RAC3R

MANUAL AND SETUP GUIDE

OPERATOR MANUAL

Setting up and running RAC3R: Control Center, Windows app, bookings and admin. For owners, center managers and everyone who looks after the technology in the center.

Software
RAC3R · Operations and control software for sim racing centers

As of
17 November 2026

OVERVIEW

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HOW TO READ THIS MANUAL

- Buttons appear exactly as you see them on screen: **Generate code**. Tabs and menu items are in bold; tabs are also underlined: **Sim PC**.
- Click paths are separated by red bars: **Control Center** / **Devices** / **Pair sim PC**.
- Text that the software displays is shown in quotation marks: “Sim ready for use”. Folders, files and addresses appear in this typeface: `C:\racecenter`.
- Keys: **Alt** + **F4**.

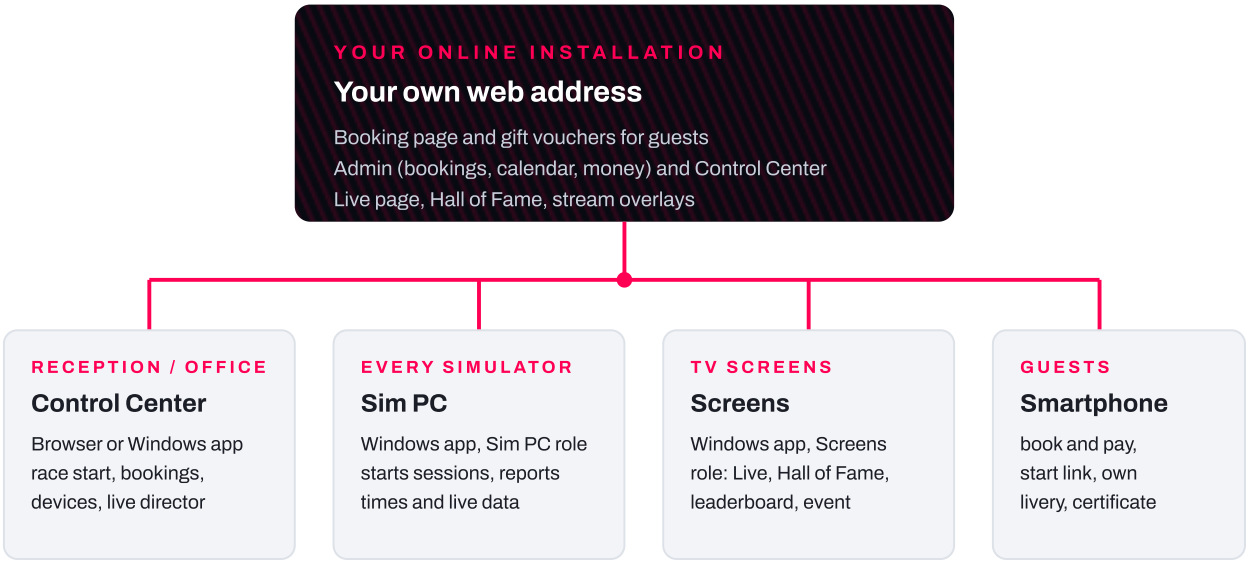
> **THE SCREEN TAKES PRECEDENCE**
>
> RAC3R is under continuous development. If a detail on your screen differs from this manual, the screen is right. The pictures in this manual are screenshots of the real software with made-up sample data. They show the German interface; in English, the screens have the same layout and use the labels given in this manual.

CHAPTER 01

WELCOME TO RAC3R

RAC3R is the operations and control software for your sim racing center: guests book online, your staff start sessions from the Control Center, lap times go straight onto the leaderboard, and the screens in the center show what is happening on track.

THE THREE PARTS



One PC can have several roles – for example a reception PC that runs the Control Center and a TV.

- **Your online installation** is the heart of the system: a website at your own address with the booking page, the admin area and the Control Center. It runs on your own online accounts (chapter 02). Online booking, payments, emails and the live page all run there – even when no PC in the center is switched on.
- **The Windows app** runs on every PC in the center. For each PC you choose one or more roles: **Sim PC** (at the simulator, invisible in the background), **Control Center** (Control Center and admin in a separate window) and **Screens** (full-screen views on TVs). The app is the same for every center and connects to your center's address the first time it starts.
- **The guest pages** open in a browser or on a phone: booking, buying a gift voucher, starting a session on their own, uploading their own livery.

