onto a row of the table; Escape drops the pick. Delete removes the selected logo from the strip and saves it. A logo can also be dragged onto a row.
13		**Scroll Right**	Scrolls the logo strip to the right while the button is held down.
14		**Show**	Show: puts the standings table on the board, including only the columns ticked in the column selector row. The remote command show_stats standings does the same with the saved file.
15		**Insert Row**	Insert Row: inserts an empty team row above the selected row (or at the end when nothing is selected) and renumbers the positions. The change is kept only with Save.
16		**Delete Row**	Delete Row: removes the selected team row and renumbers the positions. The change is kept only with Save.

No.	Control	Name	What it does
17	Save	**Save**	Save: saves the standings table to common\data\dataStandings.xml (rows that are completely empty are dropped) and reloads it. The button then stays greyed out until the Standings tab is opened again; changes made after that are not saved and are lost when the tab is reopened, because reopening reloads the saved file.

17.4 Results and Fixtures

Two grids with the same layout: played matches with their scores and the coming fixtures. Save stores the list, Show displays it.

BOARD OUTPUT **CONTROL PANEL**

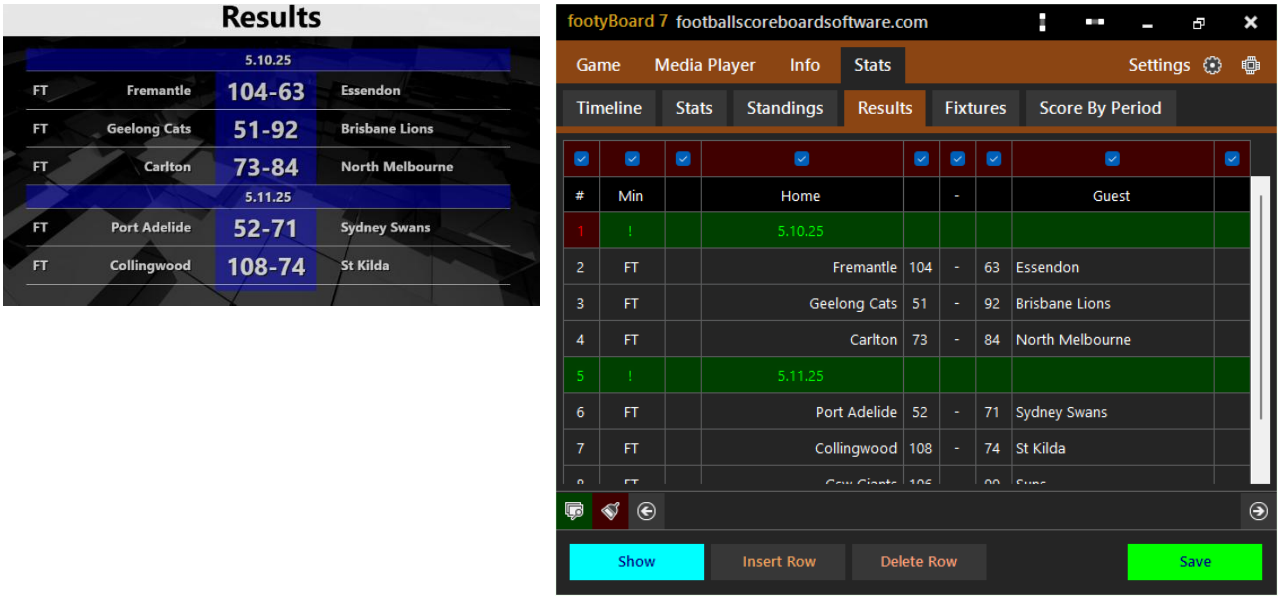


Figure 79. The results editor and the results on the board.

BOARD OUTPUT **CONTROL PANEL**

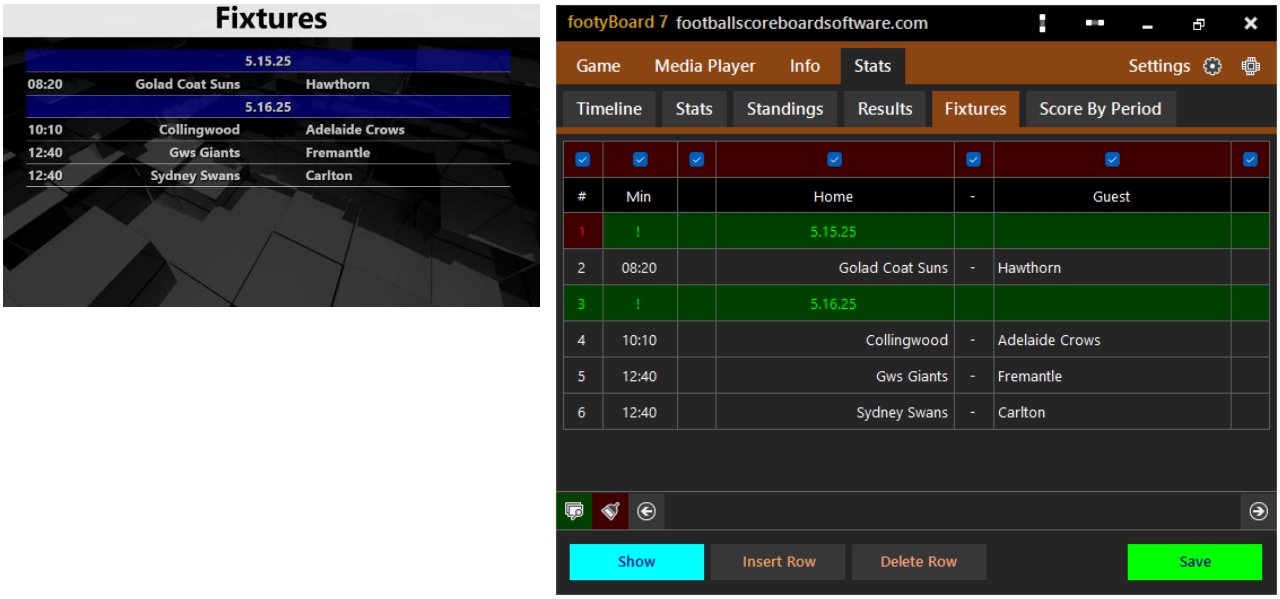


Figure 80. The fixtures editor and the fixtures on the board.

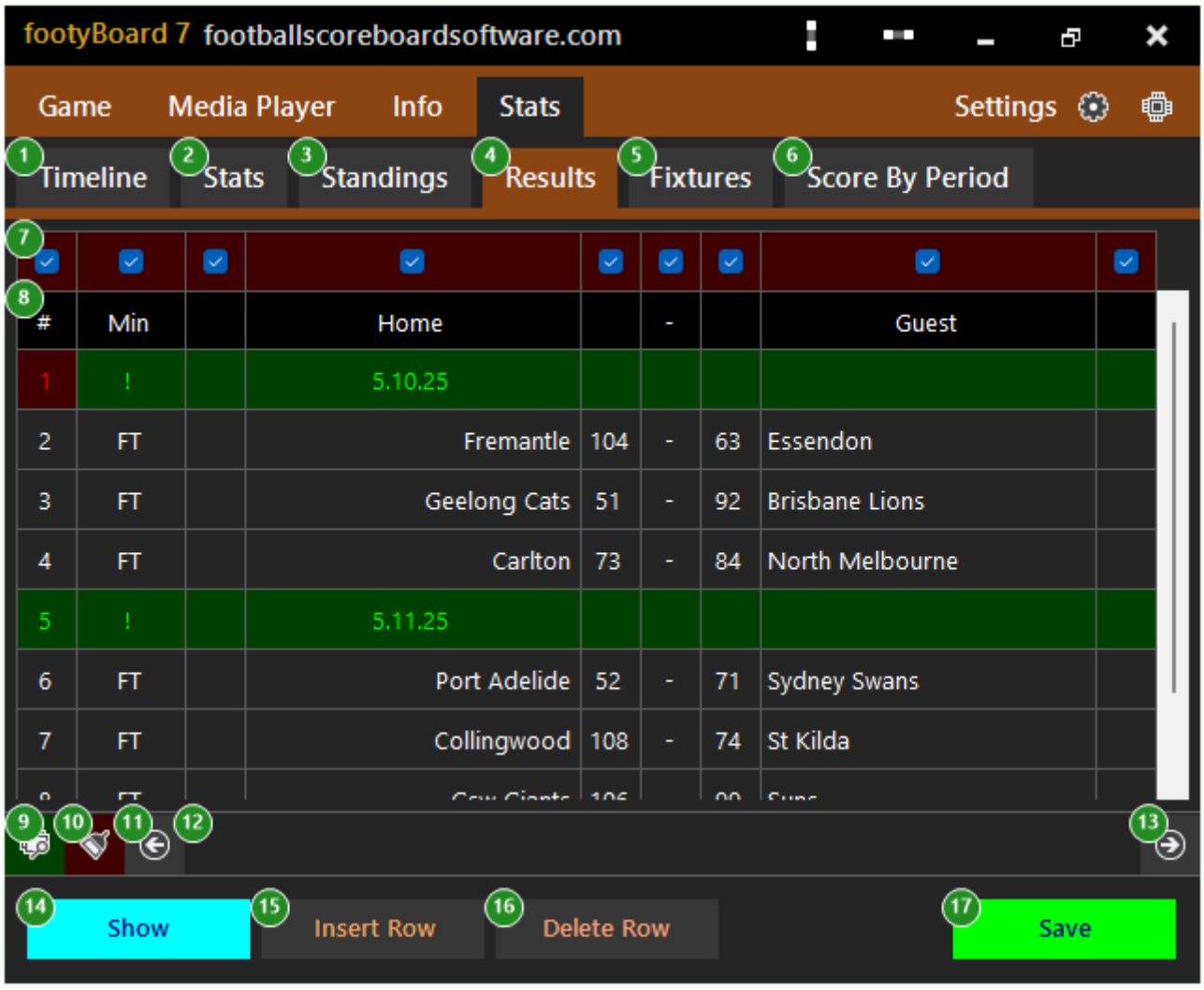
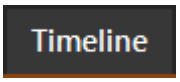
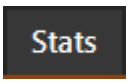
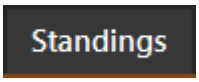
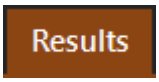
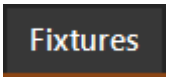
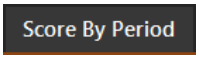
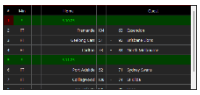


Figure 81. The controls of the results editor (the fixtures editor has the same).

No.	Control	Name	What it does
1		**Timeline**	Timeline: opens the match timeline page, where the list of match events (scores, cards, substitutions with minute and description) is edited and sent to the board.
2		**Stats**	Stats: opens the match statistics page, where the home and guest values of the statistics rows are edited and sent to the board.
3		**Standings**	Standings: opens the league standings page, where the table (position, logo, team, P, W, D, L, Diff, Pts) is edited and sent to the board.
4		**Results**	Results: opens the results page, where match results with team names, logos and scores are edited and sent to the board.
5		**Fixtures**	Fixtures: opens the fixtures page, where the upcoming matches (without scores) are edited and sent to the board. It is the same page as Results with the score columns hidden.
6		**Score By Period**	Score By Period: opens the period score table with the values the control panel holds at the moment (points scored in each period, or the score at the end of each period, depending on the mode). A cell can be corrected (it turns yellow and keeps what was typed), an empty cell or Automatic takes the counted value again; Save keeps the corrections, Save and Show also puts the table on the board, Reload drops what was typed. A value lower than the previous period is only marked, not refused. The tab is placed before AI.
7		**Select Column**	The row of tick boxes above the table: a ticked box means the column below it is sent to the board with Show. The first box ticks or unticks all columns. The choice is saved at once (common\data\dataStandingsColumns.xml, separately for Results and Fixtures).
8		**Match list**	The rows are matches: #, Min, home logo, Home, home score, -, guest score, guest logo, Guest (the score columns are hidden on the Fixtures page). Cells are edited by typing or F2. A row whose Min cell holds !, #, D or d becomes a green heading row (for example a date or a round) that shows only the Home text centred; its other cells are cleared. To give a team a logo click a logo in the strip below and then a cell of the row (the left half of the row sets the home logo, the right half the guest logo), or drag the logo onto the row; rows can be reordered by dragging. Changes are kept only with Save.
9		**Select Picture**	Select Picture: opens a file dialog to add one or more logo images to the logo strip and saves the strip (dataLogos.xml, shared with the Standings page).
10		**Clear**	Clear: removes all logos from the logo strip and saves the empty strip (common\data\dataLogos.xml, shared with the Standings page).
11		**Scroll Left**	Scrolls the logo strip to the left while the button is held down.

No.	Control	Name	What it does
12		**Logo strip**	The strip of team logos added with Select Picture (shared with the Standings page). A click picks a logo (the mouse pointer shows it) to stamp it onto a row of the table; Escape drops the pick. Delete removes the selected logo from the strip and saves it. A logo can also be dragged onto a row.
13		**Scroll Right**	Scrolls the logo strip to the right while the button is held down.
14	Show	**Show**	Show: puts the results (or fixtures) table on the board with minute or heading, team names, logos and scores, including only the columns ticked in the column selector row. The remote command show_stats results or fixtures does the same with the saved file.
15	Insert Row	**Insert Row**	Insert Row: inserts an empty match row above the selected row (or at the end when nothing is selected) and renumbers the rows. The change is kept only with Save.
16	Delete Row	**Delete Row**	Delete Row: removes the selected match row and renumbers the rows. The change is kept only with Save.
17	Save	**Save**	Save: saves the table to common\data\dataResults.xml on the Results page or dataFixtures.xml on the Fixtures page (rows that are completely empty are dropped) and reloads it.

17.5 Score By Period

The table of chapter 5.9 inside the Stats page. Here it stays open after Save, and Reload reads the values of the panel again and drops what was typed. Save & Show shows the full-screen table on the board.

BOARD OUTPUT **CONTROL PANEL**

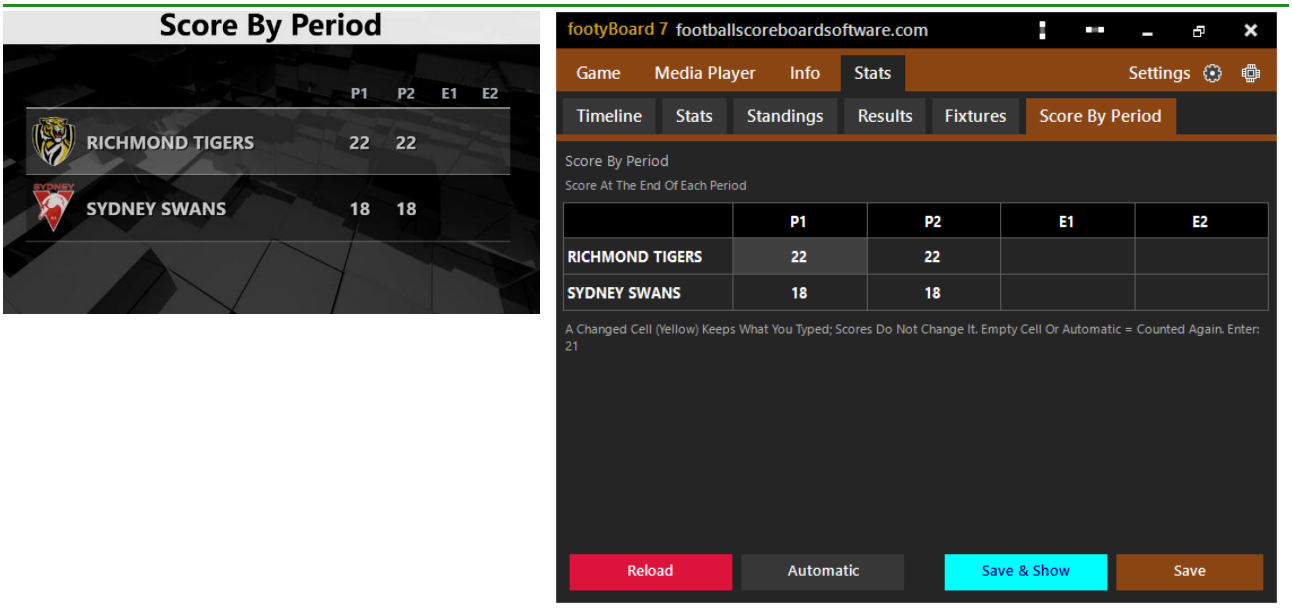


Figure 82. The score by period on the Stats page and on the board.

The small period table on the Standard board itself is a separate board element, hidden in the factory designs (chapter 22.2).

17.6 Download from the internet

The download of league data that soccerBoard 7 offers is not available in footyBoard 7: its buttons are hidden.

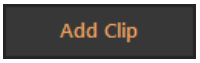
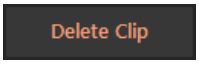
18. Media player

The Media Player page plays videos and images full screen on the board, for example a highlight clip at half time or a sponsor reel before the match.



Figure 83. The Media Player page with the sample playlist of a new installation.

No.	Control	Name	What it does
1	1	**Playlist 1**	Switches to playlist 1 and loads its clips; the number next to the button is the clip count. The six buttons are the six playlists; the chosen number is shared with the other media players of the program. Not available while a clip or the playlist is playing.
2	2	**Playlist 2**	Switches to playlist 2 and loads its clips; the number next to the button is the clip count. The six buttons are the six playlists; the chosen number is shared with the other media players of the program. Not available while a clip or the playlist is playing.
3	3	**Playlist 3**	Switches to playlist 3 and loads its clips; the number next to the button is the clip count. The six buttons are the six playlists; the chosen number is shared with the other media players of the program. Not available while a clip or the playlist is playing.

No.	Control	Name	What it does
4		**Playlist 4**	Switches to playlist 4 and loads its clips; the number next to the button is the clip count. The six buttons are the six playlists; the chosen number is shared with the other media players of the program. Not available while a clip or the playlist is playing.
5		**Playlist 5**	Switches to playlist 5 and loads its clips; the number next to the button is the clip count. The six buttons are the six playlists; the chosen number is shared with the other media players of the program. Not available while a clip or the playlist is playing.
6		**Playlist 6**	Switches to playlist 6 and loads its clips; the number next to the button is the clip count. The six buttons are the six playlists; the chosen number is shared with the other media players of the program. Not available while a clip or the playlist is playing.
7		**URL**	URL: opens the Web URL page over the work area, a list of web addresses that can be loaded onto the board (Insert Row, Delete Row, Load). Not available while a clip or the playlist is playing. The remote command for playlist 7 starts this list as well.
8		**Delete Playlist**	Removes all clips from the current playlist and saves the empty list without asking. The button is hidden while a clip or the playlist is playing.
9		**Clip list**	The clips of the selected playlist: file name, thumbnail, Play (the Play button sits on the selected row) and the playing position. Rows cannot be typed into; a click selects the clip, a row whose file is missing is shown in red and cannot be played, picture files are shown in grey. Rows can be reordered by dragging, but the new order is only written when a clip is added or deleted next time.
10		**Start**	Starts playing the playlist on the board from the selected clip, one clip after another; while running the button turns red and reads Finish, which stops the playback (the media window stays in front until Game is pressed in the main window). After the last clip the board returns to the game by itself when Return to Scoreboard is on, otherwise the list starts again. A missing or unplayable file is skipped and logged; when no file of the list can be played the playlist stops and a notice tells so.
11		**Add Clip**	Opens a file dialog to add one or more media files to the end of the current playlist; the list is saved and reloaded. Not available while a clip or the playlist is playing.
12		**Delete Clip**	Removes the selected clip from the current playlist and saves the list (common\data\playList_<n>.xml). Not available while a clip or the playlist is playing.
13		**Return to Scoreboard Screen When Playlist Ends**	Switches on (green border) or off (red border) the automatic return to the scoreboard when the last clip of the playlist ends; when it is off the playlist starts again from the first clip. The setting is off at every start of the program and is not saved.
14		**Sound**	Switches the media sound on (green border) or off (red border); the setting is saved in start.xml (MEDIAPLAYER/Volume) and is shared with the other media players. The remote command volume does the same.

No.	Control	Name	What it does
15	Stretch	**Display Mode**	Shows the current display mode of the media board (for example Stretch) and opens the mode list when clicked.

- Playlists: buttons 1 to 6, each with the number of its clips. The URL button opens a list of web pages that can be shown on the board with Load.
- Add Clip inserts video or image files, Delete Clip removes the selected one and Delete Playlist empties the list. The three buttons are hidden while something plays.
- Play in the selected row plays that clip; the button reads Stop while it plays.
- Start plays the whole list from the selected row; it reads Finish while the list runs. At the end the list starts again from the first row, unless the option Return to Scoreboard Screen When Playlist Ends is lit: then the board returns to the scoreboard.
- The speaker button switches the sound on and off, the display mode button chooses how the picture is scaled (Stretch, Center, Zoom and so on).
- Images stay on screen for the number of seconds set under Settings > Screen Properties > Image Play Duration.
- Playing a clip covers the scoreboard. Click Game to return to it.

BOARD OUTPUT **CONTROL PANEL**

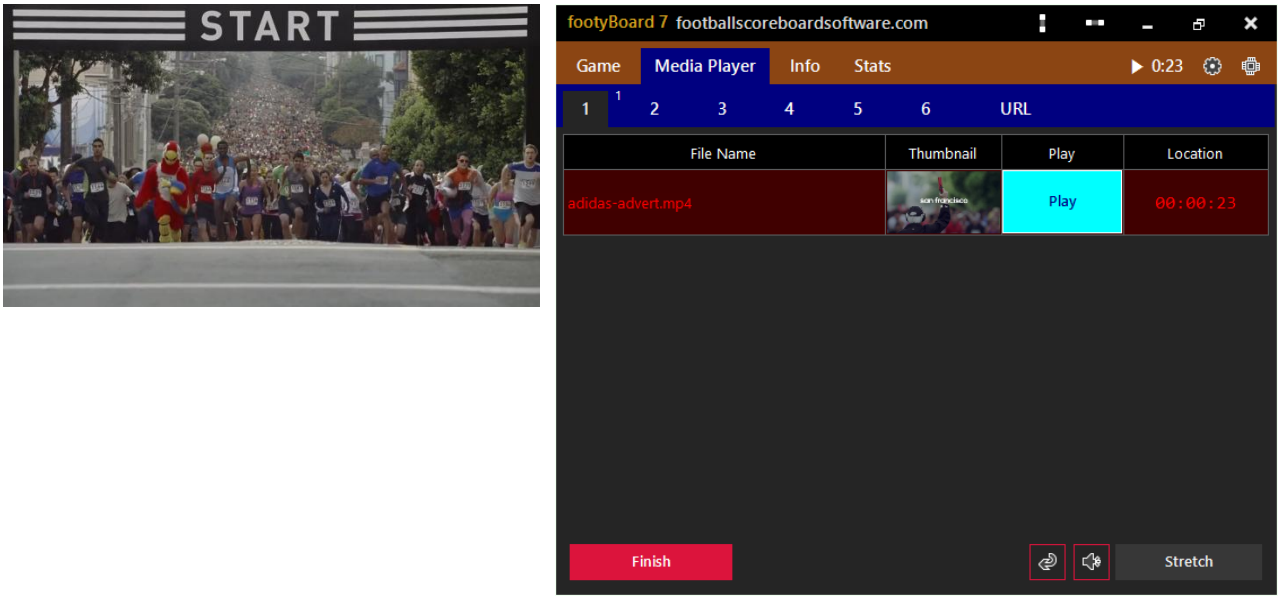


Figure 84. A playlist running: the board shows the clip, the Settings button shows the elapsed time.

