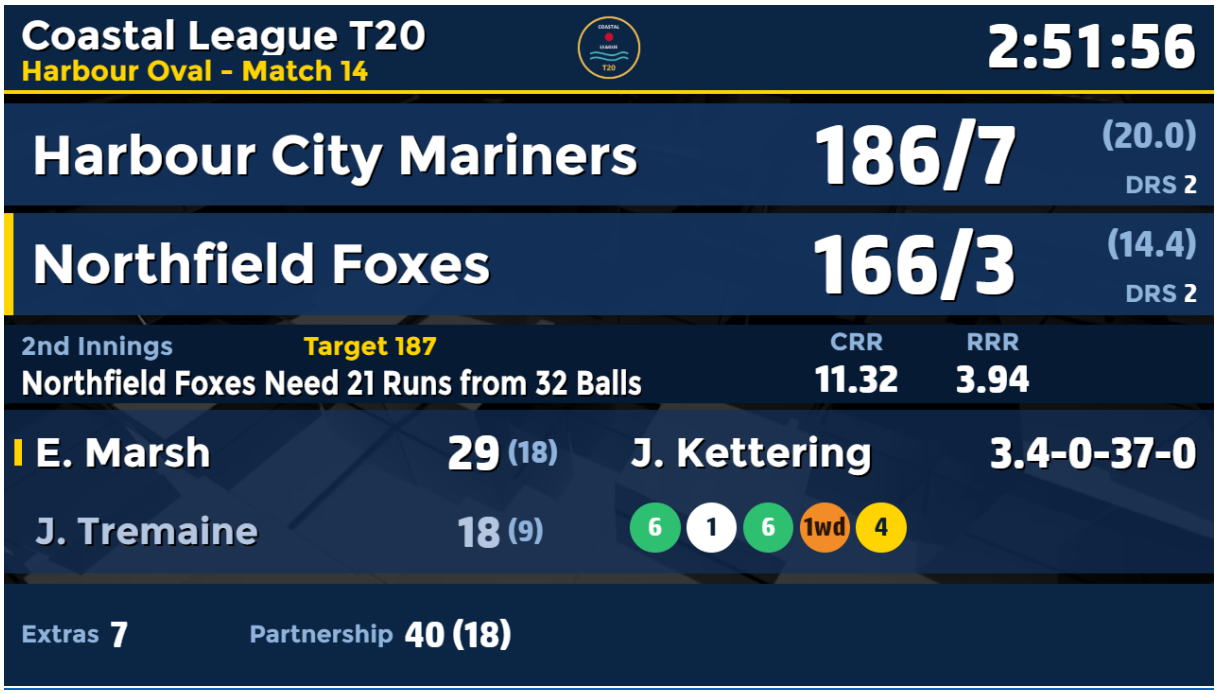
cricketBoard 7

Professional Led Display Scoreboard Software

USER MANUAL

www.footballscoreboardsoftware.com

arslan.ziya@gmail.com



LANGUAGE SUPPORT



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

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1. Introduction

1.1 What cricketBoard 7 Does

cricketBoard 7 is scoreboard and match-graphics software for cricket. You score the match ball by ball from a control window on the operator PC. The program draws 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.

The score follows the rules of the match by itself. You enter each delivery (runs, extras, wickets); the strike, the end of the over, the bowling figures, the end of the innings, the target and the result follow automatically. Every action can be undone, one step at a time, back to the toss.

Besides the score, cricketBoard 7 shows:

- the team names, the score of each team (also both innings of a two-innings match, for example 245 & 132/4) and the overs;
- the batters at the crease with runs and balls, the bowler with his figures and economy rate;
- the balls of the current over, coloured by kind (dot, runs, four, six, wicket, extra);
- the target, the equation ("Northfield Foxes Need 24 Runs from 18 Balls"), the lead or deficit, the current and required run rates and the projected total;
- the extras, the partnership and the last wicket;
- badges for the powerplay, the free hit, a fielding timeout, a hat-trick ball and the DRS reviews left;
- a short notice after a four, a six, a wicket or a milestone;
- cricket info screens: callouts (wicket, boundary, milestone, partnership, DRS review, powerplay, timeout, toss, target, result), scorecards (batting, bowling, fall of wickets, extras, innings summary, team lists), a status card, fixtures and officials;
- sponsor images, scrolling texts, banners, announcements, video playlists, camera pictures and screen captures.

Board Output **Control Panel**

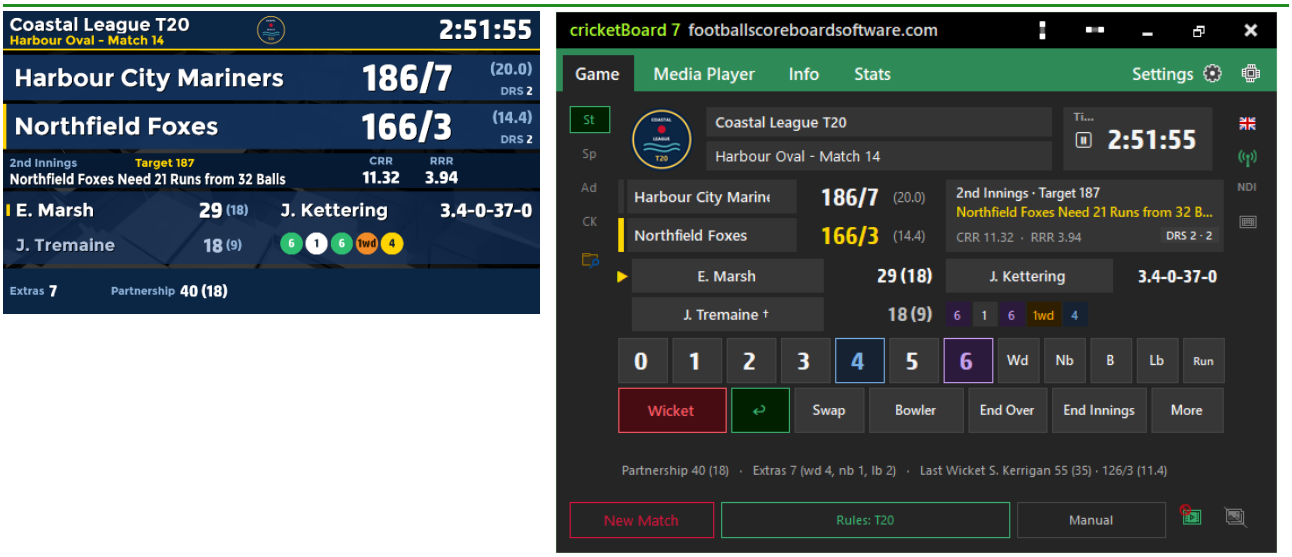


Figure 1. The Standard board during a T20 chase and the control panel that drives it.

1.2 Supported Formats

One installation covers six formats, called disciplines in the program. You choose the discipline with the Rules button on the control panel (chapter 6). Each discipline starts with its own default rules; you can change every rule and keep it for the next matches.

Discipline	Default Rules	What Is Special
Test / First-Class	Two innings per side, no over limit, 5 days	Follow-on (200 runs over 5 days), declarations, day and session, 3 unsuccessful DRS reviews per innings, no free hit
One-Day (50 Overs)	50 overs, 10 overs per bowler	Powerplays P1 (overs 1-10), P2 (11-40), P3 (41-50); free hit; 2 DRS reviews; Super Over on a tie
T20	20 overs, 4 overs per bowler	Powerplay overs 1-6; free hit; 2 DRS reviews; Super Over on a tie. Fresh installations start with T20
The Hundred	100 balls in sets of 5, ends change every 10 balls	Ball count instead of overs, 20 balls per bowler, powerplay = first 25 balls, no-ball 2 runs + free hit, one 90-second fielding timeout, 1 DRS review, Super Five on a tie
T10	10 overs, 2 overs per bowler	Powerplay overs 1-3, optional floating powerplay, 1 DRS review
Custom	Starts as T20	Every rule free

> **Note:** Choosing another discipline starts a new match; the program asks first when a match is in progress. Changing a rule of the same discipline during a match is recorded as a step of the match and applies from that moment (chapter 6).

1.3 Display Modes

The board has four display modes. Each has its own look; you switch between them with the St, Sp, Ad and CK buttons on the control panel (chapter 7).

- Standard (St): the full-screen scoreboard with both teams, the innings in progress, the batters, the bowler, the over and the match title and venue.
- Sponsored (Sp): the Standard scoreboard with a sponsor band at the bottom or the top, showing sponsor images or a scrolling text.
- Advertisement (Ad): a scoreboard column beside a large area for a video playlist, a camera or a screen capture, with a scrolling banner below.
- Chroma Key (CK): a compact scorebug and lower-third info graphics on a solid key colour, to be keyed over a live TV picture in a vision mixer.

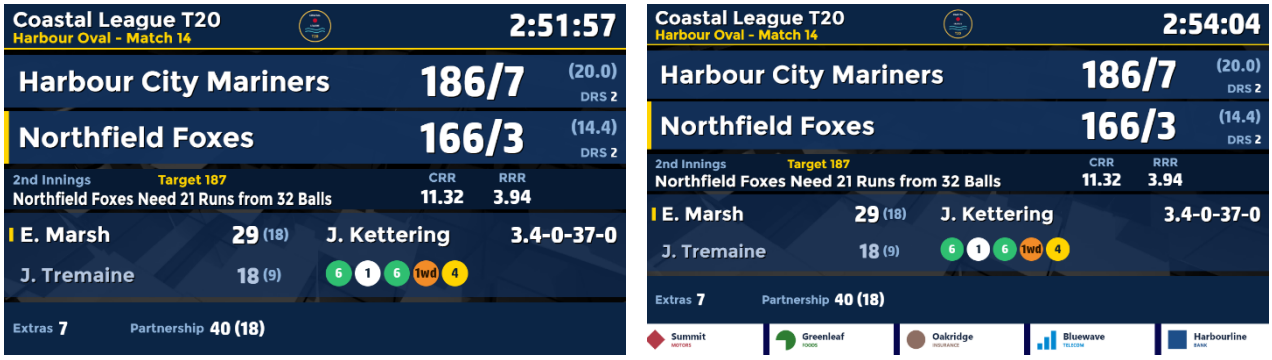


Figure 2. The Standard (left) and Sponsored (right) display modes.

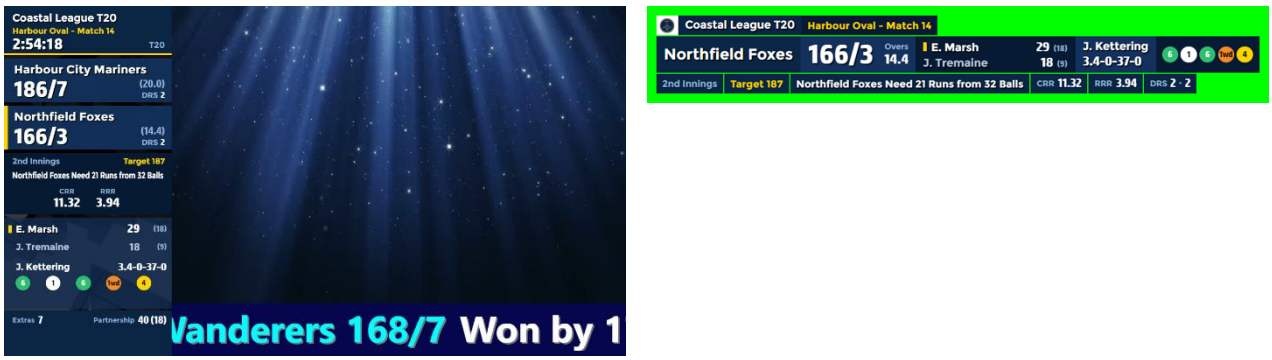


Figure 3. The Advertisement mode with a video (left), and the Chroma Key scorebug, enlarged (right).

Every board comes in three factory designs, Navy (the default), Charcoal and Clay. You can change any element of a design in the design editor and save your own designs (chapter 8).

1.4 Version 7.6.10 at a Glance

Version 7.6.10 runs on the current Board7 platform (the platform of soccerBoard 7).

Formats and rules:

- Six disciplines: Test / First-Class, One-Day (50 Overs), T20, The Hundred, T10 and Custom.
- A Match Rules window with every playing condition: innings, overs, balls per over, overs from one end, bowler limit, players per side, powerplays, floating powerplay, free hit, no-ball and wide runs, DRS reviews, fielding timeouts, follow-on, days and Super Over.
- Rule changes during a match apply from that moment; completed innings keep the rules they were played under.
- Revised target and overs and a par score entered by hand for interrupted matches (no DLS calculation).

Match safety:

- The match is saved after every action. Score, scorecards, clock and info-screen data come back after a restart.
- Undo goes back action by action to the start of the match, also after a restart, and undoes every kind of action: deliveries, wickets, player choices, reviews, penalties, rule changes.
- The engine refuses what the Laws do not allow (for example caught off a no-ball) and tells you why.
- New Match always asks before it resets the score.

Control panel:

- A ball pad with runs 0-6, the extras Wd, Nb, B and Lb, a Run toggle for all-run fours and sixes, and a Wicket dialog that asks only what the dismissal needs.
- Pickers for the striker, the non-striker and the bowler, filled from the squads; the next needed choice has a gold frame.
- A More menu for runs run, retirements, timed out, DRS reviews, penalty runs, the floating powerplay, the fielding timeout, day and session, declarations, revised targets and the end of the match.
- A break panel before the match, between innings and after the match: toss, who bats, follow-on, Super Over.
- A clock that works as a timer, a countdown (innings break, drinks, a fielding timeout) or the time of day.

Boards, graphics and scorecard:

- All boards and info screens are designed for cricket, readable from a distance, in three factory designs (Navy, Charcoal, Clay).
- Every element of a board can be moved, resized and recoloured in the design editor. Boards scale to 16:9, 4:3, 5:4 and wide LED formats.
- Nineteen cricket info screens, each also as a Chroma Key lower third.
- A Stats tab with the live scorecard of every innings.

Remote control and shortcuts:

- A remote control page for phones and tablets with Score, Info, Setup and Media tabs, including the ball pad and the wicket picker.
- An HTTP API with cricket commands for every scoring action, the info screens and the match state.
- The Keyboard Hook Manager has 17 cricket actions with numeric-keypad defaults.

1.5 How to Read This Guide

Chapters 2 to 4 cover installation, licensing and the main window. Chapters 5 and 6 are the core of the work during a match: the control panel and the match rules. Chapters 7 to 13 describe the boards, designs, info screens, the scorecard, the squads and the media. Chapters 14 to 16 cover the remote control, the HTTP API and the keyboard shortcuts. The guide ends with languages, the settings reference, troubleshooting and the appendices.

- A pair block shows the board output on the left and the control panel that produced it on the right.
- A picture with red numbers is followed by a table with the same numbers.
- 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.
- Steps are numbered. Do them in this order.
- Cricket terms follow the Laws of Cricket (MCC, 2022 code); Appendix C explains them.

> **Note:** The pictures show the program with fictional sample teams, players, competition and sponsors (for example Harbour City Mariners against Northfield Foxes). Scores and clocks were set for the pictures. The program ran with a licence; without a licence the boards show the word DEMO (chapter 3).

1.6 Website and Support

- Website: www.footballscoreboardsoftware.com
- Support: arslan.ziya@gmail.com (also shown on the License page of the settings)

2. Installation and First Start

2.1 System Requirements

Item	Requirement
Windows	64-bit Windows. The setup does not install on a 32-bit system.
.NET Framework	4.7.2 or later
Microsoft Edge WebView2 Runtime	Required: every board is drawn with it (section 19.1)
Rights	Administrator rights for the setup. The desktop shortcut starts the program as administrator.
Board output	A second monitor, a projector, an LED wall controller or an NDI receiver for the board window
Network	Only for the remote control (port 1907) and NDI
Display scaling	100 % on the monitor that shows the board is recommended (section 19.2)

2.2 Installing

1. Close cricketBoard 7 if it runs. The setup also closes it before it copies files.
2. Run cricketBoard7Setup.exe and follow the wizard.
3. The program is installed in C:\cricketBoard7. The folder cannot be changed.

During the installation the setup also:

- installs the fonts of the boards in Windows ("Installing fonts...");
- adds four Windows firewall rules for port 1907, named "cricketBoard 1907 TCP IN", "UDP IN", "TCP OUT" and "UDP OUT" ("Configuring firewall rule...");
- creates two desktop shortcuts: cricketBoard7 (the program) and cricketBoard7 Help (this guide).

In Apps & Features the program is listed as Cricket Scoreboard Software 7.6.10.12.

2.3 First Start

Start cricketBoard 7 with the desktop shortcut. A small status card appears while the program loads:

- "cricketBoard Started..."
- "Checking license..." while the licence is read. Reading the PC licence can take up to 30 seconds on a slow PC; the USB scan up to 8 seconds.
- "Renderer Initialized..." and "Entering Main Loop..." while the boards are prepared.

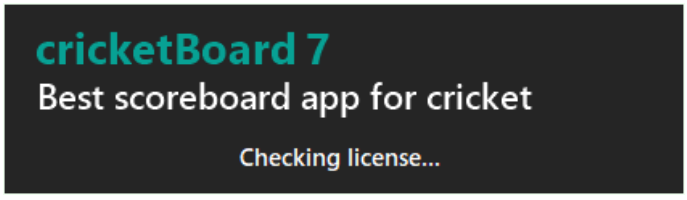


Figure 4. The status card while the program starts.

Then the main window opens at the bottom right of the screen with the Game tab, and the board window opens at the top left.

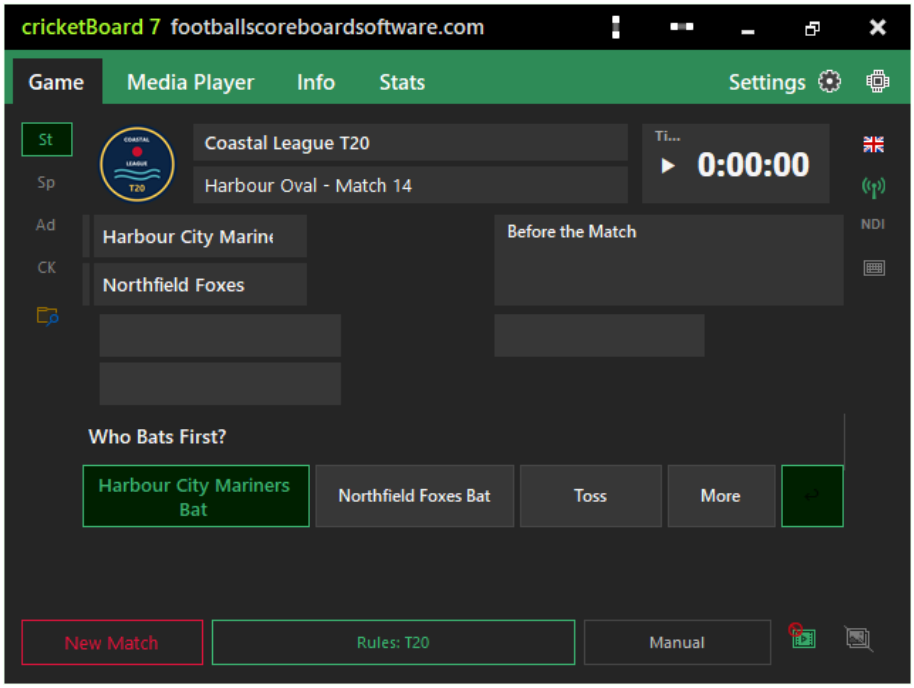


Figure 5. The main window at the first start: the Game tab before the toss.

A new installation starts with these settings:

Setting	First Start Value
Board window	Left 0, Top 0, 960 × 540 pixels
Display mode	Standard (St)
Discipline	T20 (20 overs, powerplay overs 1-6, 2 DRS reviews per innings)
Language	The language of the Windows regional format; English if it is not one of the 46 languages
Sample match	Harbour City Mariners against Northfield Foxes, before the toss. Match title Coastal League T20, venue Harbour Oval - Match 14, the league logo. Each squad has a playing XI (with captain and wicketkeeper), 4 substitutes and a coach; fixtures and officials are filled in
Clock	Timer, stopped at 0:00:00
Background video	BlackRoyal.mp4
Remote control	Off, PIN 123456
Keyboard shortcuts	Off (the default keys are already assigned)
NDI sender name	CB7_NDI
Licence	DEMO until a licence is entered (chapter 3)

> **Note:** Run only one copy of cricketBoard 7. The program does not stop a second copy; two copies would write the same settings and only one of them can use the remote control port.

2.4 Folders and Files

Everything lives in C:\cricketBoard7:

Folder or File	Contents
cricketBoard7.exe and the .dll files	The program
start.xml	All settings, the rules of every discipline, the keyboard keys and the saved match (created at the first start)
config.xml, configSp.xml, configAd.xml, configCK.xml	Banner and Announce texts, Sponsored, Advertisement and Chroma Key settings
cb7license.xml	The PC licence
common\data	Squads (playersHome.xml, playersGuest.xml), saved teams, playlists, sponsors
common\font	The fonts of the boards
common\images	Pictures, language flags and country flags (flags\country, codes.csv)
common\remote	The remote control pages and API_Commands.txt
common\vizrt\storage	The factory designs and your saved designs
common\vizrt\current	The designs in use
common\xml	Language file (lang.xml), factory copy (langFactory.xml), titles (title.xml)
media\videos, media\images	Background videos, sponsor and background pictures
logs	One log file per day, cb7_yyyy-MM-dd.log, kept for 14 days
API_Commands.txt	The HTTP API reference (Appendix B)
open_firewall_1907.bat, install_fonts.ps1	Helpers to repeat the firewall and font steps of the setup

The browser profile of the boards is kept per Windows user in %LOCALAPPDATA%\cricketBoard7\WebView2.

2.5 Updating to a New Version

Install the new version over the old one. The setup closes the program, replaces the program files and the factory content, and keeps your data:

Kept	Replaced
start.xml (settings, rules, keys, saved match) and the licence	The program and its libraries
config.xml, configSp.xml, configAd.xml, configCK.xml	Factory images, fonts, remote pages and board scripts
Squads, saved teams, playlists and sponsors (common\data)	The factory designs in common\vizrt\storage\St, Sp, Ad, CK

Kept	Replaced
Your designs, the design list and the designs in use	langFactory.xml, this guide, API_Commands.txt
Your translations (lang.xml) and titles (title.xml)	Factory media files with the same names

At the next start the program brings your files up to date:

- New texts of the new version are added to lang.xml in all languages. Your own texts are never changed. The old file is kept once as lang.xml.bak_premigration; the additions are listed in lang.migration.log.
- Missing settings are added to start.xml. The old file is kept once as start.xml.bak_premigration.
- A board design that you never changed is replaced by the new factory design. A design you changed is kept.

> **Note:** Settings > Language > Set Factory Reset brings the new wording of existing texts, but it overwrites all languages at once, without a question (chapter 17).

2.6 Uninstalling

Use Apps & Features > Cricket Scoreboard Software > Uninstall. The uninstaller removes the program, the logs, the downloads folder and the browser profile. The fonts and the firewall rules stay in Windows.

> **Note:** Before you uninstall, copy C:\cricketBoard7 to a safe place if you want to keep your settings, squads, designs and licence.

2.7 Quick Start: The First Match

1. Start cricketBoard 7. The Game tab shows the match before the toss.
2. Put the board where the audience sees it: Settings > Screen Properties, set L, T, W and H to the position and size of the second monitor or LED output (chapter 7.2).
3. Check the discipline on the Rules button of the Game tab, for example "Rules: T20". Click it to choose another discipline or change the rules (chapter 6).
4. Type the team names, the match title and the venue (chapter 5.12). Fill in the squads: Info > Home Players and Guest Players (chapter 12).
5. Click Toss and choose the toss result, then the start button "<Team> Bat" (chapter 5.3).
6. Choose the striker, the non-striker and the bowler in the pickers with the gold frame.
7. Enter every delivery with the runs buttons, the extras and Wicket (chapter 5.4). Use Undo at once if a ball was entered wrongly.
8. At the end of each innings the break panel appears; start the next innings there. After the last innings the result is shown. Click New Match before the next match.

For a TV production use the Chroma Key display mode (chapter 7.6); to score from a phone switch the remote control on (chapter 14).

3. Licensing

3.1 PC Licence and USB Licence

cricketBoard 7 runs with a licence key. There are two kinds:

	PC Licence (CPU)	USB Licence
Bound to	This PC, through its Computer ID	One USB stick, through its USB ID
Key file	C:\cricketBoard7\cb7license.xml	cb7license.xml in the root folder of the stick
Use	Only on this PC	On any PC where the stick is plugged in
Checked	At every program start	At every program start, before the PC licence

The licence is read only when the program starts. After you enter a key, or plug in the USB stick, restart the program.

The key also sets the largest board size (Max Resolution) and, for some licences, the GPU screen capture of the Advertisement and Chroma Key modes.

3.2 DEMO Mode

Without a valid licence the program runs in DEMO mode. Everything works, with these marks on the output:

- On the Standard, Sponsored, Advertisement and Chroma Key boards the clock and the team names read DEMO for one second in every ten.
- The info-screen board, the media-player board and the media area of the Advertisement board show a DEMO label.

The licence icon at the right of the menu bar shows the state. Rest the mouse on it for the tooltip: "No License", "USB License Found" or "CPU License Found".

3.3 The License Page

Open Settings > License.

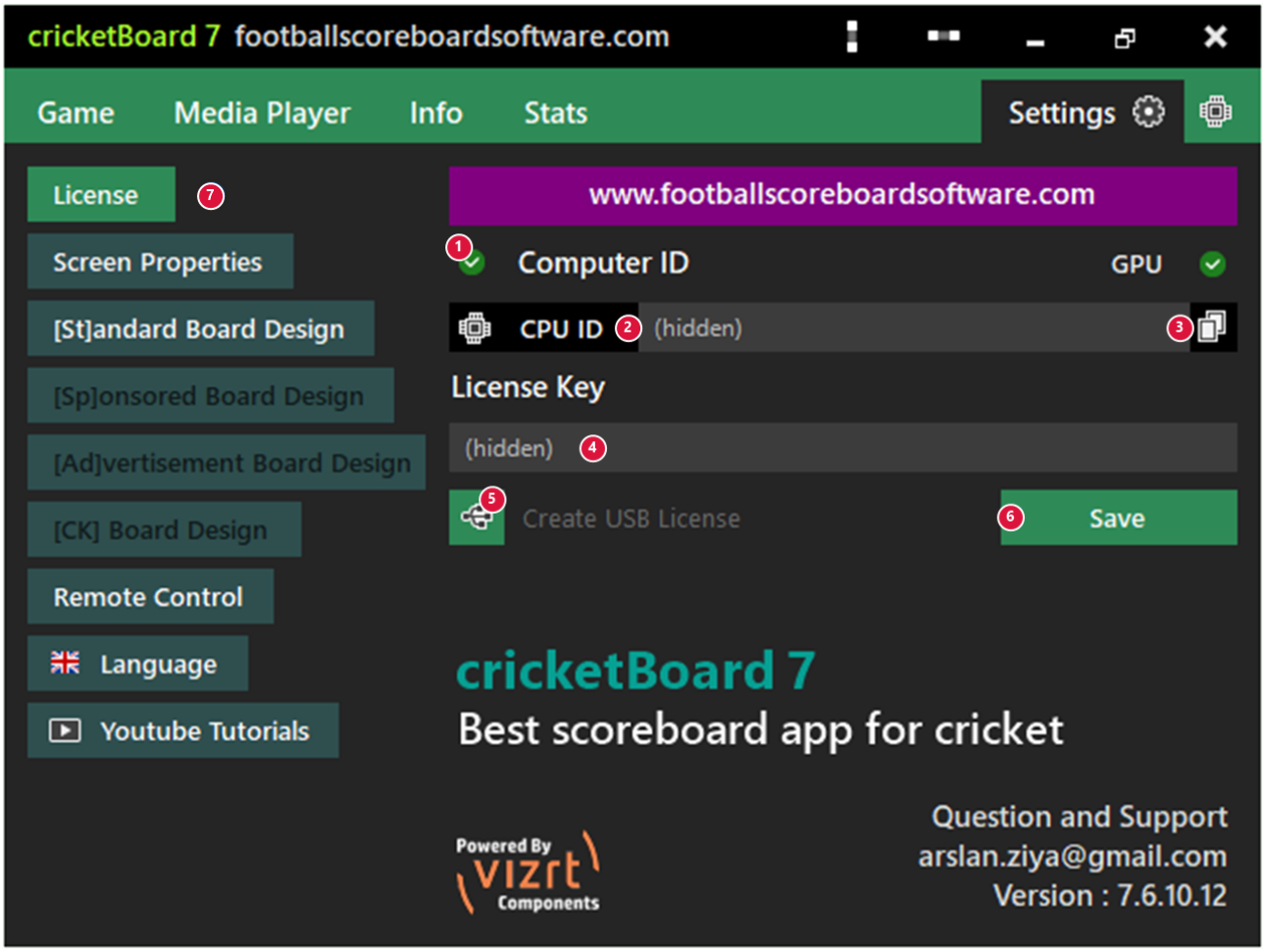


Figure 6. The License page. The Computer ID and the key are hidden in this picture.

No.	Control	What It Does
1	**Computer ID icon**	A question mark without a valid PC licence, a green tick with one. Click it to read the PC licence terms.
2	**CPU ID**	The Computer ID of this PC. Send it to the vendor to get a PC licence.
3	**Copy**	Copies the Computer ID to the clipboard.
4	**License Key**	Paste the key here. Lime = the key fits this PC; grey = it does not.
5	**Create USB License**	Opens the USB License Creator (section 3.5).
6	**Save**	Checks and saves the key.
7	**? (next to License)**	License Info: validation, Max Resolution, expiry date, model, GPU and the result of the date check.

The GPU badge appears when the licence enables GPU screen capture. The bottom of the page shows the support address and the program version (Version : 7.6.10.12).

3.4 Entering a PC Licence

1. Open Settings > License and click the copy button next to the Computer ID.
2. Send the Computer ID to the vendor (arslan.ziya@gmail.com) and order the licence.

3. Paste the key you receive into License Key. The box turns lime when the key fits this PC.
4. Click Save. The program shows "License Key Valid. Please Restart Application."
5. Restart cricketBoard 7.

If the key does not fit, the program shows "License Key Not Valid!" and puts the saved key back.

> **Note:** Do not type into the License Key box of a licensed PC. A key that does not fit makes the running session unlicensed at once: the boards show DEMO until a valid key is back or the program restarts.

3.5 Creating a USB Licence

1. Plug any USB stick into the PC. Its size does not matter.
2. Open Settings > License > Create USB License.
3. Choose the stick in Select USB Device. The scan takes up to 8 seconds. A stick that already holds a key shows "- License Key Found".
4. Copy the USB ID and send it to the vendor.
5. Paste the key you receive into License Key and click Save. The key file is written to the stick.
6. Restart cricketBoard 7 with the stick plugged in.

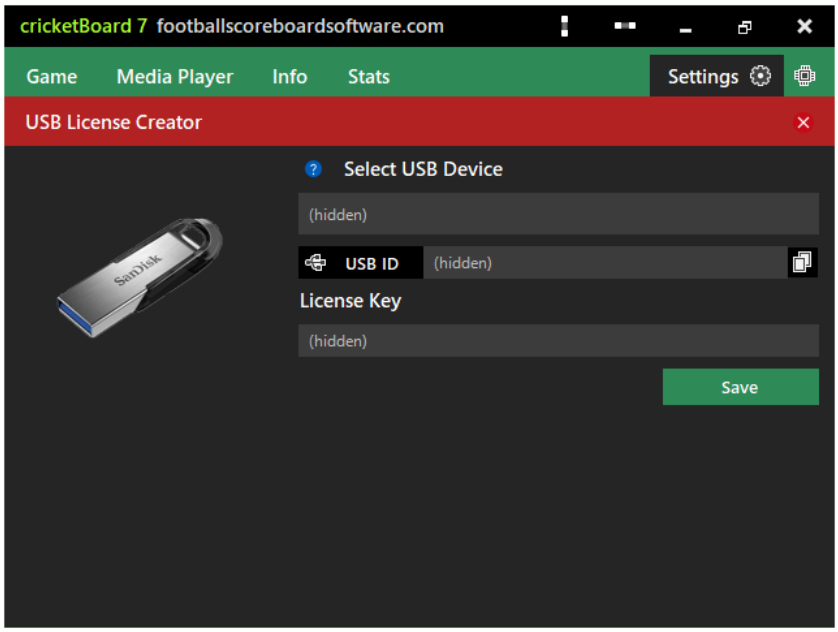


Figure 7. The USB License Creator. The drive, the USB ID and the key are hidden in this picture.

Esc or the close button leaves the USB License Creator. When a valid USB licence is found at start, the License page shows "USB License Detected" with the USB ID and the key.

3.6 When the Licence Is Not Accepted

What You See	Reason and Fix
"License Key Not Valid!"	The key belongs to another PC or stick. A PC key stops working after a hardware change; send the new Computer ID to support.
Computer ID shows ?WMI-UNAVAILABLE	Windows could not report the hardware data (WMI). Run winmgmt /verifyrepository as administrator and restart. A notice "License check unavailable – Windows WMI error" appears at start.

What You See	Reason and Fix
It worked before and now shows DEMO	The licence expired, or the PC clock is earlier than the last start. No message is shown: open the ? License Info box. Correct the Windows date and time, then restart.
USB licence not found	The stick must be plugged in before the program starts.

The licence terms for both kinds open with the question-mark icons on the License page and in the USB License Creator.

4. Main Window and Menus

4.1 The Main Window

The main window is the operator's window. It opens at 640 × 480 pixels at the bottom right of the screen and cannot be made smaller. It has three parts: the title bar, the menu bar with the tabs, and the page of the selected tab.

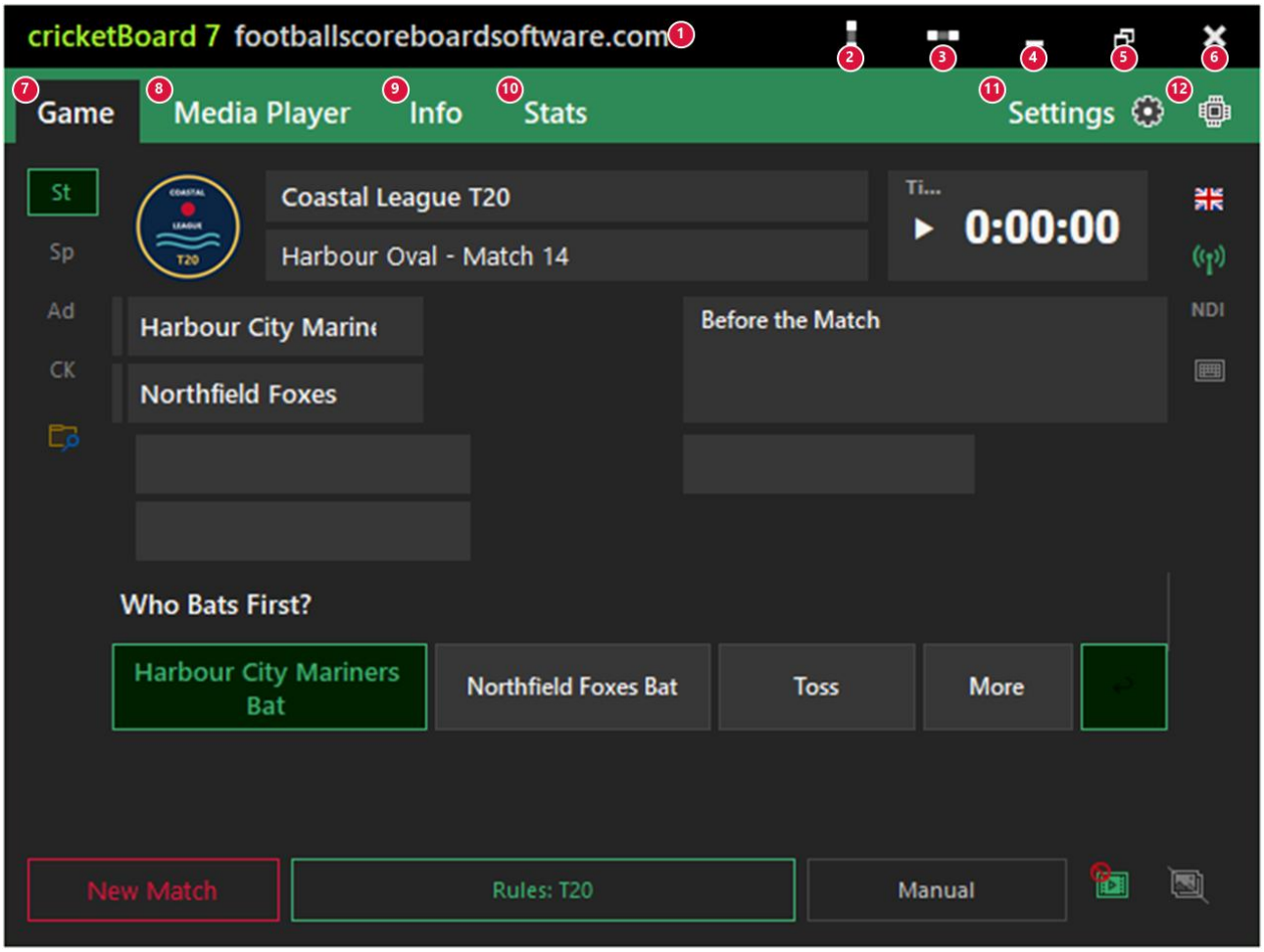


Figure 8. The main window: title bar, menu bar and the Game tab.