WHAT THE LICENSE UNLOCKS

Without an active license, day-to-day operation carries on: online booking, admin, gift vouchers, subscriptions, lap times and Hall of Fame. Sessions are then started as before via your sim manufacturer's launcher. The license adds the Control Center sections that control the simulators:

Section	Without a license	With a license
Race start	locked, yellow notice	start and end sessions from the Control Center, Box, Reset, Reload, joint races
Devices, **Live director**, **Screens**, **Liveries**, **Self-start**, **Queue**, **Idle screen**, **Safety briefing**, **Content**, **API and webhooks**, **Radio**	padlock in the menu; the page shows the "Part of the license" card	fully available
Live page and screens in the center	break programme (records, Hall of Fame, booking)	the current sessions as well
Booking, admin, gift vouchers, Hall of Fame	fully available	fully available

Nothing is deleted when there is no license: once the license is active, all sections are back immediately, with all existing data and settings.

YOUR PATH TO LAUNCH

This manual lets you set up RAC3R yourself. If you bought through a Buy It Now listing, setup via remote support and Full Service for the first 12 months from activation are included (24 months for Lifetime). An eBay auction includes neither; you can add both at any time (chapter 10).

1
Check the requirements
PCs, Windows, games with a commercial license, internet, online accounts. Chapter 02.

2
Online installation ready
Your address with booking page, admin and Control Center. Chapter 02.

3
Activate the license
Enter the key under **Control Center** / **License**. Chapter 03.

4
App on every PC
Install it, enter the address, choose a role, pair with a code. Chapter 04.

5
Sims ready for use
Work through the "Sim ready for use" list, then do a test session. Chapter 04.

6
Day-to-day operation
Race start, guests on site, screens, bookings. Chapters 05 to 07.

CHAPTER 02

REQUIREMENTS

What needs to be in place on site and online for RAC3R to run – and what you provide yourself. You will find a detailed checklist for room, power, safety and legal matters later in the Control Center under **Location** (chapter 05).

PCS AND WINDOWS

Item	Requirement
Operating system	Windows 10 or 11, 64-bit – on every sim PC, at reception and on the PC that drives the screens.
Windows account	Installing the app does not require administrator rights (it installs for the signed-in user). Administrator rights are needed just once, for two things only: the firewall rule for joint races and the installation of OBS. Windows asks for them itself.
Internet	Every PC needs internet access. The sim PCs check in with your online installation continuously; if a sim drops out, the Control Center sees it.
Local network	Only for joint races: the sims must be able to reach each other, and one of them hosts the race server.
Screens	TVs or monitors connected to the reception PC or to a separate PC; the app detects them on its own.
Windows app	Version 1.2 or later for the idle screen, the safety briefing at the sim, screenshots, the Windows update status and Stream Deck. Older versions fetch the update themselves as soon as an update address is set (section 4.9).

RAC3R does not specify fixed minimums for processor, memory or bandwidth – what counts are the requirements of your games. Continuous operation has been tested with six full-motion simulators from one manufacturer; check other hardware with a test session when you first start up.

GAMES AND SOFTWARE ON THE SIMULATOR

Software	Purpose
Assetto Corsa	Required for race start from the Control Center. Race start only launches Assetto Corsa.
Assetto Corsa Competizione, rFactor 2, Le Mans Ultimate	Detected automatically; lap times and live data come in on their own. Sessions are started in the game itself.
Steam	The app looks for games in all Steam libraries. For joint races, each sim needs its own Steam account.
Custom Shaders Patch	Needed for “Box” and “Reset” from the Control Center, for the in-game display and for the Stream Deck buttons. Everything else works without it.
Content Manager	Only needed if you use its setups in race start (“From Content Manager”).
Your sim manufacturer’s motion software	Moves the seat. RAC3R detects whether it is running, but never starts or operates it.

COMMERCIAL GAME LICENSES

The RAC3R license does not include any game licenses. To run games in your center, you need a **commercial license** from the publisher of each game for every simulator – a private Steam license does not permit commercial use. Get written confirmation for add-on software such as Content Manager or Custom Shaders Patch as well. The manufacturer does not check these rights and does not advise on them.