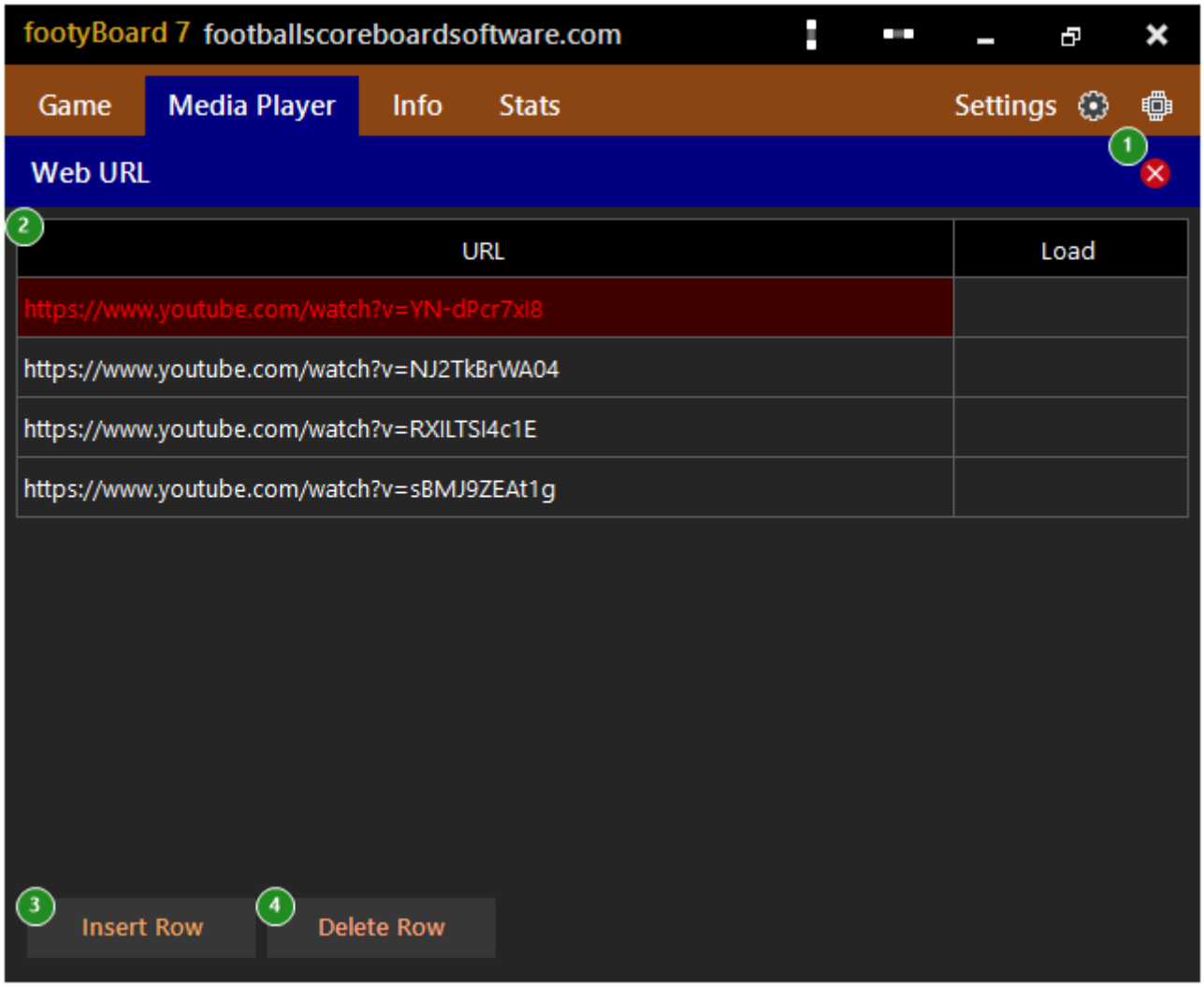
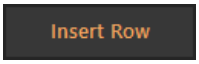
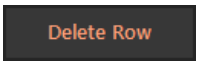


Figure 85. The URL list (the URL button).

No.	Control	Name	What it does
1		**Close**	Closes the Web URL page and returns to the media player behind it (Escape does the same).
2		**URL list**	The rows are web addresses: URL and Load (the Load button sits on the selected row). A cell is edited by typing or F2; every edit saves the list to common\data\playList_url.xml.
3		**Insert Row**	Inserts an empty row above the selected row of the URL list (or at the end when nothing is selected) for a new web address. The list is written only when a cell is edited or Load is pressed.
4		**Delete Row**	Deletes the selected row from the URL list. The list is written to common\data\playList_url.xml only when a cell is edited or Load is pressed.

Missing and unplayable files: a row whose file is missing is marked red in the list and has no Play button. A running playlist skips a file that is missing or cannot be played and starts the next one. When none of the files of a list can be played, the playlist stops with the notice "Media player playlist stopped: none of its files can be played".

19. Sponsored mode

Sponsored mode adds a strip to the Standard board. The strip shows either a slideshow of sponsor images or one of four scrolling texts. The control page has three tabs.

- Sponsors: the slideshow of the sponsor images of the Info > Sponsors page; the picture icon jumps there. The gear icon opens the style settings (image height, padding, top, speed, direction). Apply sends the strip to the board.
- Scrolling Text: four text slots (buttons 1 to 4). Type the text, use the gear icon to set font, size, weight, line height, shadow, speed and direction and the three colours (background, even lines, odd lines), then click Apply.
- Settings: whether the strip sits at the top or the bottom of the board and how high it is in pixels.

BOARD OUTPUT **CONTROL PANEL**

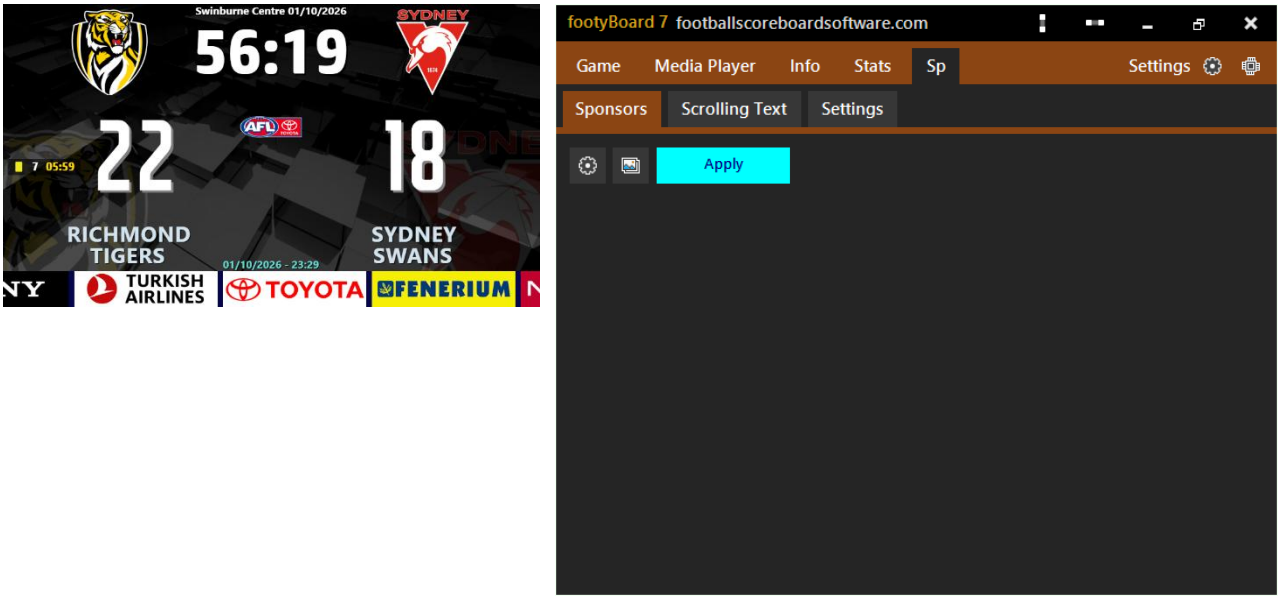


Figure 86. The Sponsors tab and the Sponsored board with the sponsor strip at the bottom.

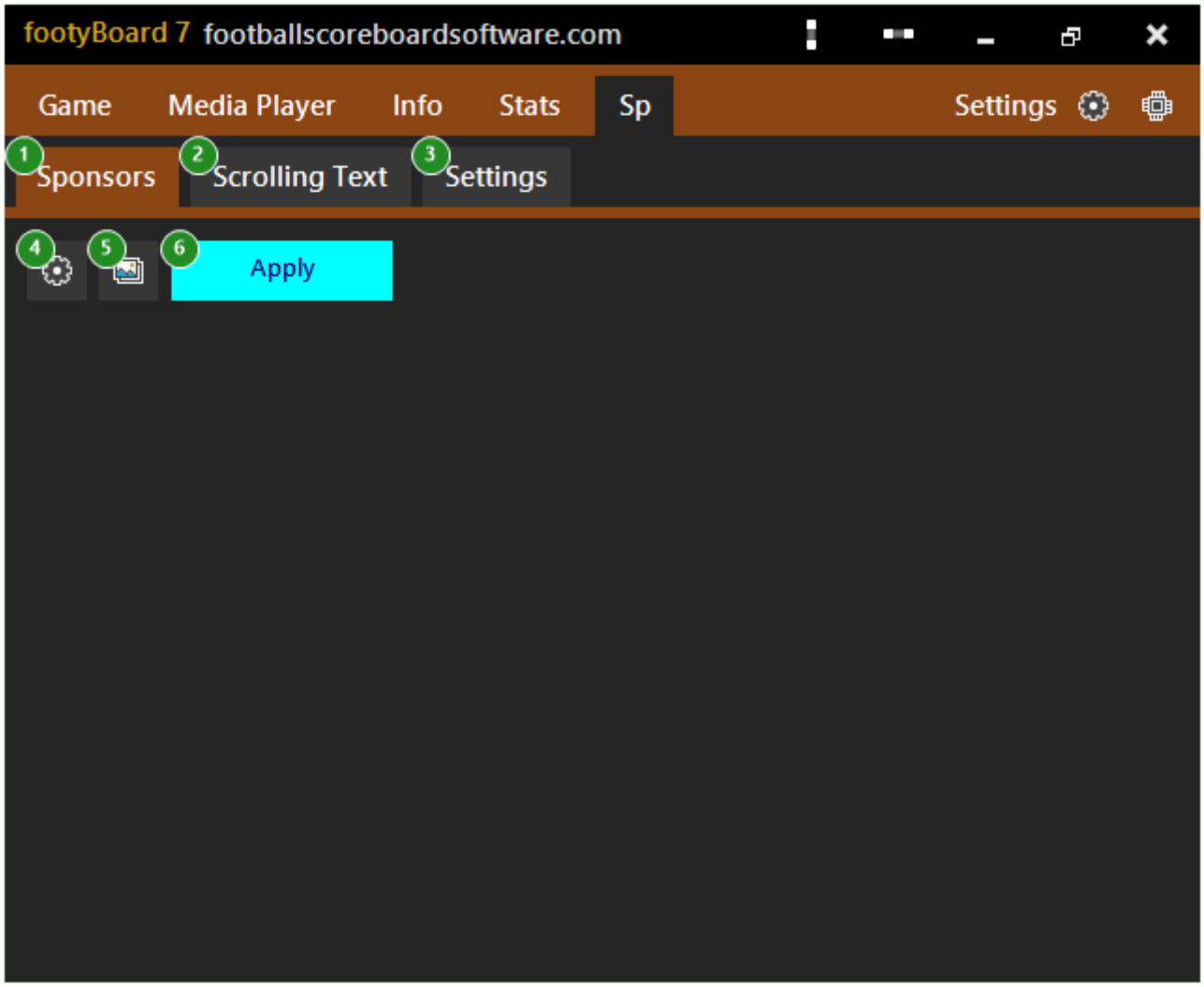


Figure 87. The controls of the Sponsors tab.

No.	Control	Name	What it does
1	Sponsors	**Sponsors**	Sponsors tab: shows the sponsor image slide show page, where the sponsor logos are managed and sent to the Sponsored strip of the board. The page opens on this tab unless the scrolling text was the last thing applied.
2	Scrolling Text	**Scrolling Text**	Scrolling Text tab: shows the scrolling text page, loads text slot 1 into the editor and places the cursor at the end of the text.
3	Settings	**Settings**	Settings tab: shows the location and height settings of the Sponsored strip, loaded with the values saved in start.xml.
4		**Image Layout Settings**	Shows or hides the layout settings panel of the sponsor image slide show (image height, padding, top offset, speed, direction).
5		**Sponsor Images**	Opens the sponsor logo list window, where the sponsor images of the slide show are added, removed and a default logo is chosen; the layout panel is closed.

No.	Control	Name	What it does
6	Apply	**Apply**	Apply: builds the sponsor image slide show from the sponsor list (common\data\sponsors.xml) and the values currently in the image layout grid (image height, padding, top offset, speed, direction) with the background colour, writes the page to the board folder and shows it on the Sponsored strip of the board; the layout panel is closed. Numbers without a unit are taken as a share of the board size. Slide is saved as the start of the strip in start.xml so the slide show returns after a restart; the grid values themselves are only saved with Save Image Layout.

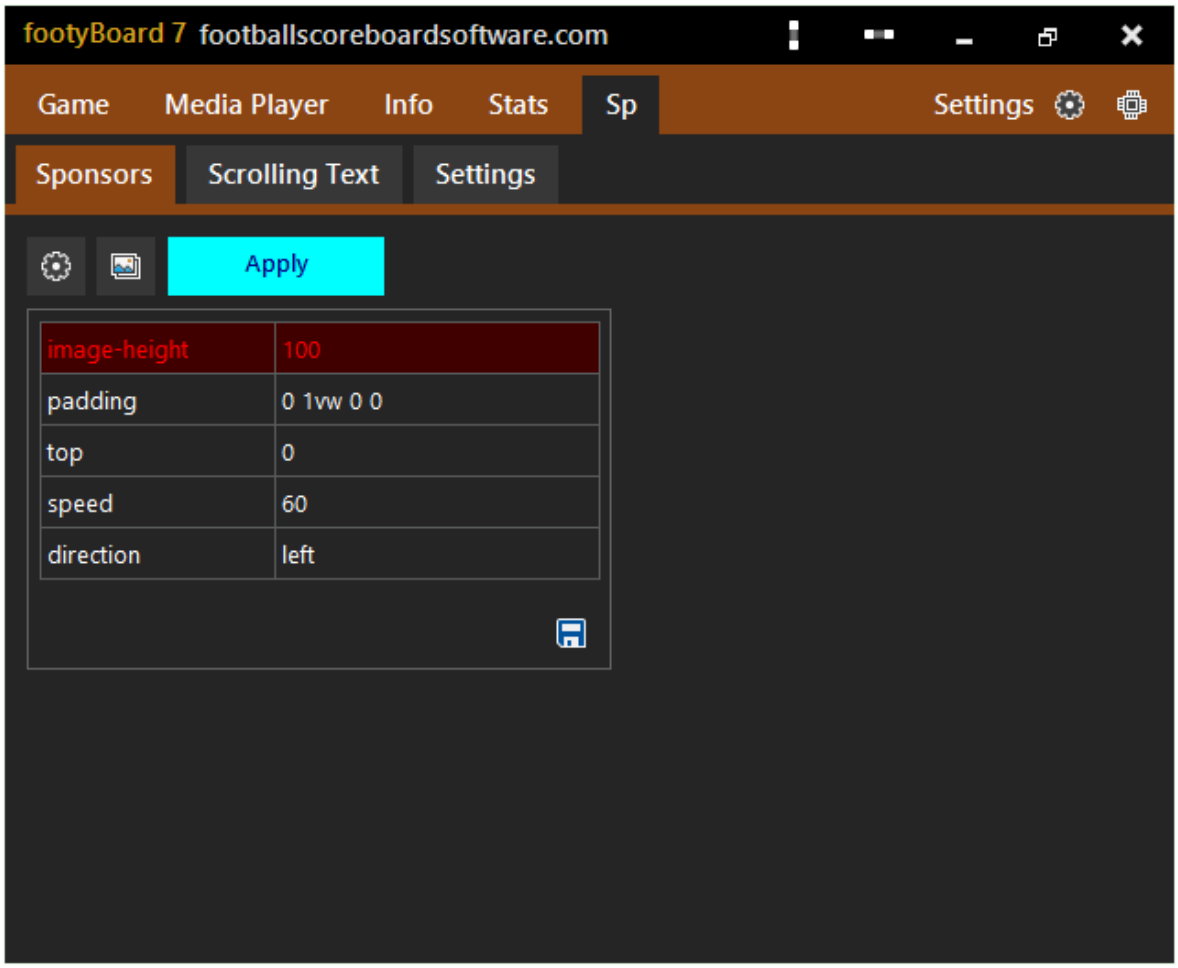


Figure 88. The style settings of the sponsor slideshow (gear icon).

BOARD OUTPUT **CONTROL PANEL**

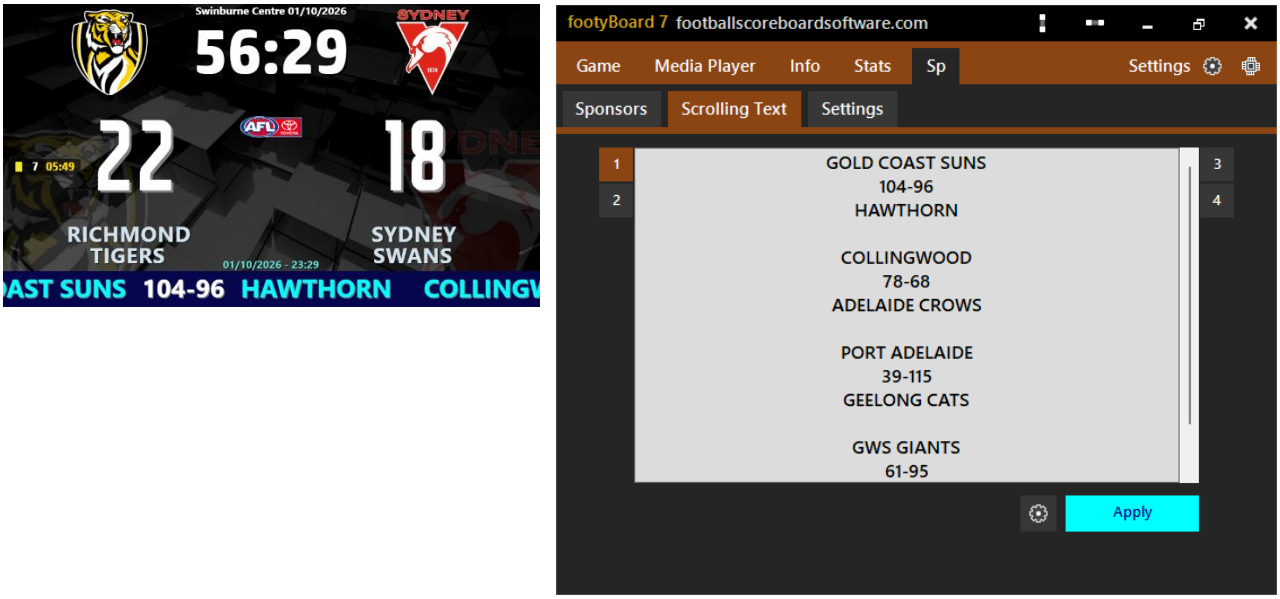


Figure 89. The Scrolling Text tab and a scrolling text on the board.

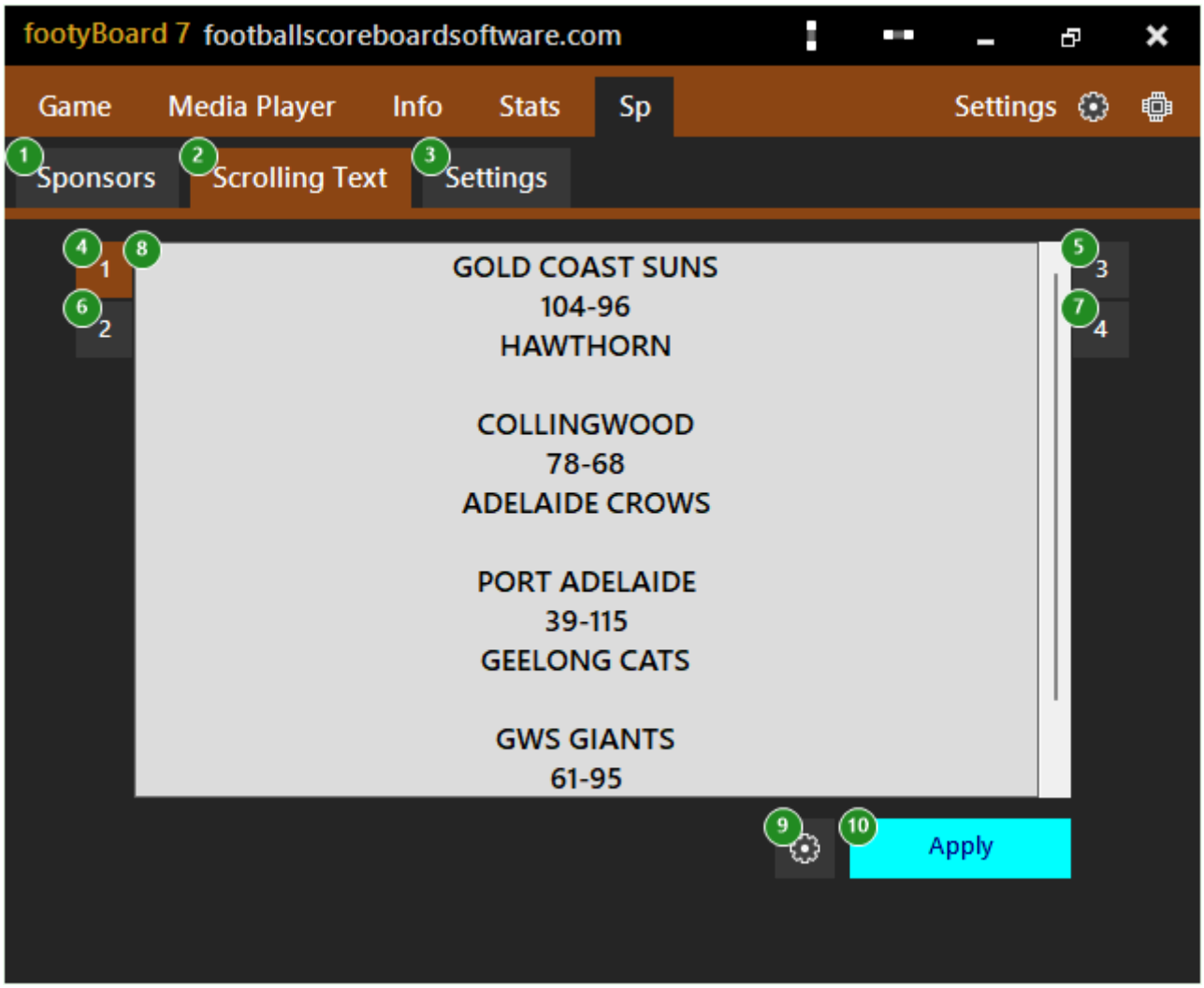
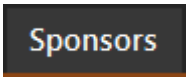
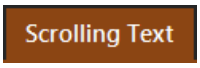
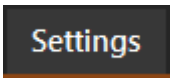


Figure 90. The controls of the Scrolling Text tab.

No.	Control	Name	What it does
1		**Sponsors**	Sponsors tab: shows the sponsor image slide show page, where the sponsor logos are managed and sent to the Sponsored strip of the board. The page opens on this tab unless the scrolling text was the last thing applied.
2		**Scrolling Text**	Scrolling Text tab: shows the scrolling text page, loads text slot 1 into the editor and places the cursor at the end of the text.
3		**Settings**	Settings tab: shows the location and height settings of the Sponsored strip, loaded with the values saved in start.xml.
4		**Text 1**	Selects scrolling text slot 1 and loads its saved text into the editor; the style panel is closed. The four buttons are the four text slots.
5		**Text 3**	Selects scrolling text slot 3 and loads its saved text into the editor; the style panel is closed. The four buttons are the four text slots.
6		**Text 2**	Selects scrolling text slot 2 and loads its saved text into the editor; the style panel is closed. The four buttons are the four text slots.
7		**Text 4**	Selects scrolling text slot 4 and loads its saved text into the editor; the style panel is closed. The four buttons are the four text slots.
8		**Scrolling text**	The text of the selected text slot; each line becomes one item of the scrolling text. It is saved and shown with Apply, not while typing; switching the slot without Apply drops the changes. Clicking into the box hides the style panel.
9		**Text Style Settings**	Shows or hides the style settings panel of the scrolling text (font, size, weight, line height, shadow, padding, top offset, speed, direction, colours). Clicking into the text editor hides the panel again.
10		**Apply**	Apply: saves the text of the selected text slot and marks it as the active text (configSp.xml, SCROLLTEXT), builds the scrolling text page with the current style grid (font, size, weight, line height, shadow, padding, top offset, speed, direction) and the three colours and shows it on the Sponsored strip of the board. Each line of the text becomes one item; odd and even lines use the two text colours. Scroll is saved as the start of the strip in start.xml.