No.	Control	What It Does
1	**Title**	cricketBoard 7 and the product website. Drag the title bar to move the window.
2	**Column**	Makes the window a full-height column of 640 pixels at the right edge of the screen. Click again for 640 × 480.
3	**Strip**	Makes the window a full-width strip of 480 pixels along the bottom of the screen. Click again for 640 × 480.
4	**Minimise**	Minimises the main window. The boards stay on.
5	**Maximise**	Fills the screen. Click again to go back.
6	**Close**	Closes the program after a question (section 4.5).
7	**Game**	The control panel: ball-by-ball scoring (chapter 5).

No.	Control	What It Does
8	**Media Player**	Playlists of videos and pictures (chapter 13).
9	**Info**	Info screens, Banner, Announce, squads and sponsors (chapters 9, 12 and 13).
10	**Stats**	The live scorecard of every innings (chapter 11).
11	**Settings**	Licence, board position, designs, remote control, language (chapter 18).
12	**Licence icon**	Shows the licence state; rest the mouse on it for the text (chapter 3).

- Drag any edge or corner to resize the window. The window snaps to the screen edges.
- In the Sponsored, Advertisement and Chroma Key display modes a fifth tab appears between Stats and Settings: Sp, Ad or CK. It opens the page of that mode (chapter 7). In Ad and CK the tab blinks while a camera, NDI source, screen capture or video plays there.
- While a video or a picture slideshow plays, the Settings tab shows the time left in the clip, for example ▶ 0:42.

4.2 Window Sizes

The column and the strip are useful when the main window shares the screen with other programs, for example a vision-mixer software.

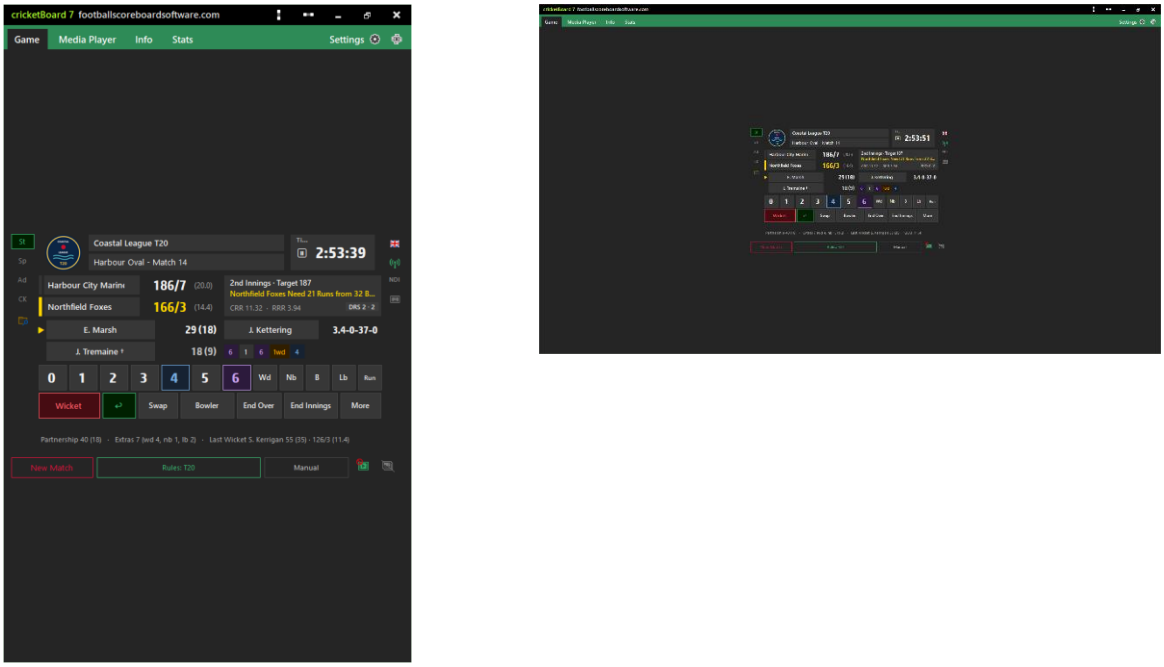


Figure 9. The column (left) and the maximised window (right). The page always stays the same size and is centred.

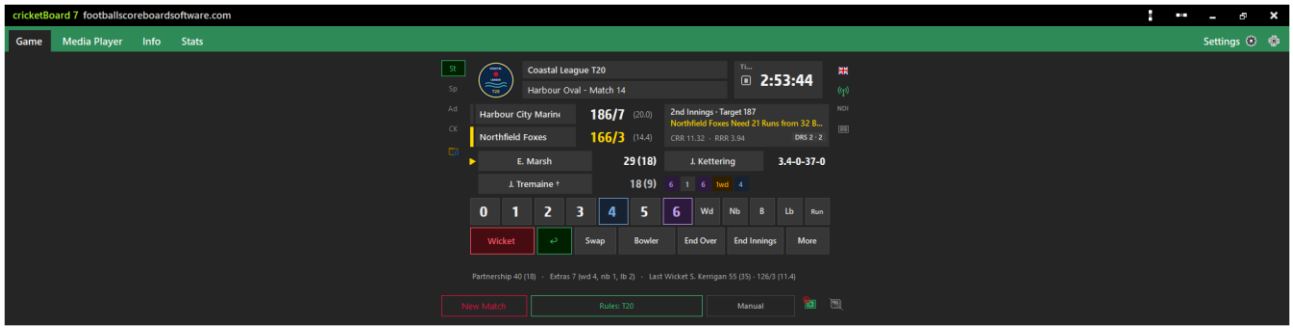


Figure 10. The strip along the bottom of the screen.

4.3 The Tabs at a Glance

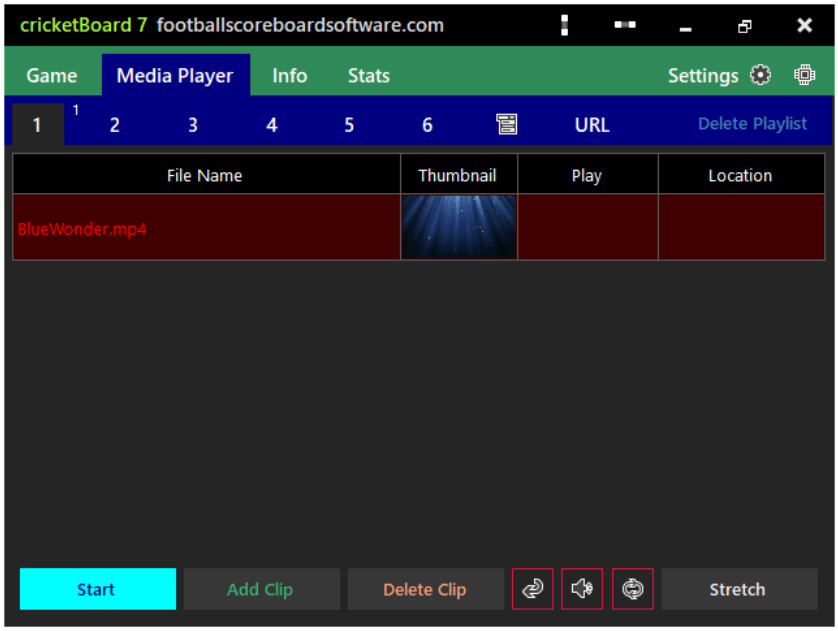


Figure 11. The Media Player tab.

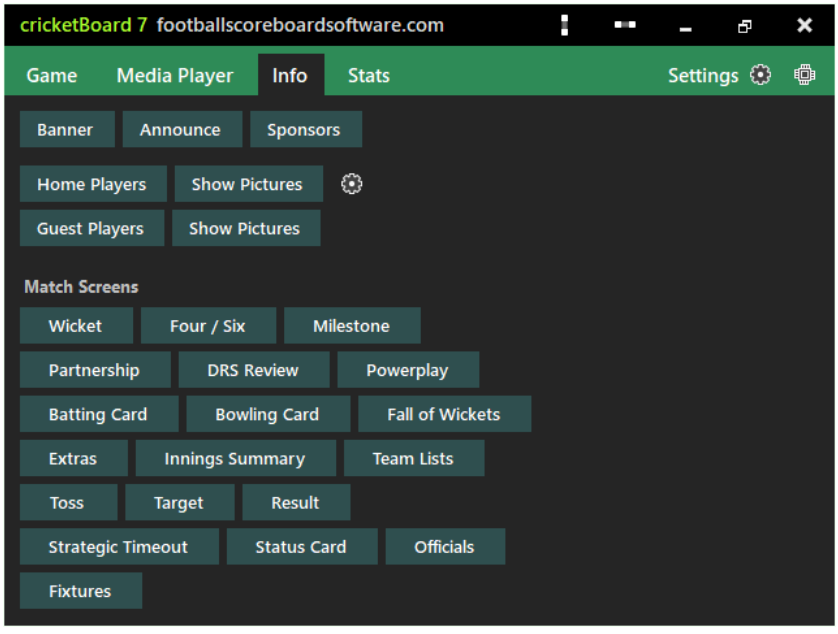


Figure 12. The Info tab.

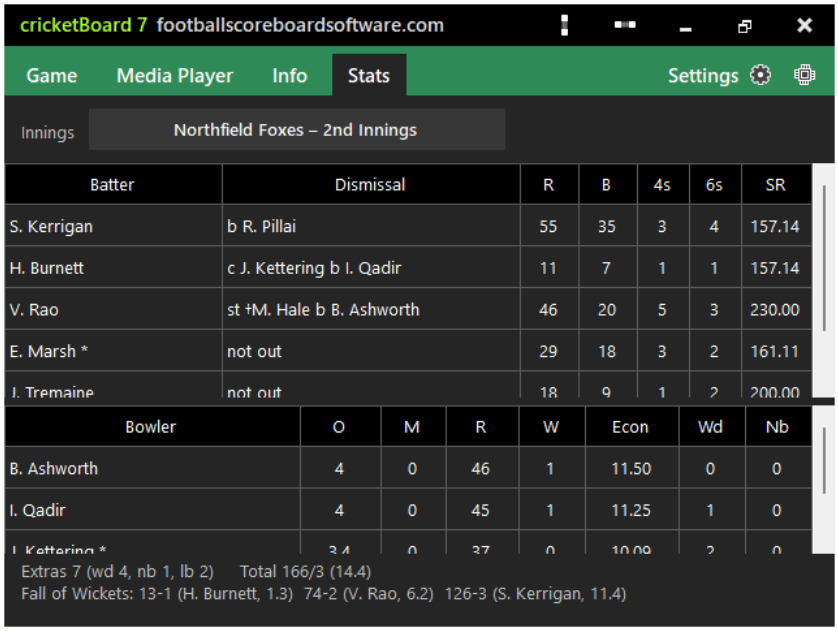


Figure 13. The Stats tab with the scorecard of the current innings.

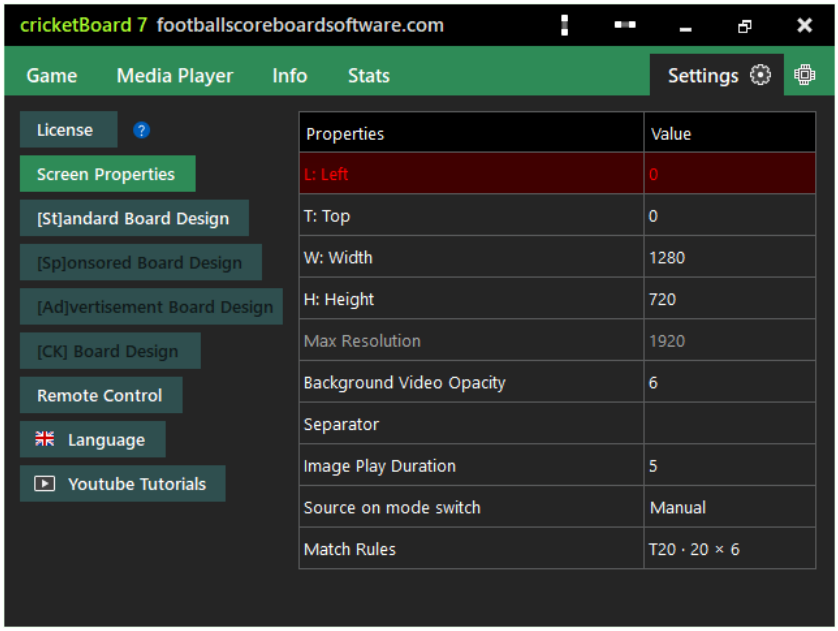


Figure 14. The Settings tab with Screen Properties.

4.4 Board Windows

The boards are separate windows without a frame: one for the Standard and Sponsored board, one for Advertisement, one for Chroma Key, one for the info screens and one for the media player. Only the board of the current display mode is shown.

Their position and size are set in Settings > Screen Properties: L: Left, T: Top, W: Width and H: Height, in pixels of the Windows desktop (chapter 7). To show the board on a second monitor or LED controller output, set Left to the x position of that output in the Windows display layout, for example 1920 for a monitor to the right of a full-HD main screen.

4.5 Closing the Program

1. Click the Close button (X) in the title bar.
2. The program asks "The Application Will Be Closed! Are You Sure?". Click Yes.

The program saves the settings and the match, stops the remote control and NDI and closes the boards. The match is restored at the next start, with its full Undo history.

> **Note:** Always close cricketBoard 7 with its own Close button. Closing the window from the Windows taskbar may skip the orderly shutdown.

4.6 Messages and Questions

Questions and messages of the program cover the page with a coloured title band (red for warnings) and Yes / No or Ok buttons. Esc answers No (or Ok). Short notices, for example about the remote control or NDI, appear for a few seconds at the bottom right of the screen.

5. Control Panel

The control panel is the Game tab of the main window. Everything you need during a match is on this one page: the teams, the batters and the bowler, the ball pad, corrections, the clock and the display mode. The page fits a 640 × 480 window, so it also works on a small screen beside the board.

5.1 The Game Tab at a Glance

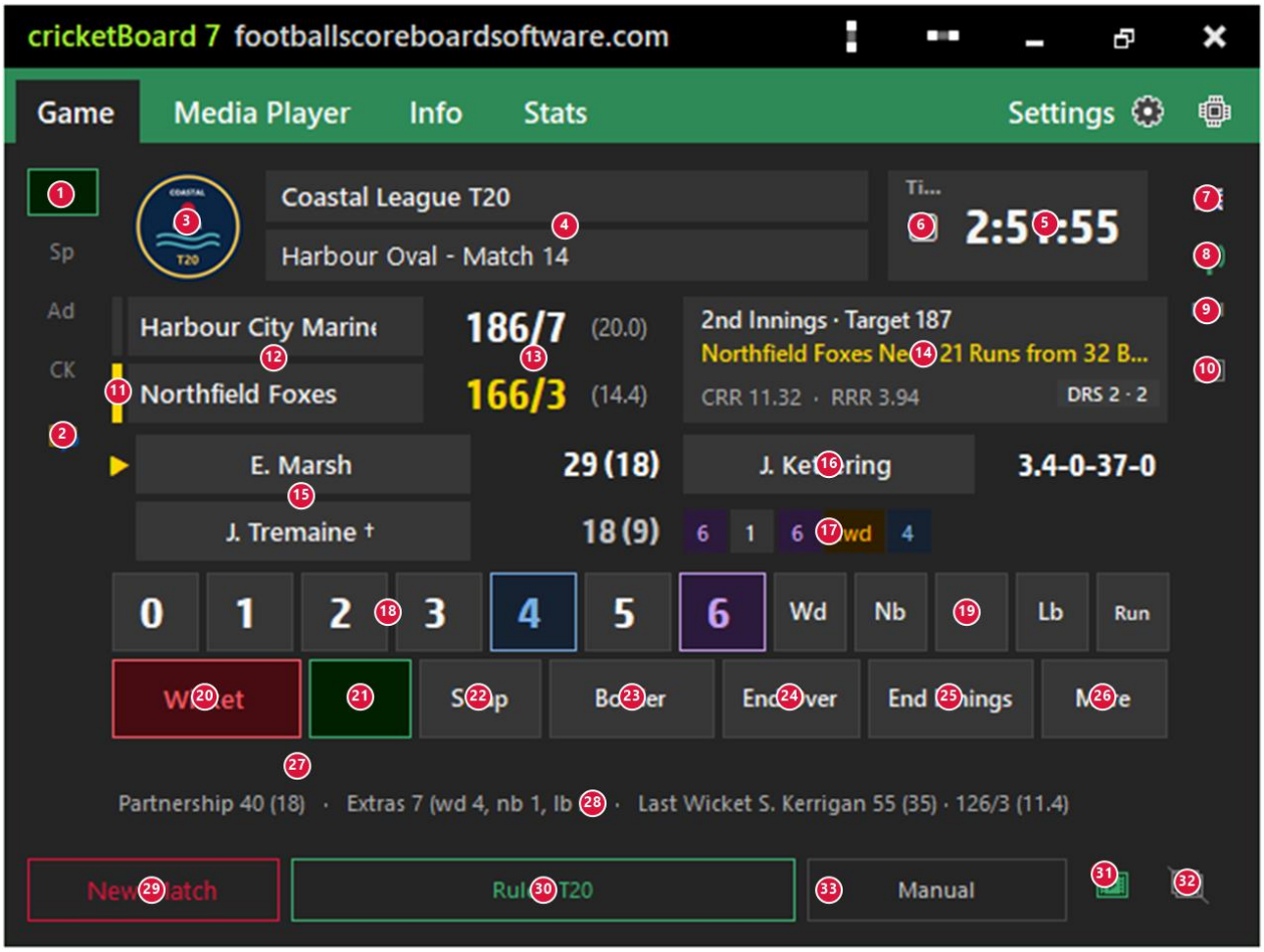


Figure 15. The Game tab during an innings.

No.	Control	What It Does
1	**St, Sp, Ad, CK**	Switch the board between the Standard, Sponsored, Advertisement and Chroma Key display modes. The active mode is green.
2	**Select Design (folder icon)**	Opens the design gallery to choose another board design (chapter 8).
3	**Logo**	Click to choose a logo for the board (for example the competition logo). The small X that appears over the logo removes it.
4	**Match title and venue**	Two text lines shown on the board, for example the competition and the ground (section 5.12).
5	**Clock and mode tag**	The clock: Timer, Countdown or Time (of day). Click it to type a time; right click it, or its mode tag, to change the mode (section 5.11).
6	**Play / Pause**	Starts and pauses the timer or the countdown. Hidden when the clock shows the time of day.

No.	Control	What It Does
7	**Language (flag)**	Opens the language page of the settings (chapter 17).
8	**Remote Control**	Opens the remote control settings (chapter 14). Green while the remote control server runs.
9	**NDI**	Starts and stops the NDI stream of the board (chapter 13). Green while it sends.
10	**Keyboard**	Opens the Keyboard Hook Manager (chapter 16). Green while the global shortcuts are on.
11	**Batting marker**	The gold bar in front of the team that is batting.
12	**Team names**	The names of the home team (upper row) and the guest team (lower row).
13	**Score and overs**	The score of each team ("187/6", two innings "245 & 132/4") and the overs of its latest innings, for example (15.2). In The Hundred: the balls.
14	**Situation box**	First line: the innings and the target. Second line: the equation or the run rates. Third line: the rates under an equation, and the badges (powerplay, free hit, timeout, hat-trick, DRS).
15	**Striker and non-striker**	The pickers of the two batters (the striker has the gold ▶) with their runs and balls, for example 45 (32).
16	**Bowler**	The bowler picker with the bowler's figures (overs-maidens-runs-wickets).
17	**This over**	The balls of the current over, coloured by kind.
18	**Runs 0-6**	Enter a delivery with these runs. 4 and 6 are boundaries (section 5.4).
19	**Wd, Nb, B, Lb, Run**	The extras for the next delivery, and the Run toggle for an all-run 4 or 6 (section 5.5).
20	**Wicket**	Opens the Wicket dialog (section 5.6).
21	**Undo**	Takes back the last action (section 5.9).
22	**Swap**	Swaps the striker and the non-striker.
23	**Bowler**	Opens the bowler picker.
24	**End Over**	Ends the over now, after a question.
25	**End Innings**	Closes the innings now, after a question.
26	**More**	The menu of the less frequent actions (section 5.8).
27	**Message line**	What is needed next, or why the last action was refused.
28	**Innings line**	The partnership, the extras and the last wicket of the innings.
29	**New Match**	Starts a new match after a question (section 5.10).
30	**Rules**	Shows the discipline, for example "Rules: T20", and opens Match Rules (chapter 6).
31	**Background video**	Chooses the video layer behind the board. Green when a video is set.
32	**Middle image**	Chooses an image layer between the background video and the scoreboard. Green when an image is set.

No.	Control	What It Does
33	**Manual**	Switches between Ball by Ball and Manual mode, after a question (section 5.16). Green while Manual mode is on.

Before the match, between innings and after the match the ball pad (controls 18 to 26) is replaced by the break panel (section 5.3).

Many controls show a tooltip when you rest the mouse on them, for example "Wide: Then Click the Runs Run (0 = Just the Wide)".

5.2 How Scoring Works

cricketBoard 7 keeps the whole match as a list of actions: the toss, the start of each innings, the choice of each batter and bowler, every delivery, every review and every correction. The score, the scorecards, the overs and the result are worked out from this list.

- Every action is checked first. If the Laws or the rules do not allow it, nothing changes and the message line shows the reason in red, for example "Choose the Bowler First" or "Bowled the Previous Over".
- When an action is accepted, the match is saved at once and the board, the remote and the info screens follow.
- Undo takes back the last action of any kind (section 5.9).

The message line also tells you what the program needs next: "Choose the Batter", "Choose the Bowler for the Next Over" or "Free Hit". The picker that is needed has a gold frame.

5.3 Before the Match and Between Innings: The Break Panel

While no innings is in progress, the break panel takes the place of the ball pad. Its first line tells you the state of the match.



Figure 16. The break panel before the match (left) and at the innings break (right).

Before the match ("Who Bats First?"):

1. Click Toss and choose the result, for example "Northfield Foxes Won the Toss, Bowl". The first line now reads "Northfield Foxes Won the Toss and Elected to Bowl".
2. Click the start button, for example "Harbour City Mariners Bat". The first innings starts.

You can also skip the toss: the break panel then offers one start button per team.

At the innings break ("Innings Break · Harbour City Mariners 176/7 (20)"):

- The start button names the team that bats next. Click it to start the next innings.
- In a two-innings match with the follow-on, Follow-On appears when the lead is large enough (section 6.5). Click it, and Yes, to make the team that batted second bat again.

After the match the first line shows the result, for example "Harbour City Mariners Won by 12 Runs". After a tie in a limited-overs match with the Super Over rule, the Super Over button appears (Super Five in The Hundred; section 6.6).

The break panel also has More (section 5.8) and Undo.

5.4 Entering a Delivery

At the start of an innings choose the striker, the non-striker and the bowler in their pickers. Then enter every delivery as it happens:

- 0 for a dot ball, 1, 2, 3 or 5 for the runs completed;
- 4 for a four and 6 for a six (boundaries off the bat);
- an extra first (Wd, Nb, B or Lb), then the runs (section 5.5);
- Wicket for a dismissal (section 5.6).

Board Output **Control Panel**

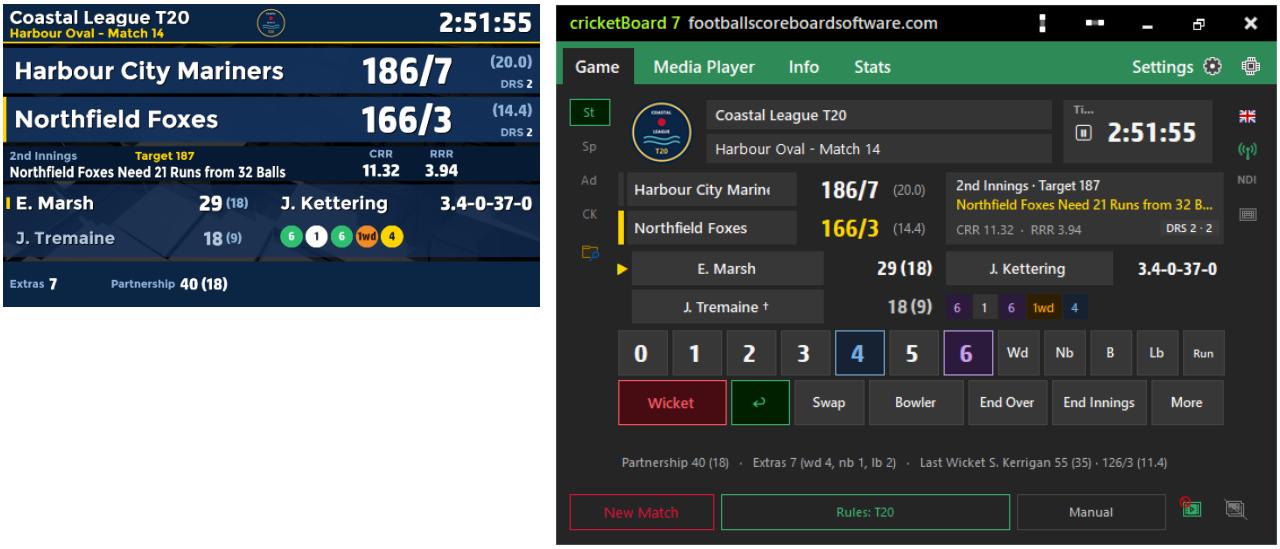


Figure 17. A delivery entered on the panel appears at once on the board: score, batters, bowler and the ball strip.

The program then does the rest:

- The runs go to the striker, the bowler and the team. The ball appears in the strip of this over: "." dot, "1", "4", "6", "1wd", "5nb", "2b", "1lb", "W".
- After an odd number of runs completed the batters change ends: the striker marker moves to the other batter.
- After the last legal ball of the over (6, or 5 in The Hundred) the over ends: the batters change ends, the bowler is cleared and the message line asks for the bowler of the next over. Wides and no-balls are not legal balls; the over goes on.
- A maiden is counted for the bowler when he bowled the whole over and conceded no runs (byes and leg byes do not count against him).
- The innings ends by itself when the team is all out, when the overs or balls are used up, or when the target is reached. The break panel appears.
- The notices of the action (four, six, wicket, fifty, hundred, five wickets, hat-trick, partnership 50s, free hit, maiden) appear on the board for 6 seconds (chapter 10).

To correct the strike by hand, click Swap. To change a batter who has not faced a ball yet (a wrong choice), choose another player in the picker.

5.5 Extras and the Run Toggle

The extras buttons prepare the next delivery. A selected button is orange. Click it again to clear it. After the runs are entered the buttons clear themselves.

Entry	What Is Recorded
Wd, then 0	A wide: 1 run (the wide runs of the rules) to the extras and the bowler. "1wd"
Wd, then 2	A wide and 2 runs completed: 3 wides. "3wd"
Wd, then 4	A wide that went to the boundary: 5 wides. "5wd"
Nb, then 0	A no-ball: 1 run (2 in The Hundred) to the extras and the bowler. The ball counts as faced by the striker. "1nb"
Nb, then 4	A no-ball hit for four: the striker gets 4 runs, the team 5. "5nb"
Nb + B, then 1	A no-ball and 1 bye: the bye is not charged to the bowler.
Nb + Lb, then 1	A no-ball and 1 leg bye.
B, then 1	1 bye: to the extras, not to the batter or the bowler. "1b"
Lb, then 4	4 leg byes to the boundary. "4lb"
Run, then 4	4 runs completed, not a boundary: the batters stay at their ends (an even number of runs), and the runs do not count as a four.

- Wd cannot be combined with the other extras. B and Lb exclude each other.
- With Wd, B or Lb a 6 is refused as a boundary ("A Boundary Is 4, or 6 off the Bat"): only a hit off the bat can be a six.
- With Free Hit after a No-Ball in the rules, the next delivery after a no-ball is a free hit. The panel shows Free Hit on the message line and as a badge; the board shows its free-hit badge. A wide on a free hit keeps the free hit for the next ball.
- For more than 6 runs completed (for example 4 runs and overthrows), use More > Runs Run... and type 0-12.

5.6 Wickets

Click Wicket (with the extras of the delivery already selected, if any). The Wicket dialog opens with the bowler's name in the title.

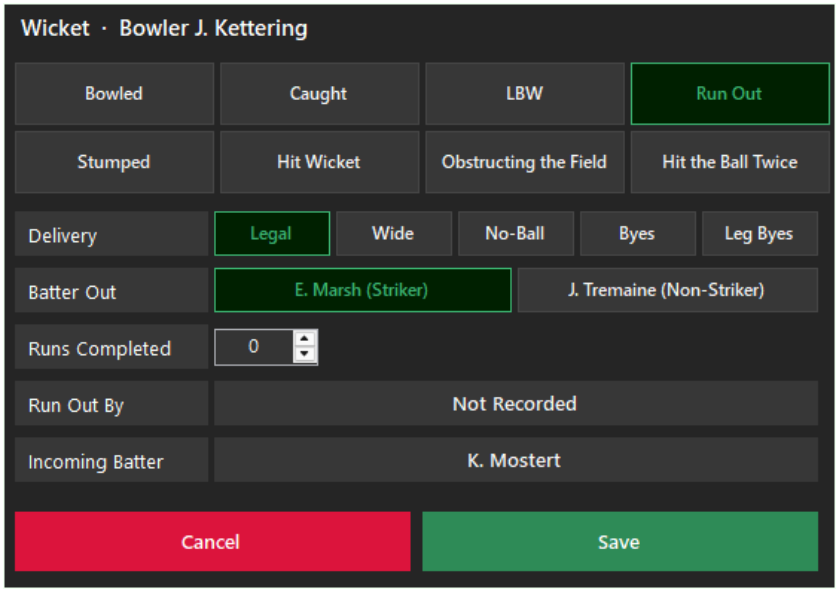


Figure 18. The Wicket dialog for a run out: the batter out, the runs completed, the fielder and the incoming batter.

1. Choose how the batter is out: Bowled, Caught, LBW, Run Out, Stumped, Hit Wicket, Obstructing the Field or Hit the Ball Twice.
2. Check the Delivery: Legal, Wide, No-Ball, Byes or Leg Byes.
3. The dialog shows only what this dismissal needs (see the list below).
4. Incoming Batter: the next batter, or Choose Later.
5. Click Save. Cancel or Esc closes the dialog without a change.

What the dialog asks for:

- Batter Out (Run Out, Obstructing the Field): the striker or the non-striker;
- Runs Completed (Run Out, Obstructing the Field): the runs completed before the wicket;
- Caught By, Stumped By or Run Out By: the fielder (optional; the wicketkeeper is at the top of the list and marked †; "Not Recorded" leaves it empty).
- Incoming Batter: always shown.

The engine checks the dismissal against the Laws:

- On a no-ball or a free hit only Run Out, Obstructing the Field and Hit the Ball Twice are possible. The dialog shows "Free Hit: Only Run Out, Obstructing the Field or Hit the Ball Twice Count."
- On a wide only Run Out, Stumped, Hit Wicket and Obstructing the Field are possible.
- Only the striker can be bowled, caught, LBW, stumped or out hit wicket; no runs count with these dismissals.
- The wicket is credited to the bowler for Bowled, Caught, LBW, Stumped and Hit Wicket.

After the wicket the fall of wicket is recorded, the partnership ends and the incoming batter takes the place of the batter who is out. After a catch the new batter takes strike unless the over has ended (Law 18.11). If the batters ended at other ends (for example after a run out), correct the strike with Swap. When you chose Choose Later, the batter picker has a gold frame.

Retired Hurt, Retired Out and Timed Out are not deliveries: they are in the More menu (section 5.8).

5.7 Batters and Bowlers

The pickers are filled from the squads of the two teams (chapter 12):

- The striker and non-striker pickers list the batters of the batting team who are not out and not at the crease. The captain is marked (c), the wicketkeeper †.

- The bowler picker lists the players of the fielding team who may bowl now. The bowler of the previous over and a bowler who has reached the bowler limit of the rules are left out.
- "No Players (Players List)" means that the squad of that team is empty: fill it in Info > Home Players or Guest Players.

In The Hundred a bowler delivers 5 or 10 balls in a row: after the first set of 5 the ends do not change and the bowler stays; after 10 balls the ends change and a new bowler is needed.

A batter who retired hurt can come back: choose him again in a batter picker when a place at the crease is free.

5.8 The More Menu

More (on the pad and on the break panel) holds the actions that are not needed on every ball. Items that are not possible now are grey.

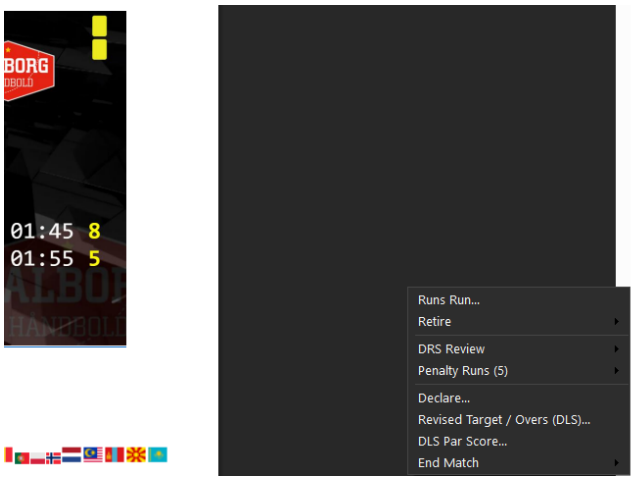


Figure 19. The More menu during an innings, with the DRS Review submenu open.

Item	What It Does
Runs Run...	A delivery with 0-12 runs completed and no boundary (overthrows), with the selected extras.
Retire	For each batter at the crease: Retired Hurt (not out, may come back) or Retired Out (counts as a wicket, after a question).
Timed Out	Only when a place at the crease is free: the incoming batter is given out timed out, after a question.
DRS Review	Per team, with the reviews left: Overturned (Kept), Umpire's Call (Kept) or Unsuccessful (Lost). Shown when the rules allow reviews (chapter 10).
Penalty Runs (5)	Awards 5 penalty runs to a team, after a question (Law 41): to the batting team's current innings, otherwise to that team's next innings, or to its last innings when it bats no more.
Floating Powerplay	The batting team takes its floating powerplay from this over. Only in rules with a floating powerplay, at the start of an over inside the allowed overs, once per innings.
Fielding Timeout: <team>	The fielding team takes its timeout (The Hundred: after ball 25). The clock starts a countdown of the timeout length (90 seconds); the Timeout badge stays until the next delivery.

Item	What It Does
Day / Session	Multi-day matches: Next Session, or Set Day / Session... (day of play and session 1-3). Shown on the board.
Declare...	Declares the innings closed, after a question.
Revised Target / Overs (DLS)...	Type a revised target and revised overs (for example 38 or 38.4); 0 = no change (section 6.7).
DLS Par Score...	Type the par score from the official DLS sheet; -1 removes it.
End Match	Ends the match with a result chosen by the operator: Match Drawn, Match Tied, No Result, Match Abandoned, Awarded to <team>. Asks first.

5.9 Undo

Undo (the green arrow on the pad, the arrow on the break panel) takes back the last action. Press it again to go further back, up to the first action of the match.

Undo takes back every kind of action: deliveries and wickets, the choice of a batter or a bowler, Swap, End Over, End Innings, the start of an innings, the toss, retirements, reviews, penalty runs, the floating powerplay, a fielding timeout, day and session, revised targets, the end of the match and rule changes made during the match.

- After Undo the message line shows "Undone".
- The Undo history is saved with the match: it still works after a restart of the program.
- Undo does not change the team names, the match title, the venue, the squads or the clock.
- New Match clears the history.

5.10 New Match

1. Click New Match.
2. The program asks "Start a New Match? The Score Is Reset."
3. Click Yes to start the new match, or No to keep the current one.

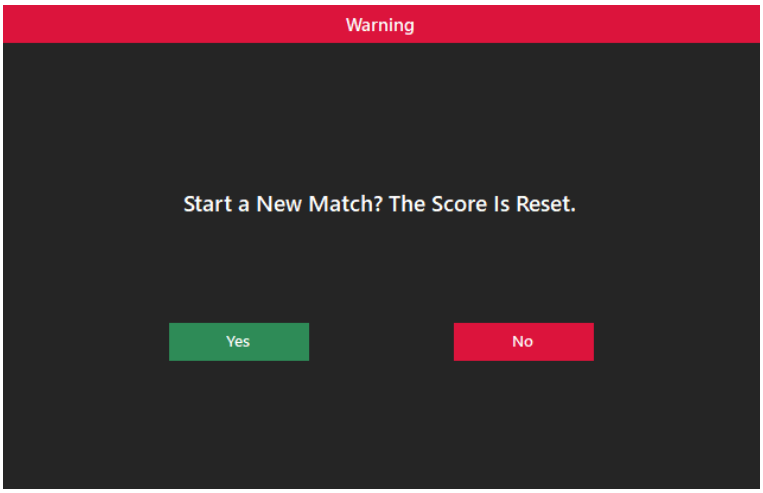


Figure 20. The New Match question.

New Match clears the score, the scorecards and the Undo history, and the per-match info-screen data (DRS review screen, status card, Player of the Match). The clock stops at zero in its current mode.

New Match keeps the team names, the squads, the discipline and its rules, the match title and venue, the logo, the background layers, the display mode, the fixtures and the officials.