YOUR ONLINE INSTALLATION

The booking page, admin and Control Center run as a website at your own address, for example `buchen.mein-center.de`. You will enter this address in the Windows app later – it is the same address you use to open the admin area in your browser. The online installation runs on accounts that belong to you:

- website hosting and a database,
- an email delivery service (booking confirmations, gift vouchers),
- a payment provider for your guests’ online payments,
- your domain.

You pay the fees for these services directly to each provider. Setting up the online installation (connecting the accounts, entering your logo, prices, opening hours and company details for the legal notice and receipts, putting the address live) takes IT skills. If you would rather not do it yourself, we take care of it as part of setup – included with Buy It Now, charged at the hourly rate after an auction (chapter 10). Please have the following ready:

- your logo (PNG or SVG), your prices and opening hours,
- company details for the legal notice (Impressum) and invoices,
- the logins for your online accounts.

Logins for your staff (email and password) are created in the online installation; the admin area has no user management. Admin accounts can also pair PCs and enter the license key.

KEEPING THE DATABASE UP TO DATE

New features bring their own tables in your database. They are applied once (as a migration) and leave all existing data untouched. For the features described in this manual, these are:

Migration	For
`migration-add-warteschlange.sql`	Queue, check-in by QR code, no-shows
`migration-add-rig.sql`	Idle screen, safety briefing with records, screenshots
`migration-add-werbefolien.sql`	Signage
`migration-add-sim-ausbau.sql`	In-game display, in-house race server, content
`migration-add-schnittstelle.sql`	API and webhooks
`migration-add-sprachchat.sql`	Radio (voice link on the local network)

> **IF A MIGRATION IS MISSING**
> Operation carries on; only the feature concerned is unavailable or limited. The page tells you so itself, for example “The database tables are missing. Please run prisma/migration-add-warteschlange.sql.” With Full Service, and when we do the setup for you, we apply the migrations.

WHAT THE PURCHASE INCLUDES – AND WHAT IT DOESN’T

Included

- License key for one location (12, 24 or 60 months from activation, or Lifetime with no end date), covering all simulators and PCs at that location
- the Windows app as a download
- this manual with setup guide
- templates for general terms and conditions (AGB), privacy policy and terms of participation
- security updates and the correction of software defects during the term
- with Buy It Now: Full Service (feature updates, help, adjustments to game updates) for the first 12 months from activation, 24 months for Lifetime
- with Buy It Now: one-time initial setup via remote support

Not included

- licenses for games and other third-party software
- hardware, Windows, motion software
- your online accounts (hosting, database, email, domain) and your payment provider’s fees
- with an auction: Full Service and setup
- support after the included period (support package), training and individual hours: can be booked separately (chapter 10)

CHAPTER 03

ACTIVATING THE LICENSE

After your purchase you receive a license key and the link to the Windows app. You enter the key once in the Control Center – and race start is unlocked.

THE LICENSE KEY

The key has the format `RAC3R-XXXXX-XXXXX-XXXXX-XXXXX`. There is one key per license. It applies to one location and is **permanently bound to your online installation** the first time it is activated. The term – 12, 24 or 60 months, Lifetime or, for a day license, a few days – belongs to the key; the activation server sets it on activation. The term starts with the first activation, and so does the included Full Service. Keep the message containing the key in a safe place.

STEP BY STEP

1. Sign in to your online installation with an **admin account** and open **Control Center** / **License**.
2. The **License key** box first shows “No key activated.” Click **Enter license key**.
3. Paste the key into the field (the hint above it reads “Key from your order. When activated, it is permanently bound to this installation.”) and click **Activate**.
4. The Control Center contacts the manufacturer’s activation server and receives a signed certificate. The box then shows “Activated: fixed-term license until …” or “Activated: Lifetime license.”

From now on the box shows the key in shortened form (for example `RAC3R-•••••-•••••-•••••-B3NT5`), the **Term** (“Fixed term (12, 24 or 60 months)” or “Lifetime”) and **Valid until** (a date, or “no end date”). At the bottom of the admin area and the Control Center, the manufacturer’s notice shows the license status: “12-month license until …”, “24-month license until …”, “60-month license until …” or “Lifetime license”; a day license reads, for example, “Day license (3 days) until …” with the time. Once the term is over, it says “… · expired on …”.