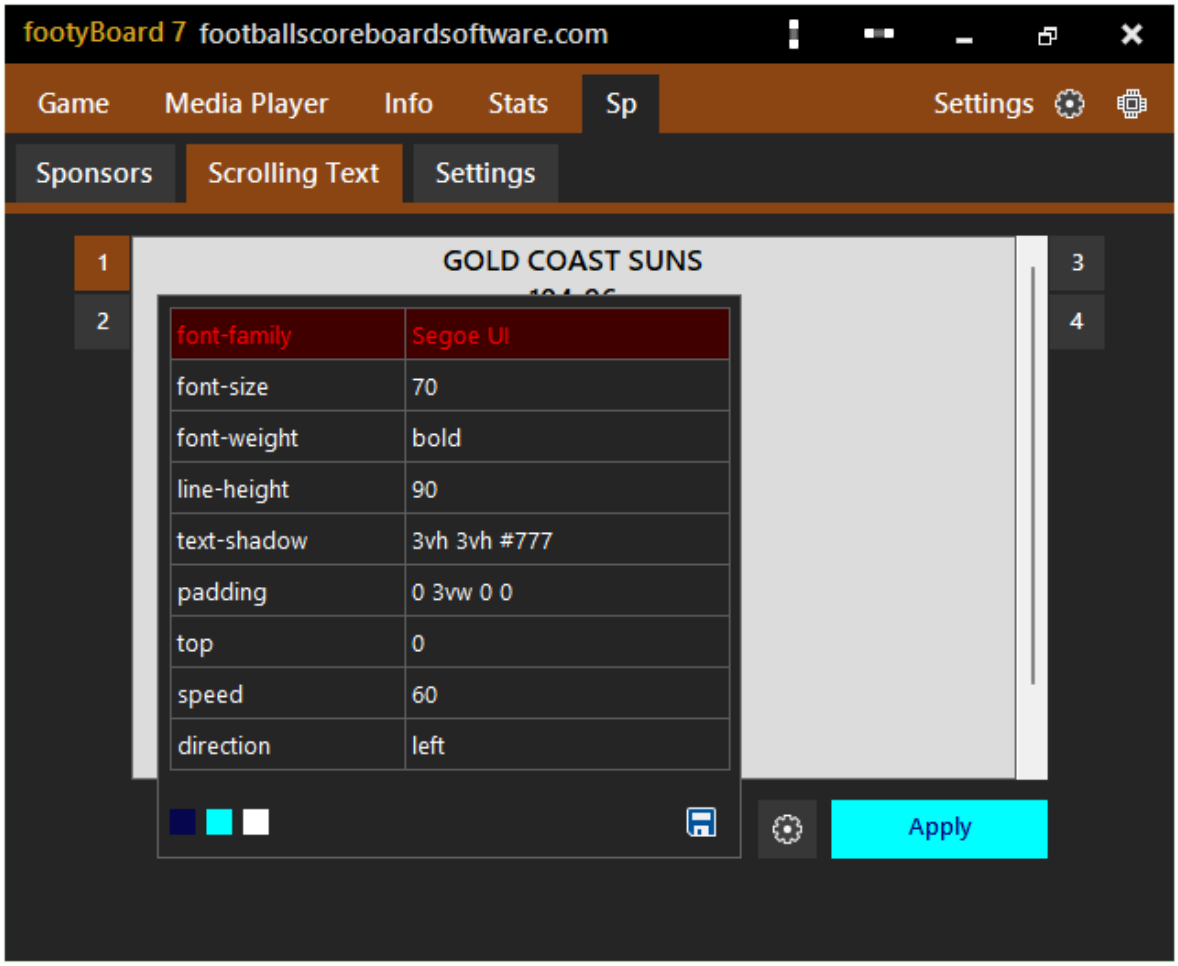


Figure 91. The style settings of the scrolling text.

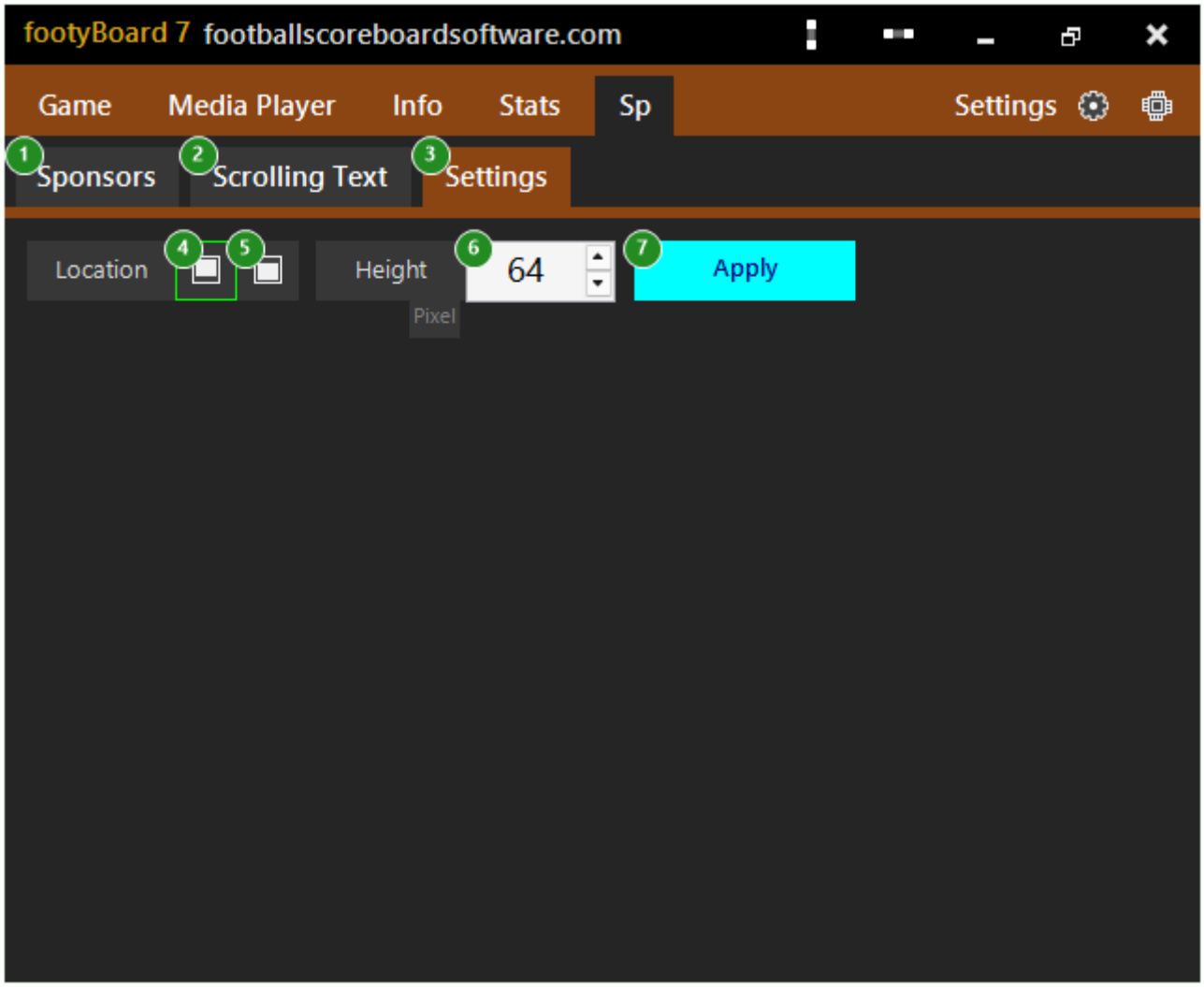


Figure 92. The Settings tab: location and height of the strip.

No.	Control	Name	What it does
1	Sponsors	**Sponsors**	Sponsors tab: shows the sponsor image slide show page, where the sponsor logos are managed and sent to the Sponsored strip of the board. The page opens on this tab unless the scrolling text was the last thing applied.
2	Scrolling Text	**Scrolling Text**	Scrolling Text tab: shows the scrolling text page, loads text slot 1 into the editor and places the cursor at the end of the text.
3	Settings	**Settings**	Settings tab: shows the location and height settings of the Sponsored strip, loaded with the values saved in start.xml.
4		**Bottom**	Places the Sponsored strip at the bottom of the board by selecting Bottom in the location list (the button gets a green border); press Apply to make it effective.
5		**Top**	Places the Sponsored strip at the top of the board by selecting Top in the location list (the button gets a green border); press Apply to make it effective.
6	64	**Height**	The height of the Sponsored strip in pixels (0 to 1920); loaded from start.xml when the Settings tab opens and saved with Apply.

No.	Control	Name	What it does
7	Apply	**Apply**	Apply: saves the chosen location (Top or Bottom) and the height in pixels of the Sponsored strip in start.xml (Sp/Location, Sp/Height) and resizes the board output at once.

An info or statistics graphic fills the whole board while it is shown and covers the strip.

20. Advertisement mode

Advertisement mode turns the board into a layout with a scoreboard box, up to two banners and a large media area. It is meant for screens where the match result shares the picture with advertising, a camera or another program. The control page has five tabs: Media Player, Camera, Screen Capture, Banner and Settings.

The scoreboard box of this mode shows names, logos, scores and the clock. The elements of the sport modes (sin-bin rows, score breakdown, counters, down and distance, play clock) are part of the Standard designs only.



Figure 93. The Advertisement board of a new installation at 960 x 540: the scoreboard box on the left, the playlist in the media area, the scrolling text of the bottom banner.

> **Note:** The score cells of the factory Advertisement layout hold totals of up to three digits. The logos are shown cut by their cells on purpose; adjust the layout in Settings > [Ad] Board Design if you want them whole.

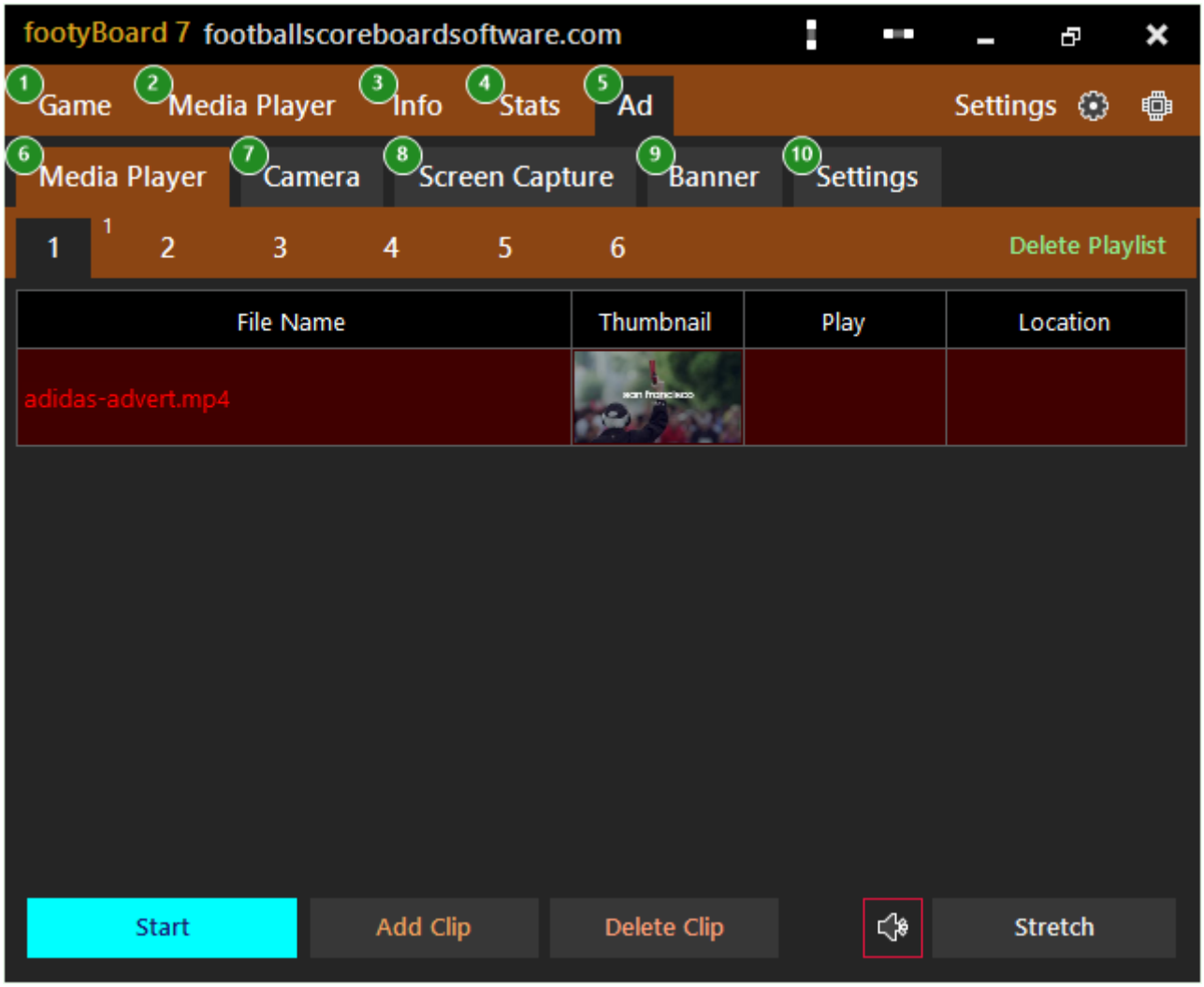
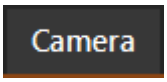
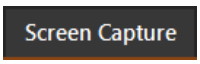
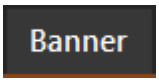
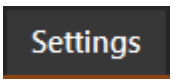


Figure 94. The Advertisement page as it opens, with its five tabs.

No.	Control	Name	What it does
1	Game	**Game**	Game: opens the control panel with score, clock, period, team names and the mode's counters, and puts the scoreboard back on the board output.
2	Media Player	**Media Player**	Media Player: opens the media player page with its playlists and the URL list for playing videos and images on the board.
3	Info	**Info**	Info: opens the Info pages (line-ups, referees, goal, cards and other information graphics).
4	Stats	**Stats**	Stats: opens the Stats pages (statistics, results, standings and score by period).
5	Ad	**Ad / Sp / CK**	Ad / Sp / CK: opens the operator panel for the selected display mode - the Advertisement banners, the Sponsored content or the Chroma Key panel. The caption follows the display mode chosen on the control panel; the button is hidden in the Standard mode.
6	Media Player	**Media Player**	Media Player tab: shows the Advertisement media playlist page, where clips are played in the media area of the Advertisement board. The button blinks while the player is on the board.

No.	Control	Name	What it does
7		**Camera**	Camera tab: shows the camera page for the Advertisement board (no NDI input in this version). The button blinks while the camera is on the board.
8		**Screen Capture**	Screen Capture tab: shows the screen capture page, where an area of the desktop is sent to the Advertisement board. The button blinks while the capture runs.
9		**Banner**	Banner tab: shows the editor of the two Advertisement banners (sponsor slide show, scrolling text or clips).
10		**Settings**	Settings tab: shows the layout settings of the Advertisement board, opening on the Scoreboard tab. The page opens on this tab when no source was active at the last run.

20.1 Settings

Four sub-tabs define the layout; click Apply after a change.

Sub-tab	Settings
Scoreboard	The side of the scoreboard box (Top, Bottom, Left, Right) and its size in percent
1. Banner, 2. Banner	Side, size, whether the banner spans the whole board (dock) and whether it is visible
Multimedia	How the media area scales its content: Center, CoverCenter, Original, SizeToFit, SizeToFitCenter, Stretch, ZoomCenter

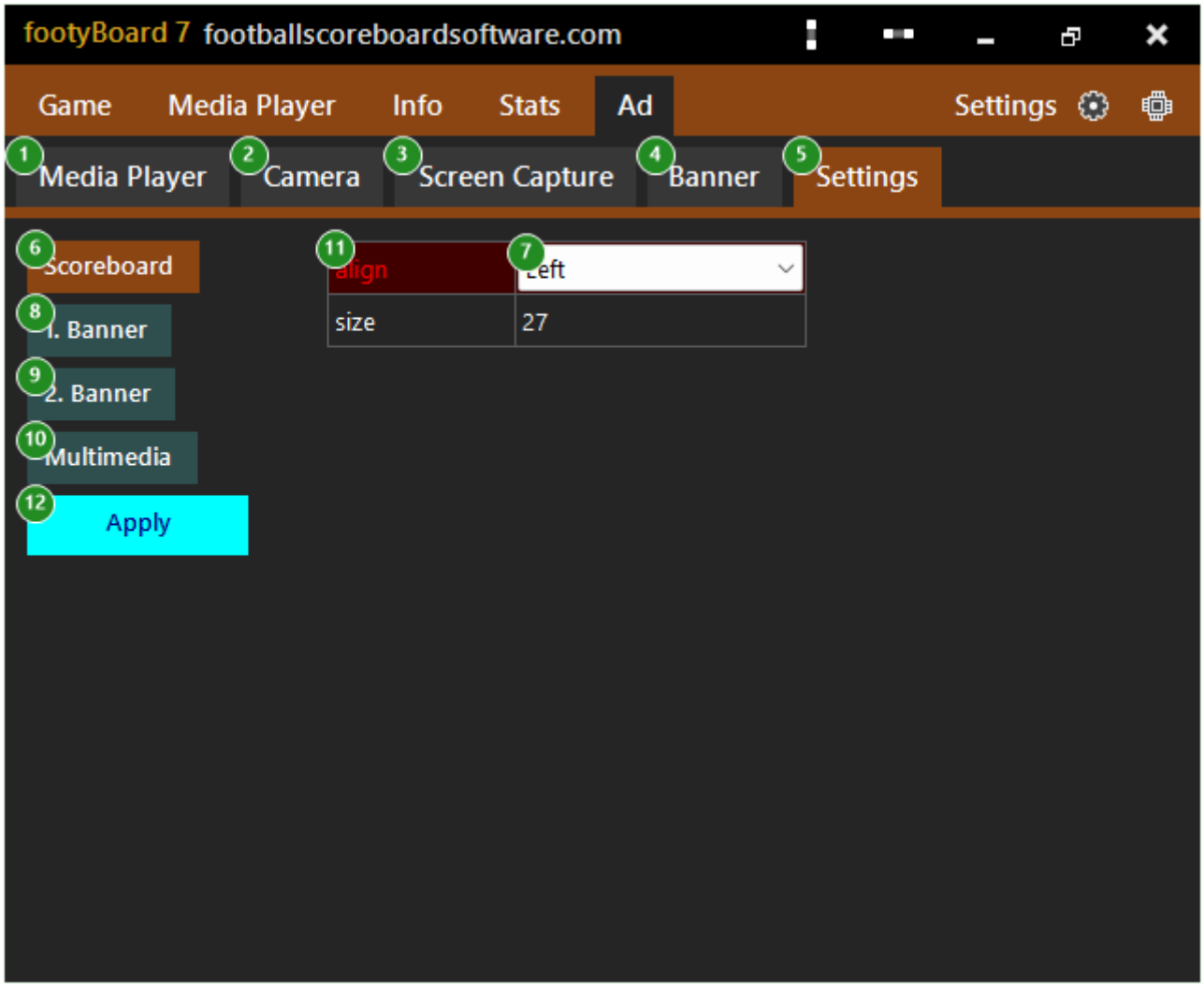
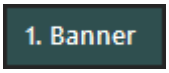
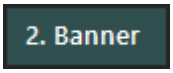
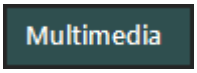
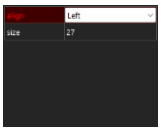


Figure 95. The Settings tab, sub-tab Scoreboard.

No.	Control	Name	What it does
1	Media Player	**Media Player**	Media Player tab: shows the Advertisement media playlist page, where clips are played in the media area of the Advertisement board. The button blinks while the player is on the board.
2	Camera	**Camera**	Camera tab: shows the camera page for the Advertisement board (no NDI input in this version). The button blinks while the camera is on the board.
3	Screen Capture	**Screen Capture**	Screen Capture tab: shows the screen capture page, where an area of the desktop is sent to the Advertisement board. The button blinks while the capture runs.
4	Banner	**Banner**	Banner tab: shows the editor of the two Advertisement banners (sponsor slide show, scrolling text or clips).
5	Settings	**Settings**	Settings tab: shows the layout settings of the Advertisement board, opening on the Scoreboard tab. The page opens on this tab when no source was active at the last run.
6	Scoreboard	**Scoreboard**	Scoreboard tab: loads the alignment (Top, Bottom, Left, Right) and the size (percent of the board) of the scoreboard area on the Advertisement board into the settings grid.

No.	Control	Name	What it does
7		**Alignment**	Drop-down shown on an align row of the settings grid: chooses where the scoreboard or banner is placed (Top, Bottom, Left, Right); saved with Apply.
8		**1. Banner**	1. Banner tab: loads the alignment, size (percent of the board), dock and visibility of the first banner into the settings grid.
9		**2. Banner**	2. Banner tab: loads the alignment, size (percent of the board), dock and visibility of the second banner into the settings grid.
10		**Multimedia**	Multimedia tab: loads the display mode of the media area (for example Stretch or Center) into the settings grid.
11		**Settings grid**	The property and value rows of the selected settings tab (align, size, dock, visible or displayMode). A click on a value cell shows the matching drop-down; the size is typed as a number (percent of the board height or width). The values are saved with Apply.
12		**Apply**	Apply: saves the rows of the selected settings tab to configAd.xml (scoreboard alignment and size, banner alignment, size, dock and visibility, or the media display mode) and resizes the Advertisement board. A banner set to size 0 or visible No is stopped and cleared from the board.

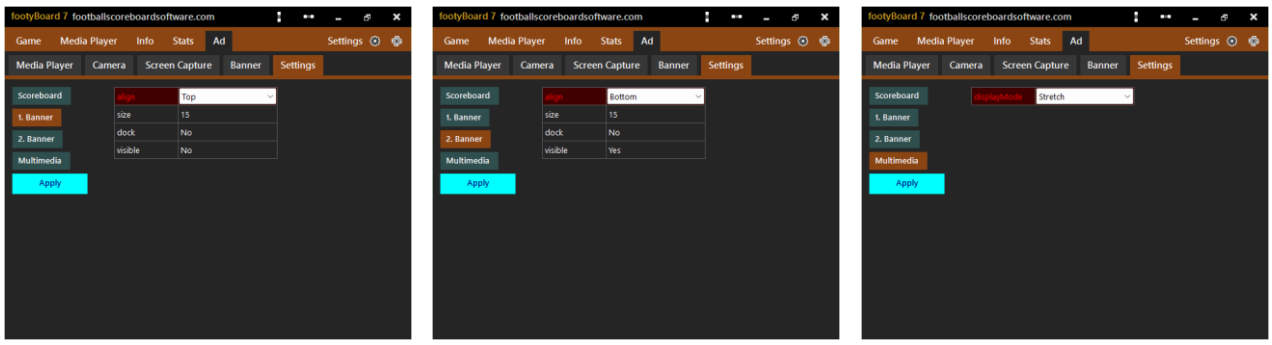


Figure 96. The sub-tabs 1. Banner, 2. Banner and Multimedia.

20.2 Media Player

A playlist player for the media area with six playlists. Add Clip, Delete Clip and Delete Playlist edit the list; rows can be moved with the mouse. Play plays the selected clip, Start plays the whole list in a loop (the button reads Finish while it runs); the Return to Scoreboard option of the main media player does not apply here. A missing or unplayable file is skipped. The speaker button switches the sound, the display mode button the scaling.

Only one source (playlist, camera or capture) can feed the media area at a time; starting one stops the others.

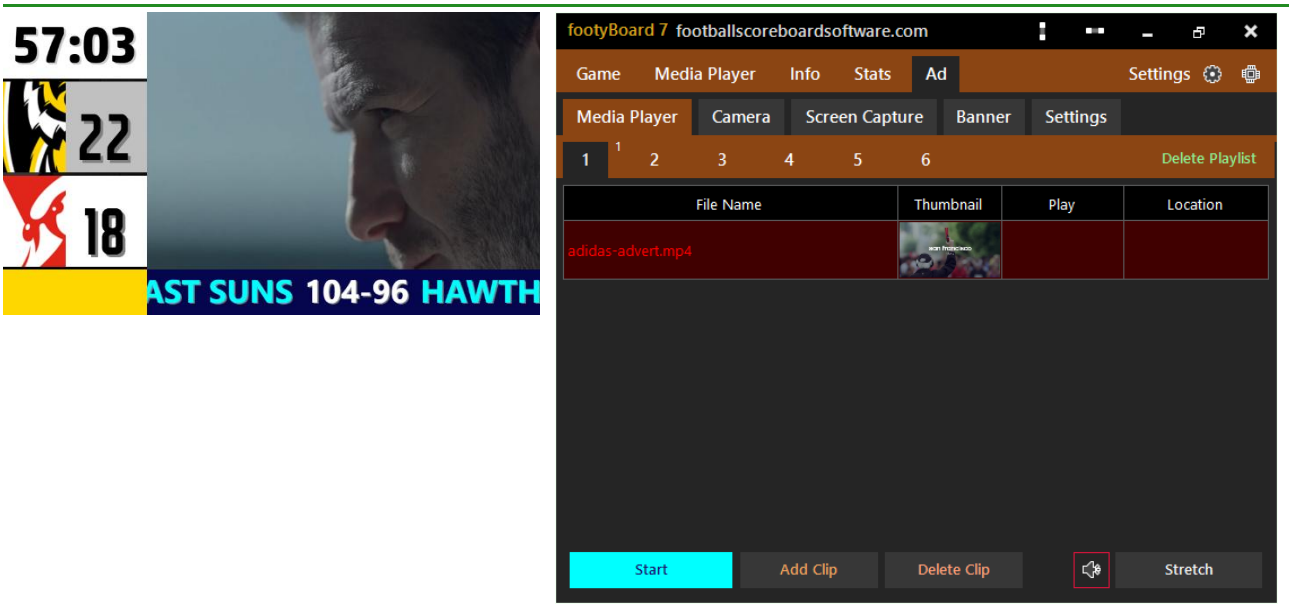


Figure 97. The Advertisement media player and the board with the playlist in the media area.