> **Note:** The remote page asks the same question before a new match. The HTTP command new_match resets without a question (chapter 15).

5.11 Clock

Cricket has no game clock. The clock box at the top right is a helper with three modes; its mode tag shows the current one:

Mode	Shows	Use
Timer	Elapsed time, for example 1:24:10	The time of a session or of the innings
Countdown	Time left, for example 9:45	An innings break, drinks, a fielding timeout
Time	The time of day, for example 14:34	Before the match, breaks

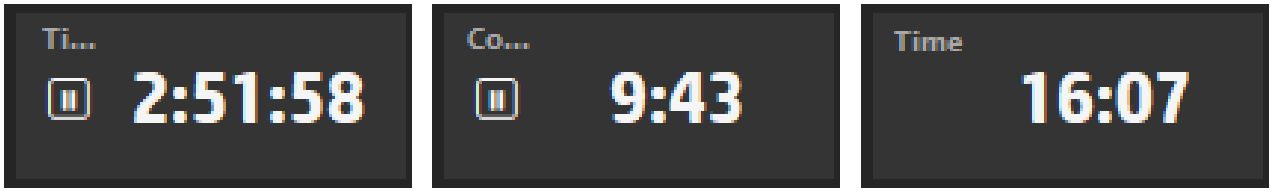


Figure 21. The clock as a timer, a countdown and the time of day.

- Right click the clock or its mode tag to go to the next mode: Timer, Countdown, Time. A new mode starts stopped at zero.
- To set the time, click in the clock, type the time (h:mm:ss, mm:ss or seconds) and press Enter. Wrong input is ignored. For a countdown, type its length and click Play.
- Play / Pause starts and pauses the timer or the countdown. A countdown stops by itself at 0:00.
- A fielding timeout from the More menu switches the clock to a countdown of the timeout length and starts it.
- The board shows whatever the panel shows.
- The clock is saved. After a restart a running timer continues from the saved time; the time while the program was closed is not counted.

5.12 Team Names, Match Title and Venue

- Click a team name and type. The X button that appears while you type clears the name. The team names label the scores, the pickers, the toss, the equation and the result.
- Match title and venue: the two text lines of the board, for example "Coastal League T20" and "Harbour Oval - Match 14". The info screens use them as their subtitle on the St board.
- The squads come from the players lists of the Info tab (chapter 12). A change there reaches the pickers when you save the list.

Changes go to the board at once.

5.13 Display Modes, Designs and Other Strip Buttons

- St, Sp, Ad, CK (left strip): switch the board. The choice is saved and used at the next start.
- Select Design (folder icon): opens the design gallery next to the button (chapter 8).
- Language flag, Remote Control, NDI and Keyboard (right strip): see the table in section 5.1. The remote icon only shows whether the remote server runs; switch the remote on or off on the Remote Control page.
- Background video and middle image (bottom right): choose a video file (mp4, webm, ogg) or an image file. A small X on the icon removes the file. The new installation starts with a background video.

5.14 A Typical Match

1. Check the team names, the squads, the match title and the venue.
2. Check the discipline on the Rules button. Change it now if needed: another discipline starts a new match.
3. Choose the display mode (St for a big screen, CK for a TV production).
4. Enter the toss on the break panel, then start the first innings.
5. Choose the striker, the non-striker and the opening bowler.
6. Enter every delivery. Choose the bowler at the start of each over and the new batter after each wicket. Use Undo at once if a ball was entered wrongly.
7. At the innings break show the innings summary or the scorecards from the Info tab if you like (chapter 9); start the countdown of the break on the clock.
8. Start the second innings. The board shows the target and the equation.
9. After the last ball the result appears. Show the Result screen.
10. Before the next match: New Match, then the new team names and squads.

5.15 Remote and Keyboard Equivalents

Most panel actions are also available from the phone remote page (chapter 14), the HTTP API (chapter 15) and the global keyboard shortcuts (chapter 16).

Panel Action	Default Key	HTTP Command
Dot ball, 1, 2, 3, 5 runs	Num 0, 1, 2, 3, 5	ball :0, :1 ...
Four, six (boundaries)	Num 4, Num 6	ball :4:b, :6:b
4 runs run (no boundary)	Num Enter	ball :4
Wd, Nb, B, Lb	Num 7, 8, 9, Num +	ball wd:0, nb:4:b, b:1, lb:2 ...
Wicket	Num . (opens the dialog)	wicket
Undo	Num −	undo
Swap	Num *	swap_strike
Clock play / pause	Num /	click playpause
Batters, bowler	–	set_striker, set_non_striker, set_bowler
End Over, End Innings, Declare	–	end_over, end_innings, declare
Toss, start the innings	–	toss, start_innings

Panel Action	Default Key	HTTP Command
More menu items	–	review, penalty, retire, timed_out, floating_powerplay, fielding_timeout, session, revise, par, end_match
New Match	none	new_match (no question)

The keyboard shortcuts work only after you switch them on in the Keyboard Hook Manager, and with NumLock on.

5.16 Manual Mode

In Manual mode the boards show what you type instead of the ball-by-ball match: the team scores and overs, the batting team, the target, two batters, the bowler and a status line. Use it when you cannot enter every ball, for example for a match you follow from the scorers' sheet, or to show the score of another match.

Click Manual (bottom row, next to Rules). The program asks "Switch to Manual Mode? The Ball-by-Ball Match Is Kept." Click Yes. The button turns green, and the manual area takes the place of the pickers and the ball pad.

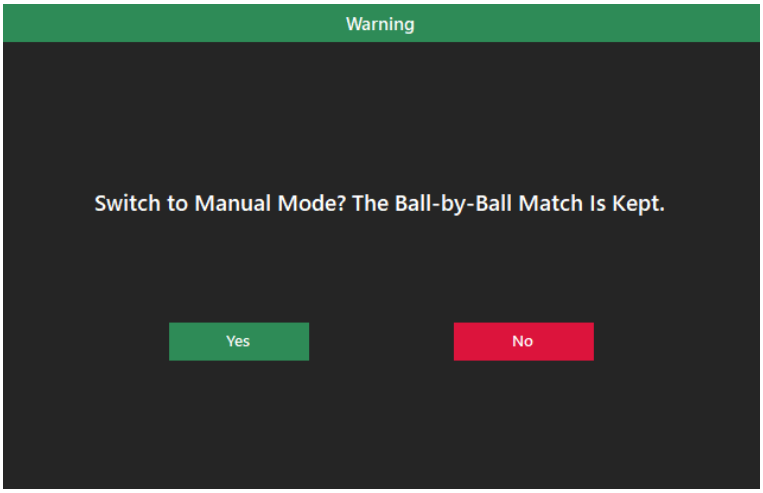


Figure 22. The question before the switch to Manual mode.

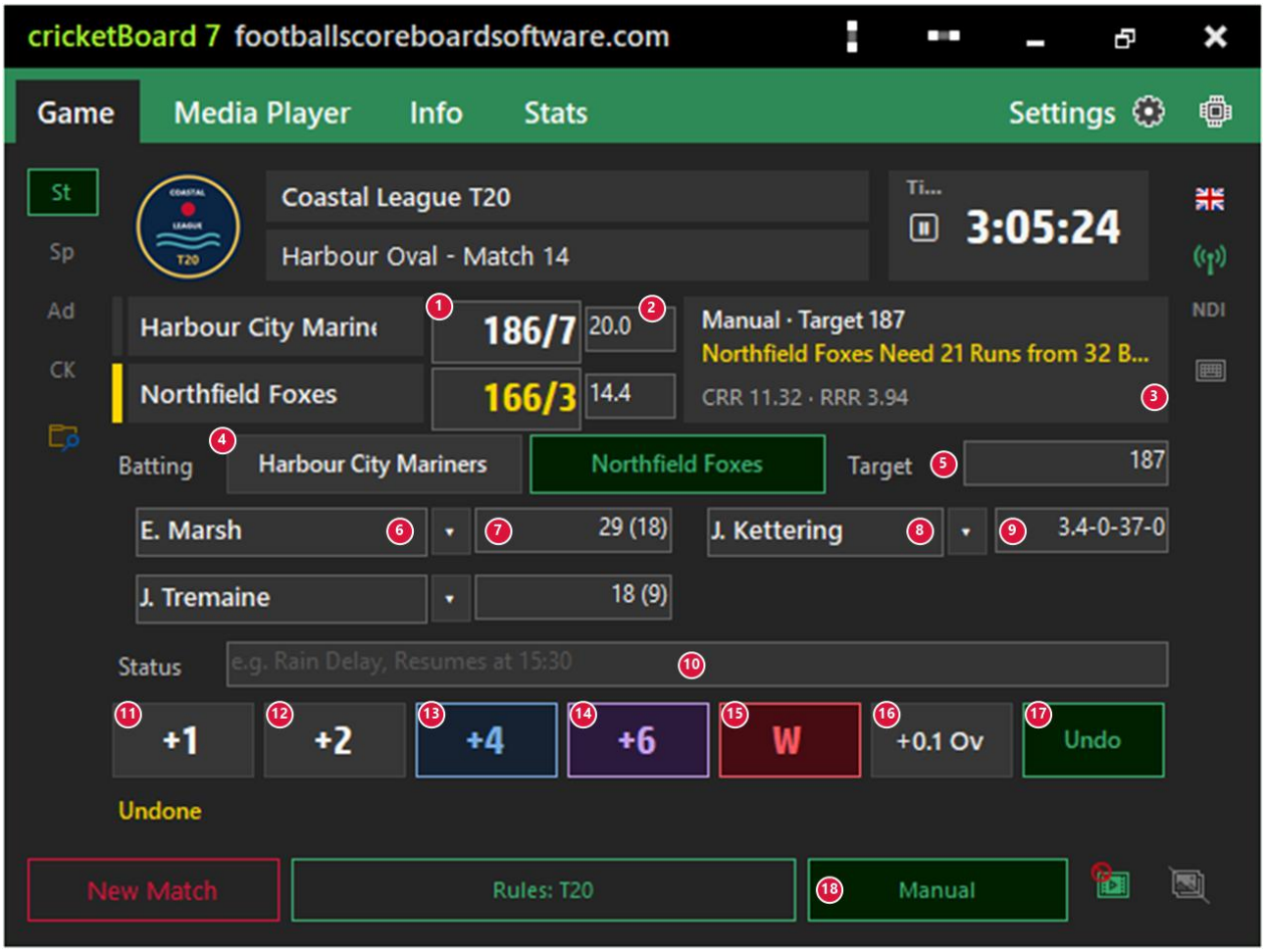


Figure 23. The Game tab in Manual mode.

No.	Control	What It Does
1	**Score boxes**	The score of each team as it should appear, for example "186/7", "120 & 187/6" or "450/7d".
2	**Overs boxes**	The overs of each team, for example 20.0 or 14.4 (The Hundred: the balls).
3	**Situation box**	"Manual" and the target, the equation ("Northfield Foxes Need 21 Runs from 32 Balls") or the status line, and the run rates.
4	**Batting**	The team that is batting: the gold marker on the board, and the team the quick buttons count for. Click the selected team again to clear it.
5	**Target**	The target of the chase (empty = no target).
6	**Batter names**	The two batters. The ▾ button next to a name lists the squad of the batting team.
7	**Batter figures**	The runs and balls of each batter, for example 29 (18).
8	**Bowler**	The bowler, with the squad of the fielding team behind ▾.
9	**Bowler figures**	For example 3.4-0-37-0 (overs-maidens-runs-wickets).
10	**Status**	A line such as "Rain Delay, Resumes at 15:30" or "Northfield Foxes Won by 6 Wickets". While it is filled, the boards show it in place of the target and the run rates.

No.	Control	What It Does
11-14	**+1, +2, +4, +6**	Runs for the batting team ("160/3" + 6 = "166/3").
15	**W**	One wicket for the batting team (at most all out).
16	**+0.1 Ov**	One legal ball for the batting team ("14.5" becomes "15.0"). In The Hundred the button reads +1 Ball.
17	**Undo**	Takes back the last quick button.
18	**Manual**	Back to Ball by Ball, after a question.

How Manual mode works:

- Type in a box; the boards follow at once. A box you are typing in is not changed by the program.
- The quick buttons change only the score and the overs of the batting team. The batter and bowler figures are always typed. Without a batting team the quick buttons are refused ("Choose the Batting Team"); with a score that is not a number they are refused as well ("The Score Is Not a Number").
- No cricket rules are applied: the strike, the over and the innings do not change by themselves. Only the end of the overs stops +0.1 Ov ("The Innings Is Complete"), and all out stops W.
- CRR, RRR and the "Need ... from ..." line are worked out from the typed values and the overs per innings of the rules on the Rules button.
- Undo takes back the quick buttons one by one (only the box the button changed). It does not take back typing.
- The typed values are saved: they are still there after a restart, also after a switch to Ball by Ball and back.
- New Match clears the typed values as well as the ball-by-ball match.



Figure 24. Manual mode on the St board: the equation and the run rates (left); a status line in their place (right).



Figure 25. Manual mode on the CK scorebug (left) and the Target screen from the typed values (right).

The ball-by-ball match is kept as it is while Manual mode is on: the pickers, the ball pad, the toss and the More menu are hidden, and the remote and the HTTP API refuse the ball-by-ball commands ("Manual Mode Is On"). Click Manual again and Yes ("Back to Ball by Ball? The Boards Show the Ball-by-Ball Match Again.") to go on where the match stopped.

The info screens that need the ball-by-ball data (the callouts, the scorecards, the toss) are greyed out in Manual mode (chapter 9); Target, Result, Team Lists, Status Card, Fixtures and Officials work. The Stats tab still shows the kept ball-by-ball match, with a note. (chapter 11)

> **Note:** The keyboard shortcuts in Manual mode: Dot ball (Num 0) = +0.1 Ov, 1 / 2 runs, Four, Six = runs, Wicket = W, Undo = Undo, Clock as usual; the other keys do nothing. While a manual box has the focus, the keys are ignored, so you can type digits.

6. Formats and Match Rules

6.1 Opening Match Rules

The Match Rules window sets the discipline and every playing condition. Open it in one of two ways:

- Game tab > the Rules button ("Rules: T20").
- Settings > Screen Properties > row Match Rules: select the row and click the small "..." button at the right of the value.

Nothing changes until you click Save & Apply. The discipline buttons and Factory Defaults only fill in the rows.

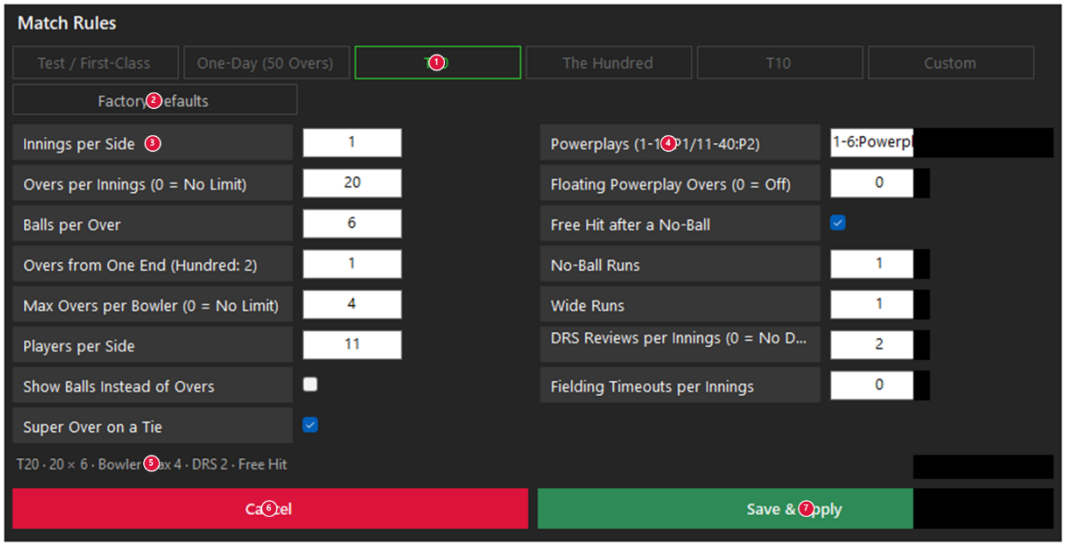


Figure 26. The Match Rules window with the T20 defaults.

No.	Control	What It Does
1	**Discipline buttons**	Test / First-Class, One-Day (50 Overs), T20, The Hundred, T10, Custom. A click shows the saved rules of that discipline. The selected discipline is green.
2	**Factory Defaults**	Puts the factory values of the selected discipline into the rows.
3	**Format (left column)**	Innings, overs, balls per over, ends, bowler limit, players, ball count, days, follow-on, Super Over.
4	**Playing conditions (right column)**	Powerplays, floating powerplay, free hit, no-ball and wide runs, DRS reviews, fielding timeouts.
5	**Summary**	The rules in one line, for example "T20 · 20 × 6 · Bowler Max 4 · DRS 2 · Free Hit".
6	**Cancel**	Closes without saving. If you changed something, the program asks "Discard Changes?". Esc does the same.
7	**Save & Apply**	Checks and saves the rules (section 6.4).

Each discipline keeps its own rules: a change of the T10 rules does not change the T20 rules. Rows that do not apply are hidden, for example the follow-on in a one-innings match.

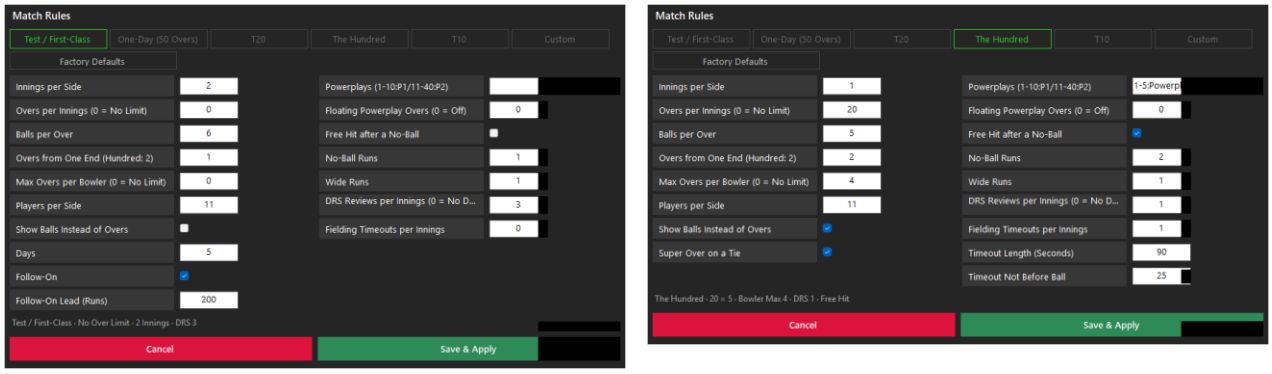


Figure 27. Match Rules with the defaults of Test / First-Class (left) and The Hundred (right).

6.2 Every Rule

Rule	Values	Shown When	What It Does
Innings per Side	1-2	Always	1 = a limited-overs match, 2 = a two-innings match (Test / first-class).
Overs per Innings (0 = No Limit)	0-200	Always	The overs of an innings. The innings ends when they are bowled. In The Hundred an "over" is a set of 5 balls: 20 sets = 100 balls.
Balls per Over	4-10	Always	Legal balls in an over (The Hundred: 5).
Overs from One End (Hundred: 2)	1-4	Always	Overs bowled from one end before the ends change. 2 in The Hundred: the ends change every 10 balls.
Max Overs per Bowler (0 = No Limit)	0-200	Always	The bowler limit. A bowler who reached it is left out of the bowler picker.
Players per Side	2-15	Always	The team is all out after Players per Side − 1 wickets.
Show Balls Instead of Overs	On / off	Always	The board, the panel and the remote count balls ("64 Balls") instead of overs, and the bowling figures show balls. Rates stay per 6 balls.
Days	1-7	Innings per Side = 2	Scheduled days. Shown with the day and session of play.
Follow-On	On / off	Innings per Side = 2	The follow-on can be enforced (section 6.5).
Follow-On Lead (Runs)	1-999	Follow-On on	The first-innings lead needed to enforce the follow-on.
Super Over on a Tie	On / off	Innings per Side = 1	After a tie the Super Over (Super Five in The Hundred) can decide the match (section 6.6).
Powerplays (1-10:P1/11-40:P2)	Text	Always	The mandatory powerplay phases: from-to over and the label shown on the board, separated by /. Empty = no powerplay. Example: 1-6:Powerplay.

Rule	Values	Shown When	What It Does
Floating Powerplay Overs (0 = Off)	0-10	Always	Overs of a floating batting powerplay that the batting side takes once per innings (More > Floating Powerplay).
Floating Powerplay from Over, to Over	1-200	Floating powerplay on	The overs in which the floating powerplay may be taken.
Free Hit after a No-Ball	On / off	Always	The delivery after a no-ball is a free hit.
No-Ball Runs	0-5	Always	The penalty of a no-ball (The Hundred: 2).
Wide Runs	0-5	Always	The penalty of a wide.
DRS Reviews per Innings (0 = No DRS)	0-9	Always	Unsuccessful reviews allowed per team and innings (chapter 10).
Fielding Timeouts per Innings	0-5	Always	Timeouts of the fielding team per innings (The Hundred: 1).
Timeout Length (Seconds)	10-600	Timeouts on	The countdown of a timeout (90).
Timeout Not Before Ball	0-600	Timeouts on	Legal balls that must have been bowled before a timeout (The Hundred: 25).

Default values of every discipline:

Rule	Test	ODI	T20	The Hundred	T10
Innings per Side	2	1	1	1	1
Overs per Innings	0 (no limit)	50	20	20 (sets of 5 = 100 balls)	10
Balls per Over	6	6	6	5	6
Overs from One End	1	1	1	2	1
Max Overs per Bowler	0 (no limit)	10	4	4 (= 20 balls)	2
Players per Side	11	11	11	11	11
Show Balls Instead of Overs	Off	Off	Off	On	Off
Days, Follow-On, Lead	5, on, 200	–	–	–	–
Super Over on a Tie	–	On	On	On (Super Five)	On
Powerplays	None	1-10:P1 / 11-40:P2 / 41-50:P3	1-6:Powerplay	1-5:Powerplay (first 25 balls)	1-3:Powerplay
Floating Powerplay Overs	0	0	0	0	0 (overs 3-9 when switched on)

Rule	Test	ODI	T20	The Hundred	T10
Free Hit	Off	On	On	On	On
No-Ball Runs, Wide Runs	1, 1	1, 1	1, 1	2, 1	1, 1
DRS Reviews per Innings	3	2	2	1	1
Fielding Timeouts	0	0	0	1 (90 s, not before ball 25)	0

Custom starts with the T20 values.

> **Note:** Competitions differ in their playing conditions: some T10 leagues play 2 mandatory powerplay overs and 1 floating over (set Powerplays to 1-2:Powerplay and Floating Powerplay Overs to 1). Check the rules of your competition before the match.

6.3 Changing the Discipline

1. Click the button of the discipline.
2. Change the rows if needed.
3. Click Save & Apply.

Another discipline always starts a new match. When a match is in progress, the program asks first: "Another Discipline Starts a New Match. Continue?". Yes starts the new match with the new rules (team names, squads and the match title stay, as with New Match, section 5.10); No keeps the window open.

6.4 Saving and Changing Rules During a Match

The program checks every number row while you type: a value outside its range turns the box red. Save & Apply with a red box shows "Invalid Values" with the name of the row, and nothing is saved.

A change of the rules of the current discipline does not start a new match:

- Before the first action of the match the match simply starts with the new rules.
- During the match the change is recorded as a step of the match. It applies from now on: completed innings keep the rules they were played under. The change can be undone with Undo like any other action.

Some changes are refused while they contradict what has been played. The program shows "The Rules Cannot Change Now" with the reason:

Reason	Example
Fewer Overs than Already Bowled	Overs per Innings 15 while 16 overs have been bowled. Use Revised Target / Overs for a reduced innings (section 6.7).
Change the Over Length between Overs	Balls per Over or Overs from One End during an over.
Fewer Players than Wickets Fallen	Players per Side 6 with 7 wickets down.
More Innings Have Been Played	Innings per Side 1 after a team batted twice.

A change of DRS Reviews per Innings during an innings gives both teams the new number minus the reviews they have already lost.

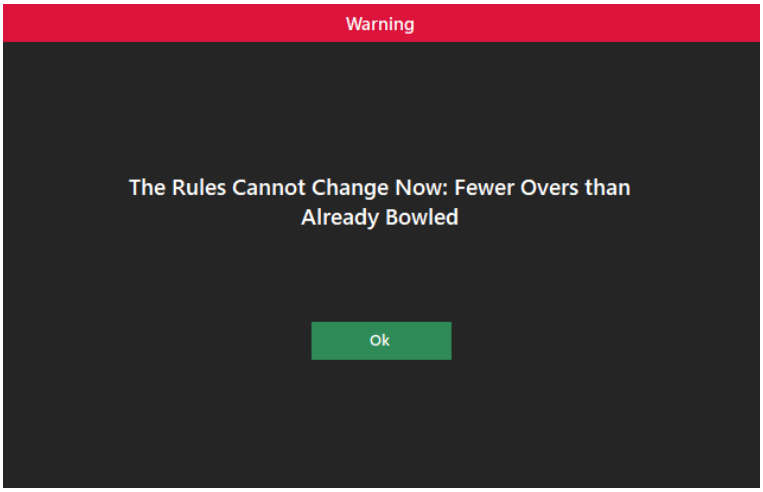


Figure 28. The message of a refused rule change.

The rules of every discipline are saved in start.xml. The running match is restored after a restart with the rules it was played under.

6.5 Two-Innings Matches: Follow-On, Declarations, Days and Sessions

- Innings order: each team bats twice, the teams alternate. The break panel always names the team that bats next.
- Follow-on: when the team batting second trails by at least the Follow-On Lead after the first two innings, the break panel shows Follow-On. Click it and confirm "Enforce the Follow-On?" to make that team bat again at once. Otherwise start the next innings with the normal start button.
- Declaration: More > Declare... closes the innings. The score keeps the wickets and a "d", for example 450/7d.
- The match ends with a win when the team batting last reaches the target, with a win by an innings when the team that batted twice is still behind the other team's single innings, or with a win by runs when the team batting last is all out short of the target. When the last innings ends without a result (End Innings with wickets left), the match is drawn.
- Day and session: More > Day / Session > Next Session moves to the next session (after the third session to session 1 of the next day); Set Day / Session... sets both. The board shows Day and Session in place of the required rate and the projected score.
- The equation shows the lead or deficit of the batting team: "Harbour City Mariners Lead by 45 Runs", "Trail by 30 Runs", "Scores Level". In the last innings it shows the runs needed: "Northfield Foxes Need 120 Runs to Win".

The Follow-On Lead factory value follows the length of the match (Law 14): 200 runs in a match of 5 days or more, 150 in 3 or 4 days, 100 in 2 days, 75 in one day. Set it in Match Rules when Days changes.

6.6 Limited-Overs Matches: Results, Ties and the Super Over

- In the second innings the board shows the target and the equation: "Northfield Foxes Need 24 Runs from 18 Balls", with the required run rate (RRR).
- In the first innings the board shows the projected total from the end of the first over (current rate × remaining balls).

- The result follows the Laws: "Harbour City Mariners Won by 12 Runs", "Northfield Foxes Won by 4 Wickets (9 Balls Left)", "Match Tied".
- After a tie, with Super Over on a Tie in the rules, the result reads "Match Tied - Super Over" and the break panel shows the Super Over button. Click it, then the start button: the team that batted second in the match bats first in the Super Over. Each Super Over innings has one over (5 balls in The Hundred: the Super Five), at most 2 wickets and at most one unsuccessful review. If the Super Over is tied too, another one can follow.
- To end the match as a tie instead, use More > End Match > Match Tied.

Board Output **Control Panel**

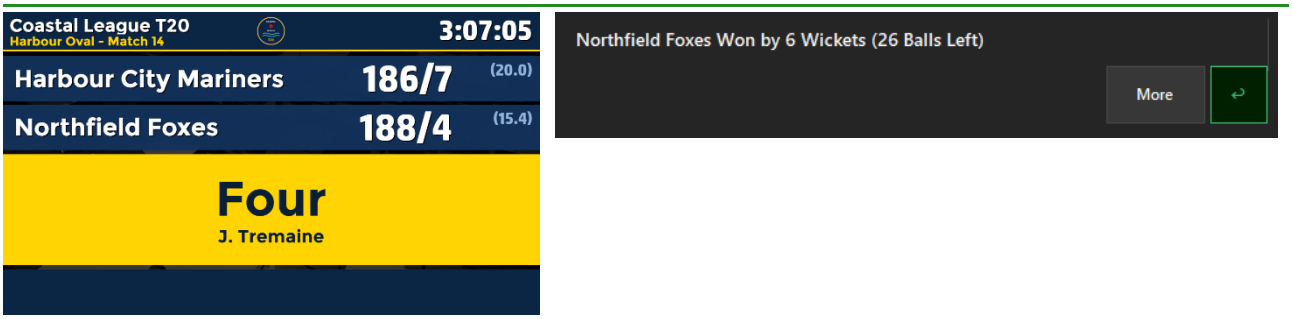


Figure 29. The end of a T20 match: the result on the board and on the break panel.

6.7 Interrupted Matches: Revised Target, Overs and Par Score

cricketBoard 7 does not calculate DLS targets. Enter the official figures by hand:

1. More > Revised Target / Overs (DLS)...
2. Revised Target (0 = No Change): the target from the officials, for example 162.
3. Revised Overs, e.g. 38 or 38.4 (0 = No Change): the overs of the innings.

During an innings the revision applies at once (a target only in the final innings). During a break it applies to the next innings. The equation, the balls left and the required rate follow the revision; a result decided on a revised target ends with "(DLS Method)".

More > DLS Par Score... shows a par score in the rates line ("Par 98") until you set -1.

> **Note:** Use More > End Match for a match that cannot be finished: Match Drawn, No Result or Match Abandoned, or Awarded to a team.

6.8 Scoring Examples

The examples show what the panel and the board record. Wide and no-ball runs are the factory values (1 run; no-ball 2 runs in The Hundred).

A T20 over:

Entry	Strip	Score	What Happens
1	1	1/0	The batters change ends.
Wd, 0	1wd	2/0	Not a legal ball: still the first ball of the over.
4	4	6/0	A four to the striker.
Nb, 6	7nb	13/0	6 to the striker, 1 no-ball. The next ball is a free hit.

Entry	Strip	Score	What Happens
Wicket: Caught	(refused)	13/0	"Only run out (or obstructing) on a free hit": nothing changes.
0	.	13/0	The free hit is used.
Lb, 2	2lb	15/0	2 leg byes: to the extras, not to the bowler.
0, 0	. .	15/0	Six legal balls: the over ends, the batters change ends, a new bowler is needed.

A chase in the last over: the target is 187 and the batting team has 181/6 with 6 balls left. The equation reads "Need 6 Runs from 6 Balls". After a 4 and a 2 the target is reached: the innings closes by itself and the result reads "<Team> Won by 4 Wickets (4 Balls Left)".

The Hundred: the panel and the board count balls ("64 Balls"); the set in progress is shown as "Set 13 · 3/5". After the first set of 5 the same bowler may continue from the same end; after 10 balls the ends change. The bowling figures show balls, wickets and runs, for example "12 1-18".

7. Display Modes and Board Output

7.1 The Four Display Modes

Mode	Use	Output	Page
St, Standard	Full-screen scoreboard on a screen, projector or LED wall at the ground	The board window	–
Sp, Sponsored	Standard scoreboard with a sponsor band	The board window, split into scoreboard and band	Sp tab
Ad, Advertisement	Scoreboard column, banners and a large area for video, camera or screen capture	The Ad board window	Ad tab
CK, Chroma Key	Scorebug and lower thirds on a key colour for a vision mixer	The CK board window	CK tab

Switch the mode with the St, Sp, Ad and CK buttons on the Game tab, or with the remote control. The choice is saved and comes back at the next start. In Sp, Ad and CK a fifth tab with the same name appears in the menu bar; it opens the page of that mode.

When you leave Ad or CK, every source running there (video, camera, NDI input, screen capture) stops. The setting Source on mode switch (section 7.7) can restart it when you come back.

7.2 Board Position and Size

The boards use the position and size of Settings > Screen Properties:

Row	Meaning	Default
L: Left	Board window x position in pixels of the Windows desktop	0
T: Top	Board window y position	0
W: Width	Board width in pixels; not more than Max Resolution	960

Row	Meaning	Default
H: Height	Board height in pixels; not more than Max Resolution	540
Max Resolution	The largest size the licence allows (read only)	From the licence
Background Video Opacity	0-10: how strongly the background video shows behind the board	6

A change is saved at once and the board moves or resizes immediately. The window may be larger than the screen it is on (up to 8192 × 8192 pixels), for example when an LED controller expects a larger picture.

All factory boards scale with the window. Text, digits and plates keep their proportions on 16:9, 4:3, 5:4 and wide LED strips:

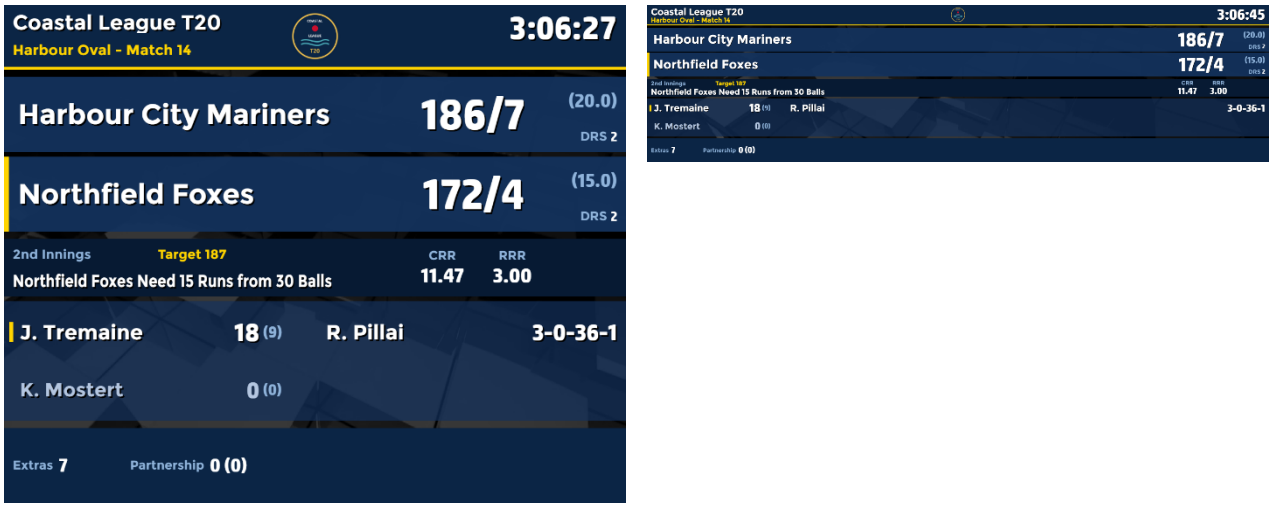


Figure 30. The Standard board at 1280 × 1024 (5:4) and on a 1920 × 480 LED strip.

What the board shows and hides by itself:

- The batting team is marked; its score and overs are highlighted. A team that has not batted yet shows no score.
- Two-innings matches show both innings of a team, for example 245 & 132/4; an all-out innings shows only its runs, a declaration keeps the wickets (450/7d).
- The batters, the bowler and the balls of the over appear only while an innings is in progress. The strip shows up to 10 balls (wides and no-balls make an over longer); in The Hundred it keeps the last 7 balls and shows the set in progress ("Set 13 · 3/5").
- The target, the equation and the required run rate appear in a chase (in The Hundred also the balls left); the projected total in a limited-overs first innings from the end of the first over; Day and Session in a multi-day match.
- The badges appear only when they apply: the powerplay label, Free Hit, Timeout, On a Hat-Trick and the DRS reviews left of both teams.
- Between innings and after the match a status line shows the innings break or the result; before the match it shows the toss.

- After a four, a six, a wicket, a milestone, a partnership 50, a free hit or a maiden a notice appears for 6 seconds (chapter 10).

7.3 Standard (St)

Board Output **Control Panel**

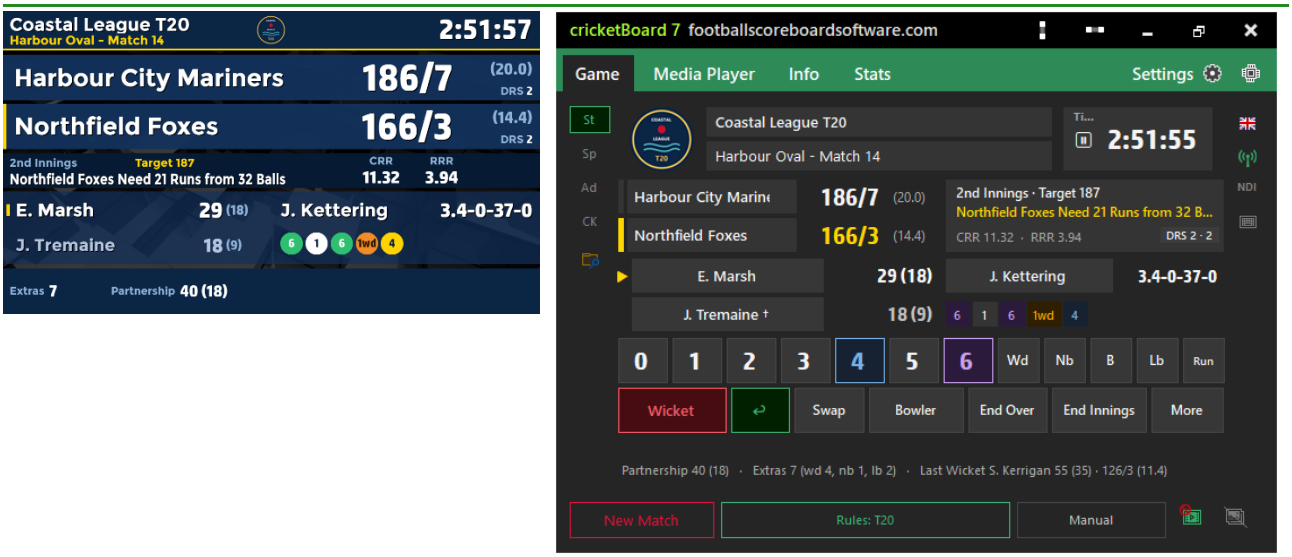


Figure 31. The Standard board and the Game tab.