> **WHO CAN ENTER THE KEY?**
> Only your center’s admin accounts. Staff accounts see the box, but not the button. The manufacturer’s technical account cannot enter a key either. To prevent guessing, no more than ten attempts are allowed within ten minutes.

IF ACTIVATION FAILS

Message	What to do
“This is not a valid license key. Please check for typos (format RAC3R-XXXXX-XXXXX-XXXXX-XXXXX).”	Copy the complete key from the message, without any spaces at the end.
“This license key is not known. Please check for typos or contact the seller.”	Check the key; if the message persists, contact the seller.
“This license key is already activated for … To transfer it to another installation, please contact the seller.”	The key is already bound to a different address. Ask the seller for a transfer (for example if you move).
“This license key is blocked. Please contact the seller.”	Contact the seller.
“The manufacturer’s activation server cannot be reached right now. Please try again later.” or “Activation is not possible right now. …”	Try again later. Operation carries on in the meantime.
“Too many attempts. Please try again in ten minutes.”	Wait ten minutes.
“Only the center’s admins can enter the license key.”	Sign in with an admin account.
“This installation already has a Lifetime license. A fixed-term key is not needed – please contact the seller.”	Nothing to do; contact the seller if you bought the key by mistake.

Messages that come directly from the activation server may appear in German.

THE “LICENSE” PAGE

Under **Control Center** / **License**, every account can see the status: at the top the notice “Buy or renew your license on eBay” with the button **Go to the eBay listing**; below that, whether race start is unlocked, which simulators are connected, what the license covers (the “What the license includes” box, plus “For your guests – license only”) and the license statement, for example “Licensed for all simulators at this location until …”. The license covers all simulators at the location, including any you add later. Motion control always remains with the manufacturer of the motion platform.

TERM, EXPIRY, RENEWAL

- **Fixed-term license** (12, 24 or 60 months): ends when the term runs out, without any notice of termination, and does not renew automatically. After expiry, race start keeps working for another **14 days** (“The license expired on … and will keep running for 14 more days. …”); after that, the licensed sections are locked until you renew.
- **Renewal:** buy a new key on eBay – **Go to the eBay listing** on the “License” page takes you straight there – and enter it under **Control Center** / **License** with **Change key**. The new term of a fixed-term key follows on from the current one. For a license bought on eBay, the page therefore shows no prices and no buy button, but the “Renew” box with the link to the eBay listing.
- **Lifetime:** has no end date – “Your Lifetime license has no end date – there is nothing to renew.”
- If a key is no longer valid (blocked or transferred), the box shows “The key is no longer valid: …”.

After expiry, your data stays complete in your own accounts. Phone notifications about the license (the “License” switch, chapter 05) remind you before it expires.

DAY LICENSE FOR EVENTS

For jobs lasting just a few days – a trade fair stand, a corporate party, a street festival, a pop-up center – there is the day license. It is valid for 1 to 31 days; 1, 2, 3 or 7 days are typical. During the term, the Control Center is fully available for all simulators at the location. Day licenses are available on request; send us the venue, the date and the number of days.

1. Enter the key **only shortly before the event**, as described above under **Control Center / License**. The term starts on activation and is exact to the minute: 3 days from Friday at 9:00 a.m. end on Monday at 9:00 a.m.
2. The Control Center needs internet access once to activate the key. After that, it checks the license on its own.
3. The “License” page shows the term, for example “Day license (3 days)”, and the end with date and time.

HOW IT DIFFERS FROM THE FIXED-TERM LICENSE

- When it ends, race start is locked immediately, without the 14-day grace period. There are no reminders before it expires.
- A day license does not extend any other license. If you enter a second one while a day license is running, the remaining time of the first one is lost.
- If a longer license is already running on the installation, the day license is rejected and not bound: “This installation is already licensed until …. The day license is not needed and remains unused.”
- Full Service and setup are not included. You book help before or during the event by the hour (chapter 10), unless the day license was expressly sold with setup.

CHAPTER 04

THE WINDOWS APP

One app for every PC in the center. It connects the simulators to your Control Center, opens the Control Center and admin in a separate window and plays live views on your TVs. Setup works with a code – nobody on site has to type in paths, IDs or passwords.