20.3 Camera

Shows a camera in the media area. Pick the device in the Camera list and a format in the Format list, click Start to see the preview and Show to put the picture on the board. Stop releases the device. The list holds every video input device Windows knows, also a capture card without a signal.

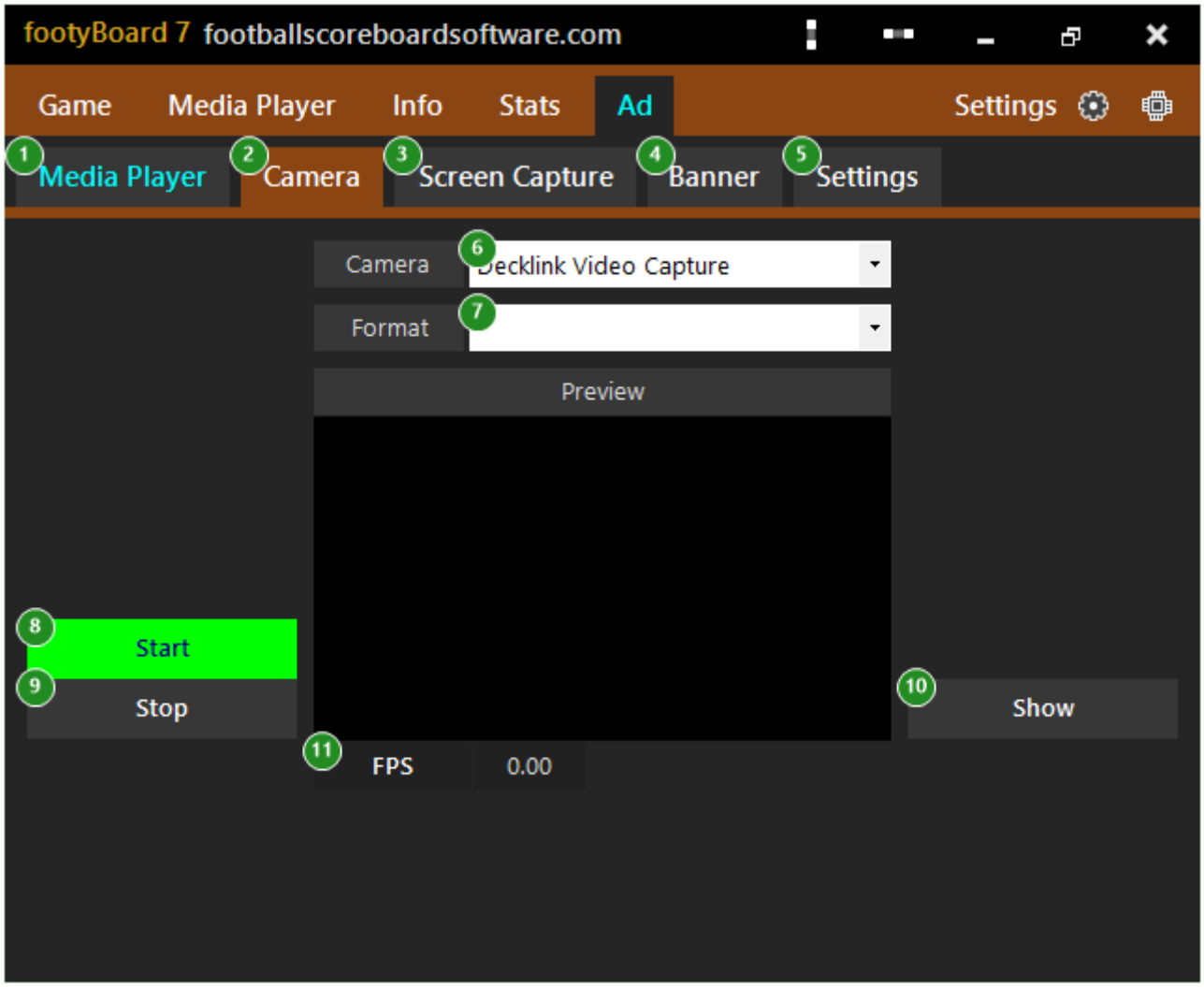


Figure 98. The Camera tab (a capture card without a signal was found on the documentation PC).

No.	Control	Name	What it does
1	Media Player	**Media Player**	Media Player tab: shows the Advertisement media playlist page, where clips are played in the media area of the Advertisement board. The button blinks while the player is on the board.
2	Camera	**Camera**	Camera tab: shows the camera page for the Advertisement board (no NDI input in this version). The button blinks while the camera is on the board.
3	Screen Capture	**Screen Capture**	Screen Capture tab: shows the screen capture page, where an area of the desktop is sent to the Advertisement board. The button blinks while the capture runs.
4	Banner	**Banner**	Banner tab: shows the editor of the two Advertisement banners (sponsor slide show, scrolling text or clips).
5	Settings	**Settings**	Settings tab: shows the layout settings of the Advertisement board, opening on the Scoreboard tab. The page opens on this tab when no source was active at the last run.
6	Decklink Video Capture	**Camera**	Lists the cameras found on this PC (the first one is preselected); selecting one loads its formats (resolution and frame rate) into the format list.

No.	Control	Name	What it does
7		**Format**	Lists the resolutions and frame rates offered by the selected camera; the selected format is used when the camera is started.
8	Start	**Start**	Start: starts the selected camera with the selected format as a preview in the panel and remembers camera and format in configAd.xml; a warning asks to select a camera and format when one of them is empty. Use Show to put the picture on the board. There is no NDI input in this version. A device error is reported in a notice.
9	Stop	**Stop**	Stop: stops the camera and removes its picture from the Advertisement board.
10	Show	**Show**	Show: stops the screen capture and the media player, sends the running camera picture to the Advertisement board and saves Camera as the start source of the board (start.xml). The Camera tab button blinks while the camera is on the board.
11	FPS	**FPS**	Shows the current frame rate of the running camera next to the button.

20.4 Screen Capture

Captures a rectangle of the desktop of the operator PC, for example a browser window with a live table, and shows it in the media area. Type the rectangle (Left, Top, Width, Height in pixels) under Source Bounds, or click the selection button and drag the rectangle on the dimmed screen (Esc cancels). Start begins the capture, Stop ends it. An area outside all screens is refused with a notice. The FPS button shows the current capture rate when you click it. A negative Left or Top (a screen left of or above the main screen) can be typed or set with the selection button.

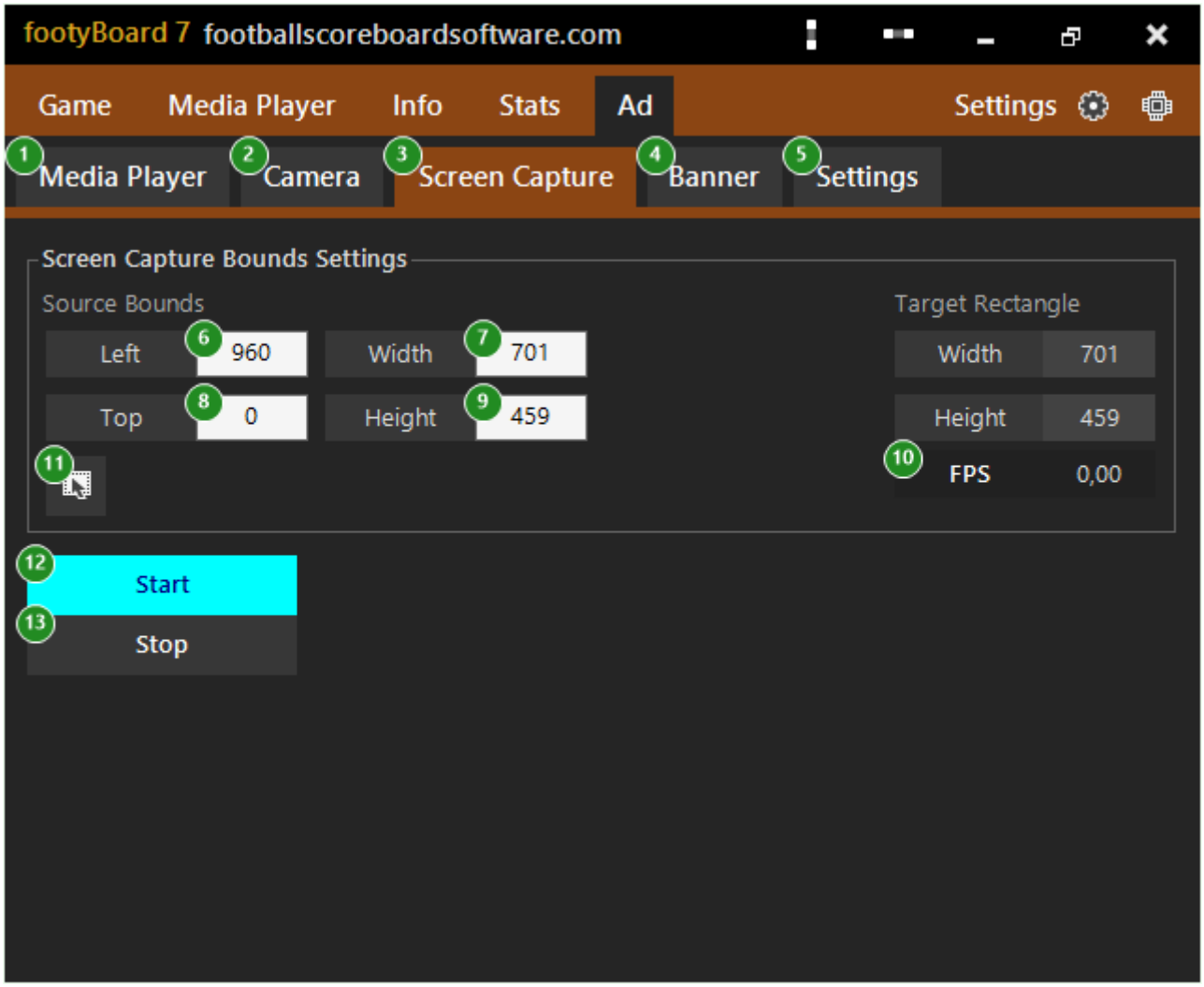
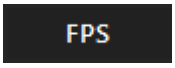
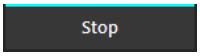


Figure 99. The Screen Capture tab.

No.	Control	Name	What it does
1	Media Player	**Media Player**	Media Player tab: shows the Advertisement media playlist page, where clips are played in the media area of the Advertisement board. The button blinks while the player is on the board.
2	Camera	**Camera**	Camera tab: shows the camera page for the Advertisement board (no NDI input in this version). The button blinks while the camera is on the board.
3	Screen Capture	**Screen Capture**	Screen Capture tab: shows the screen capture page, where an area of the desktop is sent to the Advertisement board. The button blinks while the capture runs.
4	Banner	**Banner**	Banner tab: shows the editor of the two Advertisement banners (sponsor slide show, scrolling text or clips).
5	Settings	**Settings**	Settings tab: shows the layout settings of the Advertisement board, opening on the Scoreboard tab. The page opens on this tab when no source was active at the last run.

No.	Control	Name	What it does
6		**Left**	Left edge in pixels of the desktop area to capture; filled by Select Rectangle or typed. It is saved with Start. When the box is left the text is turned into a whole number and a minus sign typed by hand is dropped (an area on a monitor to the left of the main one must be drawn with Select Rectangle).
7		**Width**	Width in pixels of the desktop area to capture; filled by Select Rectangle or typed. It is saved with Start. When the box is left the text is turned into a whole number.
8		**Top**	Top edge in pixels of the desktop area to capture; filled by Select Rectangle or typed. It is saved with Start. When the box is left the text is turned into a whole number and a minus sign typed by hand is dropped.
9		**Height**	Height in pixels of the desktop area to capture; filled by Select Rectangle or typed. It is saved with Start. When the box is left the text is turned into a whole number.
10		**FPS**	Shows the current frame rate of the running screen capture next to the button.
11		**Select Rectangle**	Select Rectangle: opens a full-screen overlay (starting from the saved area) in which the desktop area to capture is drawn; the Left, Top, Width and Height fields are filled from the drawn rectangle when it is larger than a few pixels.
12		**Start**	Start: stops the camera and the media player, saves Capture as the start source of the board (start.xml) and the area in configAd.xml, then captures that desktop area onto the Advertisement board with the display mode of the board (GPU or GDI capture depending on the settings). An area with no size or outside the connected monitors is refused with a notice. If a capture is already running nothing new is started. The Screen Capture tab button blinks while the capture runs.
13		**Stop**	Stop: stops the screen capture and clears the captured picture from the Advertisement board.

20.5 Banner

The editor for the two banners; the two buttons at the top switch between 1. Banner and 2. Banner. Each banner shows sponsor images, a scrolling text (four slots) or a small playlist without sound, with the same controls as the Sponsored strip. A banner that is switched off or has the size 0 in the settings is disabled here. When both banners are enabled the page opens on 2. Banner.

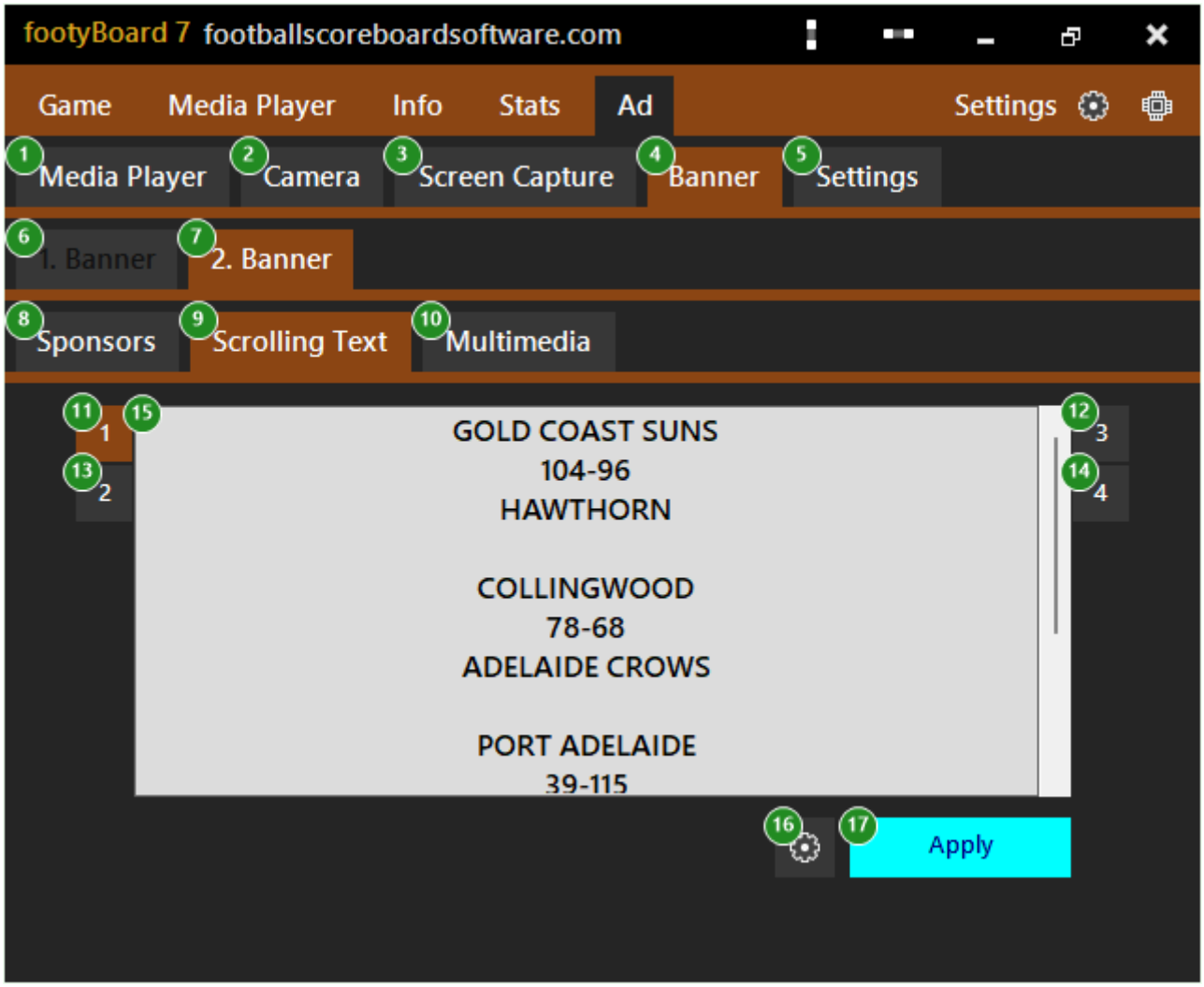
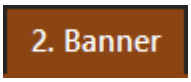
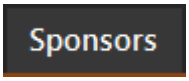
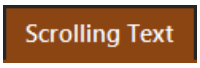
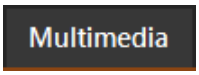
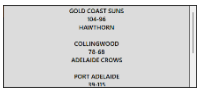


Figure 100. The banner editor: 1. Banner with the sponsor images.

No.	Control	Name	What it does
1	Media Player	**Media Player**	Media Player tab: shows the Advertisement media playlist page, where clips are played in the media area of the Advertisement board. The button blinks while the player is on the board.
2	Camera	**Camera**	Camera tab: shows the camera page for the Advertisement board (no NDI input in this version). The button blinks while the camera is on the board.
3	Screen Capture	**Screen Capture**	Screen Capture tab: shows the screen capture page, where an area of the desktop is sent to the Advertisement board. The button blinks while the capture runs.
4	Banner	**Banner**	Banner tab: shows the editor of the two Advertisement banners (sponsor slide show, scrolling text or clips).
5	Settings	**Settings**	Settings tab: shows the layout settings of the Advertisement board, opening on the Scoreboard tab. The page opens on this tab when no source was active at the last run.
6	1. Banner	**1. Banner**	1. Banner tab: shows the editor of the first Advertisement banner (sponsor slide show, scrolling text, clips). The tab is greyed out when the first banner has size 0 or is set to not visible in the Advertisement settings.

No.	Control	Name	What it does
7		**2. Banner**	2. Banner tab: shows the editor of the second Advertisement banner (sponsor slide show, scrolling text, clips). The tab is greyed out when the second banner has size 0 or is set to not visible in the Advertisement settings. When both banners are available the page opens on this tab.
8		**Sponsors**	Sponsors tab: shows the sponsor image slide show page of this banner.
9		**Scrolling Text**	Scrolling Text tab: shows the scrolling text page of this banner, loads text slot 1 into the editor and places the cursor at the end.
10		**Multimedia**	Multimedia tab: shows the clip playlist page of this banner.
11		**Text 1**	Selects scrolling text slot 1 of this banner and loads its saved text into the editor; the style panel is closed. The four buttons are the four text slots of the banner.
12		**Text 3**	Selects scrolling text slot 3 of this banner and loads its saved text into the editor; the style panel is closed. The four buttons are the four text slots of the banner.
13		**Text 2**	Selects scrolling text slot 2 of this banner and loads its saved text into the editor; the style panel is closed. The four buttons are the four text slots of the banner.
14		**Text 4**	Selects scrolling text slot 4 of this banner and loads its saved text into the editor; the style panel is closed. The four buttons are the four text slots of the banner.
15		**Scrolling text**	The text of the selected text slot of this banner; each line becomes one item of the scrolling text. It is saved and shown with Apply, not while typing; switching the slot without Apply drops the changes. Clicking into the box hides the style panel.
16		**Text Style Settings**	Shows or hides the style settings panel of this banner's scrolling text (font, size, weight, line height, shadow, padding, top offset, speed, direction, colours). Clicking into the text editor hides the panel again.
17		**Apply**	Apply: stops any clip playing in this banner, saves the text of the selected text slot and marks it as the active text (configAd.xml, SCROLLTEXT), builds the scrolling text page with the current style grid (font, size, weight, line height, shadow, padding, top offset, speed, direction) and the three colours and shows it in this banner on the Advertisement board. Each line of the text becomes one item; odd and even lines use the two text colours. The banner start is saved as Scroll in start.xml.

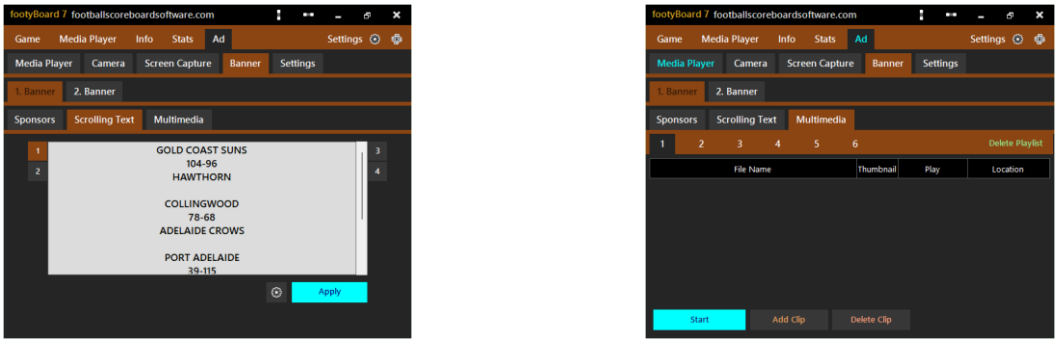


Figure 101. The Scrolling Text and Multimedia tabs of a banner.

Note: An info or statistics graphic fills the whole board while it is shown, so the banners and the media area are covered for that time and the NDI stream carries the graphic. The layout returns when you click Game.

21. Chroma Key mode

Chroma Key mode is for productions with a vision mixer or streaming software. The board shows a compact scorebug and the info graphics on a solid key colour, so the mixer can key them over the live picture. The control page has five tabs: Info, Media Player, Camera, Screen Capture and Settings.

The scorebug carries the clock, the logos, the team colours, the names and the scores. It has no elements for the sin bin, the score breakdown, the counters or the American Football values.

21.1 Info tab

Each row has a button that shows a graphic and a Hide button next to it: Scoreboard (the scorebug), Goal, Yellow Card, Red Card, Substitution and Timeline. Goal, the cards and the substitution open an editor: pick the team by its logo, the player and the minute, and click Show. The Goal editor offers the score types of the sport mode, like the Info > Goal page (chapter 16.3). The list icon adds the event to the timeline.