The Standard board needs no page of its own: everything is on the Game tab. Its look comes from the selected design (chapter 8).

7.4 Sponsored (Sp)

The Sponsored board is the Standard board with a sponsor band at the bottom or the top. The band shows the sponsor images sliding through, or a scrolling text.

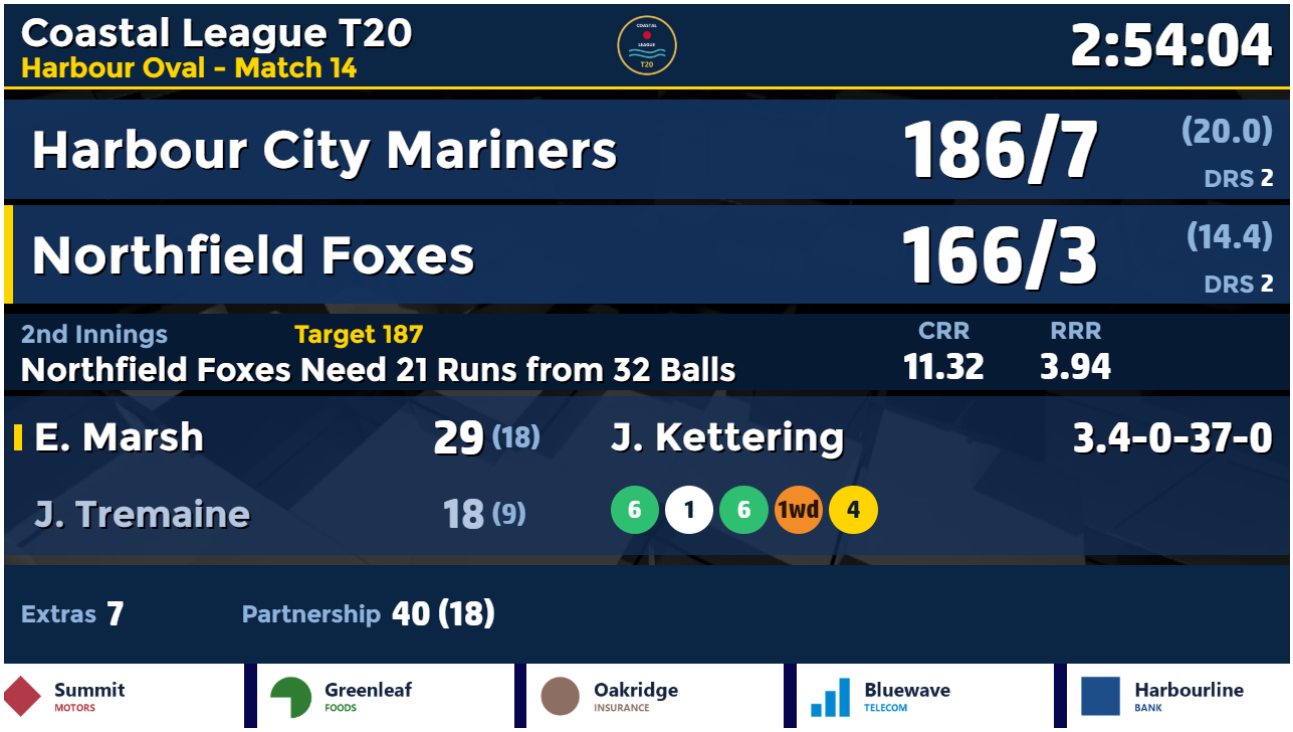


Figure 32. The Sponsored board with the sample sponsors.

The Sp page has three tabs:

- Sponsors: Apply puts the sponsor list on the band as a slide of images. The photo button opens the sponsor list (Info > Sponsors, chapter 13); the gear button opens the style values (image height, padding, speed, direction).
- Scrolling Text: four text slots (1-4). Type one item per line, then Apply: the band scrolls the lines in alternating colours. The gear button opens the text style (font, size, speed, direction); the three colour boxes set the background and the two line colours.
- Settings: Location (bottom or top) and Height of the band in pixels. Apply changes the board at once. The default is the bottom, 64 pixels.

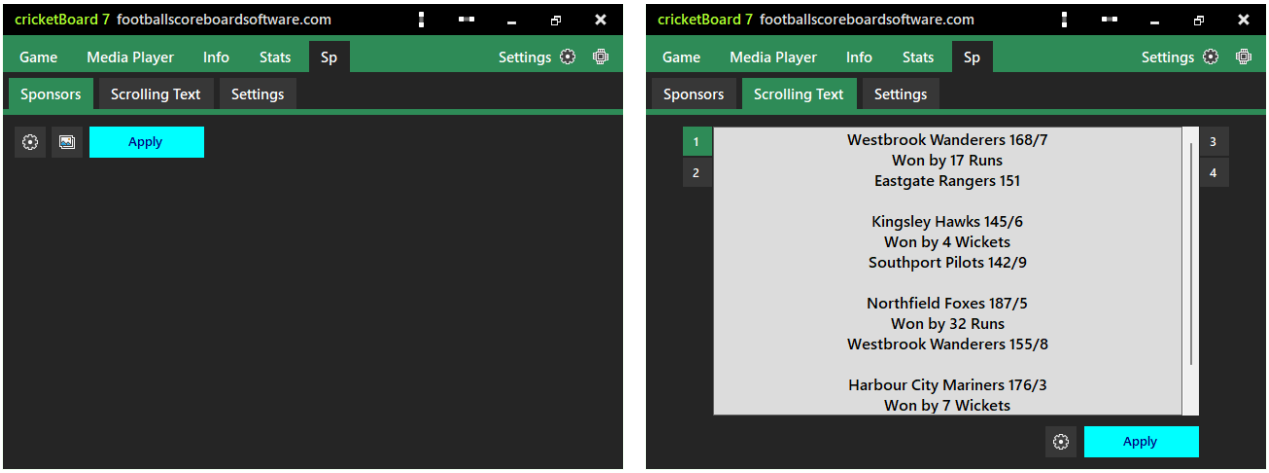


Figure 33. The Sp page: Sponsors (left) and Scrolling Text (right).

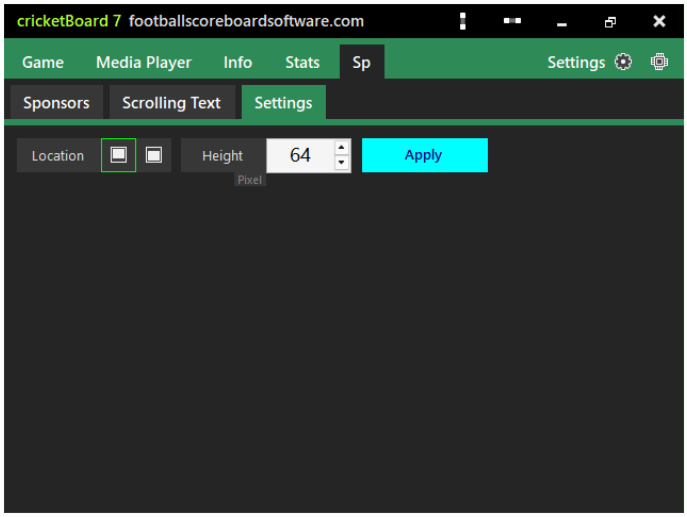


Figure 34. The Sp page: Settings.

7.5 Advertisement (Ad)

The Advertisement board has a scoreboard column, up to two banners and a large multimedia area for a video playlist, a camera, an NDI source or a screen capture. The factory layout: scoreboard column on the left (27 % of the width), banner 2 along the bottom (15 %), banner 1 off.



Figure 35. The Advertisement board with a video in the multimedia area and a scrolling text in banner 2.

The Ad page has five tabs:

Tab	What It Does
Media Player	Six playlists of videos and pictures for the multimedia area: Add Clip, Delete Clip, Delete Playlist, Start / Finish (plays the list in a loop), Play / Stop in a row (one clip), sound on/off and the display mode (Stretch, Center, Original, ...).
Camera	A camera with its format, or an NDI source: Start shows it in the preview, Show puts it on the board, Stop ends it.
Screen Capture	Shows a part of the PC screen. Set Source Bounds with numbers or with Select Rectangle (drag a frame on the screen), then Start.
Banner	Content of banner 1 and banner 2: Sponsors (sliding images), Scrolling Text or Multimedia (a playlist).
Settings	The layout: position (Top, Bottom, Left, Right) and size in percent of the scoreboard column, banner 1, banner 2, and the display mode of the multimedia area. Apply changes the board at once.

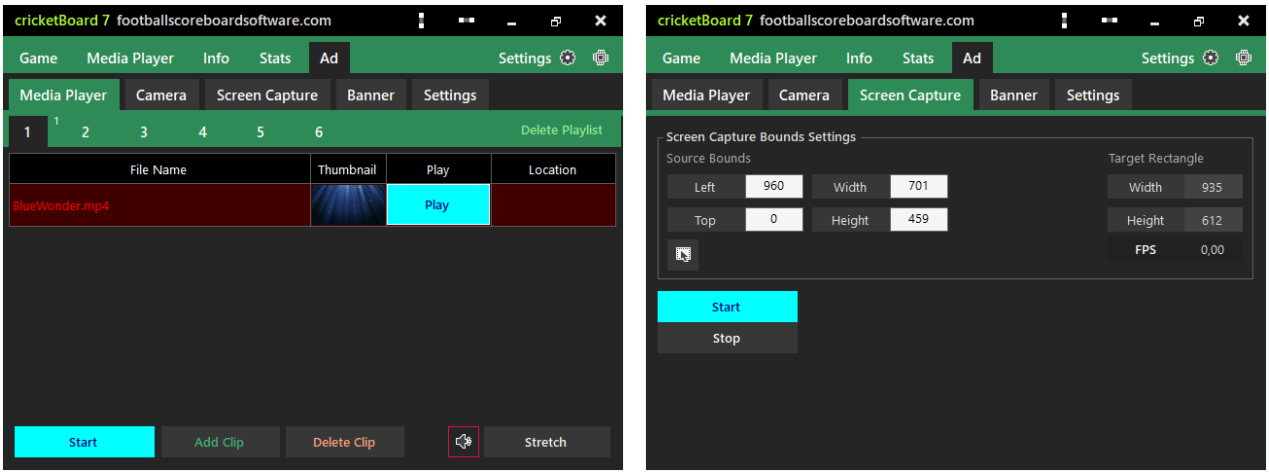


Figure 36. The Ad page: Media Player (left) and Screen Capture (right).

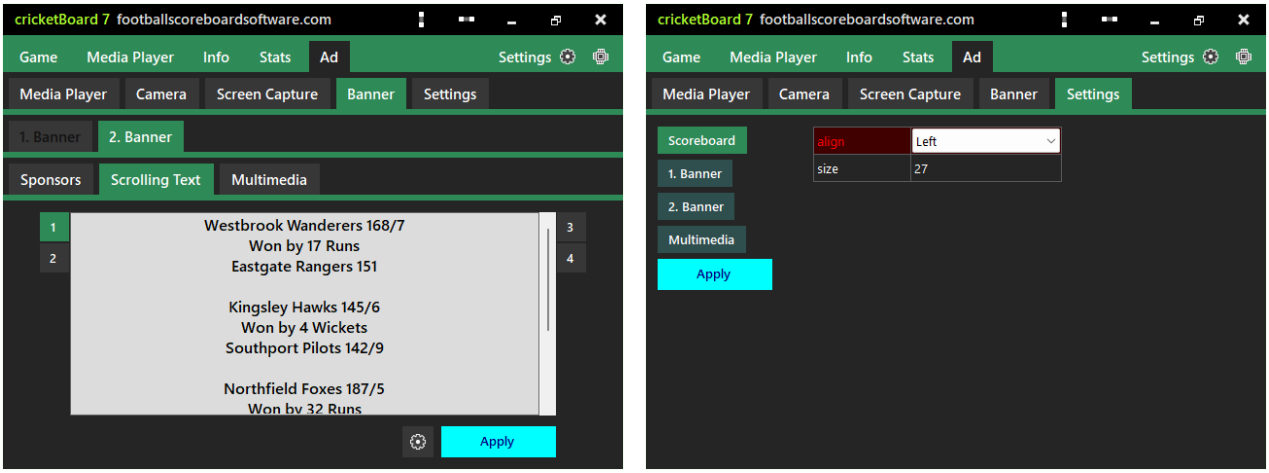


Figure 37. The Ad page: Banner and Settings.

While a source runs on the Ad page, the Ad tab in the menu bar blinks.

7.6 Chroma Key (CK)

The CK board shows a compact scorebug and lower-third graphics on a key colour. A vision mixer (or vMix, OBS ...) removes the key colour and lays the graphics over the camera picture.

Board Output (Enlarged) **CK Page**

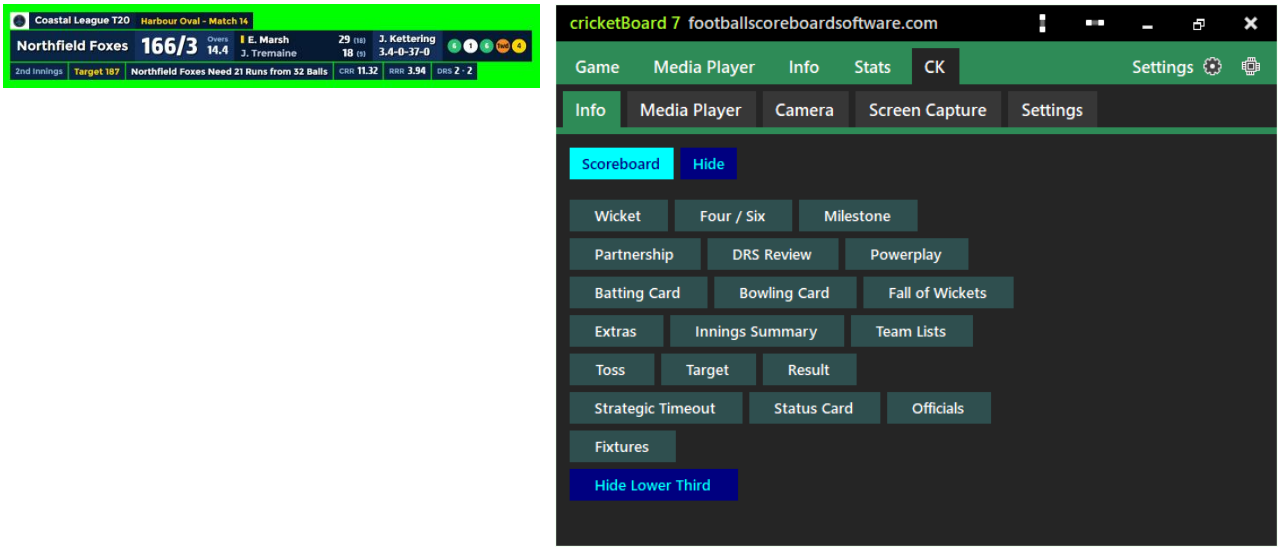


Figure 38. The CK board with the scorebug on green, and the Info tab of the CK page.

The CK page has five tabs:

- Info: Scoreboard shows the scorebug (fades in), Hide takes it off. The nineteen info-screen buttons open the editors of the info screens; their Show puts the lower third on the CK board (chapter 9). Hide Lower Third takes the lower third off.
- Media Player, Camera, Screen Capture: as on the Ad page; the picture fills the CK board behind the graphics instead of the key colour.
- Settings: Chroma Key Color: transparent, green (default), blue or magenta. The chosen colour has a red frame and is used at once.

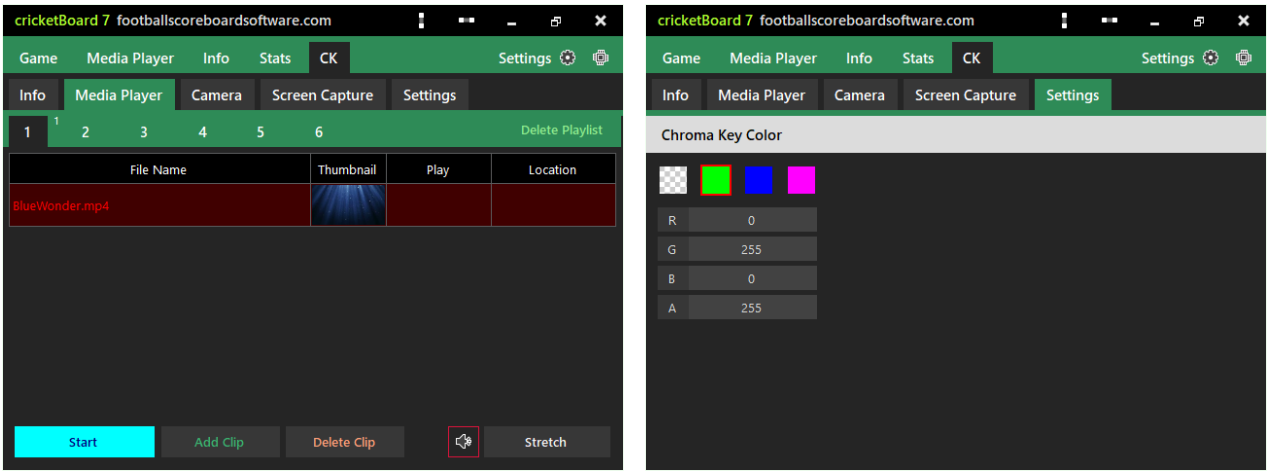


Figure 39. The CK page: Media Player (left) and Settings with the key colours (right).

> **Note:** For NDI output, use the green, blue or magenta key colour: the NDI stream carries no transparency.

7.7 Source on Mode Switch

Settings > Screen Properties > Source on mode switch:

- Manual (default): a source stopped by a display-mode change stays stopped. Start it again by hand.

- Restore: when you come back to Ad or CK, the source that ran when you left it (video, playlist, camera, NDI input or screen capture) starts again after a short pause. If it cannot start, a short notice tells you to start it by hand. Restore remembers the source only while the program runs.

7.8 NDI Output

The NDI button on the Game tab sends the board of the current display mode as an NDI video stream (60 frames per second) into the network. Receivers such as vMix or OBS list it under the sender name CB7_NDI. The button is green while it sends, amber when the stream stopped (click to restart) and grey when NDI is not available on this PC (rest the mouse on it for the reason). Chapter 13 describes NDI as an input.

7.9 Typical Set-Ups

LED wall or screen in the venue:

1. Connect the LED controller (or screen) as a second display of the PC and extend the Windows desktop to it.
2. In Settings > Screen Properties set L and T to the position of that display in the Windows layout, W and H to its resolution (for example 1920 × 1080, or the size the LED controller expects).
3. Use the Standard mode, the Sponsored mode for a sponsor band, or the Advertisement mode for video and live pictures during breaks.

TV production with a vision mixer:

1. Choose the CK display mode and a key colour (green by default) on the CK page > Settings.
2. Send the CK board to the mixer: as a video output of the PC (second display into a converter), or over the network with the NDI button.
3. Key the colour out in the mixer; the scorebug and the lower thirds lie over the camera picture.
4. Show the info screens as lower thirds from the Info tab or the CK page.

Streaming with a software mixer (OBS, vMix):

1. Click NDI on the Game tab. The board appears in the software as the NDI source CB7_NDI.
2. For an overlay use the CK mode and a chroma-key filter on the source in the software; for a full-screen graphic use the Standard mode.

In every set-up the operator can work on the main window on the PC, from a phone or tablet (chapter 14), or with the keyboard shortcuts (chapter 16).

8. Designs

8.1 The Three Masters

Every board type comes in three factory designs, the masters. They have the same layout and differ in colour:

- Master 1 - Navy (default): navy rows with a yellow accent.
- Master 2 - Charcoal: dark grey rows and an electric cyan accent.
- Master 3 - Clay: terracotta rows, chalk-white accent and a gold highlight.

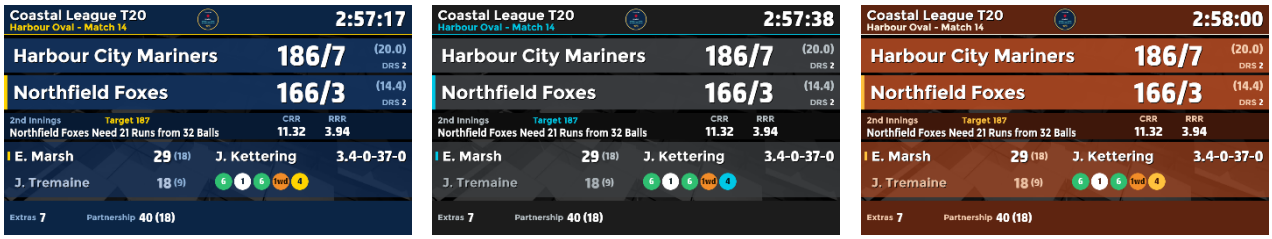


Figure 40. The Standard board in the masters Navy, Charcoal and Clay.



Figure 41. The Advertisement board in the three masters.



Figure 42. The Chroma Key scorebug in the three masters.

The Sponsored board uses the Standard design. Applying a Standard master also restyles its info screens, Banner and Announce. The Chroma Key masters bring their own set of lower thirds.

8.2 Choosing a Design

1. On the Game tab, choose the display mode (St, Sp, Ad or CK).
2. Click Select Design (the folder icon under the mode buttons). The design gallery opens next to it.
3. Click a design in the list. The preview on the right shows it with the live score.
4. Click Apply.

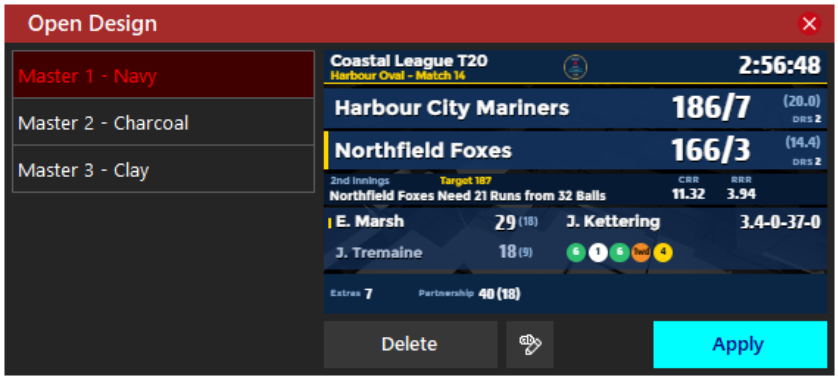


Figure 43. The design gallery with a live preview.

Button	What It Does
Apply	Uses the selected design for this display mode and closes the gallery.
Delete	Deletes one of your own designs after the question "Delete the Design ...?". Masters cannot be deleted.
Rename (pencil icon)	Renames one of your own designs: type the new name in the list and press Enter. Masters cannot be renamed.

Esc, the X or a click outside closes the gallery.

> **Note:** Applying a Standard master replaces the layouts of all info screens, Banner and Announce in use, without a question. If you changed an info screen in the design editor, save it as your own design first or note your changes.

8.3 Saving Your Own Design

The design editor (section 8.4) changes the design in use. To keep it as a design of its own:

1. In the design editor, click Save Design As (the disk icon in the title bar).
2. Type a name and confirm. The program reports "The data has been successfully saved."

Your design appears in the gallery of that display mode, next to the masters. Save Design As saves the scoreboard (Game) layout; for the Advertisement board it also keeps the layout of the scoreboard column and the banners. For the Chroma Key mode, saving is not yet supported: the program shows "Sorry, Design Saving Is Not Supported For CK Mode Yet!".

8.4 The Design Editor

Open Settings and click the design button of the current display mode: [St]andard Board Design, [Sp]onsored Board Design, [Ad]vertisement Board Design or [CK] Board Design. Only the button of the active mode is enabled.

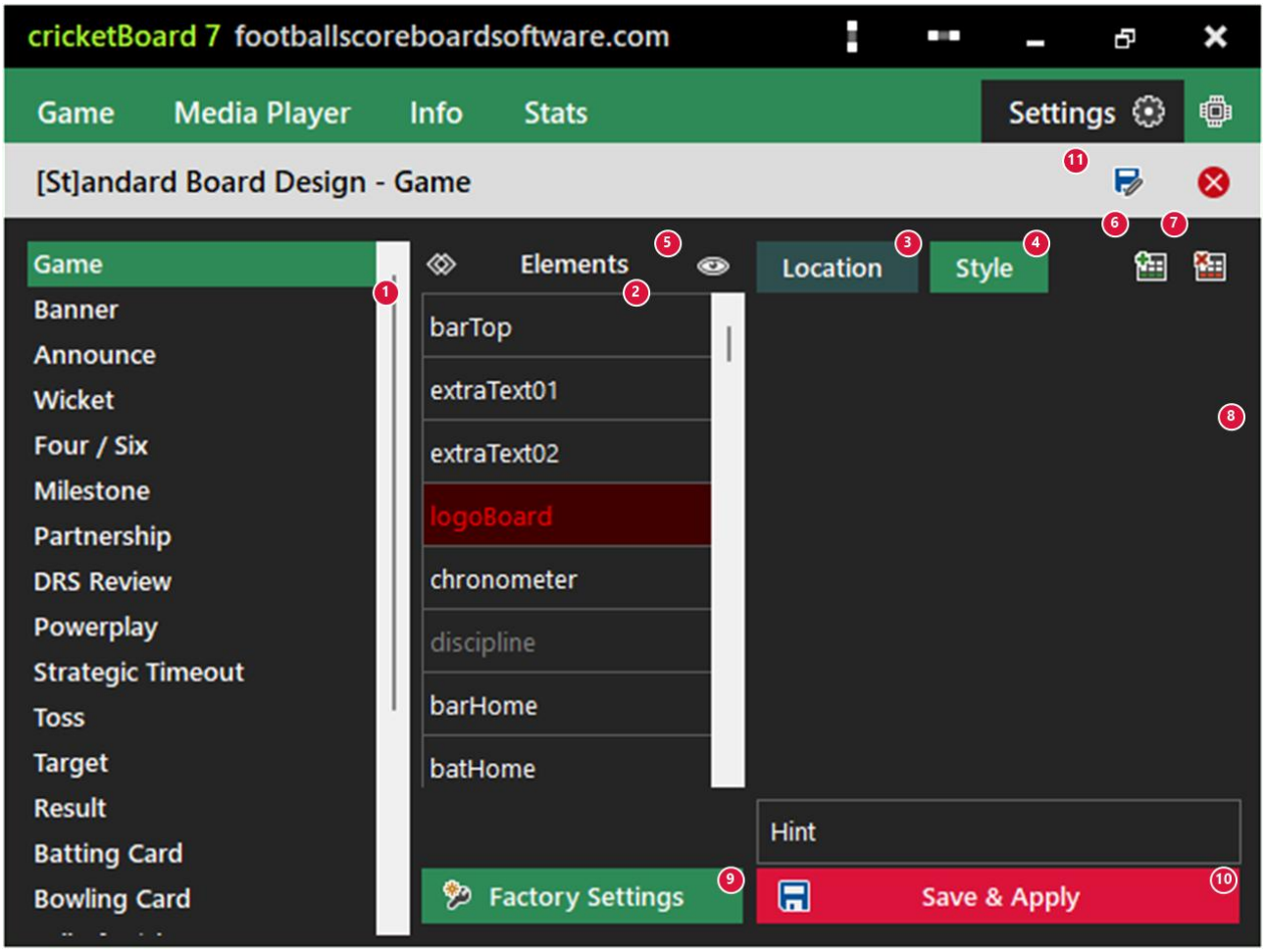


Figure 44. The design editor: an element of the Standard board selected, its Location values on the right.

No.	Control	What It Does
1	**Screens**	Game (the scoreboard), Banner, Announce and the 19 info screens. On CK: Game (the scorebug) and the 19 lower thirds.
2	**Elements**	Every object of the selected screen. Hidden objects are grey. Click one to edit it.
3	**Location**	Shows the position and size values of the element (left, top, width, height ...).
4	**Style**	Shows the look values (colour, font, size, shadow ...).
5	**Show or Hide**	Switches the element between shown and hidden.
6	**Insert Row**	Adds an empty value row; type the property and the value.
7	**Delete Row**	Removes the selected value row.
8	**Values**	Property and value. Click a property for a list of names; colour values open a colour picker, font-family a font picker.
9	**Factory Settings**	Brings back the factory version of the selected screen after a question.
10	**Save & Apply**	Saves the changes of the selected element and redraws the board.
11	**Save Design As**	Saves the scoreboard as your own design (section 8.3).

How to change an element:

1. Click the screen, then the element. The board shows the element with a red dotted frame.
2. Click Location or Style and change the values.
3. Click Save & Apply. Save each element before you choose the next one.

> **Note:** The editor works on the live output: info screens are put on the board while you edit them, and the selected element gets a red frame until you go back to the Game tab. Do not edit designs while you are on air.

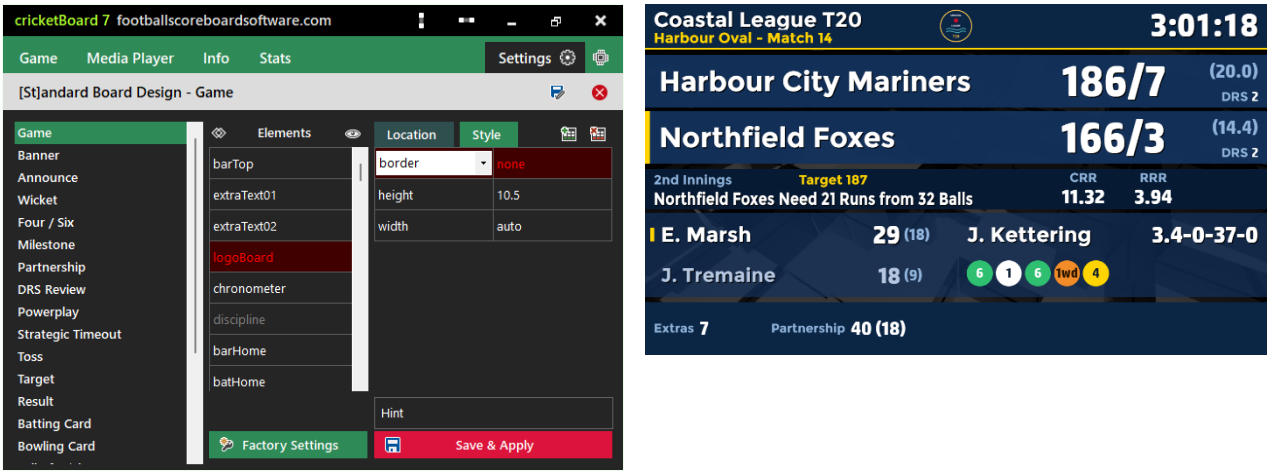


Figure 45. The Style values of the element (left) and the board with the edited element framed in red (right).

8.5 Objects, Backgrounds and Units

- Every object of a board (team name, score, overs, batters, bowler, ball strip, badges, clock, logo ...) is an element with its own Location and Style. You can move, resize, recolour or hide each one.
- The background of the Standard, Sponsored and Advertisement boards has two layers: a background video (Background Video Opacity in Screen Properties sets its strength) and a middle image. Choose them with the two layer buttons at the bottom right of the Game tab. The board logo is chosen with the Logo slot.
- The Chroma Key board has no background: it is transparent over the key colour.

Units of the values:

Unit	Meaning
u	The board unit: 1u = 1 % of the board height on a 16:9 or wider board; on narrower boards (4:3, 5:4) it follows the width. Use u for objects that must keep their shape on every board size, for example "23u".
px, %, em, vh, vw	Usual web units, kept as typed.
Number without a unit	For left, right, width and the horizontal margins: % of the board width (vw). For top, bottom, height, font size, line height and the vertical margins: % of the board height (vh).

Fonts: the factory designs use Montserrat for words and HP Simplified for digits. Both are installed with the program, together with Agency, DS-Digital, Groteskia, Jersey M54, TRT and Axis. The font picker lists every font installed in Windows.

8.6 Factory Settings

To undo your changes of one screen, select it in the design editor and click Factory Settings. The program asks "Factory Settings Will Be Restored. Are You Sure?" and restores that screen. Use it for info screens, Banner and Announce in the Standard display mode. To restore the scoreboard itself, or in the Sponsored and Advertisement modes, apply the master again in the design gallery (section 8.2).

8.7 Designs After an Update

When a new version brings new factory designs, the program checks the designs in use at the first start:

- A design you never changed is replaced by the new factory design.
- A design you changed is kept. The log file names it ("customised design - kept"); the new factory design is in the gallery.
- The Standard board, the Advertisement board and the Chroma Key set are each replaced as a whole or not at all; the info screens are checked one by one.

Your own saved designs are never changed.

9. Info Screens and CK Lower Thirds

9.1 The Info Tab

The Info tab holds everything that is shown instead of, or on top of, the scoreboard.

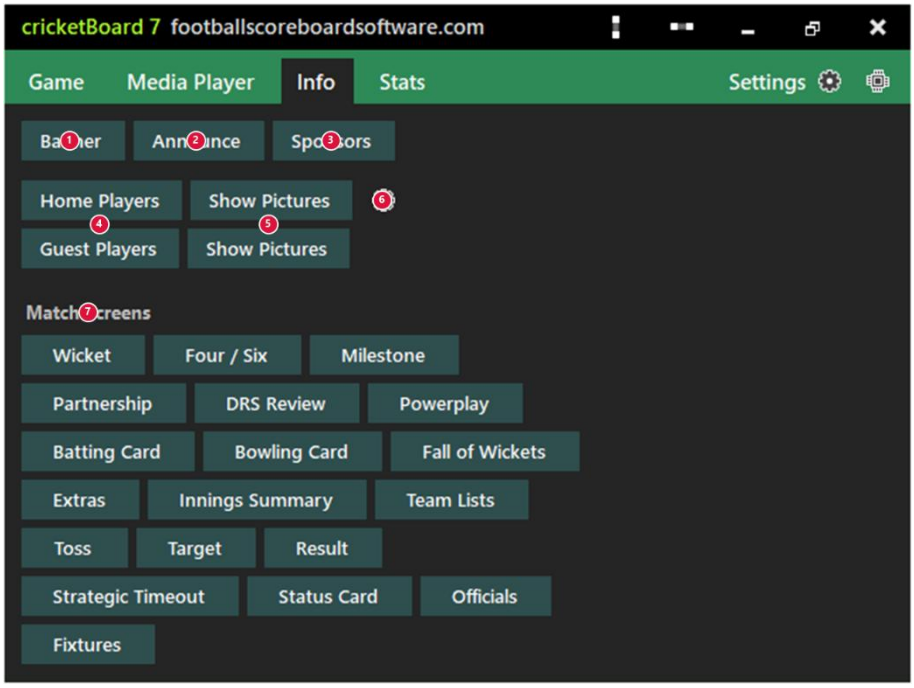


Figure 46. The Info tab with the Match Screens buttons.

No.	Control	What It Does
1	**Banner**	A full-screen text banner (chapter 13).
2	**Announce**	A full-screen announcement (chapter 13).
3	**Sponsors**	The sponsor list (chapter 13).
4	**Home Players, Guest Players**	The squads of the two teams (chapter 12).
5	**Show Pictures**	A slideshow of the player pictures of that team (chapter 13).
6	**Background (gear)**	The background of the info screens on the St, Sp and Ad boards: the scoreboard's background video (default), black, or a selected video or picture.
7	**Match Screens**	Nineteen buttons, one per info screen. Each opens its editor.

The Match Screens buttons are in rows of related screens:

Row	Screens
Moments	Wicket, Four / Six, Milestone
	Partnership, DRS Review, Powerplay
Scorecards	Batting Card, Bowling Card, Fall of Wickets

Row	Screens
	Extras, Innings Summary, Team Lists
Match	Toss, Target, Result
Status and people	Strategic Timeout, Status Card, Officials
	Fixtures

9.2 Showing and Hiding a Screen

1. Click the screen's button on the Info tab (or on the Info tab of the CK page).
2. Fill in the fields of the editor, if the screen has any. Every change is saved at once with the match; there is no Save button.
3. Click Show. In St, Sp and Ad the screen fills the board. In CK it appears as a lower third above the scorebug.

In Manual mode (section 5.16) the buttons of the screens that need the ball-by-ball data are greyed out, and their editors show "Needs the Ball-by-Ball Data (Manual Mode Is On)" instead of Show. Target, Result, Team Lists, Status Card, Fixtures and Officials work; Target and Result take the typed values (the Result screen shows the status line as the result).