4.1 DOWNLOAD AND INSTALLATION

1. Download the installer using the link from your delivery. The file is called `RAC3R-<version>-Setup.exe`, for example `RAC3R-1.2.0-Setup.exe`.
2. Optional: check that the file is complete and unmodified. To do so, open PowerShell in the download folder and enter `Get-FileHash .\RAC3R-1.2.0-Setup.exe -Algorithm SHA256`. The result must match the checksum from your delivery.
3. Run the installer. If Windows shows “Windows protected your PC”, click “More info” and then “Run anyway”.
4. The installer asks for the destination folder (the default is fine), creates a desktop shortcut and starts the app when it is done. Administrator rights are not required – the app installs for the signed-in Windows user.

> **ONE USER PER PC**
>
> Settings, pairing and autostart apply to the Windows user you install under. Set up the app under the user who is signed in on that PC in everyday operation.

4.2 FIRST START: SETUP IN FOUR STEPS

On first start, the **Settings** window opens with the setup. The steps **Address**, **Choose role**, **Pair** and **Check** are shown at the top. You can run the setup again at any time later with **Start setup** at the top right.

Step 1: Your center’s address

Enter the address of your online installation – the same one you use to open the admin area in your browser. The app adds “https://” itself; any path you append, such as `/login`, is dropped. Click **Check and continue**. The app checks that your Control Center really answers at that address and then reports, for example, “Connected to “Mein Center” (buchen.mein-center.de).” Only then does it save the address.

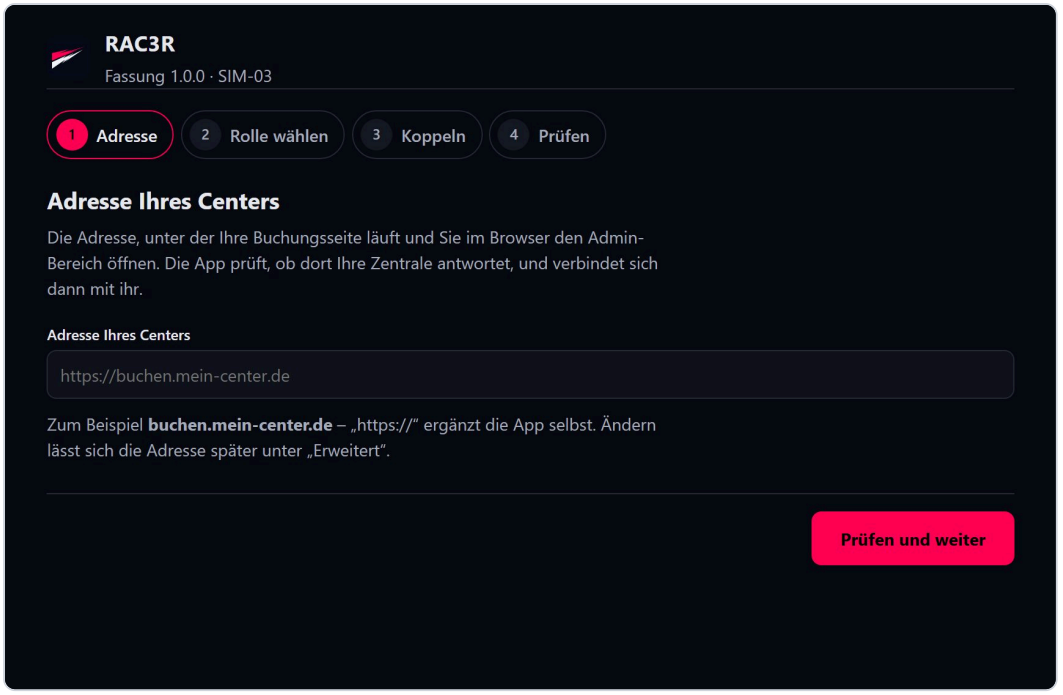


Figure 4.1 First step: your center's address. You can change the address later under "Advanced".

Step 2: What does this PC do?

Choose one or more roles (multiple selection possible):

Role	What it does
Sim PC	"Sits at a simulator. Lap times, live data and race start run invisibly in the background."
Control Center	"Race start, devices, live director and admin in a separate window – for reception or office."
Screens	"Live view, Hall of Fame or leaderboard in full screen on connected monitors or TVs."