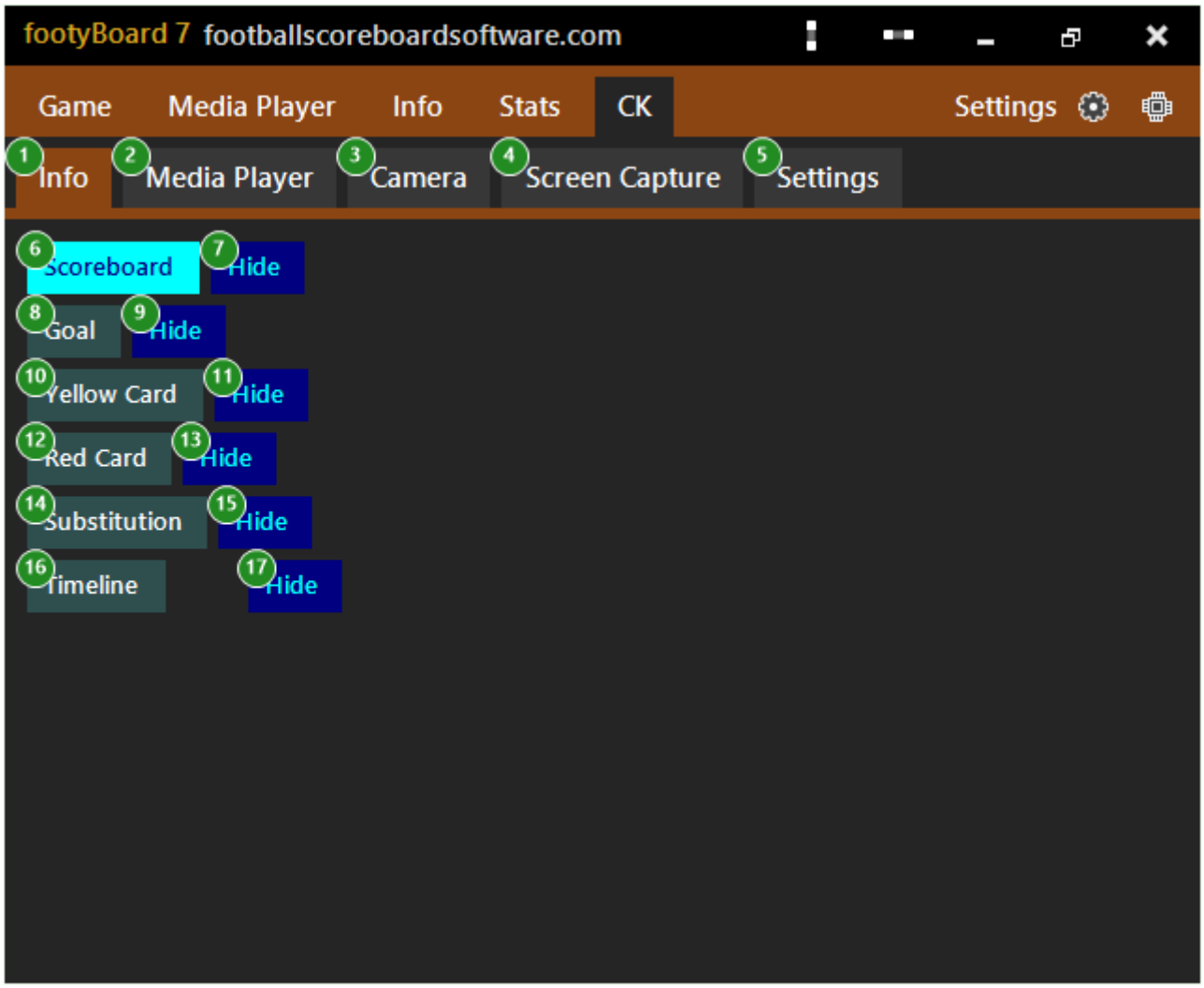


Figure 102. The Info tab of the Chroma Key page.

No.	Control	Name	What it does
1	Info	**Info**	Info: switches the Chroma Key panel to the Info page with the Scoreboard, Goal, Yellow Card, Red Card, Substitution and Timeline tabs.

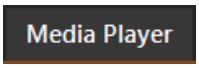
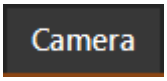
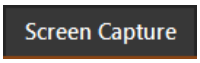
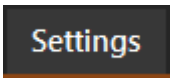
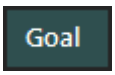
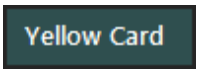
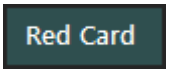
No.	Control	Name	What it does
2		**Media Player**	Media Player: switches the Chroma Key panel to the media playlist page for playing clips on the keyed output. The button blinks while the player is on the board.
3		**Camera**	Camera: switches the Chroma Key panel to the camera page (no NDI input in this version). The button blinks while the camera is on the board.
4		**Screen Capture**	Screen Capture: switches the Chroma Key panel to the screen capture page. The button blinks while the capture runs.
5		**Settings**	Settings: switches the Chroma Key panel to the key colour page, marking the saved key colour and showing its RGBA values.
6		**Scoreboard**	Scoreboard: shows the live scoreboard graphic (CK_Game page) on the Chroma Key board.
7		**Hide**	Hides the scoreboard graphic from the Chroma Key board, leaving only the key background.
8		**Goal**	Goal: opens the Goal panel for showing a score graphic (score type of the mode, team, player, minute) on the Chroma Key board.
9		**Hide**	Hides the overlay graphic currently shown (goal, card, substitution or timeline) from the Chroma Key board; the seven Hide buttons of the row all clear the same overlay area.
10		**Yellow Card**	Yellow Card: opens the Card panel preset to a yellow card for showing a card graphic on the Chroma Key board. The card shown here is independent of the sin bin of the control panel.
11		**Hide**	Hides the overlay graphic currently shown (goal, card, substitution or timeline) from the Chroma Key board; the seven Hide buttons of the row all clear the same overlay area.
12		**Red Card**	Red Card: opens the Card panel preset to a red card for showing a card graphic on the Chroma Key board. The card shown here is independent of the sin bin and the red card count of the control panel.
13		**Hide**	Hides the overlay graphic currently shown (goal, card, substitution or timeline) from the Chroma Key board; the seven Hide buttons of the row all clear the same overlay area.
14		**Substitution**	Substitution: opens the Substitution panel for showing a player in / player out graphic on the Chroma Key board.
15		**Hide**	Hides the overlay graphic currently shown (goal, card, substitution or timeline) from the Chroma Key board; the seven Hide buttons of the row all clear the same overlay area.
16		**Timeline**	Timeline: opens the match timeline panel over the work area for showing the list of match events on the Chroma Key board, home and guest in separate columns.
17		**Hide**	Hides the overlay graphic currently shown (goal, card, substitution or timeline) from the Chroma Key board; the seven Hide buttons of the row all clear the same overlay area.



Figure 103. The scorebug on the key colour (Scoreboard > Show). The factory key colour of a new installation is black.

BOARD OUTPUT **CONTROL PANEL**

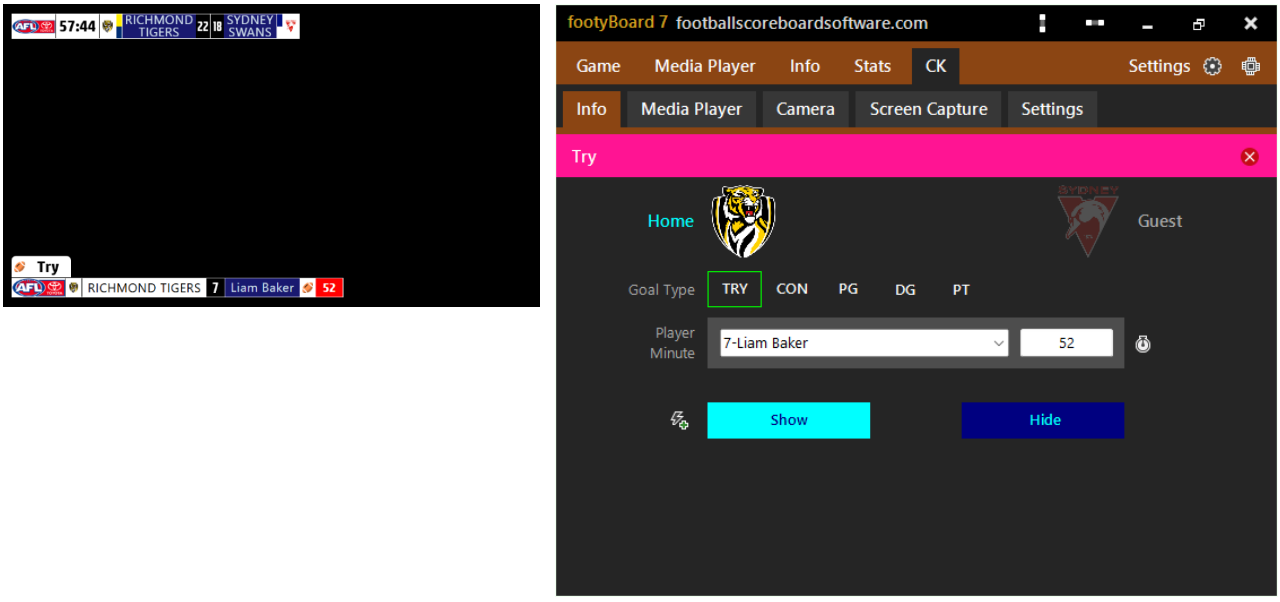


Figure 104. The keyed score event graphic and its editor.

BOARD OUTPUT **CONTROL PANEL**

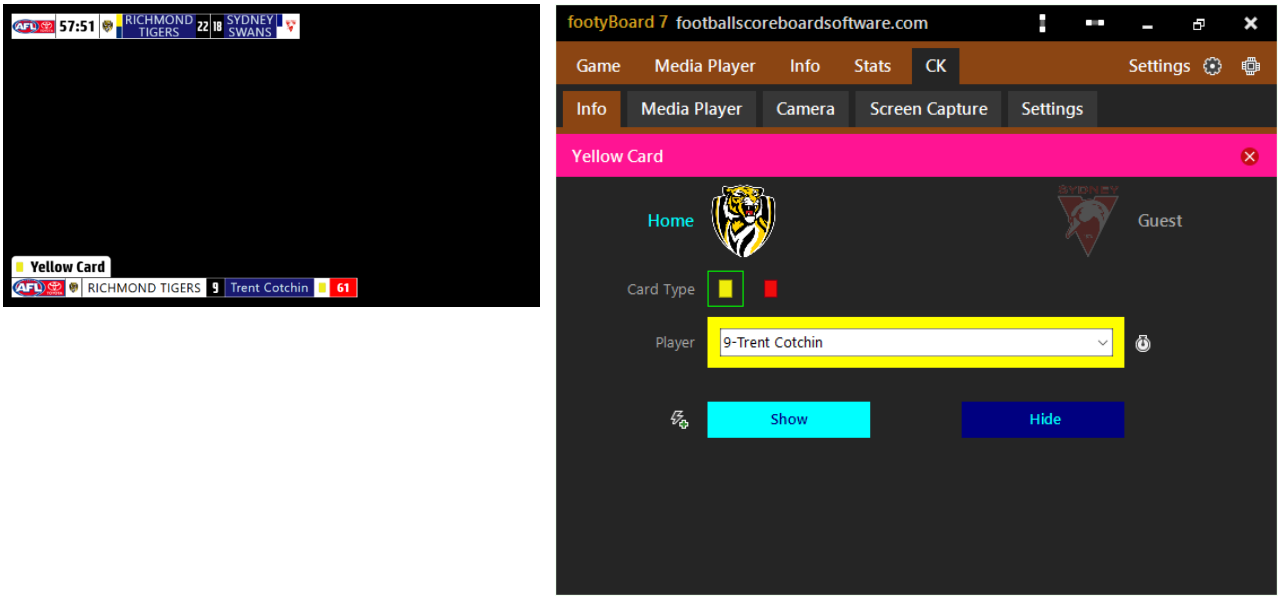


Figure 105. The keyed yellow card.

BOARD OUTPUT **CONTROL PANEL**

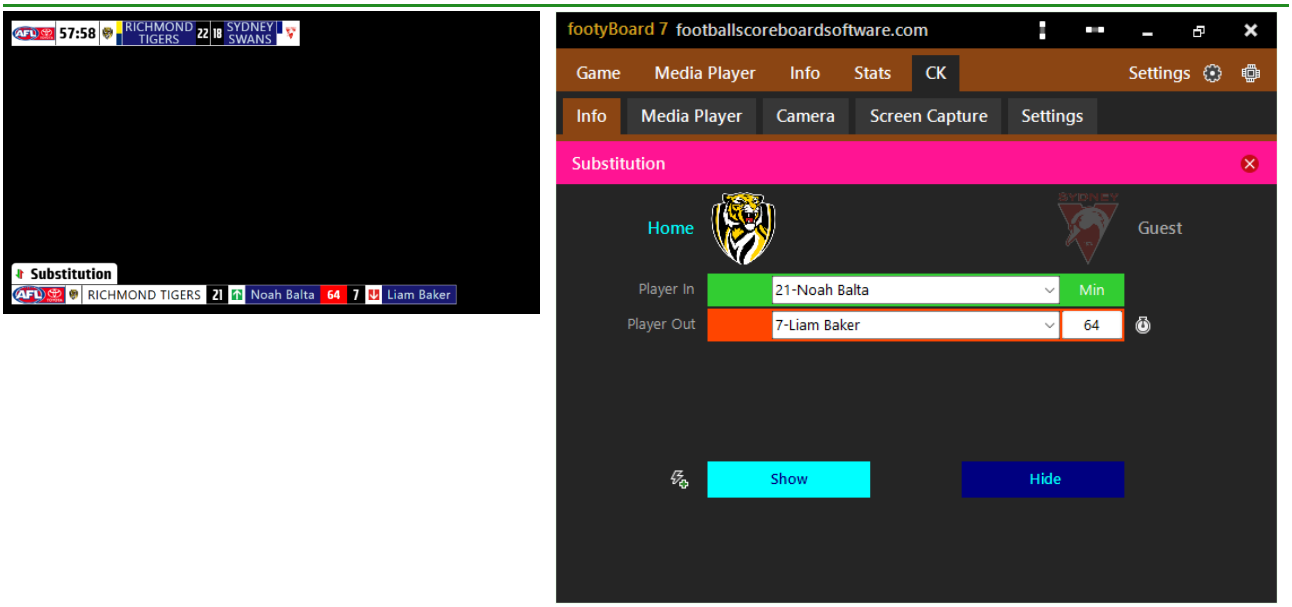


Figure 106. The keyed substitution.

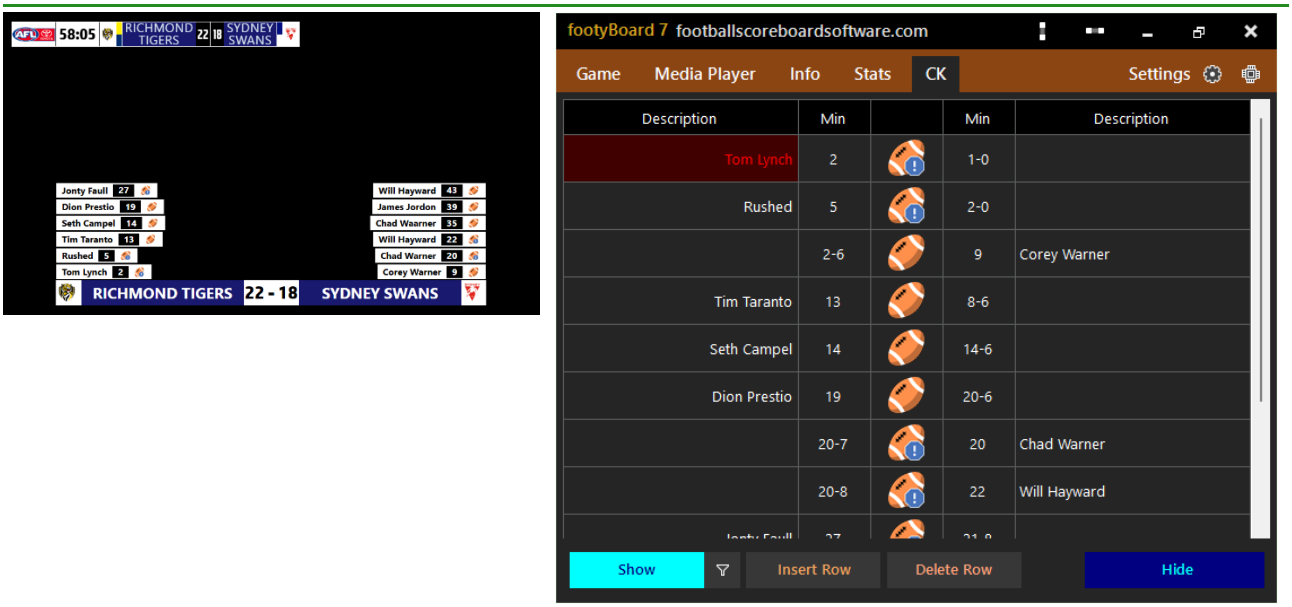


Figure 107. The keyed timeline.

In a mode with a shoot-out, selecting the shoot-out period on the Game page shows it in a keyed layout.

21.2 Media Player, Camera and Screen Capture

They work like their Advertisement counterparts (chapters 20.2 to 20.4) and fill the area behind the graphics. The screen capture fills the whole board.

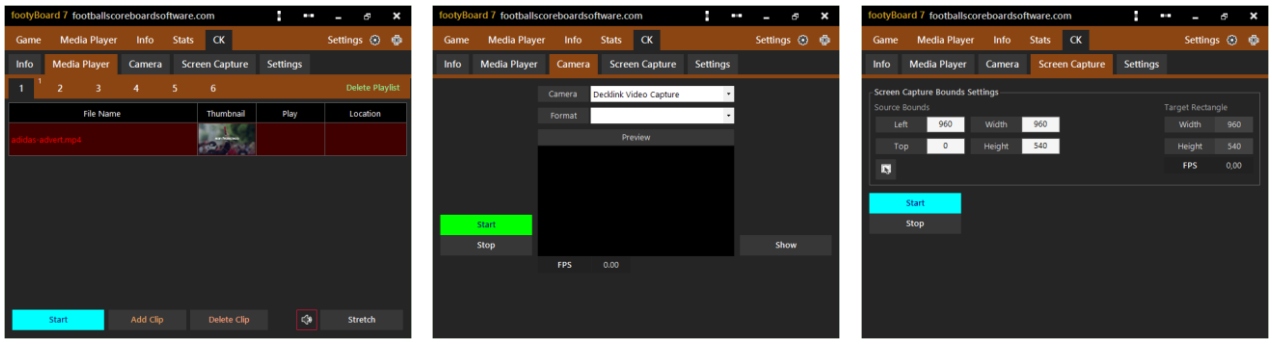


Figure 108. The Media Player, Camera and Screen Capture tabs of the Chroma Key page.

21.3 Designs

The Chroma Key scorebug is edited in Settings > [CK] Board Design. Saving a design under a new name is not supported in this mode.

21.4 Settings: key colour

Choose the key colour: Transparent, Green, Blue or Magenta. The RGBA values of the selected colour are shown so you can enter them in the keyer of the mixer.

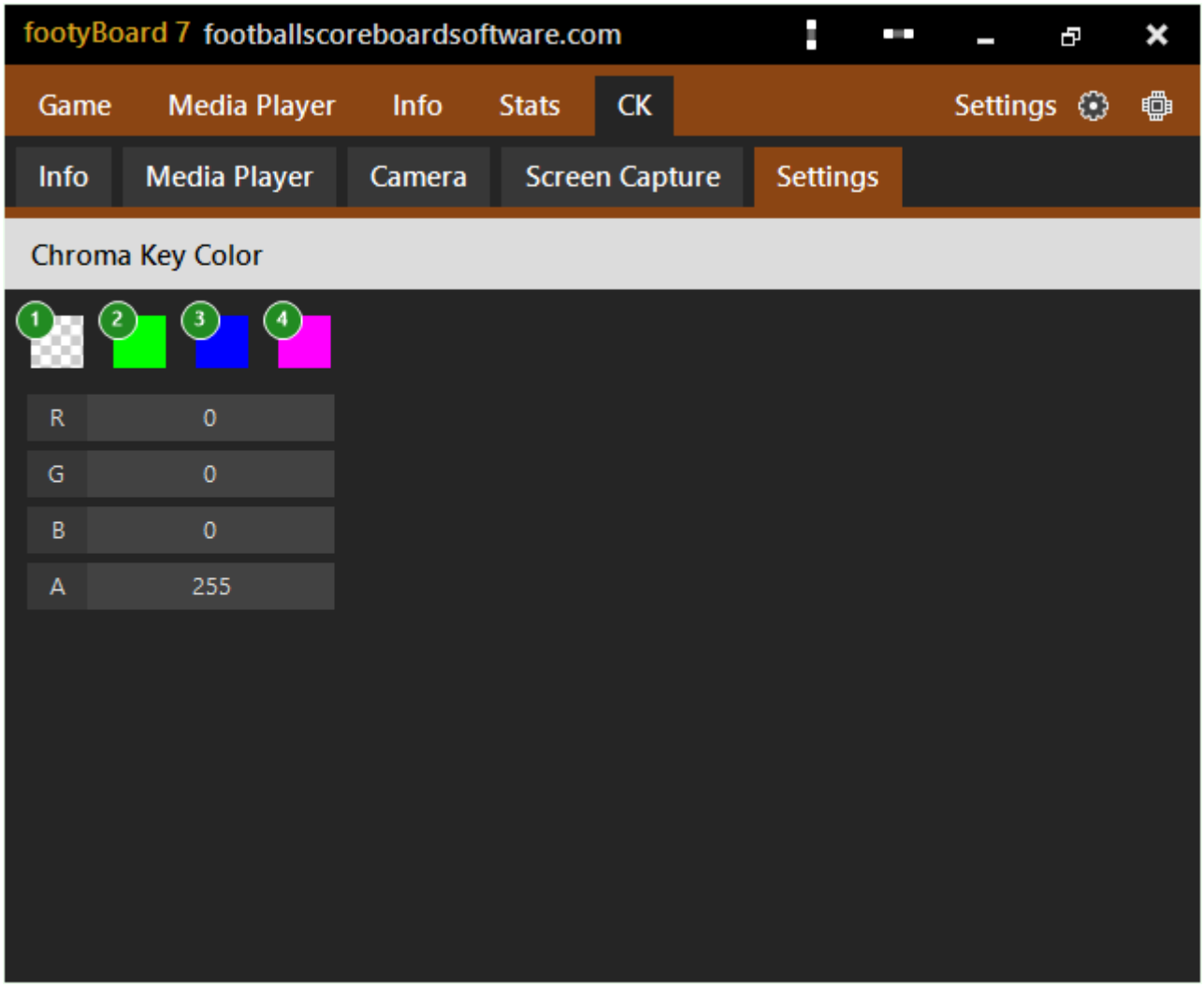


Figure 109. The key colour settings.

No.	Control	Name	What it does
1		**Transparent**	Selects Transparent as the Chroma Key background colour and saves it in start.xml (CK/KeyColor); the board shows the graphics on a transparent background, the choice is marked with a red border and the RGBA values are displayed next to the buttons.
2		**Green**	Selects Green as the Chroma Key background colour and saves it in start.xml (CK/KeyColor); the board fills its background with green for keying on the vision mixer, the choice is marked with a red border and the RGBA values are displayed next to the buttons.
3		**Blue**	Selects Blue as the Chroma Key background colour and saves it in start.xml (CK/KeyColor); the board fills its background with blue for keying on the vision mixer, the choice is marked with a red border and the RGBA values are displayed next to the buttons.
4		**Magenta**	Selects Magenta as the Chroma Key background colour and saves it in start.xml (CK/KeyColor); the board fills its background with magenta for keying on the vision mixer, the choice is marked with a red border and the RGBA values are displayed next to the buttons.

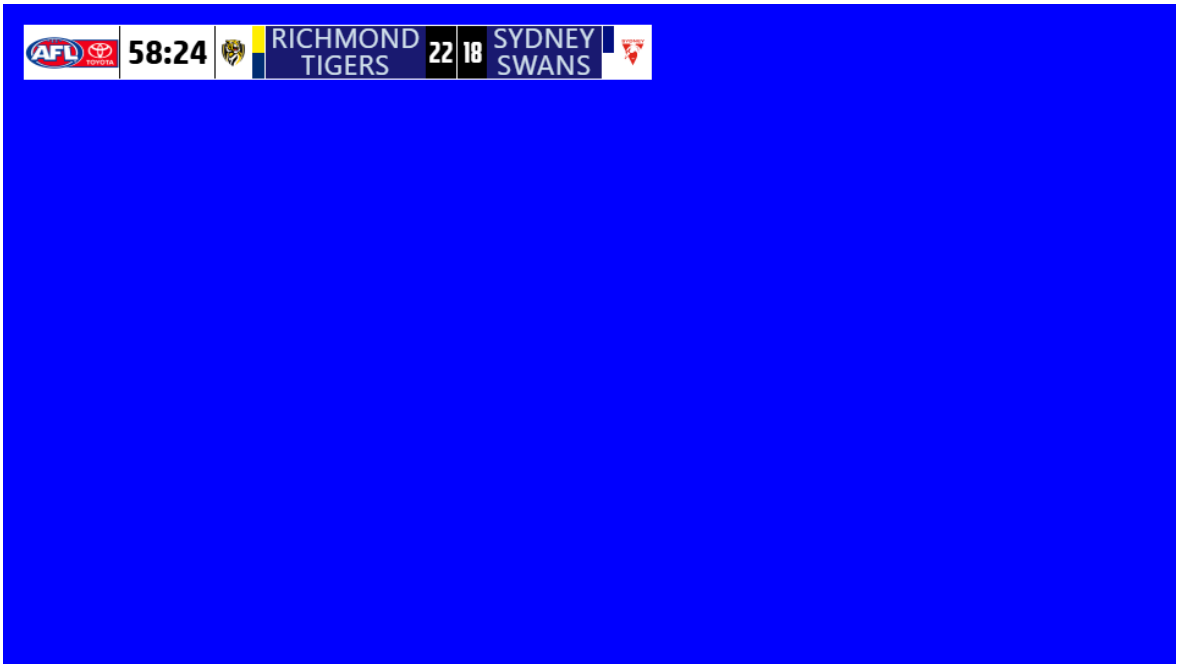


Figure 110. The board with the blue key colour.