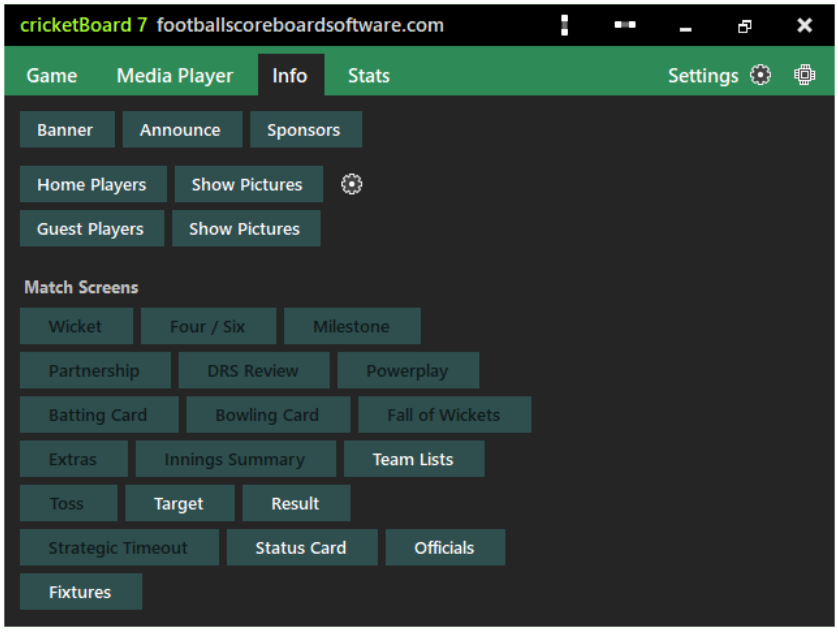


Figure 47. The Info tab in Manual mode: the screens that need the ball-by-ball data are greyed out.

4. Click Hide to go back to the scoreboard (CK: the lower third fades out).

- Most screens have no fields: they show the match as it stands, taken from the scoring.
- Show uses on-air colours (light), Hide off-air colours (dark).
- The screen is built when you click Show. It is not refreshed while on air: click Show again after the next ball. Only the countdowns of the Status Card and the Strategic Timeout run by themselves.
- A screen without data shows only its title: for example the Wicket screen before the first wicket, or the Target screen in a first innings.
- Esc or the X closes the editor; the screen stays on air.
- The match title and the venue of the Game tab are the subtitle of every screen on the St board.
- From the remote control or the HTTP API: info_show with the screen name, info_hide (chapter 15).

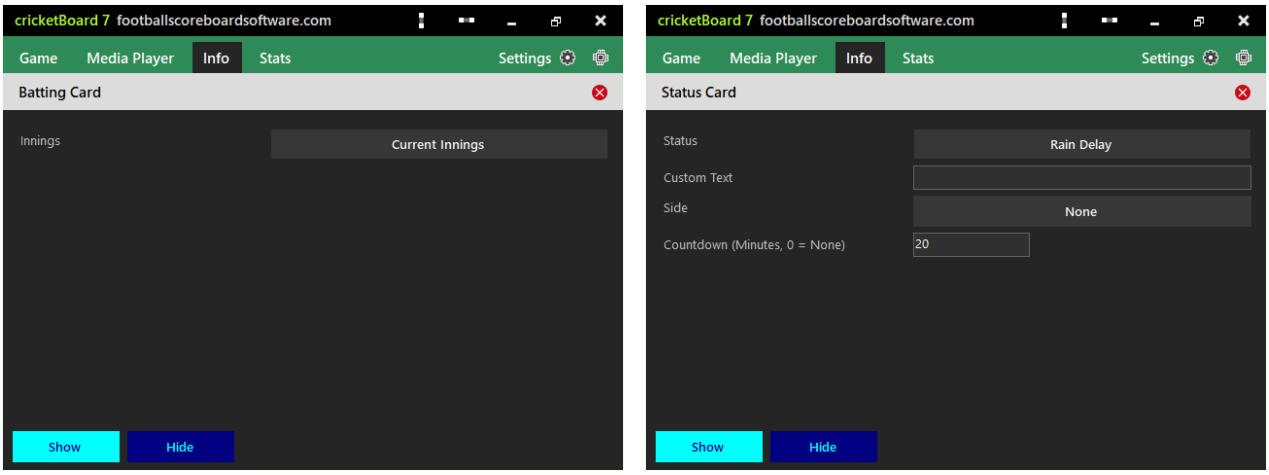


Figure 48. Two editors: Batting Card (left) and Status Card (right).

9.3 Callouts: Moments of the Match

The callout screens show one moment of the match: a coloured plate with the team, the kind of moment, the player and his figures. They have no fields unless noted.

Screen	What It Shows
Wicket	The latest wicket of the match: the batter, the dismissal ("c †Ross b Jones"), his runs and balls, 4s, 6s and strike rate, and the fall of wicket ("87/3 (12.4)").
Four / Six	The latest four or six off the bat: the batter, his runs and balls, 4s, 6s and strike rate, and the innings score.
Milestone	The latest batting or bowling milestone: Fifty, Hundred, 150 Runs (and every further 50), Five Wickets or Hat-Trick, with the player's figures and the innings score.
Partnership	The current partnership: both batters, the runs and balls of the partnership, each batter's share and the innings score.
DRS Review	A review: Side (Home, Guest) and Decision (Review in Progress, Overturned, Umpire's Call, Unsuccessful), with the reviews left of both teams (chapter 10).
Powerplay	The powerplay in play (its label from the rules), the batting team's score and overs and the current run rate.
Strategic Timeout	The fielding team's timeout with its countdown (the timeout length of the rules, from Show) and the score.
Toss	The toss result: "Northfield Foxes Won the Toss and Elected to Bowl".
Target	The target, the equation, the required run rate, the balls left and the score of the batting team.
Result	The result (or the state of the match before the end) and both teams' scores. Field: Player of the Match (text).

St Board **CK Lower Third**

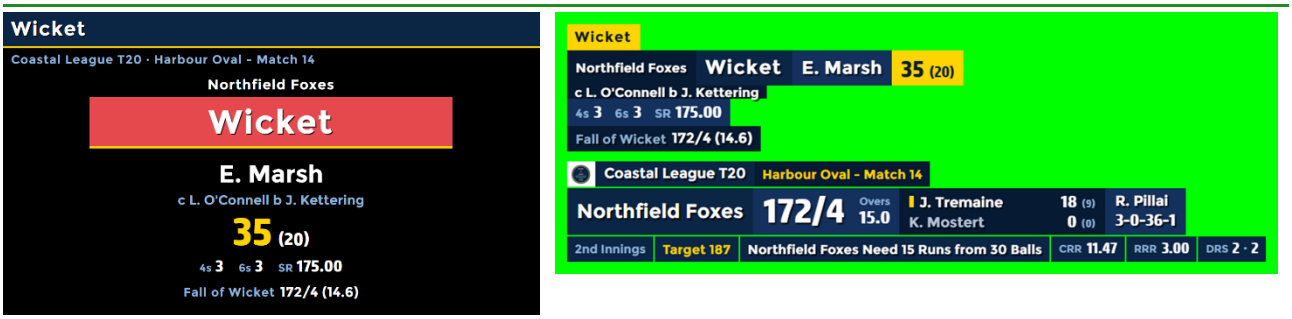


Figure 49. The Wicket callout on the St board (left) and as a CK lower third (right).



Figure 50. Four / Six and Milestone on the St board.

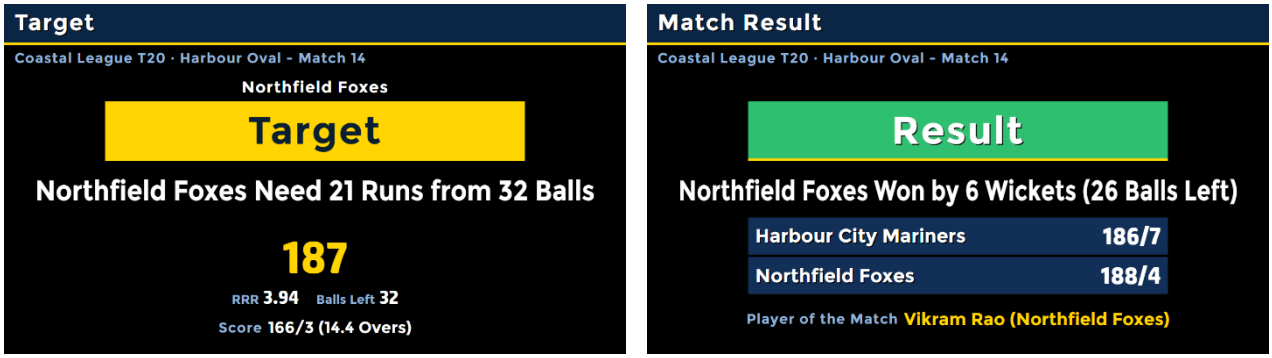


Figure 51. Target and Result on the St board.

9.4 Scorecards and Lists

The table screens show a scorecard of one innings. Their field Innings chooses it: Current Innings (the innings in progress or the last one), or the 1st, 2nd, 3rd or 4th innings of the match. The heading names the team and the innings, with the innings score, for example "Harbour City Mariners · 1st Innings 176/7 (20 Overs)".

Screen	What It Shows
Batting Card	Every batter in batting order: dismissal, R, B, 4s, 6s, SR. The batters at the crease are highlighted, the striker marked *. Then Extras (with the breakdown) and Total. Footer: Yet to Bat and the Fall of Wickets.
Bowling Card	Every bowler: O (B in The Hundred), M, R, W, Econ, Wd, Nb. The current bowler is marked *.

Screen	What It Shows
Fall of Wickets	Wicket, score, batter out and over of every wicket. Footer: the current partnership.
Extras	Wides, No-Balls, Byes, Leg Byes, Penalty Runs and Total.
Innings Summary	The four best batters and the four best bowlers of the innings, the extras and, for the innings in progress, the equation.
Team Lists	The playing XIs (the first 11 players of each squad) with captain (c) and wicketkeeper †. Field Side: Both Teams, Home or Guest.

St Board **CK Lower Third**

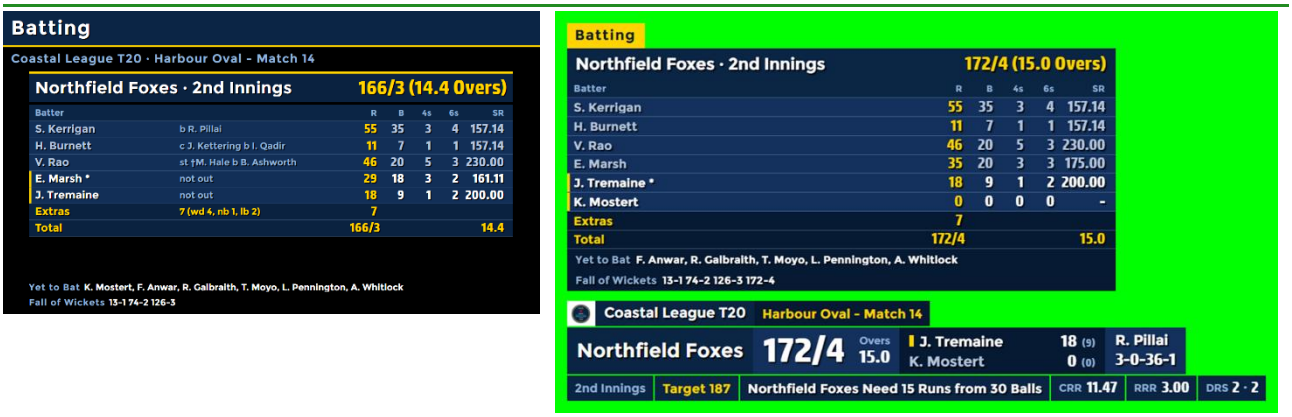


Figure 52. The Batting Card on the St board and as a CK lower third.

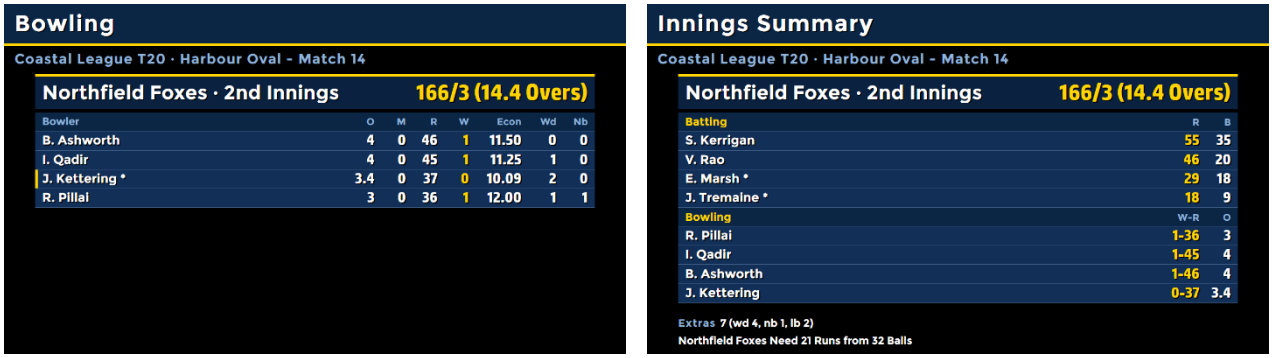


Figure 53. Bowling Card and Innings Summary on the St board.



Figure 54. Fall of Wickets and Team Lists on the St board.

9.5 Status Card

A notice for an interruption, with an optional countdown.

- Status: Rain Delay, Bad Light, Wet Outfield, Drinks Break, Lunch, Tea, Stumps, Injury Break, Custom.
- Custom Text: the text for Custom.
- Side: None, Home or Guest. With a side the card shows the team name.
- Countdown (Minutes, 0 = None): the card counts down from this time.

The countdown starts when you click Show; each Show starts it again from the full time. At 0:00 the card stays on screen until you click Hide.



Figure 55. A rain delay with a countdown.

9.6 Fixtures

The matches of the day or the round: a list with Time, Ground, Round, Team 1 and Team 2.

- Heading (Ground, Day): replaces the subtitle on the St board, for example "Coastal League T20 · Saturday".
- Matches: the list. The empty last row adds an entry; select a row and press Delete to remove it.



Figure 56. Fixtures on the St board.

9.7 Officials

The officials of the match: a list with Role, Name and Country (a country code shows a flag). The new installation fills in two on-field umpires, a third umpire, a match referee and the scorers.

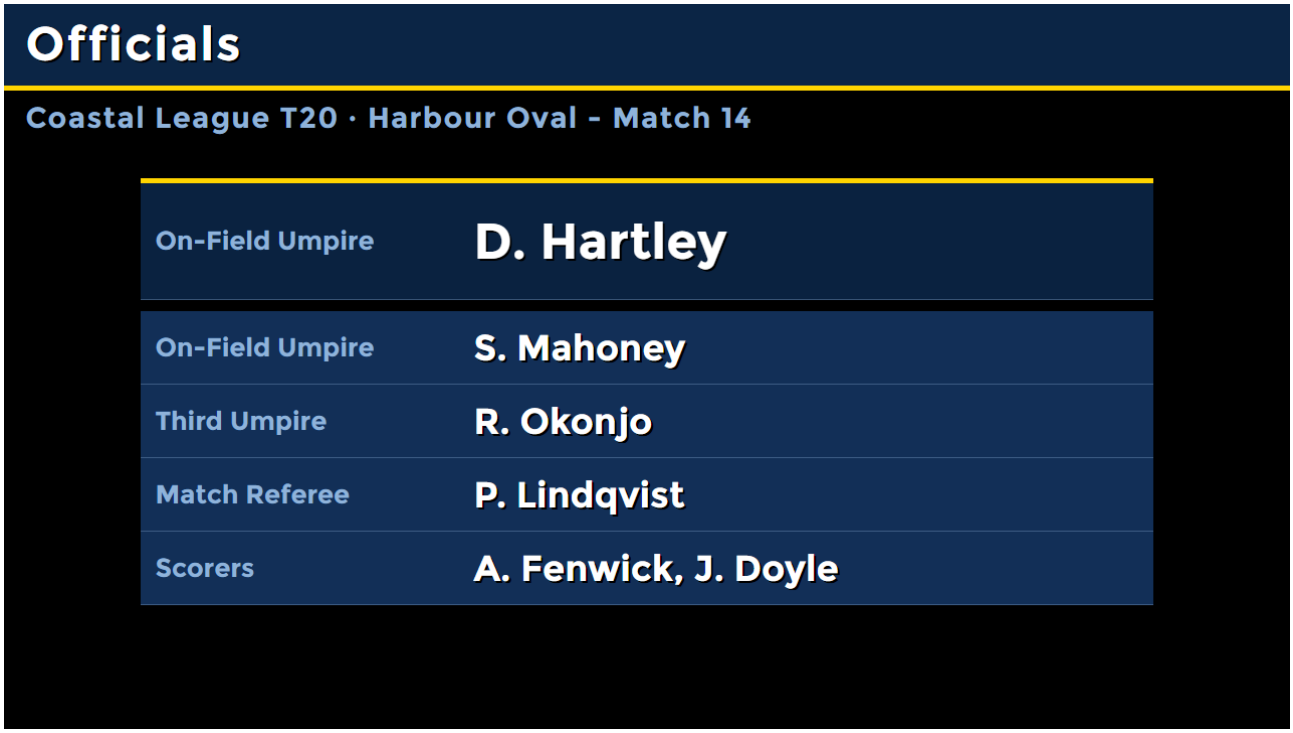


Figure 57. Officials on the St board.

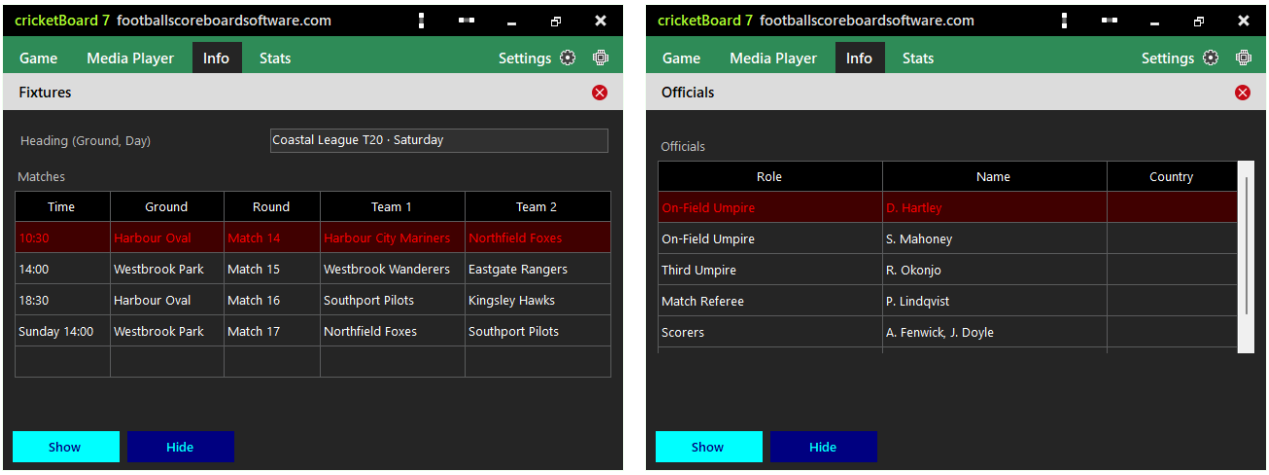


Figure 58. The editors of Fixtures (left) and Officials (right).

9.8 CK Lower Thirds

In the Chroma Key display mode every info screen appears as a lower third above the scorebug. The editors and the data are the same.

- The CK page (fifth tab CK > Info) has the same nineteen buttons, Scoreboard and Hide for the scorebug, and Hide Lower Third.
- Show in an editor puts the lower third on; Hide or Hide Lower Third fades it out.
- The lower thirds have no subtitle line.

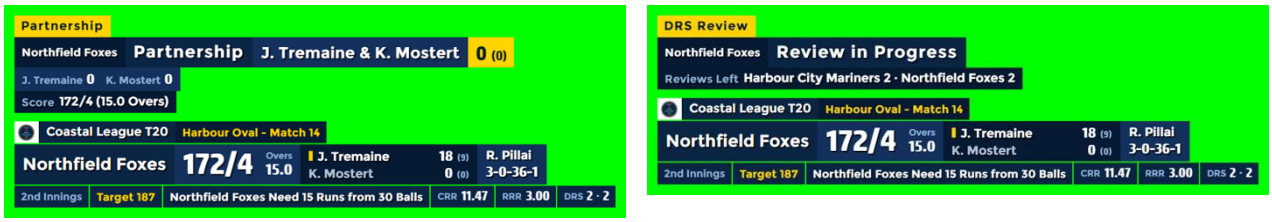


Figure 59. CK lower thirds: Partnership and DRS Review.

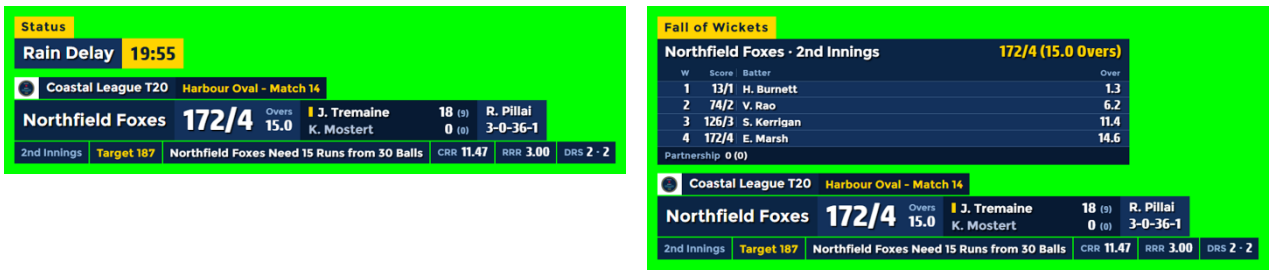


Figure 60. CK lower thirds: Status Card and Fall of Wickets.

10. Notices, DRS Reviews, Timeouts and Status Cards

10.1 Board Notices

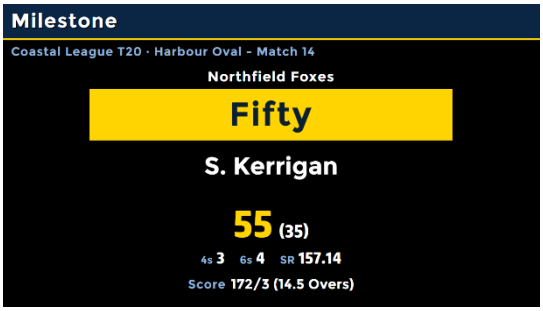
After an action that the crowd should notice, the boards show a short notice for 6 seconds: on the St, Sp and Ad boards and on the CK scorebug. It needs no operator action.

Notice	When
Hat-Trick	The bowler takes a wicket with three deliveries in a row (wickets credited to him).
Five Wickets	The bowler takes his fifth wicket of the innings.
Hundred, 150, 200 ...	A batter reaches 100 runs, then every further 50.
Fifty	A batter reaches 50 runs.
Wicket	A batter is out (also retired out and timed out).
Six, Four	A boundary off the bat. An all-run four (Run toggle) is not a four.
50 Partnership, 100 Partnership ...	The partnership reaches 50 runs, then every further 50.
Free Hit	A no-ball: the next delivery is a free hit.
Maiden	The bowler completes a maiden over.

When one ball brings more than one notice, the board shows the most important one, in the order of the table: for example a six that brings up a hundred shows Hundred. The notice carries the player's name where there is one.

The notices are only on the scoreboard. For a full-screen graphic or a lower third of the moment, show the Wicket, Four / Six, Milestone or Partnership screen from the Info tab (chapter 9.3).

Board Output



Control Panel

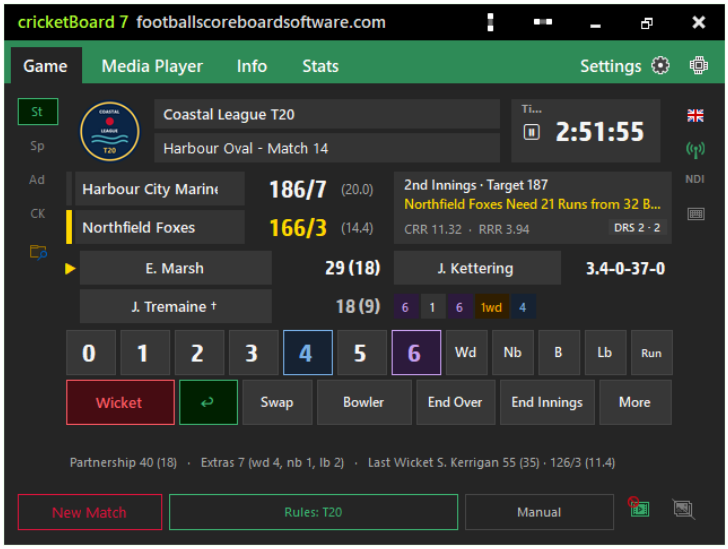


Figure 61. The Milestone screen of a fifty, shown from the Info tab after the board notice.

10.2 The Status Badges

The badges of the board and of the situation box of the panel show the state of the innings:

Badge	Shown While
Powerplay label (P1, P2, Powerplay ...)	An over of a powerplay phase of the rules, or of the floating powerplay, is in progress. The label is the text of the rules.
Free Hit	The next delivery is a free hit.
Timeout	The fielding team's timeout runs, until the next delivery.
On a Hat-Trick	The bowler took wickets with his last two deliveries.
DRS (for example DRS 2 · 1)	The reviews left of the home and the guest team, when the rules allow reviews.

10.3 DRS Reviews

The rules set the number of unsuccessful reviews each team may make per innings (DRS Reviews per Innings; Test 3, ODI 2, T20 2, The Hundred 1, T10 1). Each team gets this number at the start of every innings; a Super Over innings has at most one.

Record a review when its decision is known: More > DRS Review > the team (the reviews left in brackets) > the decision:

Decision	Reviews Left
Overturned (Kept)	Unchanged: the on-field decision was reversed.
Umpire's Call (Kept)	Unchanged: the review is retained.
Unsuccessful (Lost)	One less. At 0 the team cannot review again in this innings ("No Review Left").

- Each review is one Undo step.
- The review itself does not change the score: when an out decision is overturned, the wicket was never entered; when a not-out decision is overturned, enter the wicket with Wicket.
- A change of DRS Reviews per Innings during an innings gives both teams the new number minus the reviews they have already lost.

The DRS Review screen (Info tab) shows a review on the board, independent of the count:

1. Choose Side (the team that reviews) and Decision: Review in Progress while the third umpire looks at it.
2. Click Show. The plate shows the team and "Review in Progress".
3. When the decision comes, choose Overturned, Umpire's Call or Unsuccessful and click Show again. The plate changes colour (kept or lost) and shows the reviews left of both teams.
4. Record the decision in More > DRS Review so that the count is right.

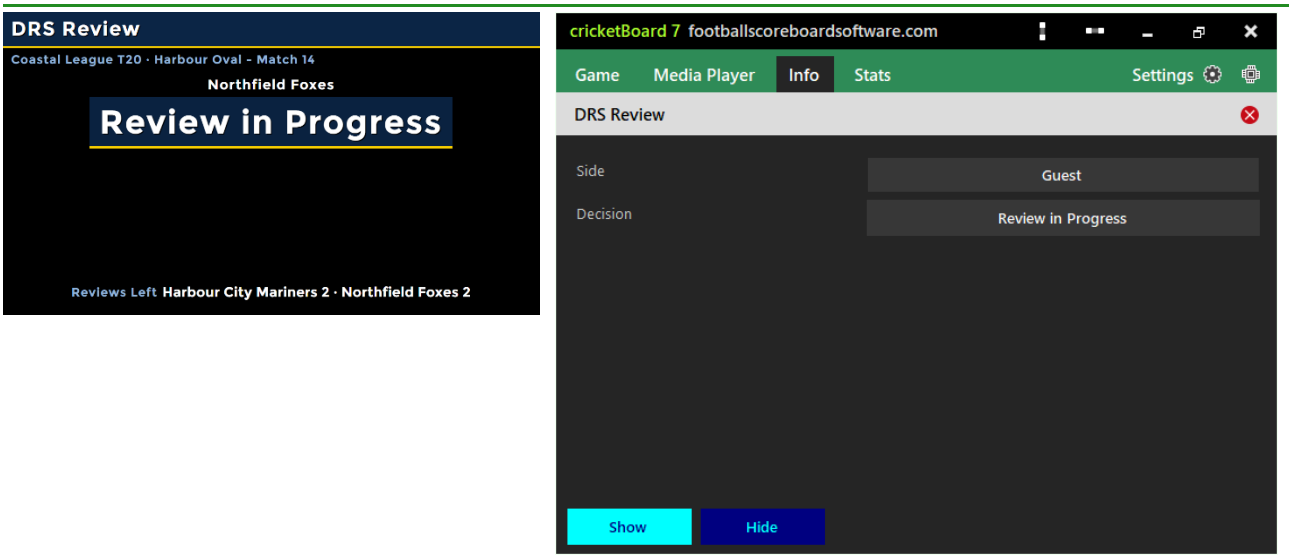


Figure 62. A review in progress on the board (left) and the DRS Review editor (right).

From the remote page the review count is on the Score tab (More card) and the review screen on the Info tab (chapter 14).

10.4 Fielding Timeouts and the Floating Powerplay

The Hundred gives the fielding team one strategic timeout of 90 seconds per innings, not before ball 25 (rules Fielding Timeouts per Innings, Timeout Length, Timeout Not Before Ball).

1. More > Fielding Timeout: <fielding team>. The item is grey before ball 25 and after the timeout was used.
2. The clock of the panel switches to a countdown of the timeout length and starts. The Timeout badge appears on the boards.
3. To show it full screen or as a lower third, show the Strategic Timeout screen from the Info tab: it counts down the timeout length from Show.
4. The timeout ends with the next delivery.

A floating powerplay (some T10 leagues) is taken by the batting team once per innings: More > Floating Powerplay at the start of an over inside the overs of the rules. The powerplay badge then shows for the overs of the floating powerplay. Without a floating powerplay in the rules the item is not in the menu.

10.5 Status Cards

The Status Card covers interruptions: Rain Delay, Bad Light, Wet Outfield, Drinks Break, Lunch, Tea, Stumps, Injury Break or a Custom text, optionally with a team and a countdown in minutes.

- The countdown starts when you click Show and starts again from the full time at every Show.
- At 0:00 the card stays on screen. Click Hide when play resumes.
- With Countdown 0 the card shows no time.
- For a countdown on the scoreboard itself, use the Countdown mode of the panel clock (chapter 5.11).

Board Output **Info Editor**

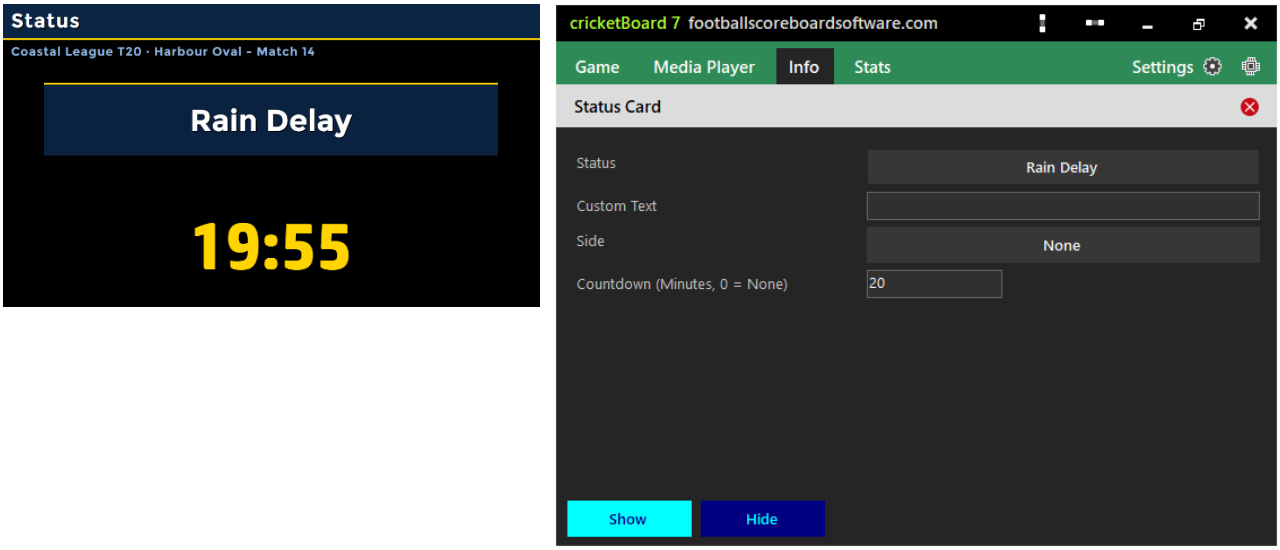


Figure 63. A rain delay with 20 minutes on the countdown, and its editor.

11. The Scorecard

11.1 The Stats Tab

cricketBoard 7 builds the full scorecard from the deliveries you enter. Open the Stats tab to see it while you score.

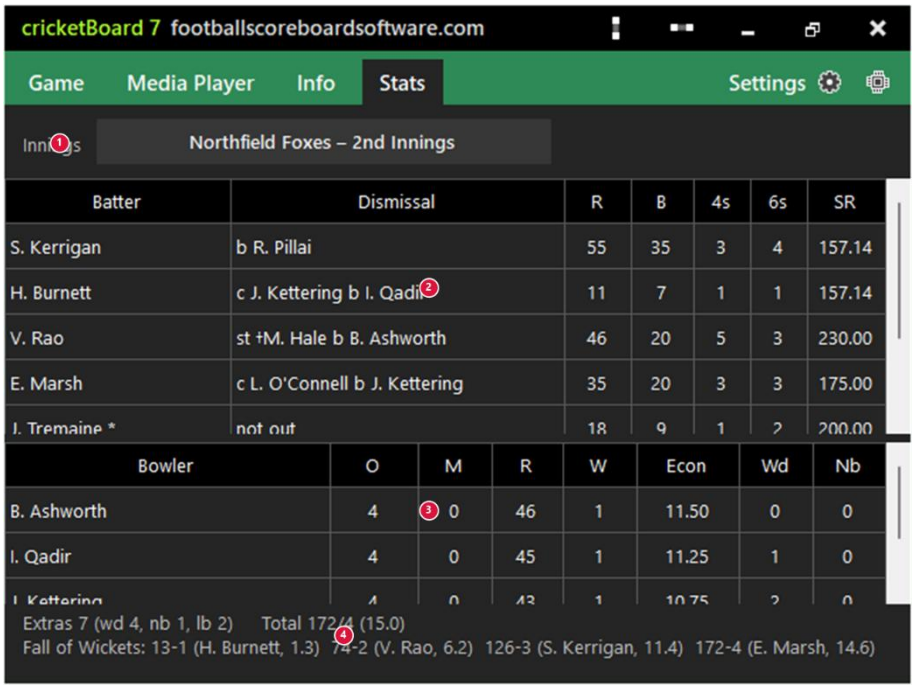


Figure 64. The Stats tab with the scorecard of the innings in progress.

No.	Control	What It Does
1	**Innings**	Chooses the innings: every innings of the match, named by team and innings, for example "Northfield Foxes – 2nd Innings", Super Over innings included. The innings in progress is chosen by itself.
2	**Batting**	Every batter of the innings in batting order.
3	**Bowling**	Every bowler of the innings in bowling order.
4	**Footer**	Extras with the breakdown, the total with the overs, and the fall of wickets.

- The scorecard is read only. To correct it, use Undo on the Game tab and enter the delivery again.
- The tab refreshes itself once a second while it is open.
- When you choose an earlier innings, the tab stays on it. Choose the last innings to follow the play again.
- The divider between the batting and the bowling table can be dragged.
- In Manual mode (section 5.16) the tab still shows the kept ball-by-ball match; a gold note says so above the Innings choice.

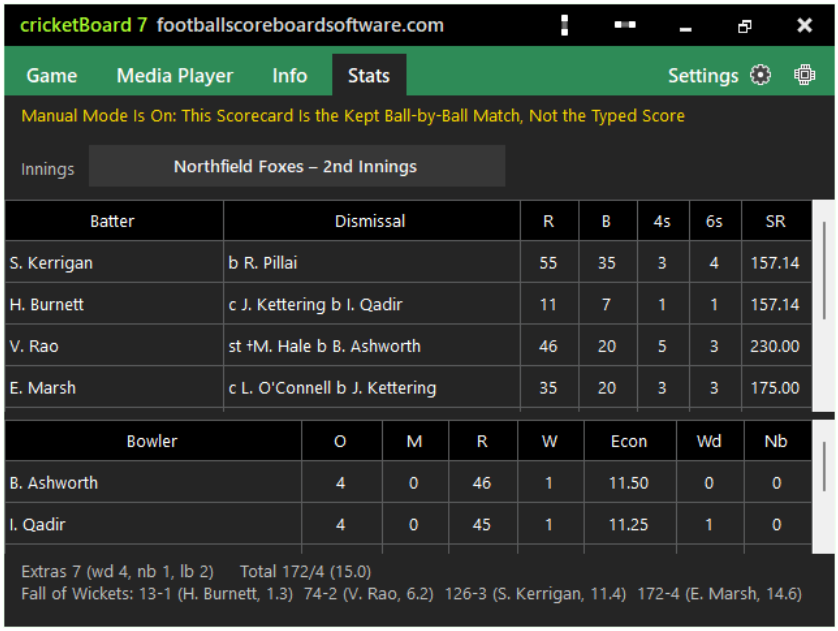


Figure 65. The Stats tab in Manual mode with its note.