> **Note:** With the colour Transparent the board window is see-through on the Windows desktop. The NDI stream carries no transparency, so a receiver does not get a transparent picture.

22. Settings

The Settings page has a button column on the left: License (chapter 2), Screen Properties, the four Board Design editors (one per display mode; only the editor of the current mode is enabled), Remote Control, Language and Youtube Tutorials.

The Youtube Tutorials button opens the video tutorials in the browser.

22.1 Screen Properties

Property	Meaning
L: Left, T: Top	Position of the board window on the desktop, in pixels (chapter 3.1). Not negative.
W: Width, H: Height	Size of the board window. 1920 x 1080 for a full-HD display; the maximum is set by your license.
Max Resolution	The largest size your license allows (read only).
Periods & Score Settings	The period lengths (read only). Click the row and then the clock button to open the Timer, Period & Score Settings.
Score Values	The points of the score types.
Image Play Duration	Seconds an image stays on screen in a playlist, 1 to 120.
Background Video Opacity	0 to 10, how strongly the background video shows.

Click a value to edit it; the change is saved when you leave the cell.

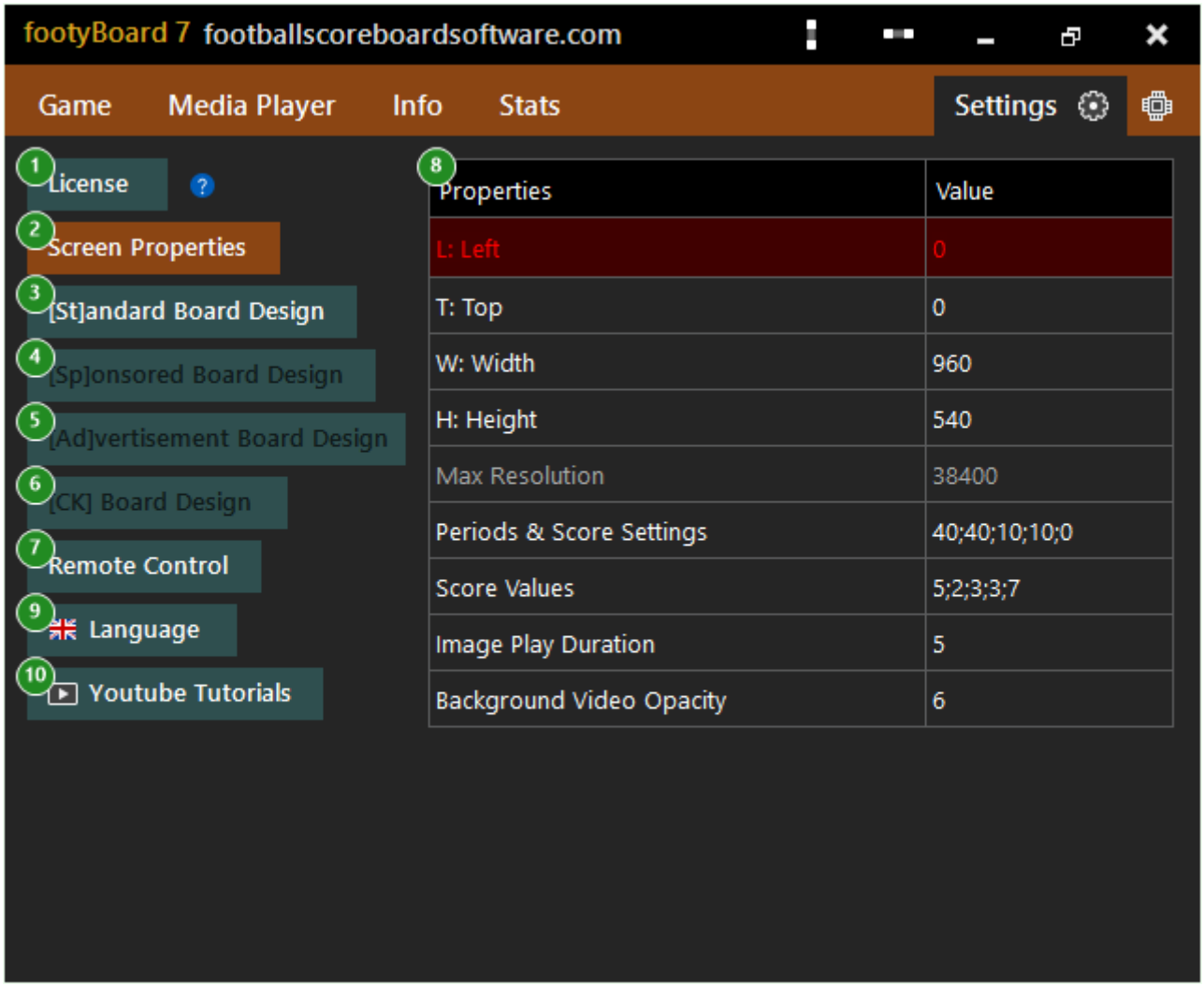
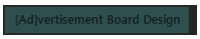
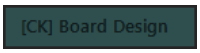
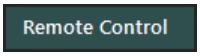
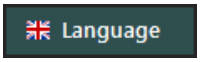
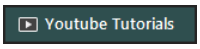


Figure 111. The Screen Properties page.

No.	Control	Name	What it does
1	License	**License**	Opens the License page of Settings, where the PC licence key and the USB licence options are managed. The page shows a USB licence panel when a licensed stick was found.
2	Screen Properties	**Screen Properties**	Opens the Screen Properties page of Settings, where the output screen position and size, image play duration, background video opacity and the link to the Timer, Period & Score Settings are edited in a property list. Each value is saved to start.xml as soon as the cell edit ends and the board is redrawn.
3	[St]andard Board Design	**[St]andard Board Design**	Opens the board design editor for the Standard display mode, where the layout and style of the elements of the board pages are adjusted. The button is enabled only while the Standard display mode is active.
4	[Sp]onsored Board Design	**[Sp]onsored Board Design**	Opens the board design editor for the Sponsored display mode, where the layout and style of the elements of the board pages are adjusted. The button is enabled only while the Sponsored display mode is active.

No.	Control	Name	What it does
5		**[Ad]vertisement Board Design**	Opens the board design editor for the Advertisement display mode, where the layout and style of the elements of the board pages are adjusted. The button is enabled only while the Advertisement display mode is active.
6		**[CK] Board Design**	Opens the board design editor for the Chroma Key display mode, where the layout and style of the elements of the board pages are adjusted. The button is enabled only while the Chroma Key display mode is active.
7		**Remote Control**	Opens the Remote Control page, where the built-in web remote control (port 1907) is switched on or off, its PIN is set and the connection link and QR code are shown.
8		**Screen Properties list**	Property list of the Screen Properties page. Rows: L: Left, T: Top, W: Width and H: Height of the output screen (width and height are limited to the licence's maximum resolution), Max Resolution (read-only, from the licence), Periods & Score Settings (read-only, shows the four period lengths; its clock icon opens the Timer, Period & Score Settings window), Score Values (shows the five score values of the mode; the edit is always rejected because the check still expects four values, so the values can only be changed in the Timer, Period & Score Settings window), Image Play Duration (1 to 120 seconds, otherwise 5) and Background Video Opacity (0 to 10, otherwise 6). A value is edited with F2 or by typing in the Value cell; an empty value is refused; when the edit ends the value is written to start.xml and the board is redrawn.
9		**Language**	Opens the Language page, where the operator language is selected and the panel captions and board titles can be edited.
10		**Youtube Tutorials**	Opens the YouTube tutorial playlist in the default web browser (the link is the playlist of the soccerBoard7 family of programs).

22.2 Board Design

The design editor changes the look of the board and the info graphics. The button that matches the current display mode is enabled; in Sponsored mode the Standard design is edited.

- The list on the left selects the graphic: Game (the scoreboard), Goal, Substitution, Multiple, Cards, Match Summary, Stats, Results, Standings, Team Players, Slide, Referees, Banner, Announce, VAR and Score By Period.
- Elements: the elements of that graphic, for example chronometer, logoHome or nameHome. Names that start with a dot are styles shared by several elements (.txt_sinTime is the style of every sin-bin time). Hidden elements are grey. The eye icon (Show or Hide) hides or shows the selected element.
- The grid on the right holds the properties of the selected element; the buttons Location and Style switch between position (left, top, width, height, alignment) and look (font, size, colour). The icons above the grid insert and delete a property row; the colour and font pickers open from the row of a colour or font.
- Numbers without a unit are percent of the board: of its width for left, right and width, of its height for top, bottom, height and font size. A value with px, em or % is used as it is.

- The selected element gets a dotted red frame on the board. The board is redrawn when you select an element and when you save.
- Save & Apply stores the changes of the element in the design that is in use. Save Design As (the icon in the title bar) stores the scoreboard as a new named design that appears in the design list of the Game page. Factory Settings restores the selected graphic after a confirmation.

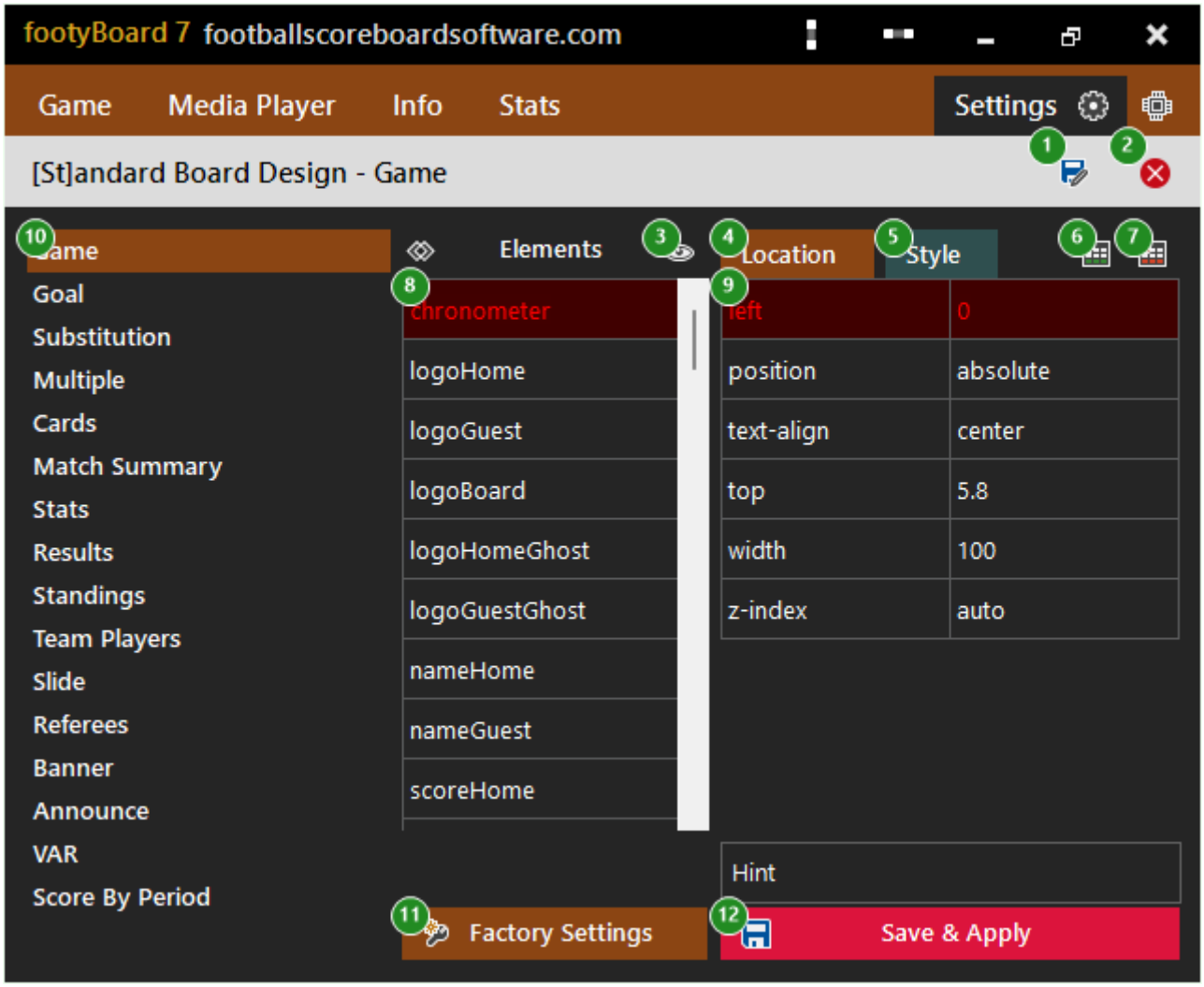
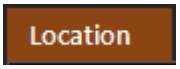
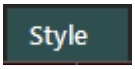
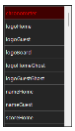
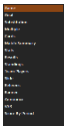
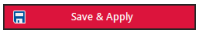


Figure 112. The design editor of the Standard board with the Location properties of the clock.

No.	Control	Name	What it does
1		**Save Design As**	Saves the current Game page design under a name you enter, so it can be chosen again later in the design picker; for the Advertisement mode the banner and scoreboard placement is saved with it. Not available for the Chroma Key mode (a warning is shown).
2		**Close**	Closes the board design editor and returns to the Settings pages (Escape does the same).
3		**Show or Hide**	Switches the display property of the selected board element between block and none in the property list (the eye icon shows the state); the change reaches the board with Save & Apply.
4		**Location**	Switches the property list to the Location properties of the selected element (placement and size on the board).

No.	Control	Name	What it does
5		**Style**	Switches the property list to the Style properties of the selected element (colours, fonts, borders and similar).
6		**Insert Row**	Inserts an empty row into the property list of the selected board element so a new property and value can be entered.
7		**Delete Row**	Deletes the selected row from the property list of the selected board element.
8		**Elements**	Lists the elements of the selected template (identifiers of the board page). Selecting one loads its properties into the property list and draws the element with a dotted red frame on the board; hidden elements are grey.
9		**Property list**	Properties of the selected element in the selected group (Location or Style), one row per property with its value. The property cell is edited through the drop-down, the value cell by typing or with the Colour or Font picker. The rows are written to the design with Save & Apply.
10		**Templates**	Lists the pages of the current display mode that can be designed (Game, Goal, Substitution, Multiple, Cards, Match Summary, Stats, Results, Table, Players, Slide, Referees, Banner, Announce, VAR and Score by period; fewer in Chroma Key mode). Selecting one shows it on the board and loads its elements.
11		**Factory Settings**	Restores the design of the selected template of the current display mode to the factory settings after a confirmation, discarding the operator's changes to that template. For the Game template the current design is reloaded from the design storage.
12		**Save && Apply**	Saves the edited properties of the selected element into the design file of the template and applies them to the board at once, rewriting the page of the template that is being edited (game board, goal, cards, substitution, match summary, players, referees, banner, announcement, score by period and so on). The Stats and Results table templates are saved but not redrawn.

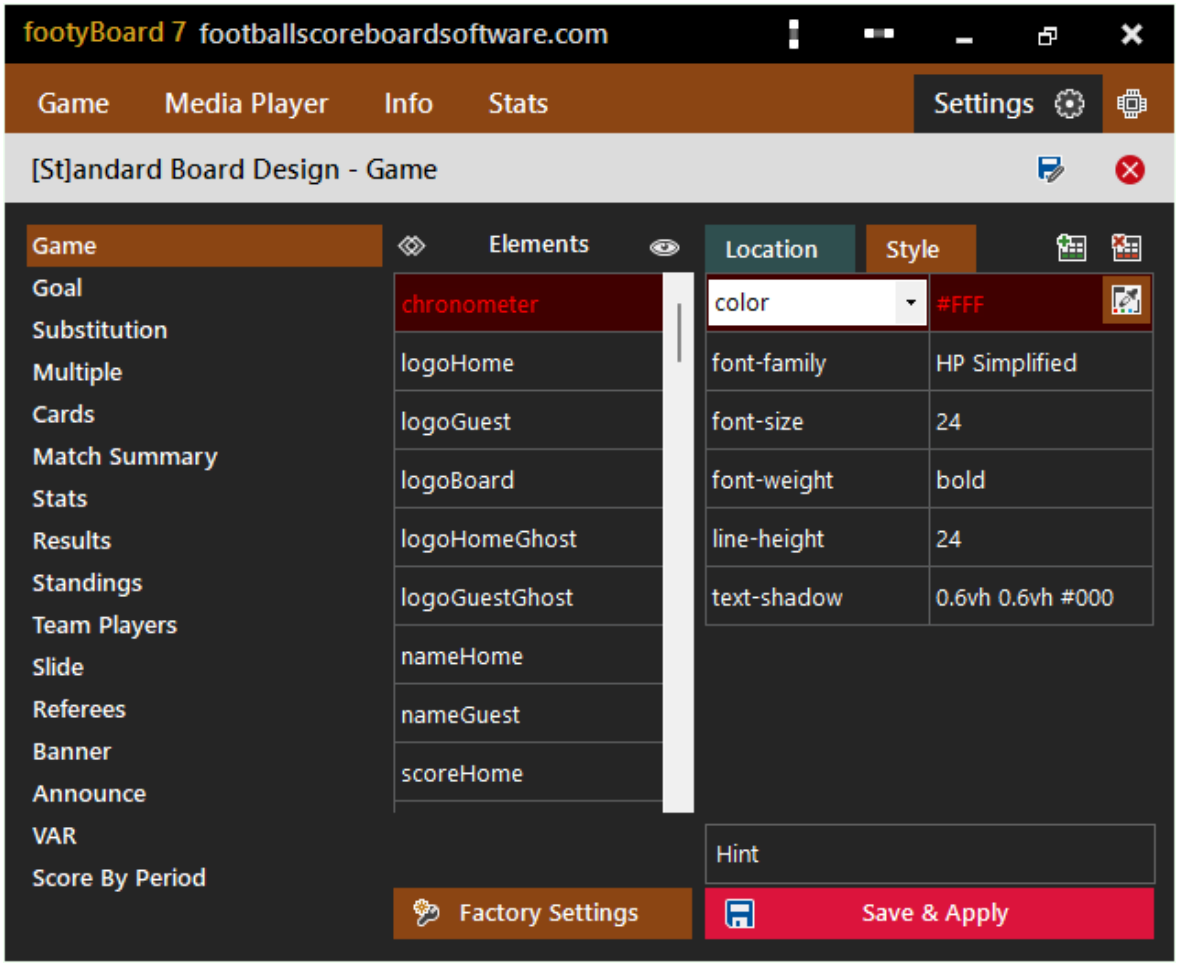


Figure 113. The Style properties of the same element.

Elements of the sport modes on the Standard scoreboard:

Element	Shows	In the factory designs
sinHome1 to sinHome4, sinGuest1 to sinGuest4	Sin-bin rows: card, number, time	Shown when a row exists
redHome, redGuest	Red card count	Hidden
gbHome, gbGuest	Score breakdown (12.8, 1-11 (14), 1.7.3 (30))	Shown in a mode with a breakdown
countHome1 to 5, countGuest1 to 5	Count of each score type	Hidden
intHome, intGuest	Interchange counter	Hidden
pscore	Small table of the scores by period	Hidden
counter	Tackle / touch counter with its label	Shown in Rugby League and Touch
possHome, possGuest	Dot for the team that has the ball	Shown in Rugby League, Touch and American Football
down	Down and distance (1st & 10)	Shown in American Football

Element	Shows	In the factory designs
ballOn	Ball On with the arrow to the half of the field	Shown in American Football
playClock	Play clock; red and flashing at 0	Shown while the play clock is shown
timeoutHome, timeoutGuest	A lamp for each time-out	Shown in American Football

To show a hidden element, select it and click the eye icon, then Save & Apply. While one of these elements is selected the board shows it with sample values (Tackle 3, 1st & 10, a play clock of 40 and so on), also in a mode that does not have it, so that it can be positioned in any mode.

Designs made with an earlier version do not have these elements. The program adds them when it starts: to the design in use, to your saved Standard designs and to the Standard and Sponsored templates. Existing elements are never changed. A design that still has the layout of one of the three factory designs gets positions that are free there; any other design gets the new elements at the edge of the board, where you can move them. The Advertisement and Chroma Key designs are not changed.

22.3 Remote Control

footyBoard 7 contains a small web server that lets a phone, a tablet or another program control the match over the network (chapter 23 and Appendix A). The server uses port 1907; the port cannot be changed.

- Disable: the check box at the bottom switches the server off (ticked, red) and on. On a new installation the remote control is off until you clear the box.
- Local Network tab: choose the network adapter; the page shows the address of the phone page as text and as a QR code (http://IP address:1907/logon.html). The copy button copies the address.
- Internet tab: shows the public address for use over the internet; your router must forward port 1907 to this PC.
- PIN: up to six digits; 123456 when none was set. Change it and click the save icon. Every request must carry the PIN.
- Local Test opens the phone page in the browser of the PC; Show API Commands opens the full command reference API_Commands.txt.

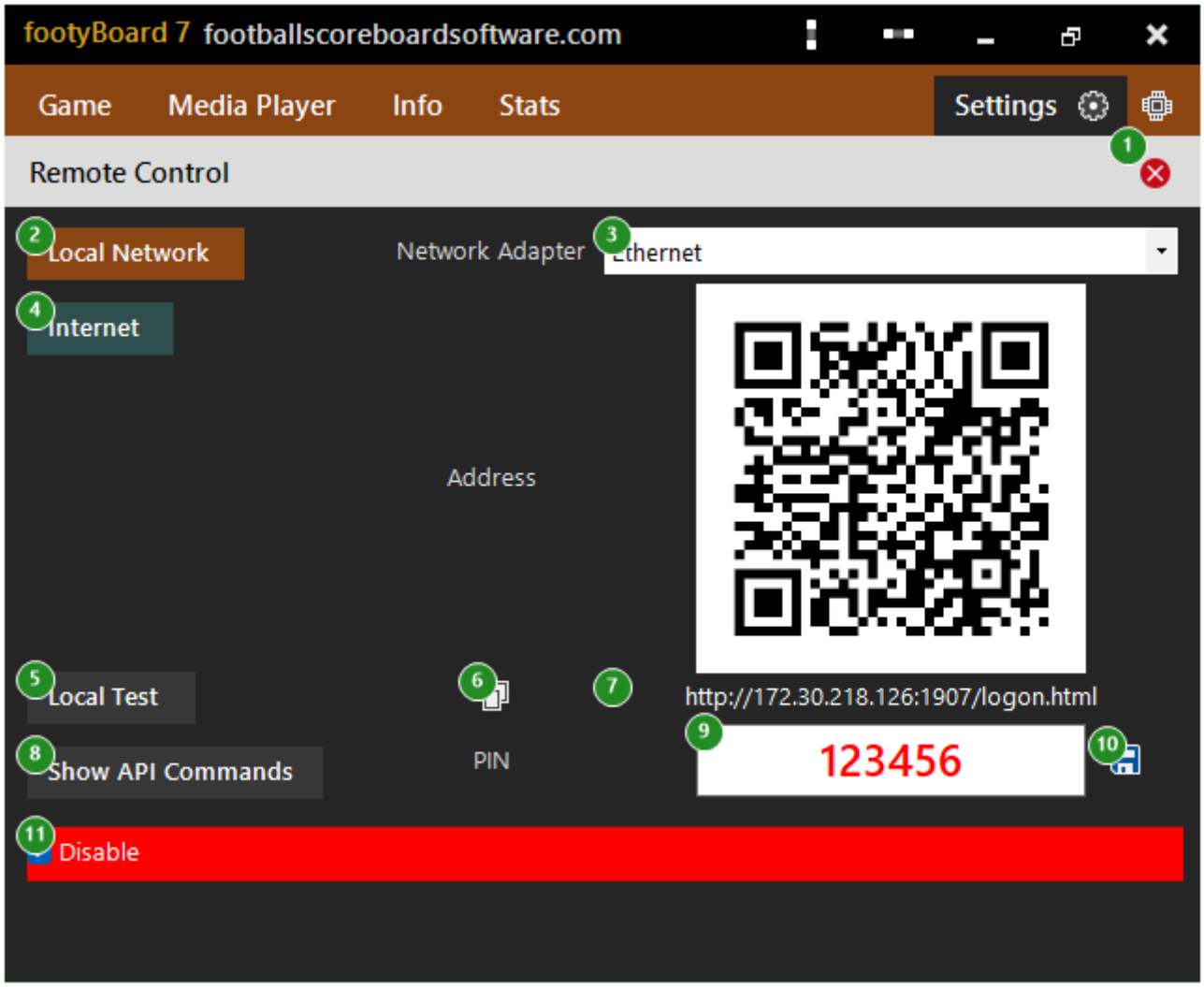
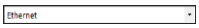
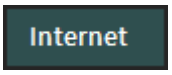
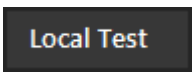


Figure 114. The Remote Control page, Local Network tab (the remote control is off on a new installation).