11.2 The Columns

Batting:

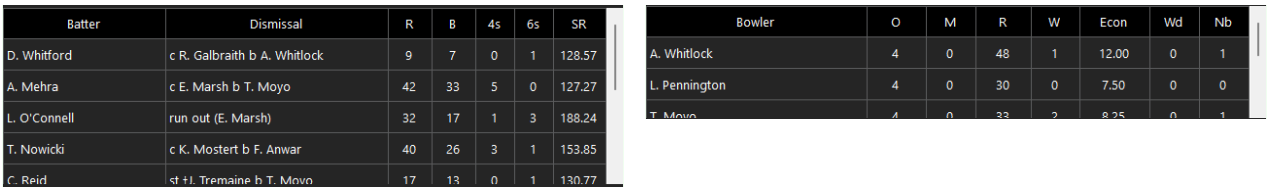
Column	Meaning
Batter	The name; the striker of the innings in progress is marked *. The last row, Yet to Bat, lists the players of the squad who have not batted.
Dismissal	The scorecard notation: "c Smith b Jones", "c & b Jones", "lbw b Jones", "st †Ross b Jones", "run out (Smith)", "hit wicket b Jones", "not out", "retired hurt".
R	Runs off the bat.
B	Balls faced: every legal ball and every no-ball; a wide is not a ball faced.
4s, 6s	Boundaries off the bat. An all-run four is not counted.
SR	Strike rate: runs per 100 balls.

Bowling:

Column	Meaning
Bowler	The name; the current bowler is marked *.
O	Overs and balls, for example 3.2 (the balls of the format: in The Hundred an "over" is a set of 5).
M	Maidens.
R	Runs conceded: runs off the bat, wides and no-balls. Byes, leg byes and penalty runs are not charged to the bowler.
W	Wickets credited to the bowler: bowled, caught, LBW, stumped, hit wicket.
Econ	Economy rate: runs per over (in The Hundred: runs per 6 balls).

Column	Meaning
Wd, Nb	Wide and no-ball runs of the bowler.

The footer lists the extras as "7 (wd 3, nb 1, b 2, lb 1)" (pen for penalty runs), the total as "176/7 (20.0)" and the fall of wickets as "34-1 (D. Brennan, 4.3)".



Batter	Dismissal	R	B	4s	6s	SR
D. Whitford	c R. Galbraith b A. Whitlock	9	7	0	1	128.57
A. Mehra	c E. Marsh b T. Moyo	42	33	5	0	127.27
L. O'Connell	run out (E. Marsh)	32	17	1	3	188.24
T. Nowicki	c K. Mostert b F. Anwar	40	26	3	1	153.85
C. Reid	st †J. Tremaine b T. Moyo	17	13	0	1	130.77

Bowler	O	M	R	W	Econ	Wd	Nb
A. Whitlock	4	0	48	1	12.00	0	1
L. Pennington	4	0	30	0	7.50	0	0
T. Moyo	4	0	33	2	8.25	0	1

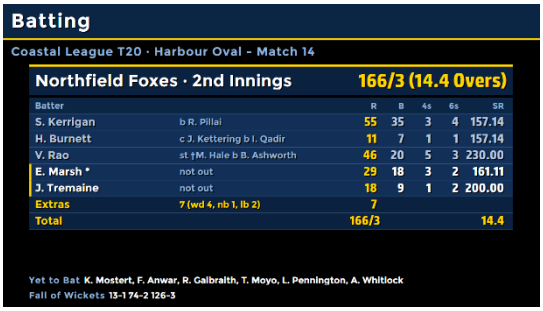
Figure 66. The batting and the bowling table of a completed innings.

11.3 Where the Figures Appear

The same figures appear on the boards and the info screens:

- the scoreboard: the batters' runs and balls, the bowler's figures (overs-maidens-runs-wickets) and economy rate, the extras, the partnership and the last wicket;
- the scorecard screens of the Info tab: Batting Card, Bowling Card, Fall of Wickets, Extras and Innings Summary, for the current innings or any innings of the match (chapter 9.4);
- the remote page: the batters' and the bowler's figures on the Score tab.

Board Output



Stats Tab

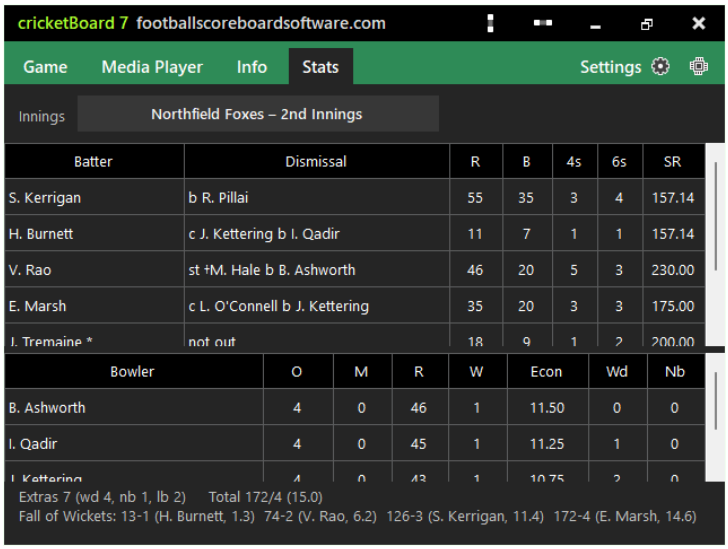


Figure 67. The Batting Card info screen and the Stats tab show the same innings.

11.4 The Scorecard and the HTTP API

The scorecard is computed from the deliveries; it has no values to set by hand. The GET reply of the HTTP API carries the score and the overs of both teams in StatsData and the figures of the batters and the bowler in the play (Appendix B.2). The statistics commands stats_show, stats_set, stats_recalc, stats_reset_set, stats_clear and stats_rows of other Board7 programs are accepted and ignored.

12. Squads and Match Data

12.1 The Squad Editor

Each team has a squad list: Info > Home Players and Info > Guest Players. The lists fill the batter, bowler and fielder pickers of the control panel and the remote, the scorecards (Yet to Bat) and the Team Lists screen, and they hold the pictures of Show Pictures.

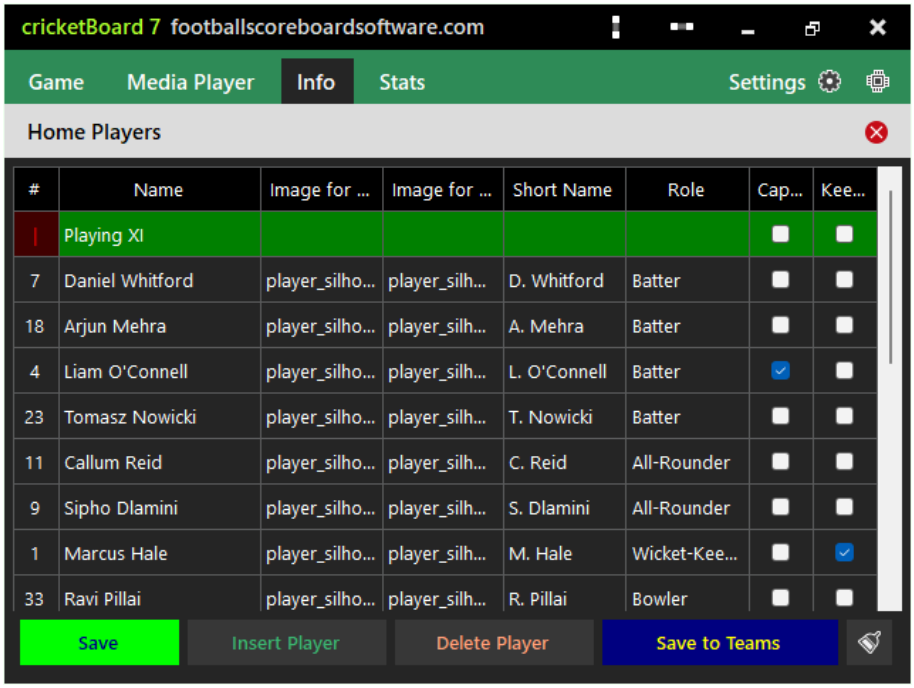


Figure 68. The Home Players list with a sample squad.

The list has four groups:

- Playing XI: the eleven players of the match, in batting order. The Team Lists screen shows them.
- Substitutes: they may field (a catch reads "c sub (Name) b Bowler" on the scorecard), but they never bat or bowl: the batter and bowler pickers, Yet to Bat and Team Lists leave them out.
- Other Players: further players.
- Coach: one person. The coach is not part of the squad: he never appears in a picker.

Column	What It Holds
#	The shirt number (optional).
Name	The player's name, for example "Daniel Whitford".
Image for Events	A second picture of the player.
Image for Banner	The player photo of Show Pictures.
Short Name	The name on the board, the pickers and the scorecards, for example "D. Whitford". Empty = the Name.
Role	Batter, Bowler, All-Rounder or Wicket-Keeper. Information for the operator; the scoring does not use it.
Captain	Tick for the captain. The pickers and the Team Lists screen add (c) to the name.

Column	What It Holds
Keeper	Tick for the wicketkeeper. The pickers and the Team Lists screen add †; the scorecard writes "st †Ross b Jones" and "c †Ross b Jones"; the wicketkeeper is at the top of the fielder list of the Wicket dialog.

Button	What It Does
Insert Player	Adds an empty row at the end of the selected group.
Delete Player	Removes the selected player (no question).
Save	Saves the list. The button is highlighted while there are unsaved changes.
Save to Teams	Keeps a copy of the list under a name in the team database (common\data).
Clear All (the icon at the right)	Empties the list (saved only when you click Save).

- Click an image cell, then the small picture button in it, to choose a file. A missing file is shown in red; a selected image shows a preview.
- Drag a row by its # or Name cell to move it, for example to change the batting order.
- Click Save before you close the list. Closing without Save drops the changes.

When you click Save on the Home or Guest Players list, the pickers of the Game tab take the new squad at once.

12.2 How the Program Identifies a Player

The scoring refers to every player by a key:

- the shirt number, written "#7", when the # column is filled;
- otherwise the name.

Both teams may use the same numbers: the key is unique within a team. The HTTP API and the remote use these keys (chapter 15).

> **Note:** Do not change the number or the name of a player who has already batted or bowled in the match. The scorecard then cannot find him in the squad and shows his old key (for example #7) instead of his name. Correct the names before the toss, or between matches.

Squads with more than 11 players are fine: the batter and bowler pickers offer the players of the Playing XI and Other Players groups; the Wicket dialog also offers the substitutes as fielders. A team is all out after Players per Side − 1 wickets (chapter 6), however long the list is.

12.3 Flags and Country Codes

The Officials screen shows a flag for a country code in its Country column.

- Type the code of the country as used in sport (IOC, for example AUS, NZL, RSA, SRI) or the two-letter ISO code (au, nz).
- The flags are vector images (SVG) in common\images\flags\country, 271 flags, including England (gb-eng), Scotland (gb-sct), Wales (gb-wls) and Northern Ireland (gb-nir).

- The three-letter codes are translated to the flag files with common\images\flags\country\codes.csv, one line per code: AUS,au. Lines starting with # are comments.
- An unknown code shows no flag; the code itself is still shown.

To add a code, open codes.csv in a text editor, add a line (for example ENG,gb-eng for England, which is not in the list as delivered), save it and restart the program.

12.4 Officials and Fixtures

These lists are edited in their info-screen editors (chapter 9) and saved with the match. New Match keeps them, so they need to be entered only once per match day.

Screen	Data
Officials	Role, Name, Country
Fixtures	Heading (Ground, Day); Matches (Time, Ground, Round, Team 1, Team 2)

The new installation fills them with fictional sample data: the officials of the sample match (two on-field umpires, the third umpire, the match referee and the scorers) and four fixtures of the Coastal League T20. In the lists, the empty last row adds an entry; select a row and press Delete to remove it.

From the remote or the HTTP API, info_list replaces a whole list and info_set sets a single field (Appendix B).

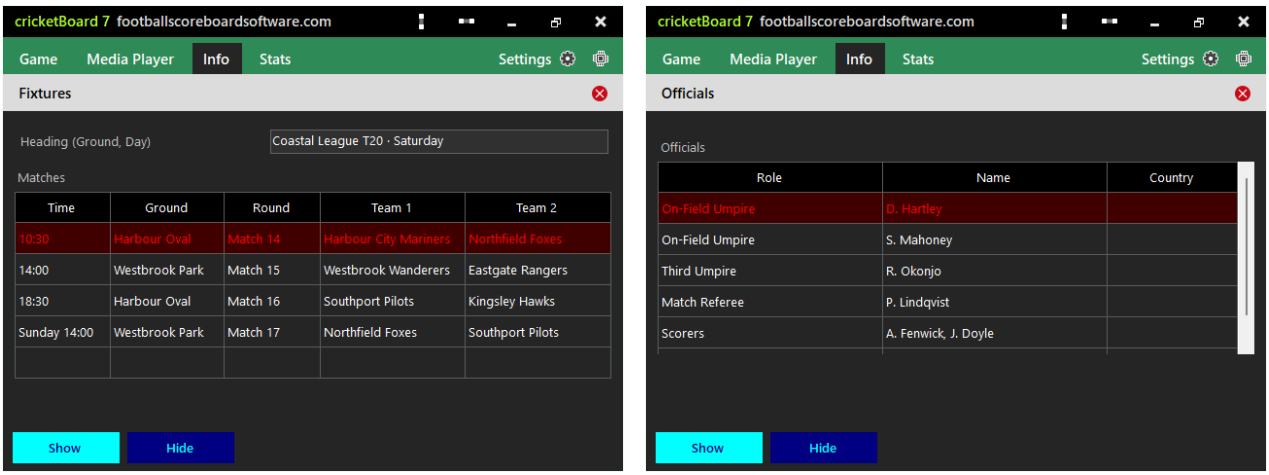


Figure 69. The editors of Fixtures and Officials.

13. Banner, Announce, Sponsors and Media

13.1 Banner

A full-screen banner with a top line, a second line and a main text, for example the start of play after a rain delay, or a countdown to the end of the innings break. Open Info > Banner.

Board Output **Banner Editor**

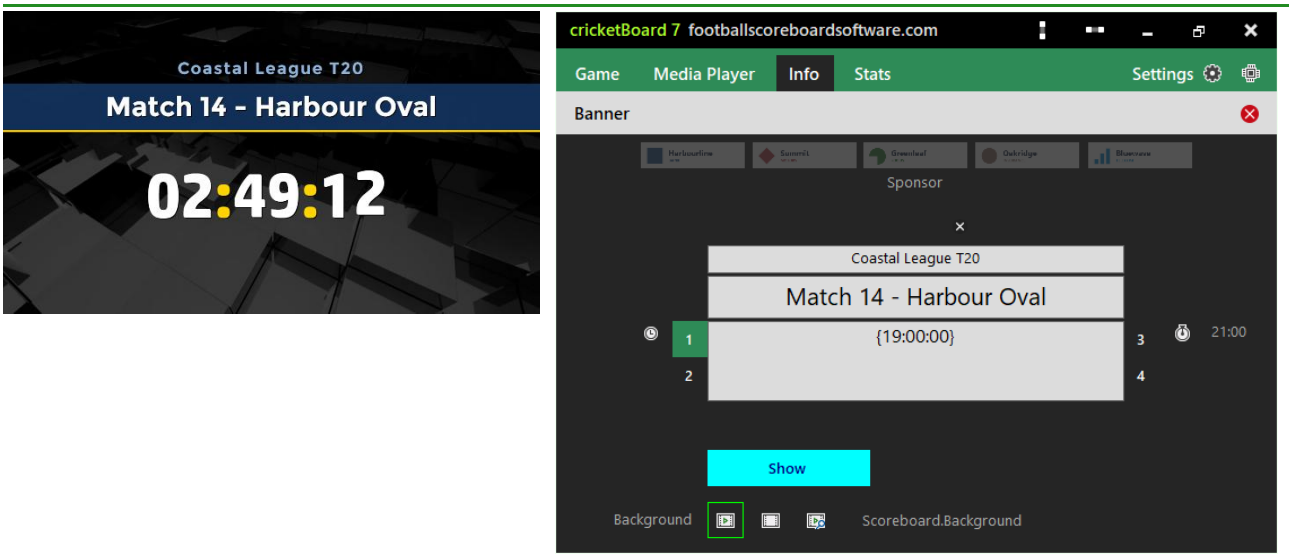


Figure 70. The Banner with a countdown to 19:00 on the board, and its editor.

- The three text boxes: top line, second line and main text. The main text has four versions (buttons 1-4); the selected one is shown.
- Show Clock (clock icon, appears while you type in the main text): puts {00:00} in the text: the board shows the time of day. Click again for {00:00:00} with seconds.
- Show Remaining Time (timer icon and time box): puts the time, for example {19:00}: the board counts down to 19:00 today (to tomorrow if the time has passed). Click again for seconds.
- The clock and the countdown work only when the main text holds nothing else.
- Background: the scoreboard's background video, black, or a selected video (mp4, webm, ogg) or picture (jpg, png, gif, webp).
- Sponsor: click one of the first five sponsor logos to show it on the banner; the X removes it.
- Show puts the banner on the board. Click the Game tab to go back to the scoreboard.

13.2 Announce

A full-screen announcement in large letters. Open Info > Announce.

Board Output **Announce Editor**

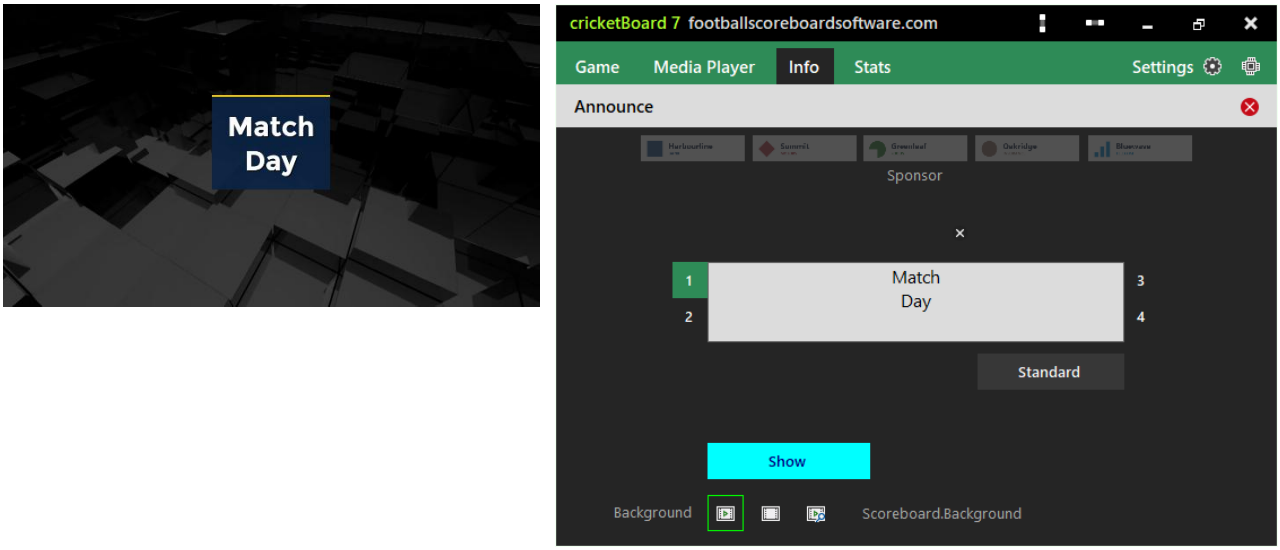


Figure 71. An announcement in the Standard style, and its editor.

- One text with four versions (buttons 1-4).
- Style list: Standard, Gradient (animated colour gradient), Shape (moving colour shapes), Stripe-H and Stripe-V (moving stripes), Stroke (outlined text with changing colours). The gear button of the styles opens the font, size, shadow and colour settings of the style.
- Background and Sponsor as for the Banner.
- Show puts it on the board; the Game tab goes back to the scoreboard.

13.3 Sponsors

Info > Sponsors holds the sponsor logos used by the Sponsored band (chapter 7.4), the Ad banners and the Banner and Announce screens.

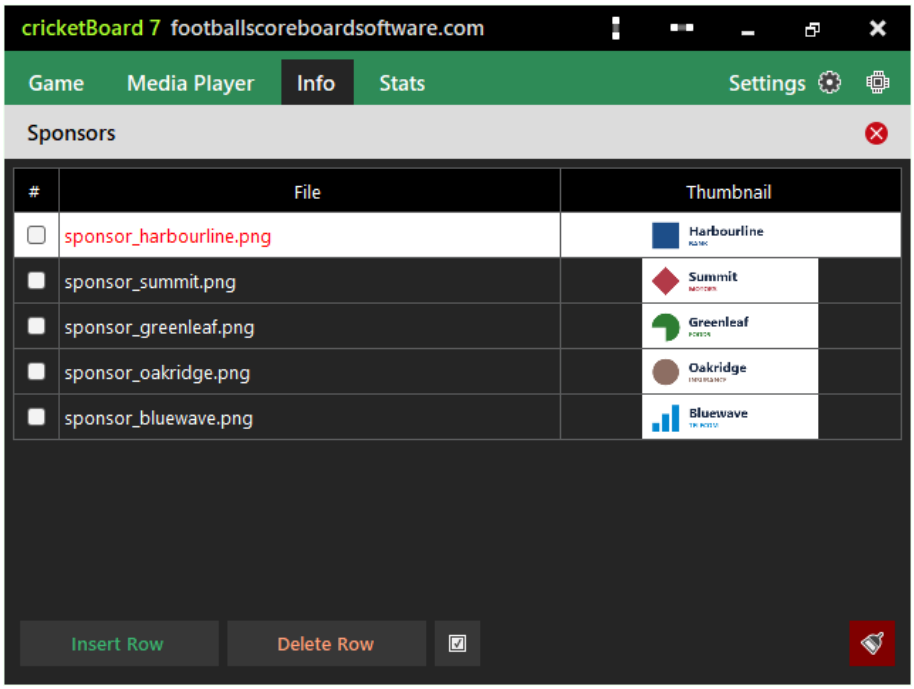


Figure 72. The sponsor list with the fictional sample sponsors.

- Insert Row: choose one or more picture files (bmp, gif, jpg, png, webp).

- Delete Row removes the selected logo; Clear All (the icon at the right) empties the list. Changes are saved at once.
- Set Default (the icon next to Delete Row): makes the selected logo the sponsor of Banner and Announce and moves it to the top.
- Drag a row to change the order.

13.4 Media Player

The Media Player tab plays videos and pictures full screen on the board output.

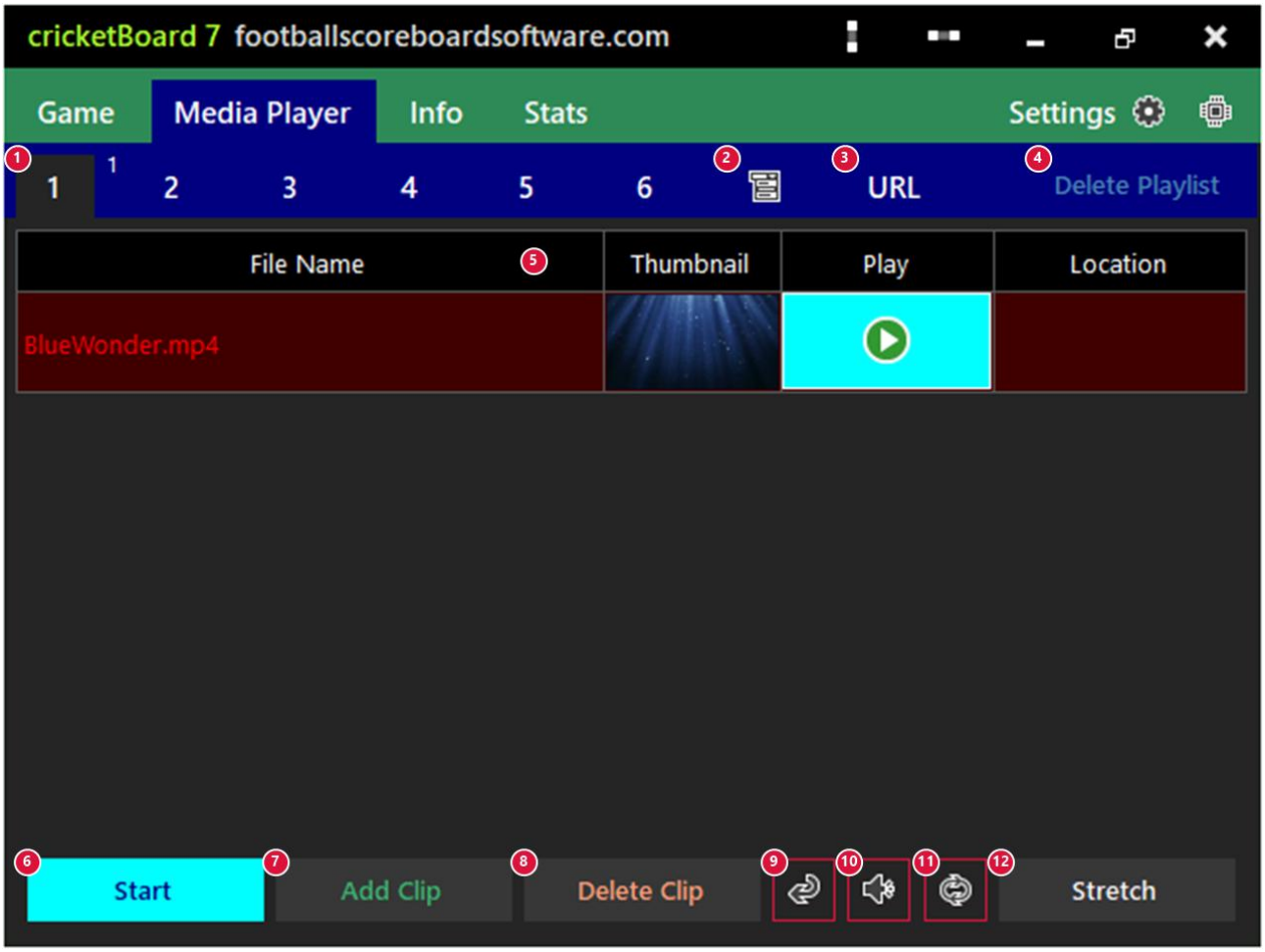


Figure 73. The Media Player tab with playlist 1.

No.	Control	What It Does
1	**1-6**	The playlists 1 to 6. The small number shows the clips in the list.
2	**List icon**	The playlists 7 to 20.
3	**URL**	A list of web pages to show on the output (section 13.5).
4	**Delete Playlist**	Empties the current playlist (no question).
5	**List**	File Name, Thumbnail, Play (plays this clip) and Location (the time left of the playing clip).
6	**Start**	Plays the list from the selected clip; then reads Finish to stop.
7	**Add Clip**	Adds video, audio or picture files.
8	**Delete Clip**	Removes the selected clip.

No.	Control	What It Does
9	**Back to Game**	On: returns to the scoreboard when the list ends. Off: the list starts again.
10	**Sound**	Sound on or off.
11	**Auto Repeat**	Repeats the current clip.
12	**Display mode**	How the picture fits the board: Stretch (default), Center, CoverCenter, Original, SizeToFit, SizeToFitCenter, ZoomCenter.

- Pictures are shown for Image Play Duration seconds (Settings > Screen Properties, default 5).
- While a clip plays, the Settings tab shows the time left, and playlists cannot be switched.
- The Game tab stops the media and shows the scoreboard again.
- From the remote: start_playlist 1-20 starts a playlist (a second call stops it).

13.5 Web Pages

The URL button of the Media Player opens a list of web addresses. Insert Row adds an address, Delete Row removes one, Load shows the page on the board output. The Game tab goes back to the scoreboard.

13.6 Show Pictures

Info > Show Pictures (next to Home Players and Guest Players) shows the player photos (Image for Banner) as a slideshow on the board output.

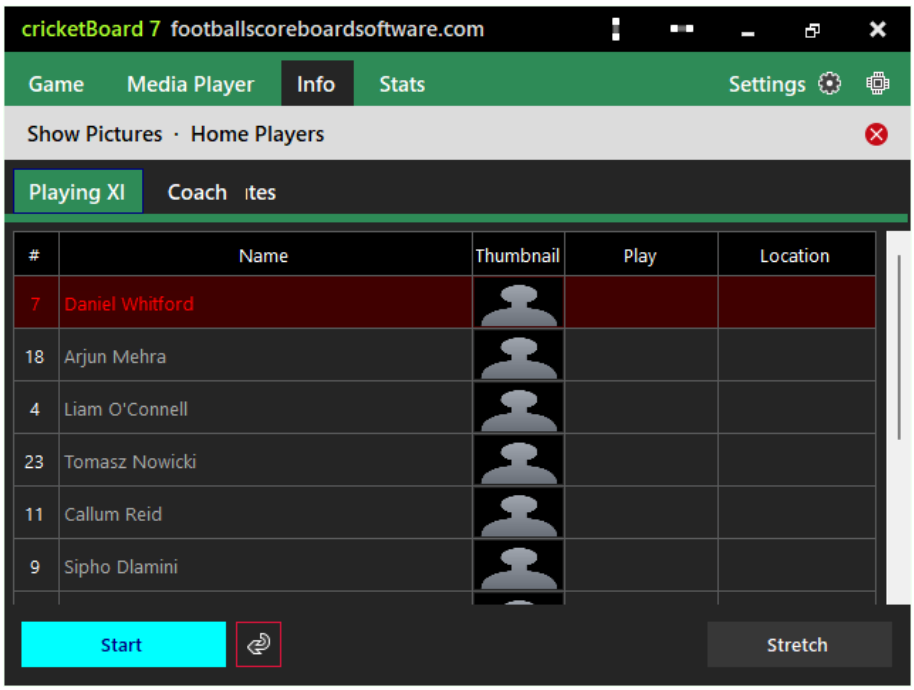


Figure 74. Show Pictures with the home players.

- Players, Substitutes or Coach: the group to show.
- Start plays the whole list from the selected row, Play / Stop one picture. Back to Game and the display mode work as in the Media Player.

13.7 Cameras and NDI Sources

The Camera tab of the Ad and CK pages shows a live picture: in the Ad multimedia area, or under the CK graphics.

1. Choose Camera, then the camera and its Format. Or choose NDI and an NDI source from the network (the refresh button searches again; "-- No NDI source found --" when there is none).
2. Click Start: the picture appears in the preview.
3. Click Show to put it on the board. Stop ends it.

The FPS value shows the frame rate. The choice is saved for the next time.

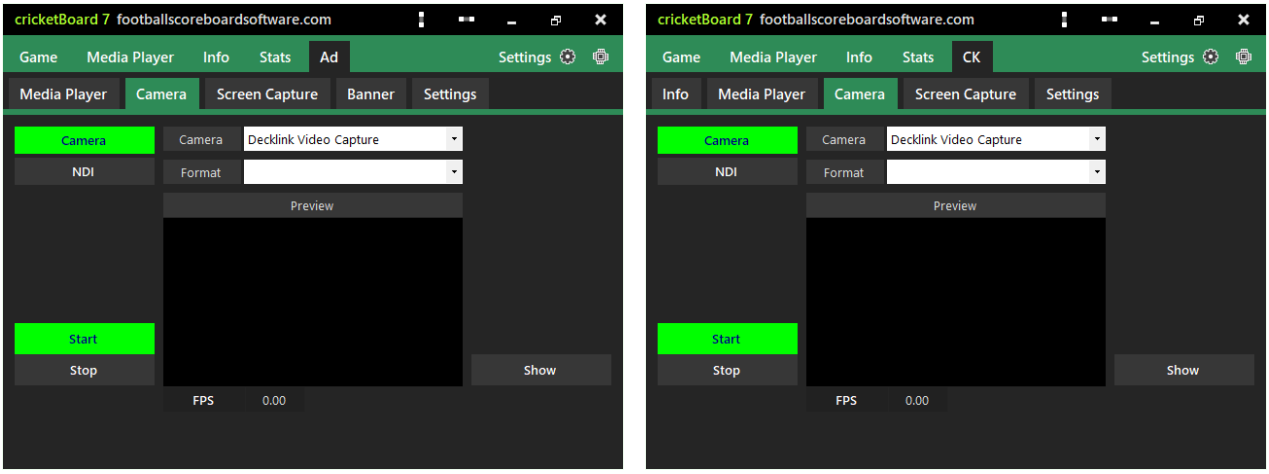


Figure 75. The Camera tab of the Ad page and of the CK page.

13.8 Screen Capture

The Screen Capture tab shows a part of the PC screen on the board, for example a statistics program or a web page.

1. Enter Left, Top, Width and Height of the area under Source Bounds, or click Select Rectangle and drag a frame on the screen (Esc cancels).
2. Click Start. Target Rectangle shows the size of the area it fills on the board.
3. Stop ends the capture.

An area outside the connected monitors is refused with a short notice. With a licence that includes GPU capture, the capture runs on the graphics card.

13.9 NDI Output

The NDI button on the Game tab sends the board output into the network as an NDI stream (60 frames per second). The stream follows what is on the output: the scoreboard of the current display mode, an info screen, Banner, Announce or a playing clip.

- Sender name: CB7_NDI (installations updated from an older version keep their saved name; it is the value SenderName in start.xml).
- Green: sending. Amber: the stream stopped; click to restart. Grey: NDI is not available; rest the mouse on the button for the reason.
- NDI carries no transparency: for a key in the receiver use the CK display mode with a key colour (chapter 7.6).

14. Remote Control

14.1 What You Need

The remote control is a web page that a phone or tablet opens in its browser; no app is needed. It talks to cricketBoard 7 over the network on port 1907.

- The phone or tablet and the PC are in the same network (Wi-Fi or LAN).
- The remote control is switched on (it is off on a new installation).
- Port 1907 is open in the Windows firewall. The setup adds the rules; if a phone cannot connect, run C:\cricketBoard7\open_firewall_1907.bat as administrator.
- Only one Board7 program at a time can use port 1907 on a PC.

14.2 Switching the Remote On

Open Settings > Remote Control, or click the remote icon on the Game tab.

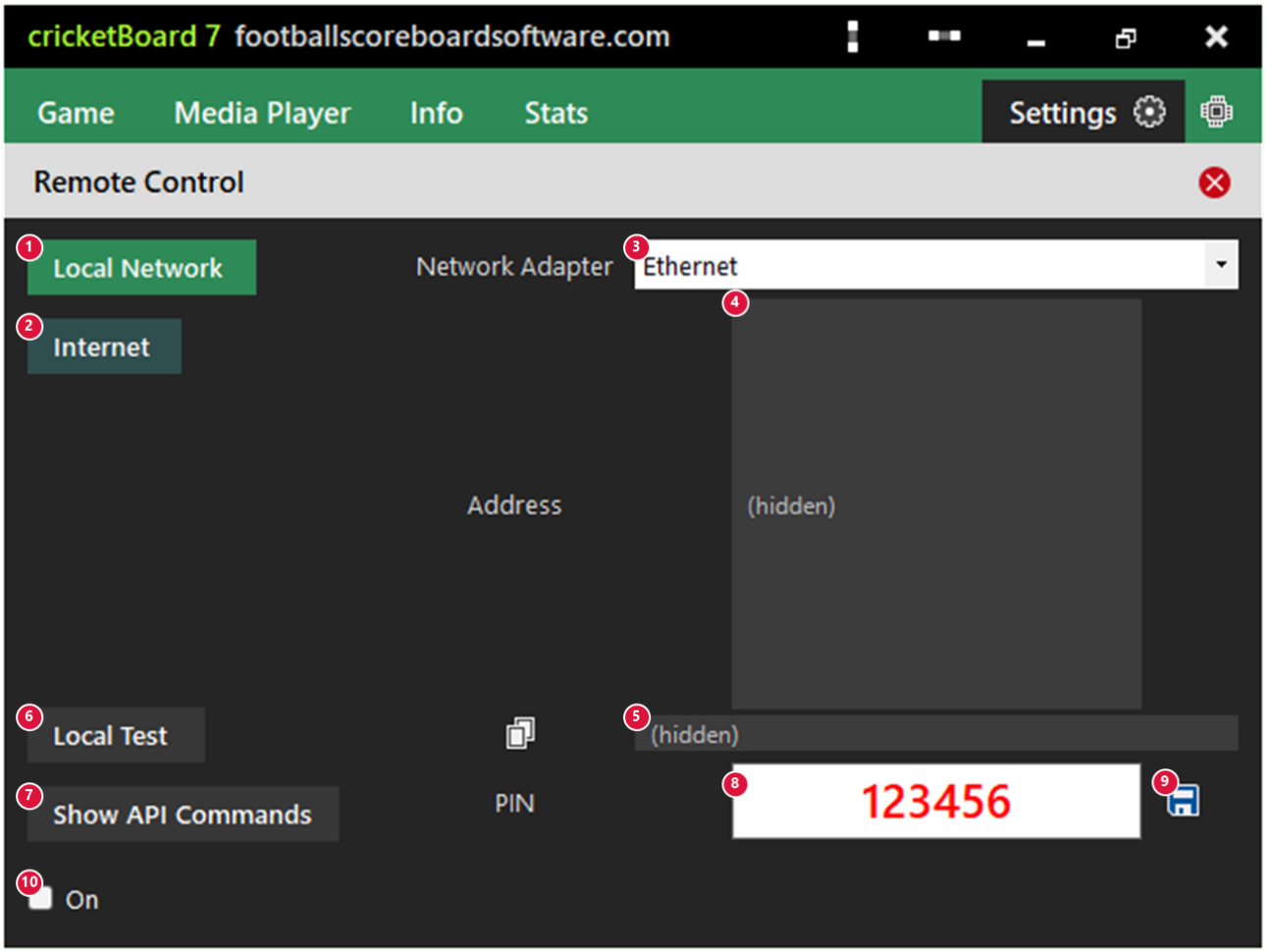


Figure 76. The Remote Control page. The address and the QR code are hidden in this picture; your page shows the address of your PC.