No.	Control	Name	What it does
1		**Close**	Closes the Remote Control page and returns to the Settings pages (Escape does the same).
2		**Local Network**	Shows the Local Network tab, listing the active network adapters of this computer so a local address can be chosen for the remote control link.
3		**Network Adapter**	Selects the network adapter whose address is used for the remote control link; the Address field and the QR code change to http://<address>:1907/logon.html.
4		**Internet**	Shows the Internet tab, which looks up the public address of this computer (api.ipify.org) and puts it into the link and the QR code for access from outside the local network; without internet the field reads No Internet Connection.
5		**Local Test**	Opens the link shown in the Address field in the default web browser for a local test of the remote control.
6		**Copy link**	Copies the remote control link from the Address field to the clipboard so it can be sent to the person operating remotely.

No.	Control	Name	What it does
7	http://172.80.218.126:1907/logon.html	**Address**	The remote control link, filled from the selected adapter or the public address. It can be edited by hand; Local Test opens and Copy copies what is in the field. It is not saved.
8	Show API Commands	**Show API Commands**	Opens the list of remote control API commands (API_Commands.txt in the program folder) in Notepad.
9	123456	**PIN**	The PIN (digits only, up to 6) that remote users must enter to log on. Typing shows the save icon; the PIN is used and kept only after the save icon is clicked. The delivered PIN is 123456.
10		**Save PIN**	Save icon that appears after the PIN was changed. Saves the PIN to start.xml; remote users must enter this PIN to log on to the remote control.
11		**Disable**	Switches the built-in remote control server off (checked, shown red) or on. If the server cannot be started the box returns to off and the operator is informed. The state is saved to start.xml (REMOTE/Open) and kept for the next start; the remote control is off by default.

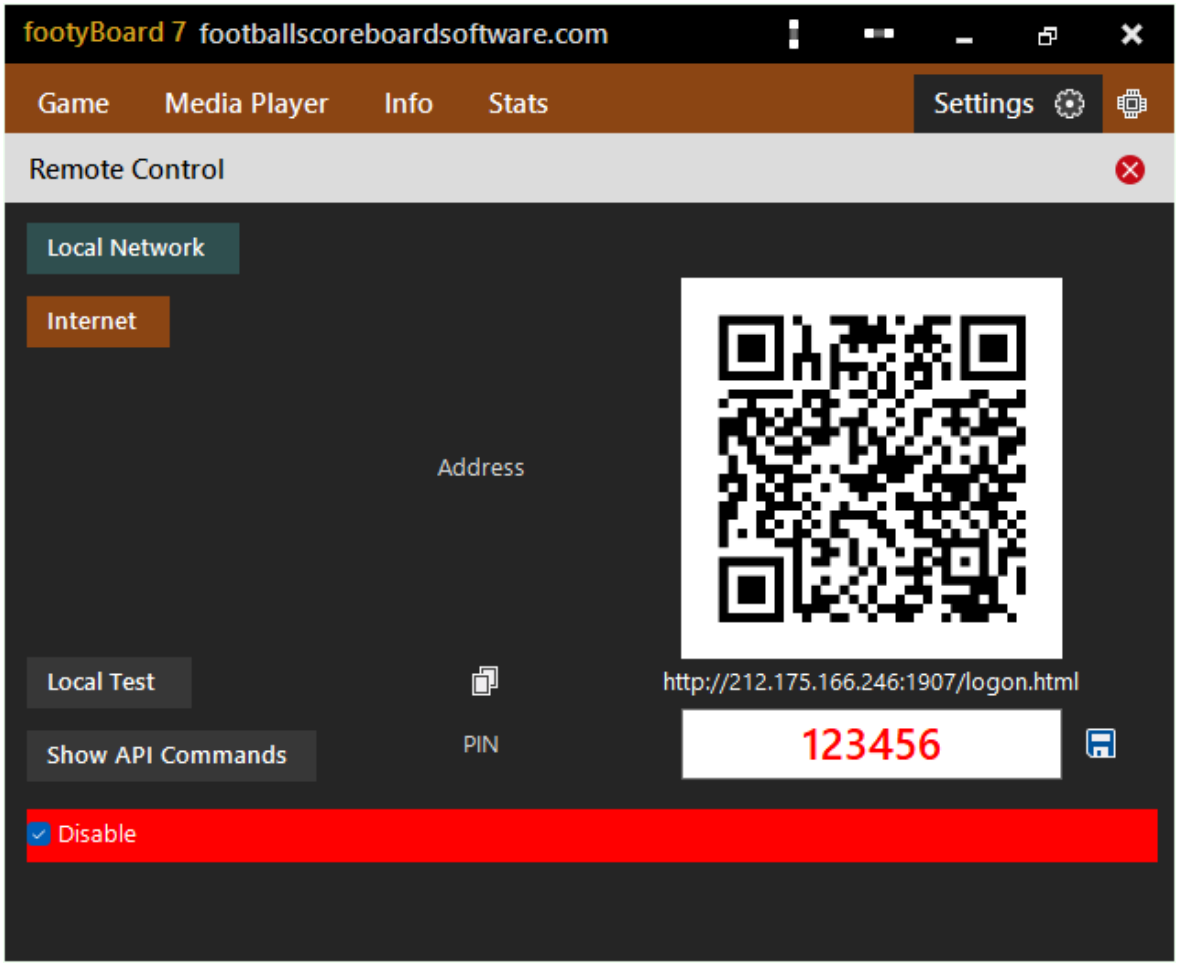


Figure 115. The Internet tab.

Note: An empty PIN can be saved. Requests without a PIN are then accepted until the program is restarted; at the next start an empty PIN is 123456 again. Use a PIN of your own in a network you do not control.

22.4 Language

- Language tab: choose the interface language in the Select Language list and click the save icon beside it (a restart is required). Every text of the interface is listed with its English text and its translation; press F2 on a row to edit the translation and click Save. Set Factory Reset restores the delivered translations at once, without a question; the previous file is kept as lang.xml.bak.
- Titles tab: the titles printed on the board graphics (Try, Yellow Card, Standings and so on). Edit them if your competition uses other wording.

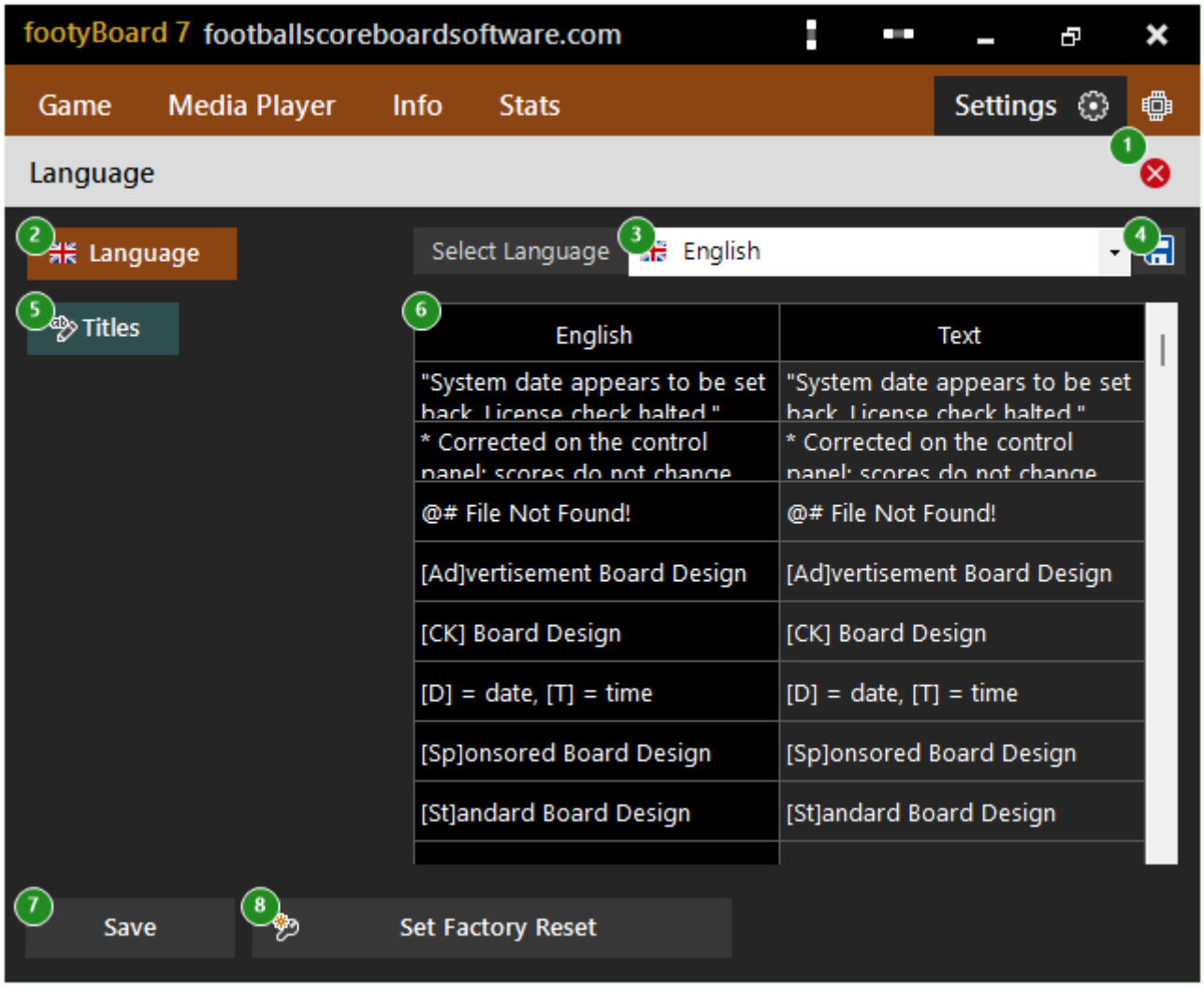
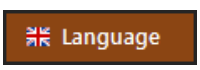
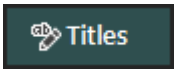
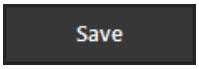


Figure 116. The Language page.

No.	Control	Name	What it does
1		**Close**	Closes the Language page and returns to the Settings pages (Escape does the same).
2		**Language**	Shows the Language tab, listing every caption of the operator panel in the selected language next to its English text for editing.

No.	Control	Name	What it does
3		**Language list**	Selects the language to view and edit; each entry shows the country flag and the language name, and choosing one loads its captions into the list. The language is not applied until the save icon next to it is clicked.
4		**Apply language**	Save icon next to the language list. Makes the chosen language the operator language (start.xml BOARD/Lang), resets the board titles to English and asks you to restart the application for the change to take effect.
5		**Titles**	Shows the Titles tab, listing the titles displayed on the board (title.xml) for editing.
6		**Captions list**	Two columns: the English text (read-only) and the text in the selected language (Language tab) or the title shown on the board (Titles tab). F2 edits the Text cell; an edited row is remembered and written with Save.
7		**Save**	Saves the rows edited in the list (the button is green while there are unsaved edits): captions of the selected language on the Language tab into the language file, or the board titles on the Titles tab into title.xml.
8		**Set Factory Reset**	Restores the factory texts: on the Language tab it replaces the language file with the delivered one (all translations of all languages, including your edits), on the Titles tab it resets the board titles to the English texts of the language file.

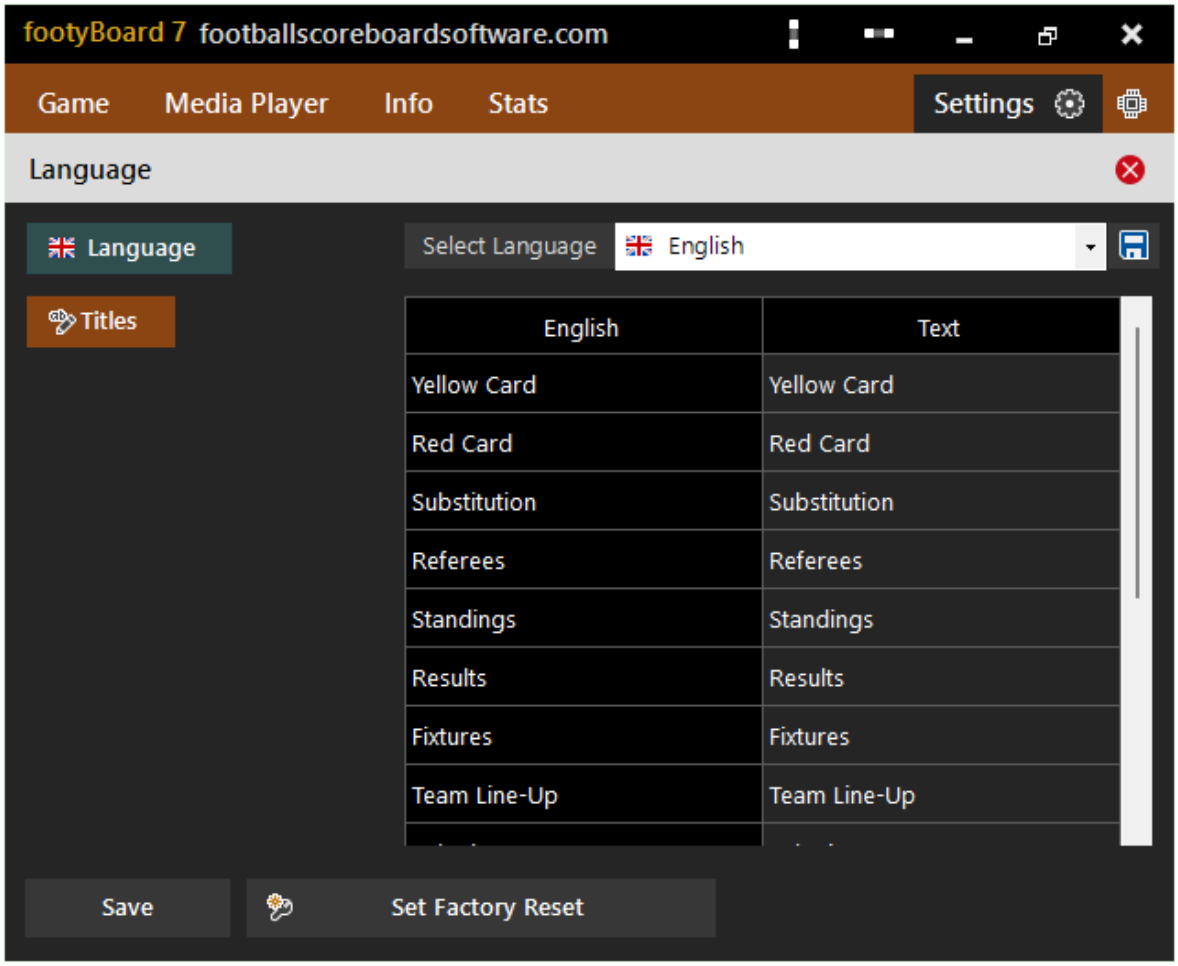


Figure 117. The Titles tab.

23. Remote control from a phone

23.1 Opening the page

1. Switch the remote control on under Settings > Remote Control and note the PIN.
2. Connect the phone to the same network as the PC.
3. Scan the QR code of the Remote Control page, or type the address http://IP address:1907/logon.html into the browser of the phone.
4. Enter the PIN and confirm.

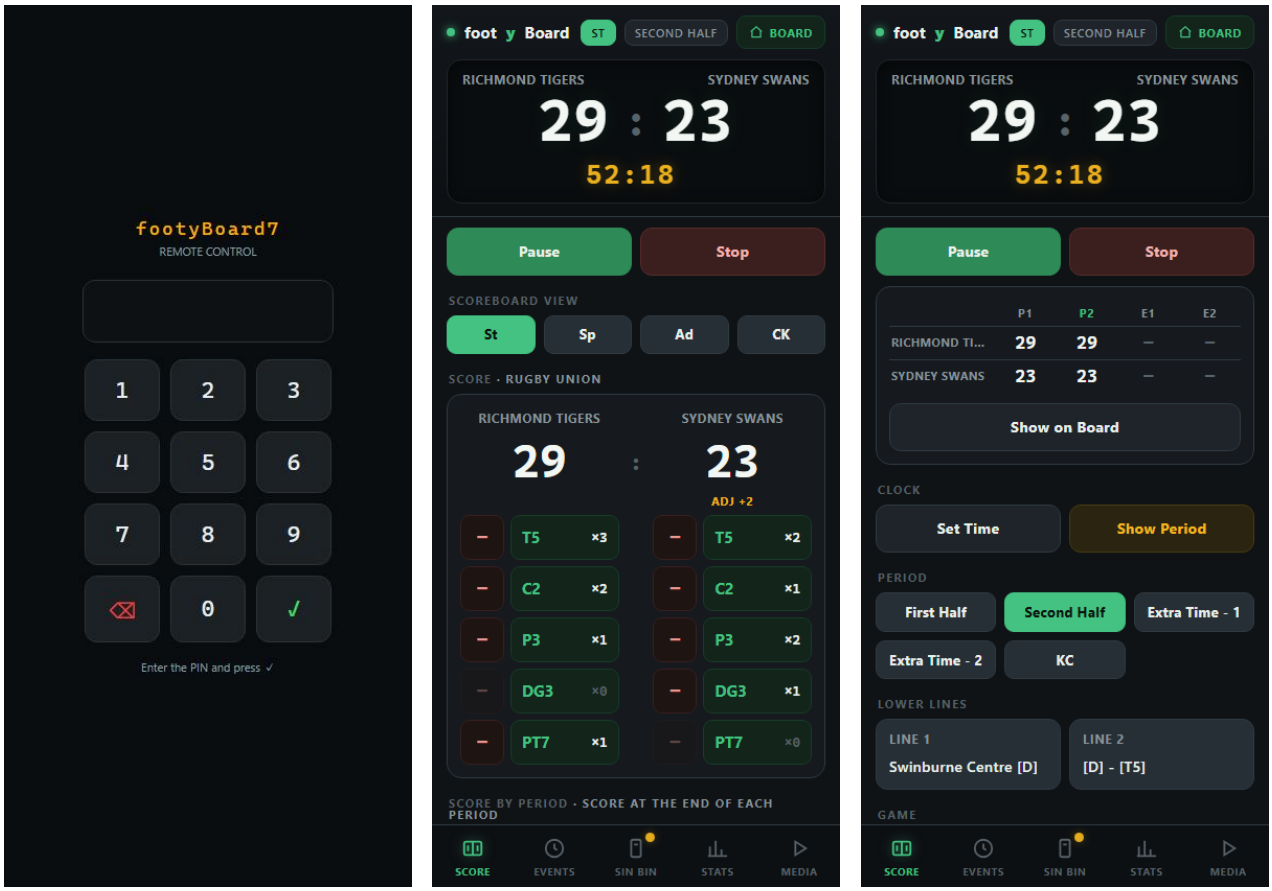


Figure 118. The logon page, the Score tab in Rugby Union and the lower part of the same tab.

The page follows the program: the period buttons, the score types, the cards and the mode-specific boxes are built from what the program reports, and a change made on the control panel appears on the phone within a second. When the PIN is changed in the program, an open page returns to the logon page.

23.2 The page

- Header: the display mode and the period, the Board button (returns to the scoreboard from any graphic), the team names, the scores and the clock.
- Start / Pause and Stop stay visible on the Score, Events and Sin Bin tabs.
- Score tab: the four display modes (St, Sp, Ad, CK); the score card with a button for every score type and a minus button to take one back; tap a team name to edit it and, in a mode without breakdown, tap a total to type it; the boxes of the sport mode; the score by period with Show on Board; Set

Time and Show Period; the period buttons; the two lower lines; Reset Score & Penalties and New Match, each with a confirmation.

- Events tab: choose the team, type the player number, choose the score type and tap Show or Show With Picture. With Count the Score Too the score is counted as well.
- Sin Bin tab (modes with a sin bin): the active cards of both teams with a button to clear each row, and Add Card: team, player number and the card. Clear All removes every card after a confirmation. The tab is marked when the time of a card is over.
- Stats tab: Timeline, Stats, Standings, Results, Fixtures and Score By Period.
- Media tab: the playlist number, Start Playlist, Start Ad Playlist, Sound On and Mute.

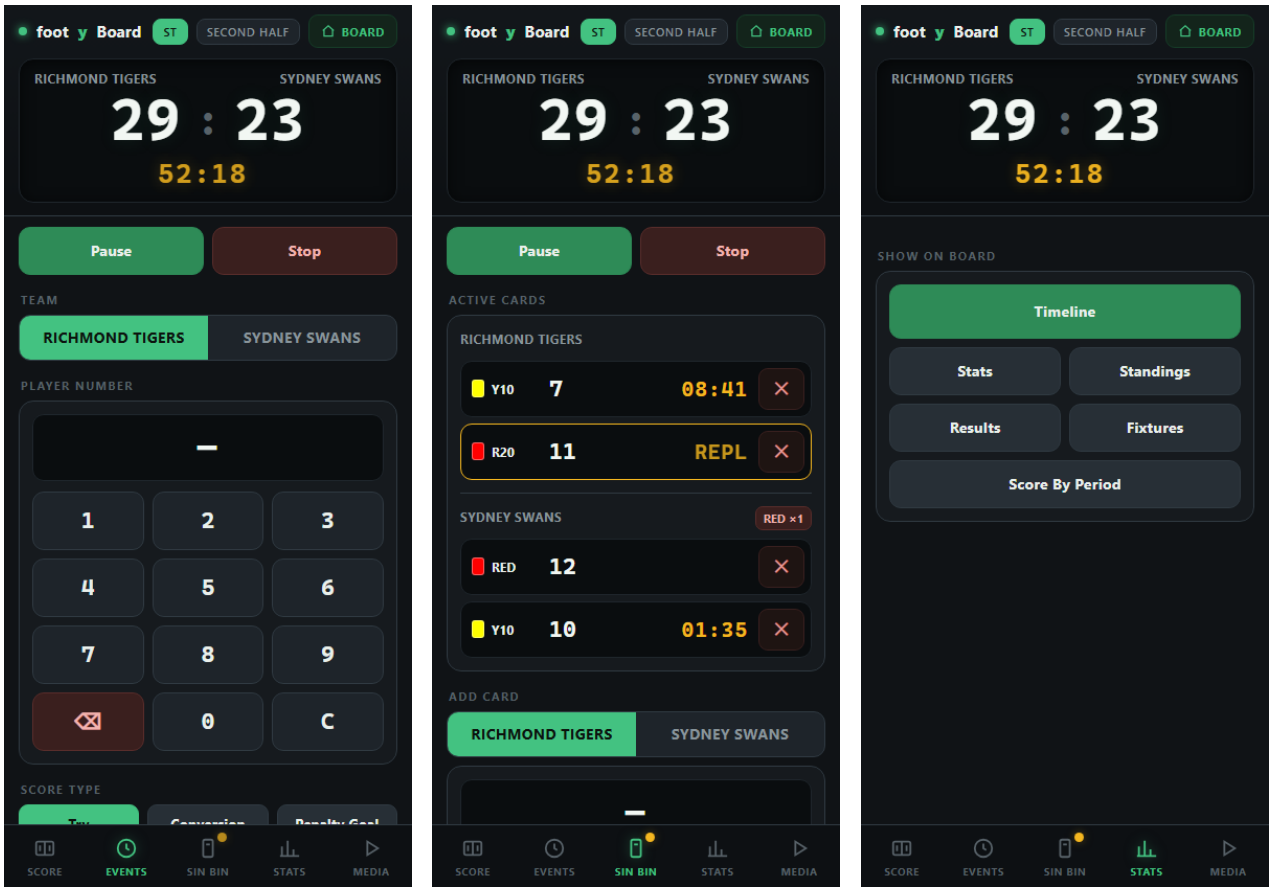


Figure 119. The Events, Sin Bin and Stats tabs.

23.3 The boxes of the sport modes

Mode	Box on the Score tab
Rugby League, Touch	Ball: the two teams as buttons, the counter with -, +, 0 and Change Possession
American Football	Ball; Down & Distance with Down, To Go, 1st & 10, Goal, Ball On and the half of the field; Play Clock with Start 40, Start 25, Stop and Hide; Timeouts with a lamp for each time-out, - and +
Aussie Rules	Goals and behinds as steppers; Interchange
Gaelic Football, Hurling / Camogie, International Rules	The score buttons with the breakdown under the totals

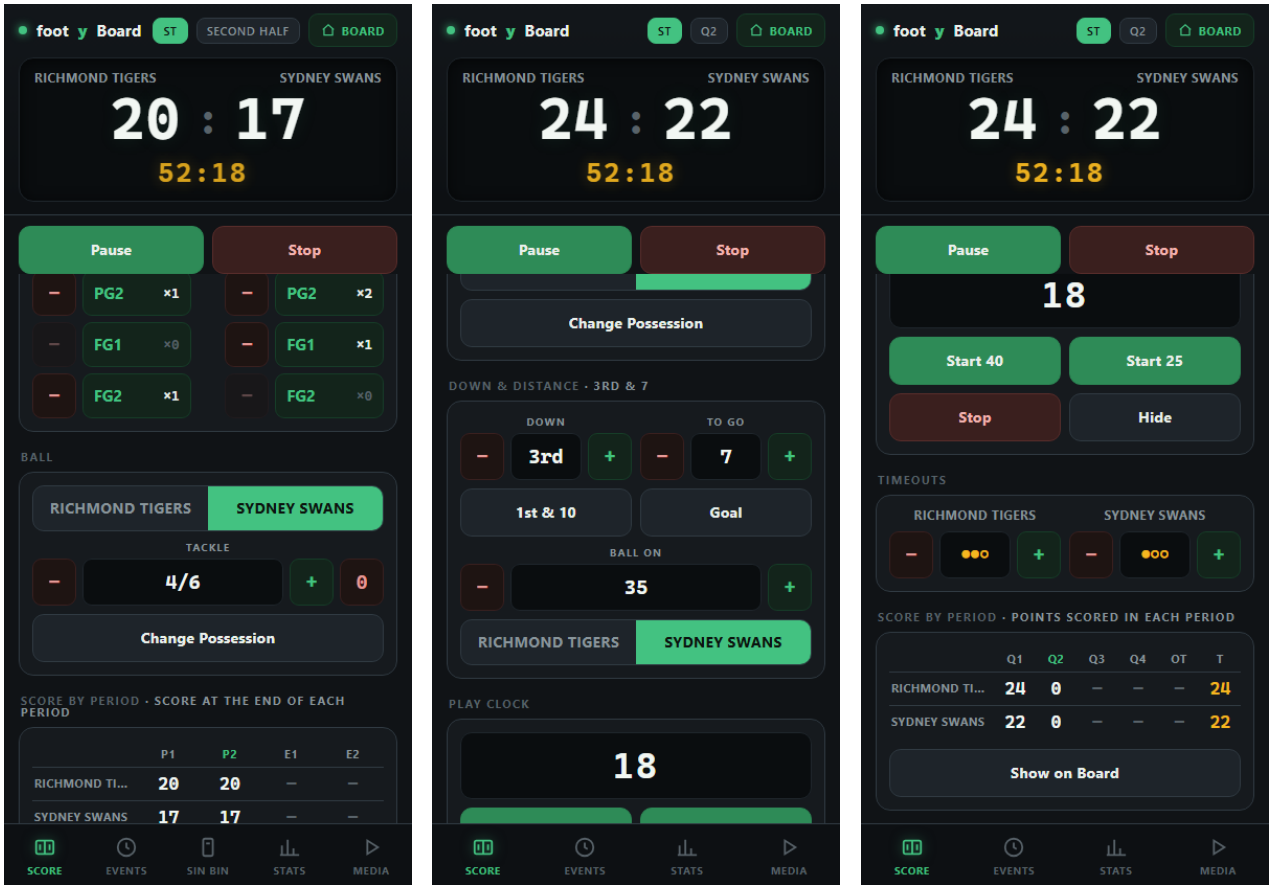


Figure 120. Rugby League: ball and tackle count. American Football: down and distance, play clock and time-outs.

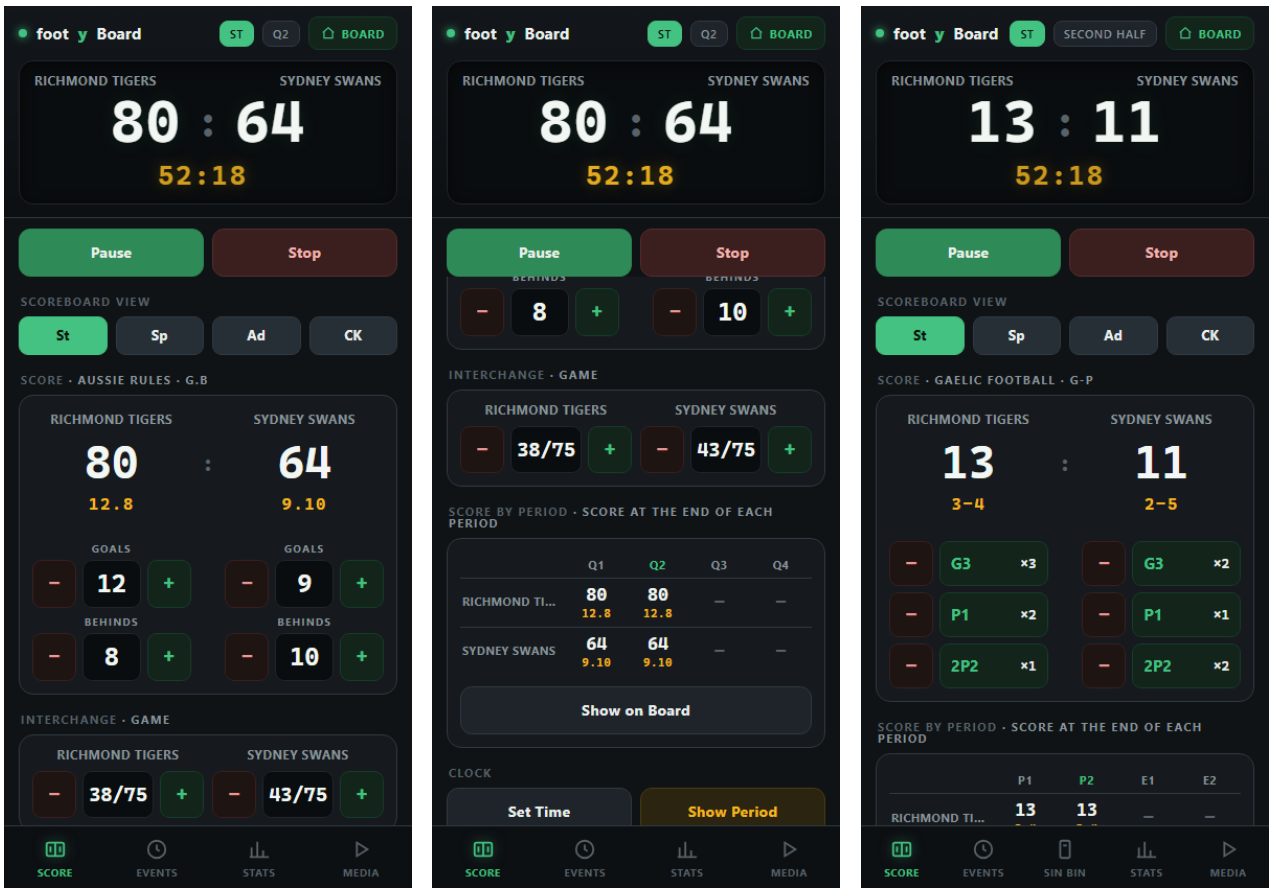


Figure 121. Aussie Rules: goals, behinds and interchange. Gaelic Football: score buttons and breakdown.

The page shows a change at once and corrects itself with the next answer of the program. The play clock is shown as the program reports it, about every 0.6 seconds, so a second can stay a little longer than the next.

23.4 Language of the page

The page and the logon page use the interface language the program was started with. A language selected in the settings is used after the restart of the program, as on the control window. In Arabic and Persian the page runs from right to left; the home team stays on the left, as on the board.

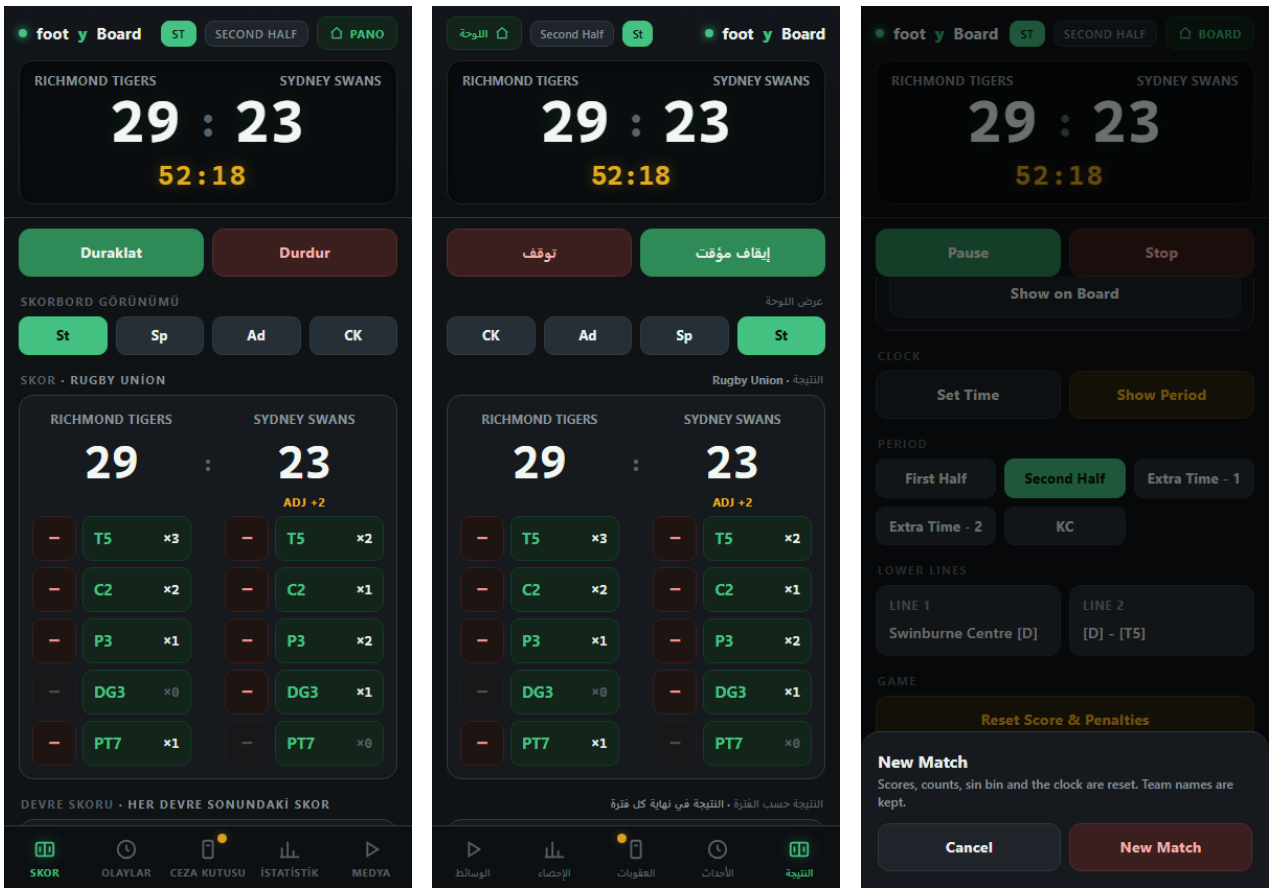


Figure 122. The page in Turkish and in Arabic; the confirmation of New Match.

23.5 Diagnostic bar

Hold a finger on the header for about one second to show a small bar with the state of the connection, the mode and the language version. Tap the bar to hide it. Support may ask for a picture of it.

> **Note:** The Media tab offers the playlist numbers 1 to 7. The numbers 1 to 6 are the six playlists of the media player; 7 opens the URL list page on the control window, as the URL button does (read from the code).

24. External play clock window

This version has no separate play clock window for a second screen at the field. The play clock of American Football is shown on the board (chapter 10.5) and on the phone page.

25. Troubleshooting

25.1 Log folder and support

The application writes a log file for every day into C:\footyBoard7\logs (fb7_yyyy-MM-dd.log) and keeps the files of the last 14 days. If that folder cannot be written, the log goes to C:\ProgramData\footyBoard7\logs. The log records the start with the version, the license mode, repairs of files, additions made by an upgrade, the remote control, sources and the NDI stream, errors and a diagnostic line every minute.

Messages that do not need an answer appear as a small dark notice at the lower right of the main screen and close by themselves.

When something goes wrong, send these to support (arslan.ziya@gmail.com):

1. The log file of that day from the logs folder.
2. The version number shown at the bottom of the Settings > License page.
3. A short description of what you did and what you expected, if possible with a screenshot of the control window and a photo or screenshot of the board.
4. For license questions: the Computer ID from the License page or the USB ID from the USB License Creator.
5. For layout questions: the file start.xml and, for Advertisement layouts, configAd.xml.

25.2 Safety copies and damaged files

Every time the program saves one of its XML files it first writes a new file and then replaces the old one; the previous version stays beside it with the ending .bak.

When a file is found damaged (empty or unreadable), at start or when it is opened, the program moves it aside as file.corrupt-date-time and restores it, in this order: from an interrupted save, from the .bak copy, from a source that belongs to the file (the factory texts for lang.xml, the saved or factory design for a design file), or with default values. A notice names every file that was repaired, for example "start.xml was damaged and was restored from its backup (.bak)." The program keeps at most five damaged copies of a file and none older than 30 days.

25.3 Files written by an upgrade

File	Written when
file.bak_premigration	Before the first change an upgrade makes to a file: start.xml, a design file, lang.xml
design.migration.log	New board elements were added to your designs
lang.migration.log	New interface texts were added to lang.xml
start.xml.migration.log	Period and score settings of an older version were converted

These files are in the program folder. They are never overwritten by the setup and can be deleted when the upgraded system works.

25.4 Symptoms

Symptom	What to check
The board window is not visible	Settings > Screen Properties: L: Left and T: Top must point to a connected display. Set 0 and 0 to bring it to the main screen.
The board shows DEMO or DM in the clock	The application runs without a license. Enter the key under Settings > License, or plug in the USB license, and restart.
The USB stick is plugged in but the license icon shows a lock	The stick is read at start only. Restart the application with the stick plugged in.
A message says port 1907 is in use	Another Board7 program or other software uses the port. Close it and press Retry, or press Cancel to go on without the remote control; it can be switched on later under Settings > Remote Control. The port cannot be changed.
The phone page does not open	The remote control must be switched on (the Disable box cleared). PC and phone must be in the same network; check the address and the PIN on the Remote Control page and allow port 1907 in the Windows firewall (the program folder contains open_firewall_1907.bat).
The phone page returns to the PIN page	The PIN was changed in the program or typed wrong.
Starting the program only brings a window to the front	The program is already running; only one copy runs at a time. If a message says it does not answer, end footyBoard7.exe in the Task Manager and start again.
The clock does not start and its box is red	The box holds a text that is not a time. Type the time as mm:ss.
A period button does nothing	The clock is running. Pause it first.
The mode button is not there	It is hidden while the clock runs.
The score values cannot be saved	Scores were counted with the old values. Use Reset Score & Penalties first.
The score type buttons of the Goal graphic are empty	Open the Timer, Period & Score Settings, press the button of your mode and click Save & Apply.
A counter, the down or the play clock is not on the board	The element is hidden in your design or lies outside the picture. Open Settings > Board Design, select the element and check its eye icon and its position.
A notice says a file was damaged and restored	The program repaired the file from a safety copy (chapter 25.2). Check the settings of that file and keep the log for support.
A clip does not play	The file is missing or has a format that cannot be played; its row is marked red.
The camera does not appear in the list	Connect it before opening the Camera tab and make sure no other program uses it.
The board clock or a total is smaller than the design	A clock from 100:00 or a total of three digits was reduced so that it does not touch its neighbours (chapter 5.6).

26. Appendix A: Remote API summary

Any device on the same network can drive the scoreboard with plain HTTP requests. The same server serves the phone page. The full reference with every example is the file API_Commands.txt in the program folder (Settings > Remote Control > Show API Commands).

26.1 Request format

```
http://<HOST>:1907/api.html?pin=<PIN>&cmd=<CMD>&value=<VALUE>$
```

- Every request ends with the character $.
- HOST: 127.0.0.1 on the PC itself, or the address of the PC in the network. The port 1907 is fixed.
- PIN: the PIN of the Remote Control settings. It is compared as a whole.
- pin, cmd and value may come in any order. Write special characters of a value in URL encoding: & as %26, $ as %24, + as %2B, % as %25, a space as %20.
- Inside team names and text lines the underscore _ stands for a new line.

Answers: !... means the command was taken; #Invalid API Request, #Invalid PIN and #Invalid API Command name the error. cmd=GET answers with XML. A command of a sport mode that the current mode does not have is answered and ignored.

26.2 Reading the state

```
http://127.0.0.1:1907/api.html?pin=123456&cmd=GET$
```

The answer is an XML document with one Item element. The most used fields:

Field	Meaning
BoardType	Display mode: St, Sp, Ad or CK
Home, Guest, HomeScore, GuestScore	Team names and totals
Chronometer, StatusChronometer	The clock as mm:ss and whether it runs
Period	1 to 4 = period 1 to 4, 5 = shoot-out, 6 = overtime
Extra01, Extra02	The two free text lines
Mode, ModeName, ModeNameText	Sport mode: number, English name, name in the interface language
ModeFeatures, Periods, ScoreTypes, ScoreFormat, SinBinCards	What the mode has: features, period buttons, score types, breakdown, cards
ScoreCountsHome, ScoreCountsGuest, ScoreAdjustHome, ScoreAdjustGuest	Counts by score type and the adjustment
ScoreTextHome, ScoreTextGuest	The score breakdown as text
SinBinHome, SinBinGuest, SinBinSlots, RedHome, RedGuest	Sin-bin rows, slots on the board, red card counts

Field	Meaning
InterchangeHome, InterchangeGuest, InterchangeLimit, InterchangePerPeriod	Interchange counter
PeriodScoreMode, PeriodScores	Score by period
ClockDirection, ClockCumulative, ClockNonStop	How the clock counts
Counter, CounterLabel, CounterMax, Possession	Tackle / touch counter and who has the ball
Down, ToGo, DownText, BallOn, BallOnSide	American Football: down, distance and ball on
PlayClock, PlayClockState, PlayClockLong, PlayClockShort	Play clock: seconds, state (hidden, running, stopped, expired), the two start values
TimeoutsHome, TimeoutsGuest, TimeoutsMax	Time-outs left and the number of the half
PlaylistStarted, AdPlaylistStarted	Whether a playlist runs
LangVersion	Changes when the texts of the phone page change; cmd=lang answers the texts

26.3 Names, text lines and score

Command	Value	Effect
set_home_team, set_guest_team	text	Team name; _ starts a second line
line_text_1, line_text_2	text	Free text lines
home_score_TYPE, guest_score_TYPE	-	Counts one score of the type (try, conversion, penalty_goal, drop_goal, penalty_try, touchdown, extra_point, two_point_conversion, field_goal, field_goal_1, field_goal_2, safety, goal, behind, point, two_point, over)
home_score_TYPE_down, guest_score_TYPE_down	-	Takes one score of the type back
set_home_score, set_guest_score	0 to 999	Sets the total; the difference to the counts is kept as adjustment
set_home_score_up, set_home_score_down, set_guest_score_up, set_guest_score_down	-	Total plus or minus one
reset_score	-	Reset Score & Penalties, without confirmation
new_match	-	New match, without confirmation

26.4 Clock, periods and views

Command	Value	Effect
set_chronometer	play, pause, stop	Starts, pauses or resets the clock
set_chronometer	mm:ss	Stops the clock and sets the time
click	first_half, second_half, extra_1, extra_2	Selects period 1 to 4 (the clock must stand)
click	overtime	Selects overtime (American Football)
click	kicking_competition	Selects the shoot-out (Rugby Union, Gaelic Football, Hurling / Camogie)
click	playpause, stop	The Start/Pause and Stop buttons
click	st, sp, ad, ck	Selects the display mode
click	show_added	Switches Show Period
match	-	Returns to the scoreboard from any graphic

26.5 Score events, sin bin and counters

Command	Value	Effect
home_TYPE, guest_TYPE	player number; add p for the picture (7p)	Shows the score event graphic; does not count
home_sinbin_CARD, guest_sinbin_CARD	player number	Adds a card; CARD is an id of SinBinCards (yellow, red20, red, black)
home_sinbin_clear, guest_sinbin_clear	player number, or #n for the n-th row	Removes one row
sinbin_clear_all	empty, home or guest	Removes all rows
home_interchange, guest_interchange	-	Counts one interchange; add _down to take one back
counter_up, counter_down, counter_reset	-	Tackle / touch counter
possession_home, possession_guest, possession_toggle	-	Gives the ball to a team; toggle is Change Possession

26.6 American Football

Command	Value	Effect
down_up, down_down	-	Next down, down before
down_set	1 to 4	Sets the down
togo_up, togo_down	-	One yard more or less
togo_set	1 to 99, or goal	Sets the yards to go
first_and_ten	-	Down 1, 10 yards to go
ballon_up, ballon_down	-	Yard line plus or minus one
ballon_set	1 to 50	Sets the yard line
ballon_side	home, guest, or empty	The half of the field; empty changes to the other half
playclock_start_long, playclock_start_short	-	Starts the play clock from the long or the short value
playclock_stop, playclock_hide	-	Stops or hides the play clock
home_timeout, guest_timeout	-	Uses a time-out and stops the game clock
home_timeout_undo, guest_timeout_undo	-	Gives the time-out back

26.7 Statistics and media

Command	Value	Effect
stats	timeline, stats, standings, results, fixtures, periods	Shows the table on the board
clear_events_history	-	Empties the timeline
start_playlist	playlist number	Starts the playlist of the media player; while a playlist plays, the command stops it
start_playlist_ad_screen	1 to 6	The same for the Advertisement playlists
volume	0 or 1	Sound of the media player off or on
lang	-	Answers the texts of the phone page in the interface language

27. Appendix B: Files, dialogs and known limitations

27.1 Files and folders

Everything the application needs lives in its installation folder, C:\footyBoard7. The only exception is the profile of the built-in browser, which is in the local application data folder of the Windows user.

Folder or file	Content
start.xml, config.xml, configSp.xml, configAd.xml, configCK.xml	Your settings. start.xml is created at the first start.
rb7license.xml	The PC license
common\data	Teams, players, referees, sponsors, playlists, the timeline, statistics, standings, results and fixtures
common\vizrt	Board designs: current (the design in use) and storage (factory and saved designs)
common\xml	lang.xml (interface texts), langFactory.xml (their factory copy), title.xml (titles of the board graphics)
media	Your videos and images
logs	The application log, one file per day, kept for 14 days
API_Commands.txt, footyBoard7Help.pdf, open_firewall_1907.bat	The API reference, this guide and the firewall script

Back up the whole folder to keep your data; copying it to another PC moves teams, playlists and designs along. A PC license stays bound to the original computer; a USB license travels with the stick.

27.2 Dialogs and pickers

- Message box: a dark panel over the control window with a red title bar for warnings and questions and a green one for a success, with an OK button or Yes and No. Esc answers No.
- Input box: the same panel with a text field, used when you save a design or a team under a new name.
- Colour picker: a palette with a hue bar, basic colours, fields for red, green and blue and for the hexadecimal code, opened from the colour rows of the design editor and of the style panels.
- Font picker: a list of the installed fonts and of the fonts of the program, with a preview.
- File dialogs: the standard Windows open-file dialog. It follows the language of Windows, not the language chosen in the application. A few messages of the program itself are standard Windows message boxes and always in English.
- Capture region overlay: after clicking the selection button on a Screen Capture tab the desktop dims; drag a rectangle with the mouse, or press Esc to cancel.

27.3 Known limitations

- The match is kept in memory only. After a restart of the program the scores, the clock, the sin bin, the counters and the American Football values start at zero.
- The elements of the sport modes (sin-bin rows, breakdown, counters, down and distance, play clock, time-outs) exist on the Standard and Sponsored boards only, not in the Advertisement scoreboard box and not in the Chroma Key scorebug.
- Info and statistics graphics fill the whole board and cover the Sponsored strip and the Advertisement layout while they are shown.
- A new match has no button on the control panel; use the phone page or the API.
- The interchange counter does not stop at its limit; it shows the limit in red.
- A caution is not turned into another card by the program.
- The score event graphic does not count the score, and the score buttons do not show the graphic.
- The camera tabs offer cameras only; there is no NDI input.
- The remote control port 1907 cannot be changed.
- The three factory designs were checked at 16:9. At 4:3 some elements can overlap.
- There is no undo for deleted playlists, saved teams or designs.
- Only one controller should change the clock at a time.