No.	Control	What It Does
1	**Local Network**	Shows the address in the local network (default).
2	**Internet**	Shows the public address of the internet connection (see the note below).

No.	Control	What It Does
3	**Network Adapter**	The network card whose address is shown (Ethernet or Wi-Fi).
4	**QR code**	Scan it with the phone camera to open the remote page.
5	**Address**	The address to type in the phone browser, http://<PC address>:1907/logon.html. The copy button copies it.
6	**Local Test**	Opens the remote page in the browser of this PC.
7	**Show API Commands**	Opens API_Commands.txt (Appendix B).
8	**PIN**	The code the phone must enter: digits only, up to 6. Default 123456.
9	**Save PIN**	Appears when you change the PIN; click it to use the new PIN.
10	**On / Off box**	Ticked (red) = remote control off; not ticked = on. The text shows the real state of the server: On or Off.

To switch the remote on: untick the box at the bottom. The text changes to On, and the remote icon on the Game tab turns green. The setting is kept for the next start.

> **Note:** Change the PIN from 123456 before you use the remote at an event. After a PIN change, log out and log in again on every phone. Never save an empty PIN.
>
> **Note:** The Internet address only works when the router forwards TCP port 1907 to this PC. The page is protected by the PIN only and is not encrypted: use it only if you know what this means for your network.

14.3 Logging On

1. Open the address in the phone browser, or scan the QR code.
2. Enter the PIN on the keypad and tap the green tick.
3. The remote page opens on the Score tab.

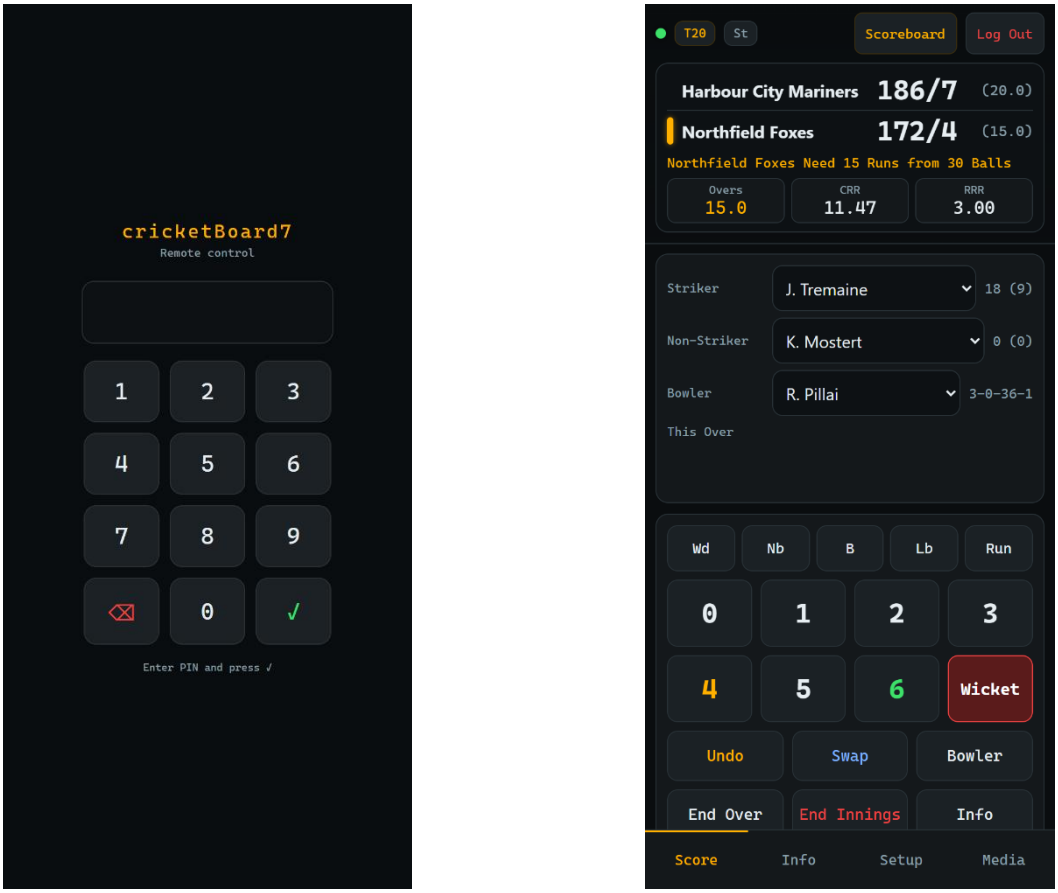


Figure 77. The logon page and the Score tab on a phone.

> **Note:** Logging on (and reloading the remote page) brings the scoreboard back on the PC: a running video or an info screen is taken off the board. Log on before you start a video or an info screen.

The top of the page always shows:

- the connection dot: green = connected, red = the PC cannot be reached;
- the discipline (for example T20) and the display mode (St, Sp, Ad or CK);
- Scoreboard: brings the scoreboard back on the board (takes off a video or info screen); Log Out: back to the logon page;
- both teams with the batting marker, the score and the overs, and the situation line (innings and target, the equation, the break or the result);
- the tiles of the innings: Overs (Balls in The Hundred, with the set in progress), Balls Left, CRR, RRR, Projected, and Day and Session in a multi-day match. A tile appears only when it applies.

When the PC refuses an action, a red note with the reason appears under the tiles for a few seconds, for example "Choose the Bowler First".

The page checks the PC about every 0.6 seconds, so it also shows changes made on the PC.

14.4 Score Tab

During an innings the Score tab has three cards:

Card	What It Holds
Batters and bowler	The Striker, Non-Striker and Bowler pickers with their figures. A picker that must be chosen is marked. Under them: This Over (the ball strip) and the badges (powerplay, Free Hit, Timeout, On a Hat-Trick).
Ball pad	Wd, Nb, B, Lb and Run (the extras and the all-run toggle, as on the panel, section 5.5); the runs 0-6 (4 and 6 are boundaries) and Wicket; Undo, Swap, Bowler (opens the bowler picker), End Over, End Innings (both ask first) and Info (to the Info tab).
More	DRS Review: choose the team (with its reviews left), then Overturned, Umpire's Call or Unsuccessful. Floating Powerplay, Fielding Timeout and Next Session when the rules have them; Declare (asks first).

The Wicket button opens the wicket picker:

1. Tap the dismissal: Bowled, Caught, LBW, Run Out, Stumped, Hit Wicket, Obstructing the Field or Hit the Ball Twice.
2. The picker shows only what the dismissal needs: Batter Out (Run Out, Obstructing the Field), Fielder (Caught, Run Out, Stumped; for Stumped the wicketkeeper is chosen in advance), Runs Completed 0-3 (Run Out), Extras (Run Out: none, wd, nb, b, lb; Stumped: none, wd). An extra selected on the pad is taken over.
3. Choose the Incoming Batter, or leave it at Choose... and pick him later.
4. Tap Send.

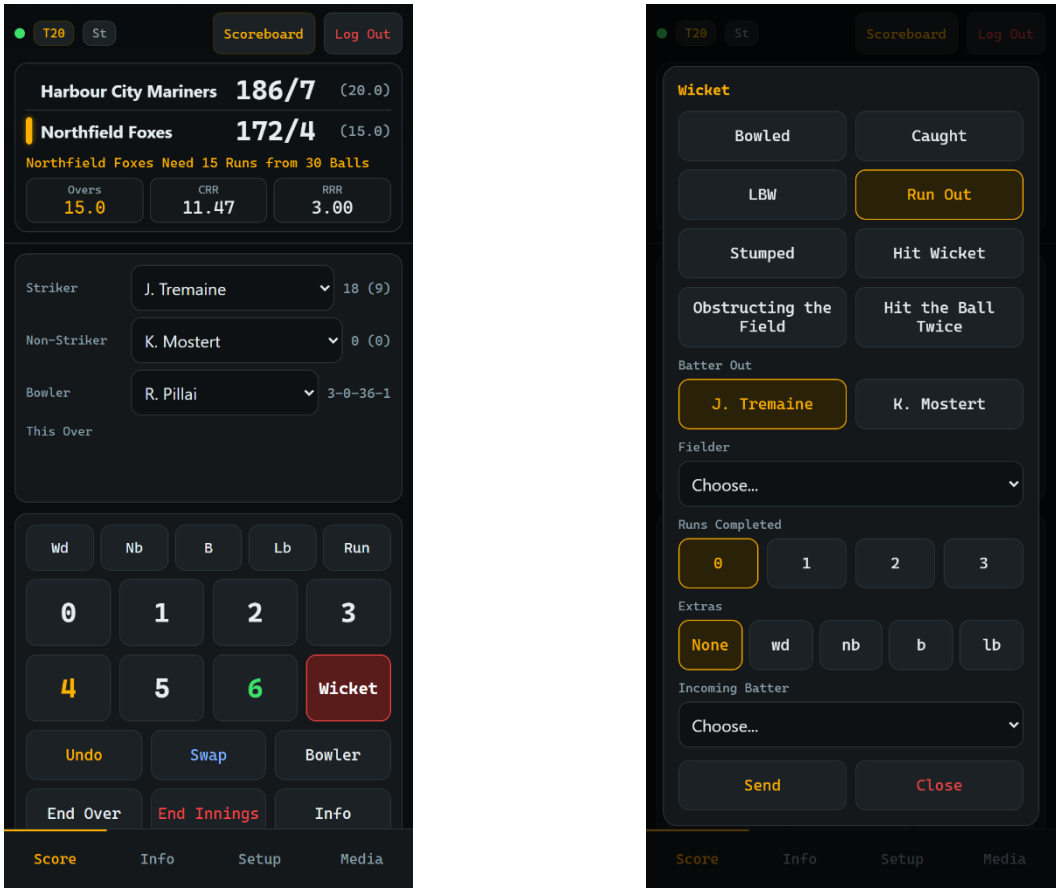


Figure 78. The ball pad (left) and the wicket picker (right).

Before the match, between innings and after the match the Score tab shows the break card instead:

- the state of the match: "Who Bats First?", the toss, the innings break or the result;
- before the toss: four toss buttons, for example "Northfield Foxes Won the Toss, Bowl";
- the start buttons: Start Innings after a toss, else "<Team> Bat" for each team;
- Follow-On and Super Over when they are available;
- Undo and New Match (asks "Start a New Match? The Score Is Reset.").

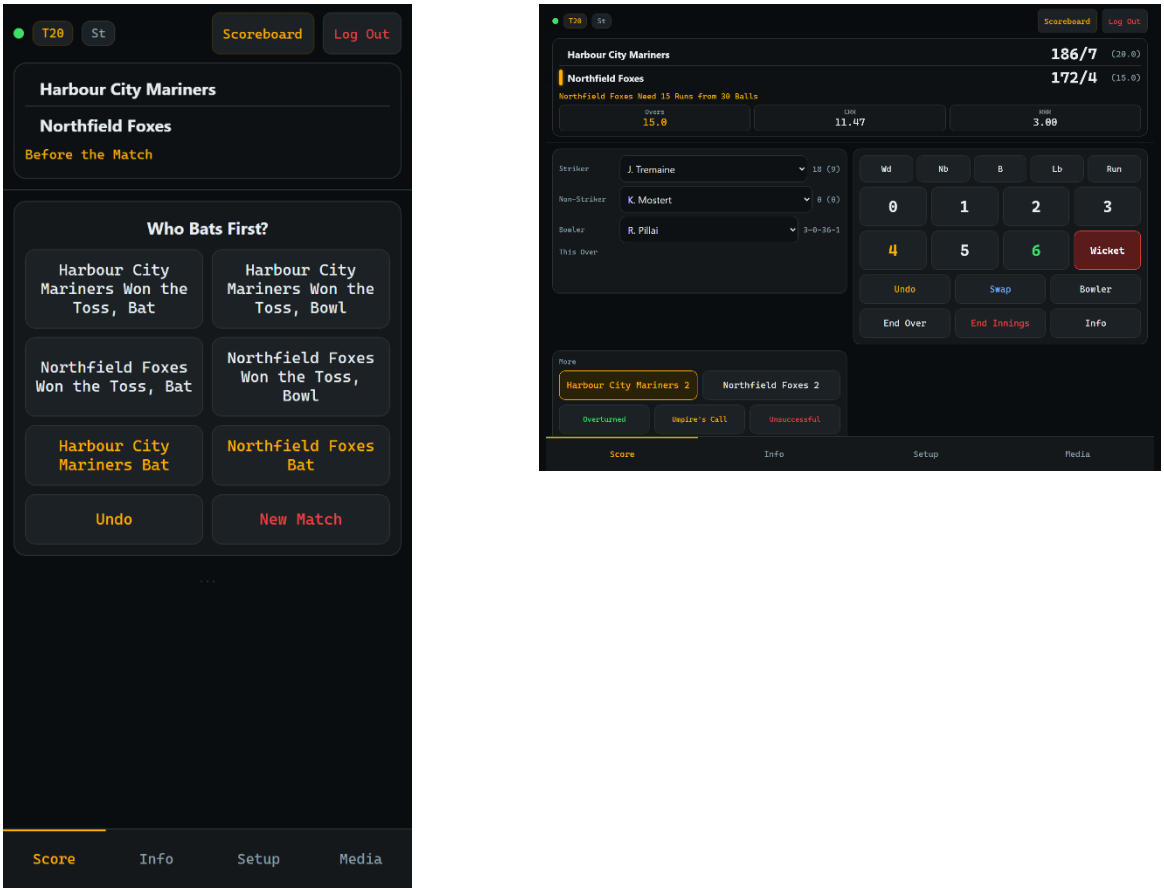


Figure 79. The break card before the toss (left) and the Score tab on a tablet (right).

Retirements, timed out, penalty runs, revised targets and the end of the match are not on the remote page: use the More menu of the PC (section 5.8) or the HTTP API (chapter 15).

14.5 Info Tab

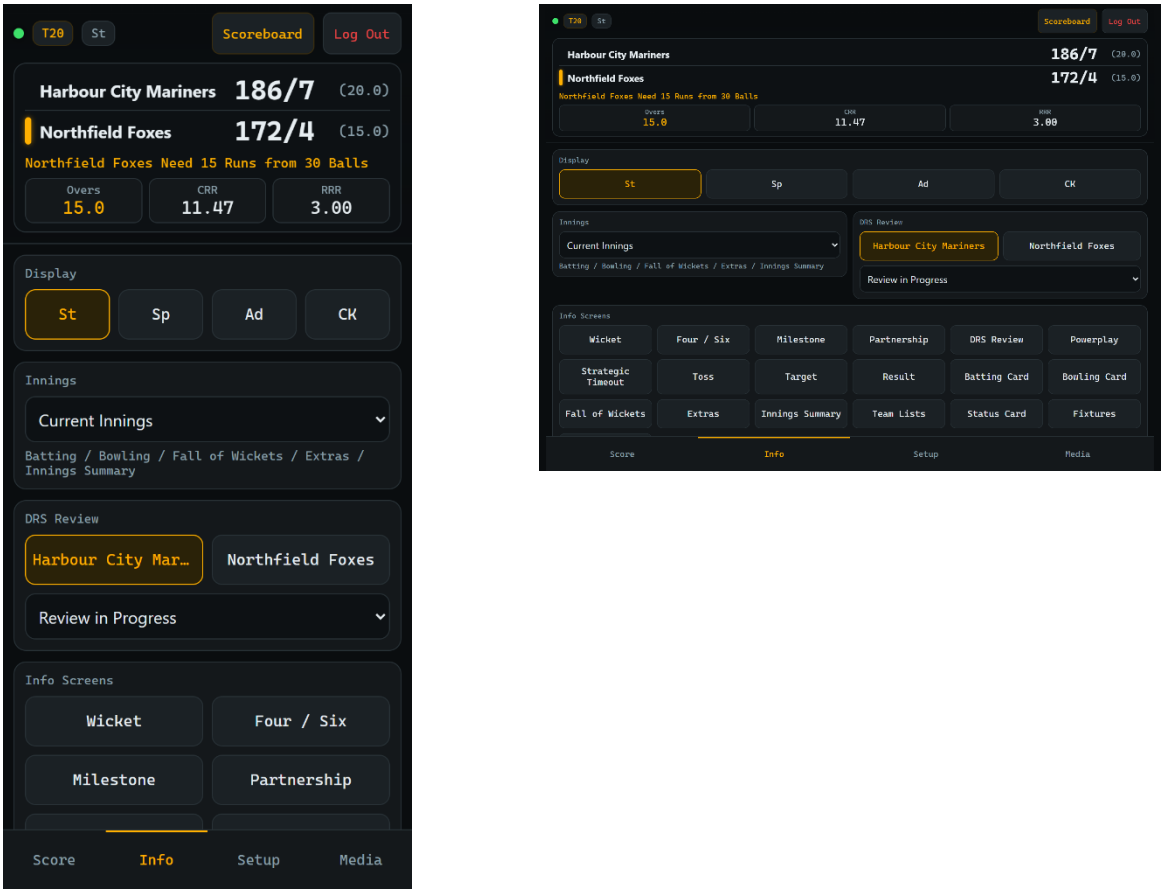


Figure 80. The Info tab on a phone and on a tablet.

Element	What It Does
Display	St, Sp, Ad, CK: switches the display mode.
Innings	The innings of the scorecard screens (Batting Card, Bowling Card, Fall of Wickets, Extras, Innings Summary): Current Innings or the 1st to 4th innings.
DRS Review	The team and the decision (Review in Progress, Overturned, Umpire's Call, Unsuccessful) for the DRS Review screen. It does not change the review count: record the decision on the Score tab (More).
Info Screens	One button per info screen. The screen on air is highlighted; tap it again to hide it. The scorecards take the innings chosen above, the DRS Review screen the team and the decision.
Hide the Screen	Takes any info screen off.

In Manual mode the screens that need the ball-by-ball data are greyed out (section 14.9).

The other fields of the screens (status card, fixtures, officials, Player of the Match) are set in the editors on the PC.

14.6 Setup Tab

Element	What It Does
Clock	Tap the time to type a new one (m:ss or h:mm:ss); Play / Pause; Stop pauses the clock. Only for the timer and the countdown, not the time of day.
Names	Tap a team name to change it.
Match Title and Venue	The two text lines of the board.
Scoring	Ball by Ball or Manual: switches the mode after a question (section 14.9).
New Match	Starts a new match after the question.

Text fields open a sheet with the text, Set and Close. A new line in a name becomes a line break on the board.

14.7 Media Tab

Type the number of a playlist on the keypad (C clears), then:

- Start: plays that playlist of the Media Player (1-20). If a playlist already plays, Start stops it.
- Start on Ad: switches to the Advertisement mode and plays that playlist of the Ad page (1-6).
- Scoreboard: back to the scoreboard.

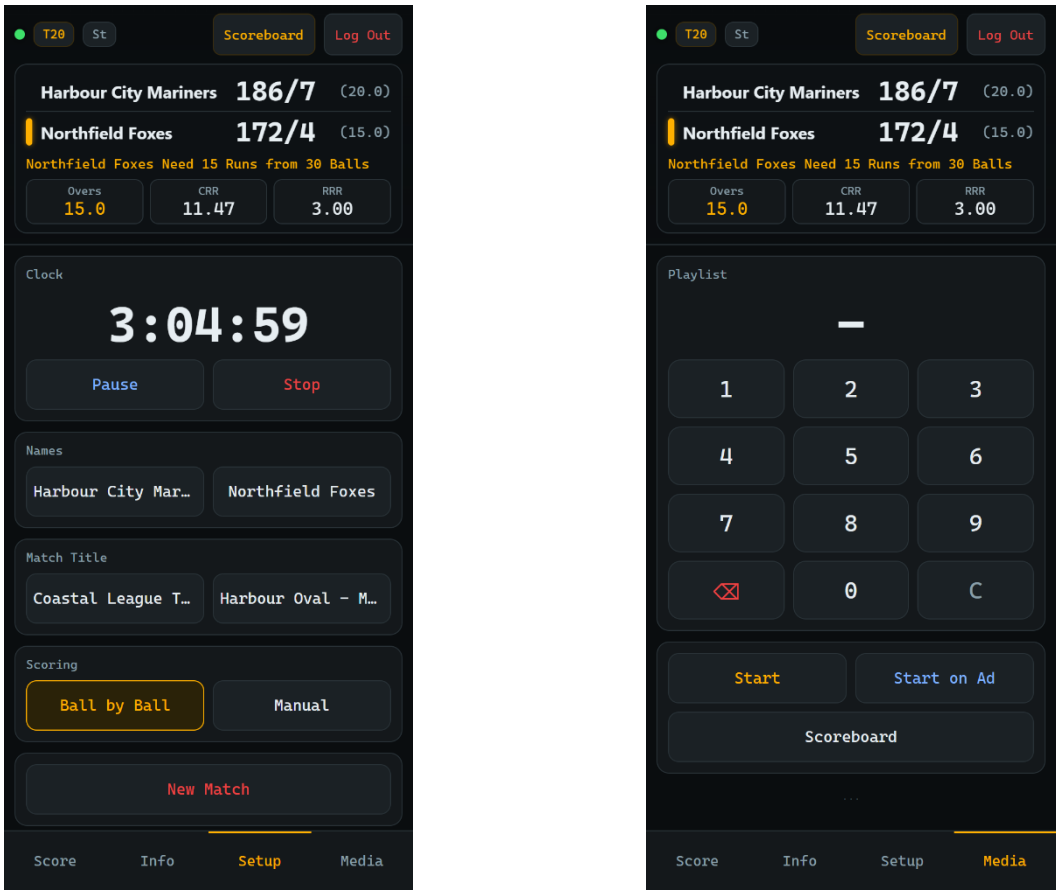


Figure 81. The Setup and Media tabs.

14.8 Tablets and Tips

On a tablet or a phone in landscape the page shows its cards in columns.

- The runs buttons are large enough for a thumb.
- Add the page to the home screen of the phone for a full-screen app look.
- Only one person should score at a time: the PC does not stop two remotes (or a remote and the keyboard) from entering the same ball twice. Undo removes a double entry.
- If the connection dot turns red, check the Wi-Fi of the phone and that the program still runs on the PC.

14.9 Manual Mode

When the PC is in Manual mode (section 5.16), the Score tab shows the manual card instead of the ball pad. The header shows the discipline and "Manual", for example "T20 · Manual".

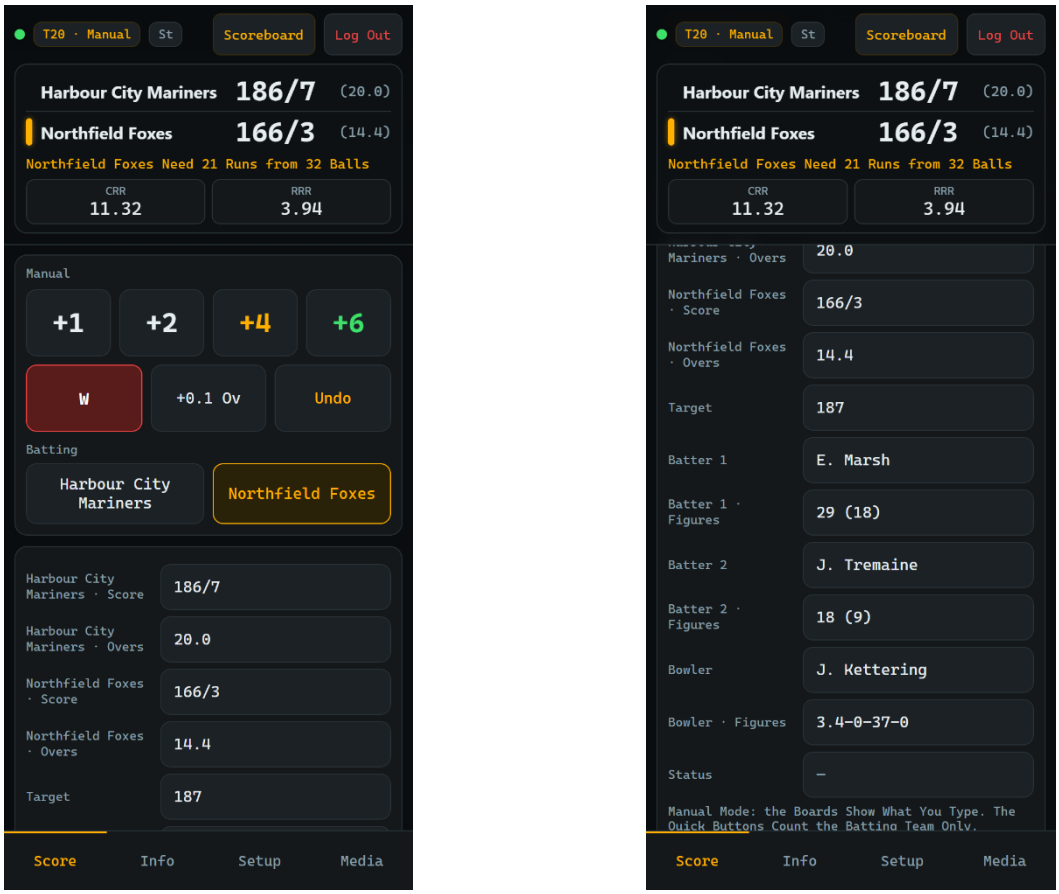


Figure 82. The manual card (left) and the typed values (right).

Element	What It Does
Score lines	The two typed scores with the overs, the equation or the status line, CRR and RRR.
Batting	The two team buttons choose the batting team (the gold marker on the board and the team of the quick buttons).
Quick buttons	+1, +2, +4, +6, W, +0.1 Ov (The Hundred: +1 Ball) and Undo, as on the panel. They count for the batting team only.

Element	What It Does
Values	One row per typed value: the scores and overs, the target, the batters and their figures, the bowler and the figures, the status line. Tap a row to type a new value in the text sheet.

- Switch the mode on the Setup tab (Scoring: Ball by Ball or Manual). The page asks first.
- While Manual mode is on, the ball-by-ball buttons are not shown; a ball-by-ball command from another remote is refused ("Manual Mode Is On").
- On the Info tab the screens that need the ball-by-ball data are greyed out. Target, Result, Team Lists, Status Card, Fixtures and Officials work. The Result screen shows the status line as the result.

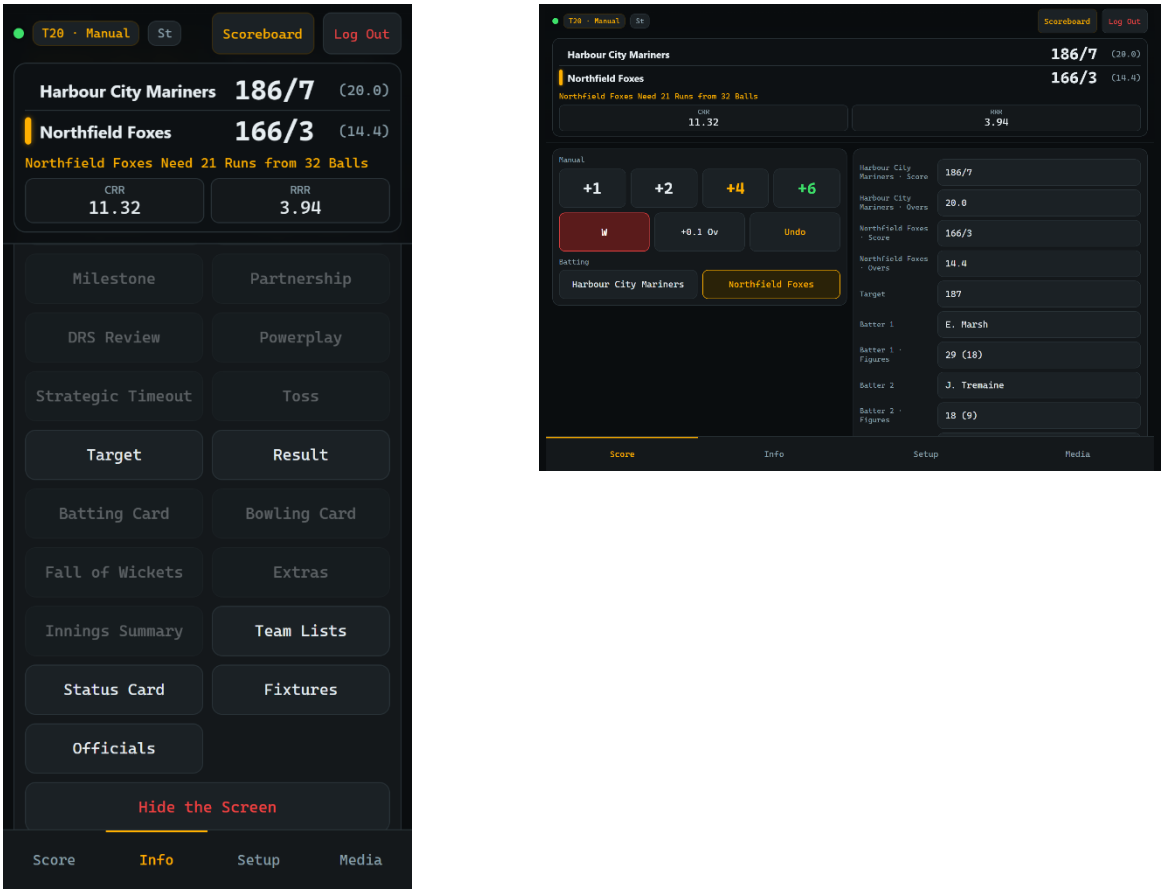


Figure 83. The Info tab in Manual mode (left) and the manual card on a tablet (right).

15. HTTP API

cricketBoard 7 can be controlled by other programs and devices with plain web requests: a vision-mixer macro, a stream deck, a scoring system or a script. The remote page of chapter 14 uses the same commands.

15.1 Request Format

```
http://<PC address>:1907/api.html?_=<number>&pin=<PIN>&cmd=<command>&value=<value>$
```

- Port 1907 is fixed. The remote control must be on (chapter 14).
- Every request ends with $.
- _=<number> (any changing number, first) stops browsers and proxies from answering from their cache.
- Leave out &value= when the command has no value. Encode the value: a space as %20, | as %7C, ~ as %7E, # as %23.
- In text values an underscore _ is a line break.

Replies: !<command> = accepted; #Invalid PIN; #Invalid API Request (wrong address or missing $); #Invalid API Command (no command). Every other command is answered with !, also one that does nothing.

A scoring action that the engine refuses (for example a ball before the bowler is chosen) changes nothing. The reason is written to the log, and the GET reply carries it in Refusal (with a counter in RefusalSerial), in the language of the program.

Examples:

```
http://127.0.0.1:1907/api.html?_=1&pin=123456&cmd=ball&value=:4:b$
http://127.0.0.1:1907/api.html?_=2&pin=123456&cmd=ball&value=wd:0$
http://127.0.0.1:1907/api.html?_=3&pin=123456&cmd=wicket&value=caught%7Cstriker%7C%235%7C%2311$
http://127.0.0.1:1907/api.html?_=4&pin=123456&cmd=info_show&value=Batting%7CBatting.Innings=Innings1$
```

15.2 Entering Deliveries

ball value = extra:runs[:b]

- extra: empty (a normal ball), wd (wide), nb (no-ball, runs off the bat), b (byes), lb (leg byes), nbb or nblb (no-ball with byes or leg byes).
- runs: 0-12: runs off the bat, byes or leg byes, or the runs completed on a wide.
- :b at the end: the runs are a boundary (4, or 6 off the bat).
- The wide and no-ball penalties are added by the rules.

Delivery	Value
Dot ball	:0
Single	:1
Four, six	:4:b, :6:b
Four runs completed (no boundary)	:4
Wide	wd:0

Delivery	Value
No-ball hit for four	nb:4:b
Two leg byes	lb:2

wicket value = how|out|fielder|incoming|extra|runs (only how is required):

- how: bowled, caught, lbw, run_out, stumped, hit_wicket, obstructing, hit_twice;
- out: striker, non_striker or a player key (run out and obstructing: either batter);
- fielder: the key of the catcher, the run-out fielder or the wicketkeeper;
- incoming: the key of the new batter (else choose him later with set_striker or set_non_striker);
- extra: wd, nb, b, lb (for example run out off a wide);
- runs: the runs completed before a run out.

Player keys are the shirt numbers ("#7") or the names (chapter 12.2). The GET reply lists them (Batters, Bowlers, Fielders).

15.3 Reading the State

cmd=GET returns the state as XML: the team names and scores, the phase of the match (prematch, live, break, over), the innings, the score and overs, the target and the equation, the run rates, the batters and the bowler with their figures, the balls of this over and the last over, the badges, the DRS reviews left, the toss and the result, the clock, the display mode and the info screen on air. Appendix B.2 lists the fields. A panel can poll it about every 0.6 seconds; ActionSerial grows with every action, so a panel can tell when something changed.

15.4 Command Groups

Group	Commands
Deliveries	ball, wicket, undo, swap_strike
Players	set_striker, set_non_striker, set_bowler
Overs and innings	end_over, end_innings, declare, toss, start_innings, super_over
More	retire, timed_out, penalty, review, revise, par, floating_powerplay, fielding_timeout, session, end_match
Match	new_match, discipline
Manual mode	mode, manual_set, manual_runs, manual_wicket, manual_ball, manual_undo
Names and lines	set_home_name, set_guest_name, line_text_1, line_text_2
Clock and display	set_chronometer, click, match
Info screens	info_show, info_hide, info_set, info_list
Media	start_playlist, start_playlist_ad_screen
State	GET

Appendix B describes every command. The file API_Commands.txt in C:\cricketBoard7 (Settings > Remote Control > Show API Commands) has the same reference with more examples.

> **Note:** new_match from the API resets the match without a question. Build a confirmation into your own panel or macro.

15.5 Manual Mode

mode manual switches the program to Manual mode (section 5.16), mode ball back to Ball by Ball. manual_set sets one typed value as field=value, for example

http://192.168.1.20:1907/api.html?pin=123456&cmd=manual_set&value=guest_score=166%2F3

The fields: home_score, home_overs, guest_score, guest_overs, batting (home, guest or none), target, batter1, batter1_figures, batter2, batter2_figures, bowler, bowler_figures, status. manual_set also works in Ball by Ball mode, so the values can be prepared before the switch.

manual_runs 0-12, manual_wicket and manual_ball are the quick buttons; manual_undo (or undo) takes back the last one. While Manual mode is on, the ball-by-ball commands are refused with "Manual Mode Is On"; new_match clears both the ball-by-ball match and the typed values. The GET reply has Mode, ManualValues, ManualEquation, ManualCrr, ManualRrr and InfoScreensOff (Appendix B.2).

15.6 Compatibility with Other Board7 Programs

Remote setups made for soccerBoard 7 keep working where the commands have a cricket meaning: set_home_team and set_guest_team set the team names, set_chronometer and click playpause / stop drive the clock, click St / Sp / Ad / Ck switches the display. Commands without a cricket meaning (for example point, goal, card and statistics commands) are accepted, logged and ignored. The GET reply also carries the soccerBoard 7 field names, filled with cricket values (HomeScore = the home team's score, Period = the number of the innings, Extra01 = the match title ...). See Appendix B.3.

16. Keyboard Shortcuts

16.1 Keyboard Hook Manager

cricketBoard 7 can be scored with the keys of the numeric keypad. The shortcuts are global: they work while another program (for example the vision-mixer software) has the focus.

Open the Keyboard Hook Manager with the keyboard icon on the Game tab.

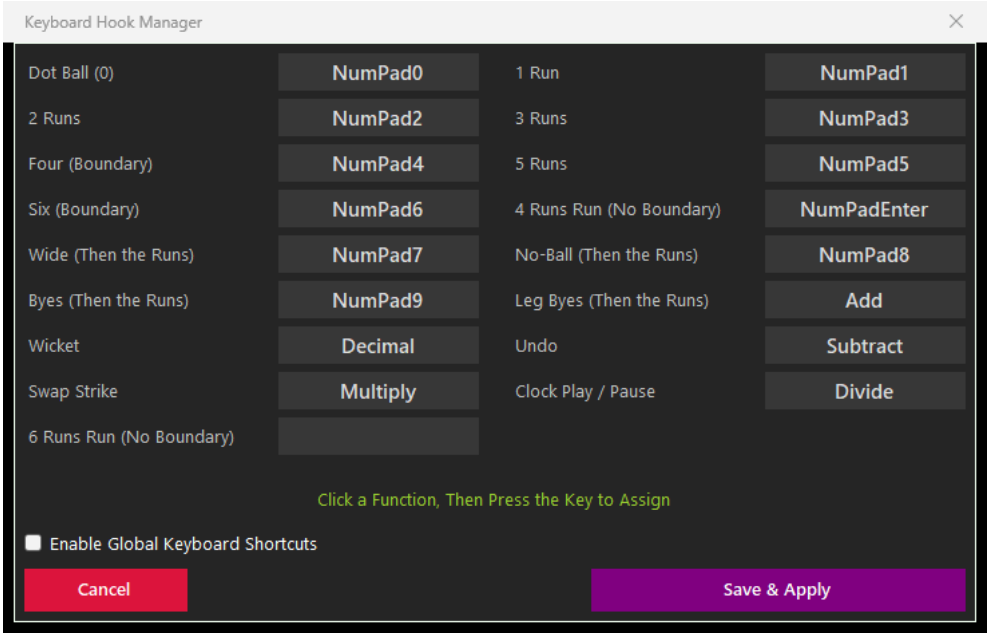


Figure 84. The Keyboard Hook Manager with the default keys.

1. Tick Enable Global Keyboard Shortcuts. The shortcuts are off on a new installation.
2. To change a key, click its box, then press the new key. Right click a box to clear it.
3. Click Save & Apply. Cancel closes without saving.

The keyboard icon on the Game tab is green while the shortcuts are on.

16.2 Default Keys

The numeric keypad mirrors the ball pad of the control panel: the digits are the runs, the keys around them the extras.

Action	Key	Action	Key
Dot Ball (0)	Num 0	1 Run	Num 1
2 Runs	Num 2	3 Runs	Num 3
Four (Boundary)	Num 4	5 Runs	Num 5
Six (Boundary)	Num 6	4 Runs Run (No Boundary)	Num Enter
Wide (Then the Runs)	Num 7	No-Ball (Then the Runs)	Num 8
Byes (Then the Runs)	Num 9	Leg Byes (Then the Runs)	Num +
Wicket	Num .	Undo	Num −
Swap Strike	Num *	Clock Play / Pause	Num /

Action	Key	Action	Key
6 Runs Run (No Boundary)	(none)		

- The extras keys work like the Wd, Nb, B and Lb buttons: press the extra, then the runs. Example: Num 7, Num 0 = a wide; Num 8, Num 4 = a no-ball hit for four.
- Num . opens the Wicket dialog on the PC; finish it with the mouse.
- Num Enter is the Enter key of the numeric keypad. The main Enter key never fires a shortcut.
- New Match has no shortcut.
- An installation updated from an earlier version keeps its saved keys; new actions start without a key.

16.3 Good to Know

- NumLock must be on: with NumLock off the numeric keypad sends other keys and the Num 0-9 and Num . shortcuts do not work.
- A key pressed together with Ctrl, Shift or Alt is ignored.
- Holding a key repeats the action: tap the keys, do not hold them. Undo (Num −) removes a ball entered twice.
- The key also reaches the program that has the focus. Keep the cursor out of text fields of other programs while you score, or the digit is typed there too.
- While you assign keys with the shortcuts switched on, pressing an assigned key also performs its action. Switch the shortcuts off (untick, Save & Apply) before you reassign keys, or use Undo afterwards.
- A key that the match does not allow now (for example a run before the bowler is chosen) does nothing; the message line of the Game tab shows the reason.

In Manual mode (section 5.16) the keys work as quick buttons: Dot ball = +0.1 Ov (one legal ball), 1 and 2 runs, Four and Six = runs for the batting team, Wicket = W, Undo = the last quick button, Clock as usual. The other keys do nothing. While a box of the manual area has the focus the keys are ignored, so digits can be typed.

17. Languages and Translations

17.1 Choosing the Language

The program speaks 46 languages: English, Turkish, Albanian, Azerbaijani, Bosnian, Bulgarian, Chinese, Czech, German, Danish, Spanish, Finnish, French, Georgian, Greek, Croatian, Hungarian, Indonesian, Hindi, Persian, Icelandic, Italian, Japanese, Kyrgyz, Khmer, Korean, Kazakh, Macedonian, Mongolian, Malay, Dutch, Norwegian, Polish, Portuguese, Romanian, Serbian, Russian, Arabic, Swedish, Slovenian, Thai, Tajik, Turkmen, Swahili, Uzbek and Vietnamese.

1. Open Settings > Language, or click the flag at the top right of the Game tab.
2. Choose the language in Select Language.
3. Click the disk icon next to the list. The program shows "New Language Selected! Please Restart Application."
4. Restart cricketBoard 7.

The language applies to the program, the texts on the boards and the remote page. The remote page follows the new language at once; the program after the restart.

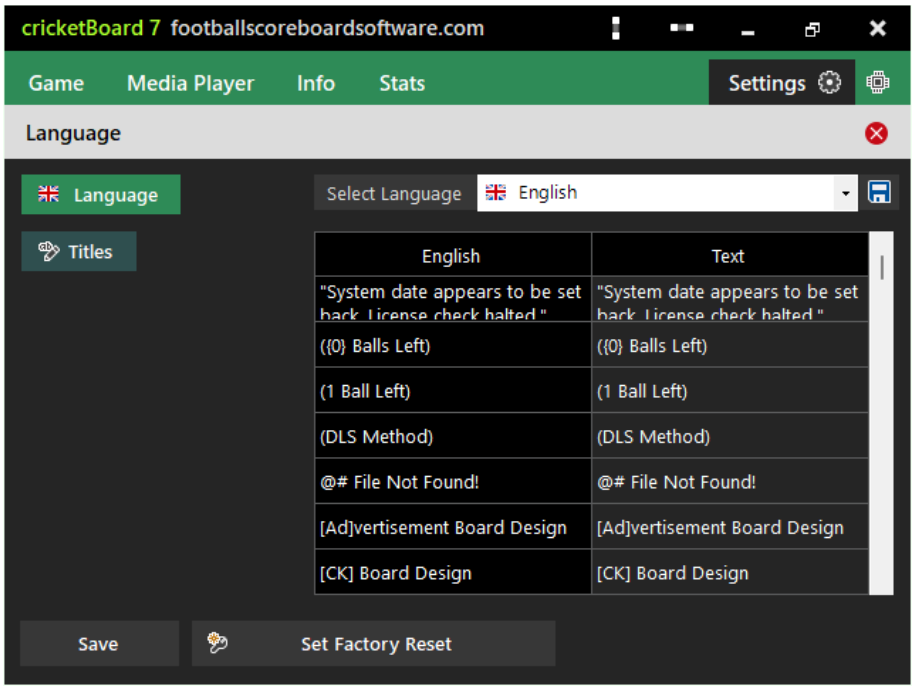


Figure 85. The Language page.

17.2 Editing Translations

Every text of the program can be changed:

1. Choose the language in Select Language.
2. Find the text in the list: English on the left, the translation on the right.
3. Select the translation and press F2, type the new text, press Enter.
4. Click Save. The texts change after the next start.

- Names in braces, for example {0}, are filled in by the program; keep them.
- Translations other than English and Turkish were made by machine translation. Corrections by native speakers are welcome; please send them to support.
- The cricket texts (the ball pad, the Wicket dialog, the rules, the info screens, the scorecard notation) are in English and Turkish. In the other languages they appear in English until they are translated.

- An update of the program keeps your translations and only adds the texts of new features.

17.3 Titles

The Titles tab holds two group names used by the squad lists and Show Pictures: Players and Coach. Change the text and click Save.

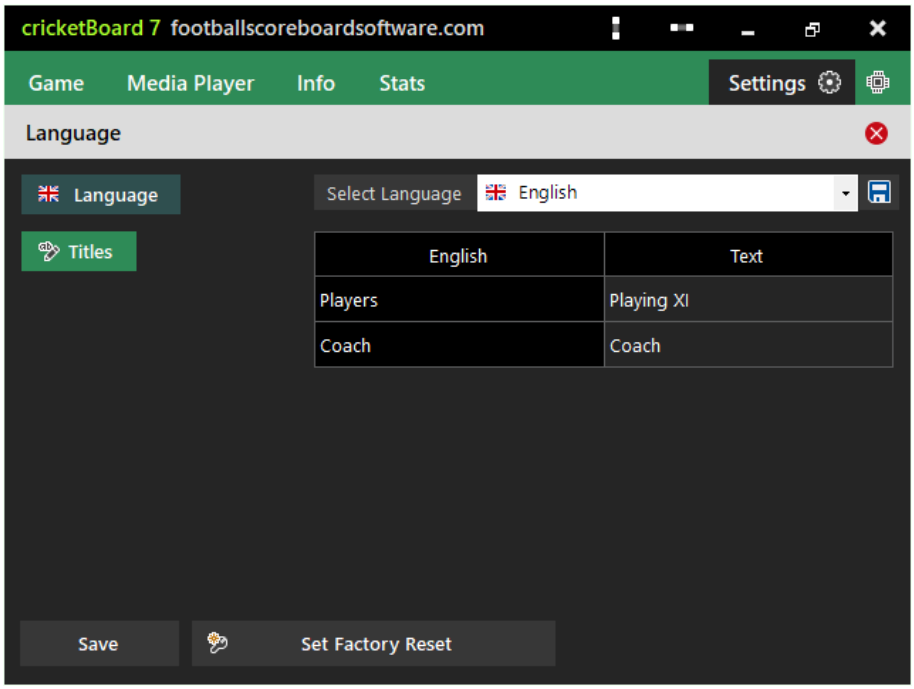


Figure 86. The Titles tab.

17.4 Factory Texts

Set Factory Reset copies the factory texts back:

- On the Language tab: all texts of all languages, at once and without a question. Your own changes are lost. Use it after an update to get the new wording of existing texts.
- On the Titles tab: the titles in the program language.

The factory texts are in common\xml\langFactory.xml; your texts are in common\xml\lang.xml. Copy lang.xml to a safe place before a factory reset if you want to keep your changes.

18. Settings Reference

18.1 The Settings Tab

Button	Opens	Chapter
License (and ? for License Info)	The licence page	3
Screen Properties	The board position and size and the other settings below	18.2
[St]andard / [Sp]onsored / [Ad]vertisement / [CK] Board Design	The design editor. Only the button of the current display mode is enabled.	8
Remote Control	The remote control page	14
Language	Language and translations	17
Youtube Tutorials	Opens the video tutorials in the web browser	–

18.2 Screen Properties

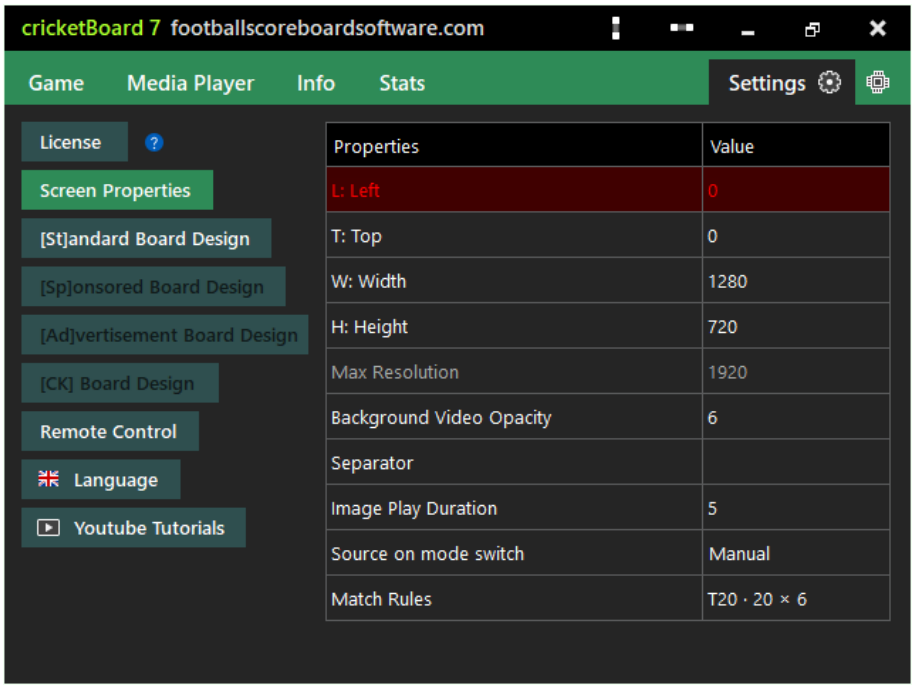


Figure 87. Settings > Screen Properties.

A change takes effect when you leave the cell; there is no Save button. An empty value is not accepted.

Row	Default	Values	What It Does
L: Left	0	Pixels	X position of the board windows on the Windows desktop

Row	Default	Values	What It Does
T: Top	0	Pixels	Y position of the board windows
W: Width	960	Pixels, up to Max Resolution	Width of the board windows
H: Height	540	Pixels, up to Max Resolution	Height of the board windows (in Sp the sponsor band is part of it)
Max Resolution	From the licence	Read only	The largest width and height
Background Video Opacity	6	0-10	Strength of the background video behind the boards and info screens
Separator	Empty	Text	Not used by the cricket factory designs
Image Play Duration	5	1-120 seconds	How long a picture stays in a Media Player playlist
Source on mode switch	Manual	Manual, Restore	Restarts the Ad or CK source when you come back to that mode (chapter 7.7)
Match Rules	The rules summary, for example "T20 · 20 × 6"	"..." button	Opens Match Rules (chapter 6)

18.3 Where Other Settings Are

Setting	Where
Display mode	Game tab: St, Sp, Ad, CK
Design	Game tab: Select Design (chapter 8)
Sponsor band (place, height, content)	Sp page (chapter 7.4)
Ad layout and banners	Ad page > Settings and Banner (chapter 7.5)
Chroma key colour	CK page > Settings (chapter 7.6)
Info screen background	Info tab > gear button (chapter 9.1)
Keyboard shortcuts	Game tab: keyboard icon (chapter 16)
Remote control, PIN	Settings > Remote Control (chapter 14)
Clock mode (timer, countdown or time of day)	Game tab: right click on the clock (chapter 5.11)
Discipline and rules	Game tab: Rules button (chapter 6)
Squads	Info tab: Home Players, Guest Players (chapter 12)
Media Player display mode and sound	Media Player tab (chapter 13.4)

Setting	Where
NDI sender name	start.xml, value SenderName in the NDI section (edit only while the program is closed)

All settings are stored in C:\cricketBoard7\start.xml (and config*.xml). The program saves them at once; a copy of the previous version is kept as start.xml.bak.

19. Troubleshooting and FAQ

19.1 The Board Is Black or Empty

The boards are drawn by the Microsoft Edge WebView2 Runtime. If it is missing, a notice says "WebView2 Runtime is not installed. The scoreboard cannot render." with the download address https://developer.microsoft.com/microsoft-edge/webview2/. Install the runtime and restart the program.

If the board engine keeps crashing, the program switches to software rendering and says so. Restart the program; update the graphics driver if it happens again.

19.2 Display Scaling

Set the Windows display scaling of the board monitor to 100 % (Windows Settings > System > Display > Scale). The program does not adapt to other scaling: at 125 % or 150 % Windows enlarges it, the picture becomes slightly blurred and the board position and size in Screen Properties are counted in scaled pixels.

19.3 Fonts

The setup installs the fonts of the boards, and the program also loads them from C:\cricketBoard7\common\font at every start. If a board shows a wrong font, run the font installation again as administrator:

```
powershell -ExecutionPolicy Bypass -File C:\cricketBoard7\install_fonts.ps1
```

Then restart the program.

19.4 Licence Checks (USB and WMI)

- At start the program reads the Computer ID (up to 30 seconds) and looks for USB sticks (up to 8 seconds), then continues in any case.
- If Windows cannot report the hardware data (WMI), the Computer ID shows ?WMI-UNAVAILABLE, the program runs in DEMO and a notice suggests "winmgmt /verifyrepository". Run that command as administrator, restart the PC and the program.
- A USB stick plugged in after the start is not seen: restart the program.
- An expired licence or a PC clock set back gives DEMO without a message. Check ? License Info on the License page and the Windows date and time.

19.5 Network and Firewall

Problem	Fix
The phone cannot open the remote page	Remote control on? (Settings > Remote Control, box not ticked.) Phone and PC in the same network? Address and port 1907 correct?
Still no connection	Run C:\cricketBoard7\open_firewall_1907.bat as administrator. It adds the four "cricketBoard 1907" firewall rules if they are missing. Check other firewall or security software.
"Remote control unavailable: port 1907 is in use"	Another Board7 program (for example soccerBoard 7) or a second copy of cricketBoard 7 uses the port. Close it and click Retry.

Problem	Fix
The phone shows a green dot but nothing changes	The PIN was changed on the PC: log out and log in again.

19.6 NDI

- Grey NDI button: the NDI runtime cannot be used on this PC. Rest the mouse on the button for the reason, repair or reinstall cricketBoard 7, and restart.
- Amber NDI button: the stream stopped; click it to start again.
- The source does not appear in the receiver: PC and receiver in the same network, NDI not blocked by the firewall; the sender is called CB7_NDI on new installations.
- NDI sources for the Camera tab are searched in the network; click the refresh button if a new source is missing.

19.7 Log Files

The program writes a log file per day: C:\cricketBoard7\logs\cb7_yyyy-MM-dd.log (kept for 14 days). Send the log of the day of the problem to support. It contains the program and runtime versions, the licence mode and the Computer ID (never the licence key), the remote and NDI events and a status line every 10 seconds.

19.8 Damaged Settings Files

Every settings file is saved safely with a backup copy. If a file is damaged (for example after a power cut), the program restores it from the backup and keeps the damaged copy as <file>.corrupt-<date>; the log names the file.

To start with fresh settings: close the program and rename start.xml. The program creates a new one with the first-start values (chapter 2.3). The licence file stays valid.

19.9 FAQ

The boards show DEMO every 10 seconds. No valid licence was found at start. Check Settings > License; after entering a key, restart. With a USB licence, plug the stick in before you start the program.

"License Key Not Valid!" The key belongs to another PC or stick. After a hardware change send the new Computer ID to support.

The board is in the wrong place or has the wrong size. Set L, T, W and H in Settings > Screen Properties (chapter 7.2). Use 100 % display scaling.

A runs button does nothing and the message line is red. The engine refused the ball and names the reason, for example "Choose the Bowler First" or "Choose Both Batters First". Make the choice in the picker with the gold frame (chapter 5.2).

The pickers say "No Players (Players List)". The squad of that team is empty. Fill it in Info > Home Players or Guest Players and click Save (chapter 12).

A bowler is missing from the bowler picker. He bowled the previous over, or he has reached the bowler limit of the rules (chapter 5.7).

The wrong batter is on strike. Click Swap. The program changes ends after odd runs and at the end of the over; after a run out where the batters crossed, correct it by hand (chapter 5.6).

The over ended too early or too late. The umpire may miscount: End Over ends the over now; a ball entered too many is removed with Undo (chapter 5.4).

I entered a ball wrongly several balls ago. Undo goes back one action at a time. Undo back to the wrong ball, then enter the balls again (chapter 5.9).

A rule change is refused. It contradicts what has been played, for example fewer overs than already bowled. For a shortened innings use More > Revised Target / Overs (DLS) (chapter 6.7).

Changing the discipline asks to start a new match. Another discipline is always a new match. Choose the discipline before the toss (chapter 6.3).

Caught is refused on a free hit. On a free hit and a no-ball only run out, obstructing the field and hit the ball twice are possible (chapter 5.6).

A shortcut key does nothing. Switch the shortcuts on in the Keyboard Hook Manager and check NumLock (chapter 16).

My translations changed after an update. They did not: an update only adds new texts. Set Factory Reset brings the factory texts back for all languages (chapter 17.4).

I started the program twice. Close one copy with its Close button. Only one copy should run.

How do I close the program safely? With the X in the title bar of cricketBoard 7 and Yes. The match and the settings are saved.

An info screen shows old values. Info screens are built when you click Show. Click Show again after the next ball (chapter 9.2).

The CK lower third does not go away. Click Hide in the editor, or Hide Lower Third on the CK page (chapter 9.8).

The clock shows the time of day instead of the timer. Right click the clock on the Game tab until its tag reads Timer (chapter 5.11).

The phone remote stopped a video on the board. Logging on and reloading the remote page bring the scoreboard back on the PC. Log on before you start a video (chapter 14.3).

My NDI receiver shows a green picture. That is the Chroma Key display mode with the key colour. Key it in the receiver, or switch to the Standard mode (chapter 7.6).

The Sponsored band is missing. The Sponsored band appears only in the Sp display mode. Check its height and place on the Sp page > Settings (chapter 7.4).

Appendix A: Rules Sources

cricketBoard 7 scores by the Laws of Cricket and the playing conditions of the common formats. The discipline defaults follow these documents; every rule can be adjusted in Match Rules (chapter 6). Playing conditions change from season to season and differ between competitions: check the current edition of the rules of your competition before an event.

Source	What the Program Takes from It
MCC Laws of Cricket, 2017 Code, 3rd edition (2022)	The over (Law 17); scoring runs and the strike after a dismissal (Law 18, 18.11: after a catch the incoming batter takes strike unless the over has ended); boundaries (Law 19); no-ball, wide, bye and leg bye (Laws 21-23) and the dismissals possible on them; the dismissals (Laws 32-40: bowled, caught, hit the ball twice, hit wicket, LBW, obstructing the field, run out, stumped, timed out) and retiring (Law 25.4); declarations and the follow-on (Laws 15 and 14, with the follow-on lead of 200, 150, 100 or 75 runs by match length); results (Law 16); penalty runs (Law 41, 41.17)
ICC Standard Test Match Playing Conditions	Two innings per side over five days, no over limit, no free hit, DRS reviews per innings (default 3), sessions of play
ICC Standard One Day International Playing Conditions	50 overs, 10 overs per bowler, powerplays overs 1-10, 11-40 and 41-50, free hit after every no-ball, 2 reviews per innings, Super Over after a tie
ICC Standard Twenty20 International Playing Conditions	20 overs, 4 overs per bowler, powerplay overs 1-6, free hit, 2 reviews per innings, Super Over after a tie
The Hundred Playing Conditions (ECB)	100 balls in sets of 5, a bowler delivers 5 or 10 balls in a row, ends change after 10 balls, at most 20 balls per bowler, powerplay of the first 25 balls, no-ball of 2 runs and free hit, one strategic timeout of 90 seconds per fielding side after ball 25, 1 review per innings, Super Five after a tie
T10 league playing conditions	10 overs, 2 overs per bowler, powerplay overs 1-3 (or 2 mandatory overs and 1 floating over in overs 3-9), 1 review per innings

Notes:

- The program records what the umpires decide: it does not judge LBW, boundaries or reviews. The engine only refuses entries that the Laws make impossible (for example caught off a no-ball, a bowler beyond his limit of overs, the same bowler in two consecutive overs).
- DRS counts follow the ICC playing conditions: only unsuccessful reviews are lost; reviews with an umpire's call or an overturned decision are retained.
- The program does not calculate DLS targets. A revised target, revised overs and a par score are entered by hand from the official sheet (chapter 6.7).
- Run outs where the batters crossed, short runs and the choice of the end of the incoming batter are left to the operator: correct the strike with Swap.

Appendix B: HTTP API Command Reference

B.1 Commands

Request: http://<PC address>:1907/api.html?_=<number>&pin=<PIN>&cmd=<command>&value=<value>$ (chapter 15). Commands are not case-sensitive.

Command	Value	What It Does
match	–	Game tab to the front and the scoreboard back on the output (stops a video, takes an info screen off).
ball	extra:runs[:b]	One delivery. extra: empty, wd, nb, b, lb, nbb, nblb; runs 0-12; :b = boundary (4, or 6 off the bat).
wicket	how|out|fielder|incoming|extra|runs	A dismissal on a delivery: how = bowled, caught, lbw, run_out, stumped, hit_wicket, obstructing, hit_twice; out = striker, non_striker or a key; the rest optional.
undo	–	Takes back the last action of any kind.
swap_strike	–	Swaps the striker and the non-striker.
set_striker, set_non_striker	Player key	Puts a batter at the crease (an empty place, or a batter who has not faced a ball yet).
set_bowler	Player key	The bowler (not the bowler of the previous over; the bowler limit applies).
end_over	–	Ends the over now.
end_innings	–	Closes the innings now (all out, overs and target are detected by themselves).
declare	–	Declares the innings closed.
retire	key|hurt, key|out	Retired hurt (not out, may resume) or retired out (a wicket).
timed_out	Player key	The incoming batter is out timed out.
penalty	home|5, guest|5	Penalty runs to a team (Law 41).
review	home|overturned, home|umpires_call, home|unsuccessful (or guest|...)	A DRS review; only unsuccessful costs one.
revise	target|overs	Revised target and / or overs ("38" or "38.4"); 0 = no change. No DLS calculation.
par	Runs	The DLS par score; -1 = none.
floating_powerplay	–	The batting team takes its floating powerplay.
fielding_timeout	home, guest, empty	A fielding timeout (empty = the fielding team).

Command	Value	What It Does
session	next, day|session	Multi-day matches: the next session, or day and session (for example 2|3).
toss	home|bat, home|bowl, guest|bat, guest|bowl	The toss, before the first innings.
start_innings	auto, home, guest, follow_on	Starts the next innings.
super_over	–	After a tie: the Super Over (Super Five) follows.
end_match	draw, tie, no_result, abandoned, won_home, won_guest	Ends the match with this result.
new_match	–	New match without a question: score, scorecards, Undo history and per-match info reset; teams, squads, rules and lists kept.
discipline	0-5	Test, ODI, T20, The Hundred, T10, Custom, with their saved rules. Only before the first action of a match.
mode	manual, ball	Manual mode on or off (section 5.16).
manual_set	field=value	One typed value of Manual mode (also in Ball by Ball): home_score, home_overs, guest_score, guest_overs, batting (home, guest, none), target, batter1, batter1_figures, batter2, batter2_figures, bowler, bowler_figures, status.
manual_runs	0-12	Manual mode: runs for the batting team.
manual_wicket, manual_ball	–	Manual mode: one wicket, one legal ball for the batting team.
manual_undo	–	Manual mode: takes back the last quick button (undo does the same in Manual mode).
set_home_name, set_guest_name	Text	Team name (_ = line break).
line_text_1, line_text_2	Text	Match title, venue.
set_chronometer	play, pause, stop, time	Clock (timer or countdown): play, pause, stop (first call pauses, second resets to zero), or a time m:ss, mm:ss, h:mm:ss. Not in time-of-day mode.
click	St, Sp, Ad, Ck	Switches the display mode (and brings the scoreboard back).
click	playpause, stop	Clock play / pause; stop pauses.
clear_events_history	–	Clears the event history texts.
info_show	Screen[|Field=value...]	Sets fields and shows an info screen (B.4).

Command	Value	What It Does
info_hide	–	Takes the info screen off (CK: the lower third fades out).
info_set	Field=value	Sets one field (see B.4).
info_list	List=c1~c2|c1~c2	Replaces a list (see B.4); empty clears it.
start_playlist	1-20	Media Player: plays playlist 1-6 (buttons) or 7-20 (list). A call while a playlist plays stops it.
start_playlist_ad_screen	1-6	Switches to Ad and plays playlist 1-6 of the Ad page. A call while a playlist plays stops it.
GET	–	The state as XML (B.2).

B.2 The GET Reply

Fields with soccerBoard 7 names, filled with cricket values:

Field	Meaning
BoardType	Display mode: St, Sp, Ad, CK
Home, Guest	Team names
HomeScore, GuestScore	Team score "187/6", two innings "120 & 187/6d"; empty before the team batted; in Manual mode the typed scores
HomeEvents, GuestEvents	Event history text
Chronometer, StatusChronometer	Clock text; True while the clock runs
Period	Number of the current innings (Super Over innings included)
Extra01, Extra02	Match title and venue
PlaylistStarted, AdPlaylistStarted	A playlist plays
StatsData	Score and overs of both teams: home~label~guest|...

Cricket fields:

Field	Meaning
Sport, Discipline, DisciplineName, Rules	Cricket; 0 Test, 1 ODI, 2 T20, 3 The Hundred, 4 T10, 5 Custom; its name; the rules in force (Key=Value;...)
Phase, Situation, Result, Toss	prematch, live, break, over; the innings and target, the break text or the result; the result text; the toss text
CanUndo, ActionSerial	An action can be undone; a counter that grows with every action and undo
SuperOverAvailable, FollowOnAvailable	A Super Over or the follow-on can be started

Field	Meaning
BattingTeam, InningsNumber, InningsName	0 home, 1 guest, -1 none; the innings in progress
Score, Overs, OversHome, OversGuest, BallsMode	The current innings ("124/3", "15.2"); each team's latest innings; True when the rules count balls
BallsRemaining, BallSet, Sessions, Day, Session	Legal balls left (-1 = no limit); The Hundred set "Set 13 · 3/5"; multi-day match; day and session
Target, RunsRequired, Equation	The chase (0 = no target); "Northfield Foxes Need 24 Runs from 18 Balls", "Lead by 45 Runs" ...
Crr, Rrr, Projected	Run rates ("8.50", empty when not defined); projected total (-1 = none)
Extras, Partnership, LastWicket	Texts of the current innings
ThisOver, LastOver, ThisOverClasses, LastOverClasses	The ball strips (". 1 4 W 1wd 6") and one class per ball: dot, run, four, six, wicket, extra
Striker, NonStriker, Bowler (+ Name, Figures)	Player keys, display names, figures "45 (32)" and "3.2-0-24-1"
NeedStriker, NeedNonStriker, NeedBowler	True when the operator must choose
Batters, Bowlers, Fielders	The batters who can come in, the players allowed to bowl now, the fielding team (key~name|...; † = wicketkeeper)
FreeHit, Powerplay, Timeout, TimeoutAvailable, FloatingAvailable, OnHatTrick	Badges and available actions
DrsEnabled, DrsHome, DrsGuest	DRS reviews left in this innings
Refusal, RefusalSerial	The reason of the last refused remote action and its counter
InfoOnAir, InfoScreens, Labels	The info screen on air; the info screens (Key~Label|...); the remote-page texts in the program language
InfoScreensOff	The info screens that cannot be shown now (Key|Key...; Manual mode)

Manual mode fields (the cricket fields above always describe the kept ball-by-ball match; HomeScore and GuestScore follow the mode):

Field	Meaning
Mode	ball or manual
ManualValues	The typed values: field~value|... (the fields of manual_set)
ManualProgressHome, ManualProgressGuest	"(14.4)", or "57 Balls" in The Hundred
ManualEquation, ManualCrr, ManualRrr	The equation and the run rates worked out from the typed values (empty = none)
ManualCanUndo	True when a quick button can be taken back

B.3 Commands of Other Board7 Programs

Command	Cricket Meaning
set_home_team, set_guest_team	set_home_name, set_guest_name
set_chronometer play | pause | stop | time	The clock
click playpause | stop	The clock

Accepted and ignored (a warning is written to the log): point_home, point_guest, serve, format, set_home_score, set_guest_score (with _up / _down), set_home_games_up / _down, set_guest_games_up / _down, set_home_name2, set_guest_name2, outcome, fault, serve_speed, bigpoint, challenge_lost, challenges_reset, challenges_set, info_goal, info_card, info_subst, stats_show, stats_set, stats_add, stats_clear, stats_recalc, stats_reset_set, stats_rows, set_chronometer with ! (added time), click first_half / second_half / extra_1 / extra_2 / show_added.

B.4 Info Fields and Lists

Field	Values
Review.Side	Home, Guest
Review.State	InProgress, Overturned, UmpiresCall, Unsuccessful
Result.Award	Text (Player of the Match)
Batting.Innings, Bowling.Innings, Fow.Innings, Extras.Innings, Summary.Innings	Current, Innings1, Innings2, Innings3, Innings4
Teams.Side	Both, Home, Guest
Status.Type	RainDelay, BadLight, WetOutfield, Drinks, Lunch, Tea, Stumps, Injury, Custom
Status.Text, Status.Side, Status.Minutes	Text; None, Home, Guest; minutes of the countdown (0 = none)
Order.Title	Text (the heading of Fixtures)

List	Columns (separated by ~)
Order.Rows	time ~ ground ~ round ~ team 1 ~ team 2
Officials.Rows	role ~ name ~ country

Screens for info_show: Wicket, Boundary, Milestone, Partnership, Review, Powerplay, Timeout, Toss, Target, Result, Batting, Bowling, Fow, Extras, Summary, Teams, Status, Order, Officials.

Appendix C: Glossary

Term	Meaning
All out	The batting team has lost all its wickets (Players per Side − 1); the innings ends.
All-rounder	A player who both bats and bowls.
API	The HTTP command interface on port 1907 (chapter 15).
Board	The output window with the graphics (Standard, Sponsored, Advertisement or Chroma Key).
Boundary	A four or a six: the ball reaches or clears the boundary.
Bye, leg bye	Runs scored when the ball did not touch the bat (bye) or touched the batter's body (leg bye). Extras, not charged to the bowler.
Chroma key (CK)	Graphics on a solid key colour that a vision mixer replaces with the camera picture.
CRR, RRR	Current run rate, required run rate: runs per over.
Declaration	The batting captain closes the innings before it is complete. Shown as "d", for example 450/7d.
DEMO	The program without a valid licence.
Discipline	The format of the match in the program: Test / First-Class, One-Day, T20, The Hundred, T10, Custom.
Display mode	St, Sp, Ad or CK.
DLS	The Duckworth-Lewis-Stern method of revised targets in interrupted limited-overs matches. Entered by hand in the program.
Dot ball	A legal delivery without a run.
DRS	Decision Review System: a team may ask the third umpire to review an on-field decision.
Economy rate	Runs conceded by a bowler per over.
Equation	What the batting team needs: "Need 24 Runs from 18 Balls".
Extras	Runs not scored off the bat: wides, no-balls, byes, leg byes and penalty runs.
Fall of wicket	The team score when a wicket fell, for example 87/3 (12.4).
Floating powerplay	A powerplay over that the batting team chooses within allowed overs (some T10 leagues).
Follow-on	In a two-innings match the team batting second, far behind, is made to bat again at once.
Free hit	The delivery after a no-ball in limited-overs cricket: the striker can only be out run out, obstructing the field or hit the ball twice.
Hat-trick	Three wickets with three consecutive deliveries by one bowler.

Term	Meaning
Info screen	A graphic with match information shown instead of the scoreboard, or as a lower third in CK.
Innings	One team's turn to bat.
Lower third	A graphic in the lower part of a TV picture.
Maiden	An over in which the bowler concedes no runs.
Master	A factory design: Navy, Charcoal or Clay.
NDI	A standard for video over the network; cricketBoard 7 can send and receive NDI.
No-ball	An illegal delivery: a penalty run (two in The Hundred) and an extra ball.
Non-striker	The batter at the bowler's end.
On air	Shown on the output now.
Over	A set of legal deliveries (6; 5 in The Hundred) bowled from one end.
Par score	The score a chasing team should have at a point of an interrupted match (DLS).
Partnership	The runs scored while two batters are together.
Penalty runs	Five runs awarded by the umpires for a breach of the Laws (Law 41).
PIN	The code that protects the remote control.
Powerplay	Overs with fielding restrictions, shown with a badge.
Projected score	The total the batting team reaches at the current run rate.
Retired hurt, retired out	A batter leaves the field: hurt = not out and may resume; out = a wicket.
Scorebug	The small score graphic of the CK mode.
Session	A period of play in a multi-day match (morning, afternoon, evening).
Strike rate	Runs per 100 balls faced.
Striker	The batter facing the bowler.
Super Over	A one-over eliminator after a tied limited-overs match (Super Five in The Hundred).
Timed out	The incoming batter is out for not being ready in time.
u	The board unit of the designs: 1 % of the board height on 16:9 boards.
Umpire's call	A DRS result that keeps the on-field decision; the review is retained.
WebView2	The Microsoft Edge component that draws the boards.
Wicketkeeper (†)	The fielder behind the stumps; marked † on the scorecard.
Wide	A delivery out of the batter's reach: a penalty run and an extra ball.

Appendix D: Match-Day Checklist

Before the event:

1. Licence: the licence icon at the right of the menu bar shows a CPU or USB symbol, not a padlock (chapter 3).
2. Board output: Settings > Screen Properties L, T, W, H match the LED or second monitor; Windows display scaling of that monitor is 100 % (chapter 7.2, 19.2).
3. Design: the right master or your own design is applied in every display mode you will use (chapter 8).
4. Rules: the Rules button shows the right discipline; Match Rules has the playing conditions of the competition: overs, bowler limit, powerplays, free hit, DRS reviews, timeouts (chapter 6).
5. Squads: both squads with shirt numbers, short names, captain and wicketkeeper, in batting order, saved (chapter 12).
6. Data: fixtures and officials are filled in (chapter 9).
7. Sponsors and media: sponsor logos, playlists and background video are in place (chapter 13).
8. Remote: switched on, PIN changed, the phone logged in, a test ball entered and undone (chapter 14).
9. Keyboard shortcuts: switched on if used, NumLock on (chapter 16).
10. NDI or video output: the receiver or vision mixer shows the board; for keying use CK with a key colour (chapter 7.6).

Before each match:

1. New Match (Game tab), then the team names, the match title and the venue.
2. The toss on the break panel, then the start of the first innings.
3. The opening batters and the opening bowler.
4. The clock in the mode you need (timer, countdown or time of day).
5. The display mode for the moment (St, Sp, Ad or CK) and the scoreboard on the output.

During the match:

- One person scores. Use Undo at once after a wrong entry.
- Choose the bowler at the start of every over and the incoming batter after every wicket.
- Record every DRS decision in More > DRS Review; show the DRS Review screen if wanted.
- Breaks: the countdown on the clock or a Status Card; the Innings Summary or the scorecards at the innings break.
- Interruptions: a Status Card; after the restart, a revised target and overs from the officials (More > Revised Target / Overs).

After the match:

- Show the Result screen (with the Player of the Match) and the scorecards if wanted.
- Close cricketBoard 7 with its Close button at the end of the day; the match and the settings are saved.