Leave **"Start with Windows (recommended)"** ticked. Below it, you can see which address the app connects to; **change** takes you back to step 1. Then click **Next**.

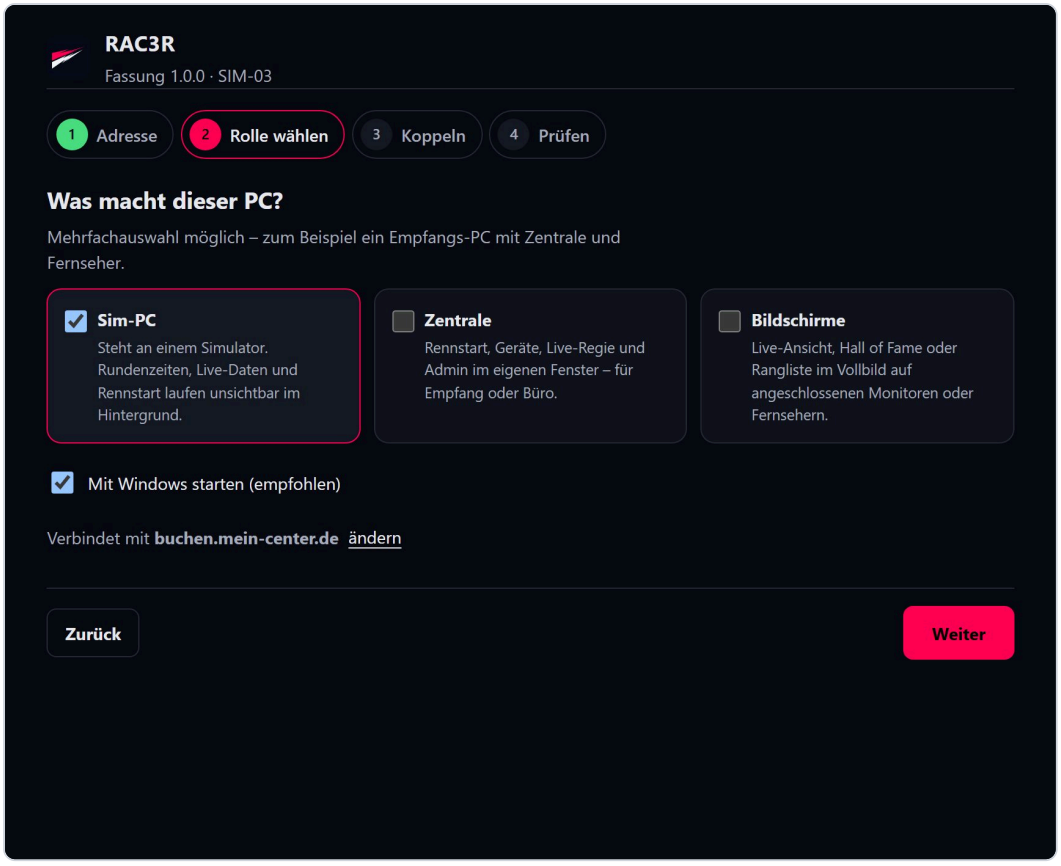


Figure 4.2 Choosing the role – here for a sim PC.

Step 3: Pairing with the Control Center

Pairing means that the Control Center gets to know this PC and sends it its access credentials. There are two ways – use whichever is more convenient at the time.

Option A: enter a code from the Control Center

1. In the Control Center (browser or phone), open **Devices / Pair sim PC**.
2. Choose the target: “As a new sim” (with a name, e.g. “Sim 7”), “For an existing sim (e.g. new PC, switching to the app)” or “Screens only (PC without simulator)”. Then click **Generate code**.
3. Type the code (6 characters) into the “Code (6 characters)” field in the app and click **Pair**.

The code is valid for 15 minutes and can be used only once. The Control Center reports on its own as soon as the PC is paired.

Option B: approve remotely

1. In the app, click **Show code and wait**. The app displays a code and a QR code.
2. In the Control Center, open **Devices / Pair sim PC / Requests** – on a phone you can also scan the QR code. Compare the code with the screen at the PC, choose the target and click **Accept**.
3. The app pairs itself. Nobody has to type anything at the PC.

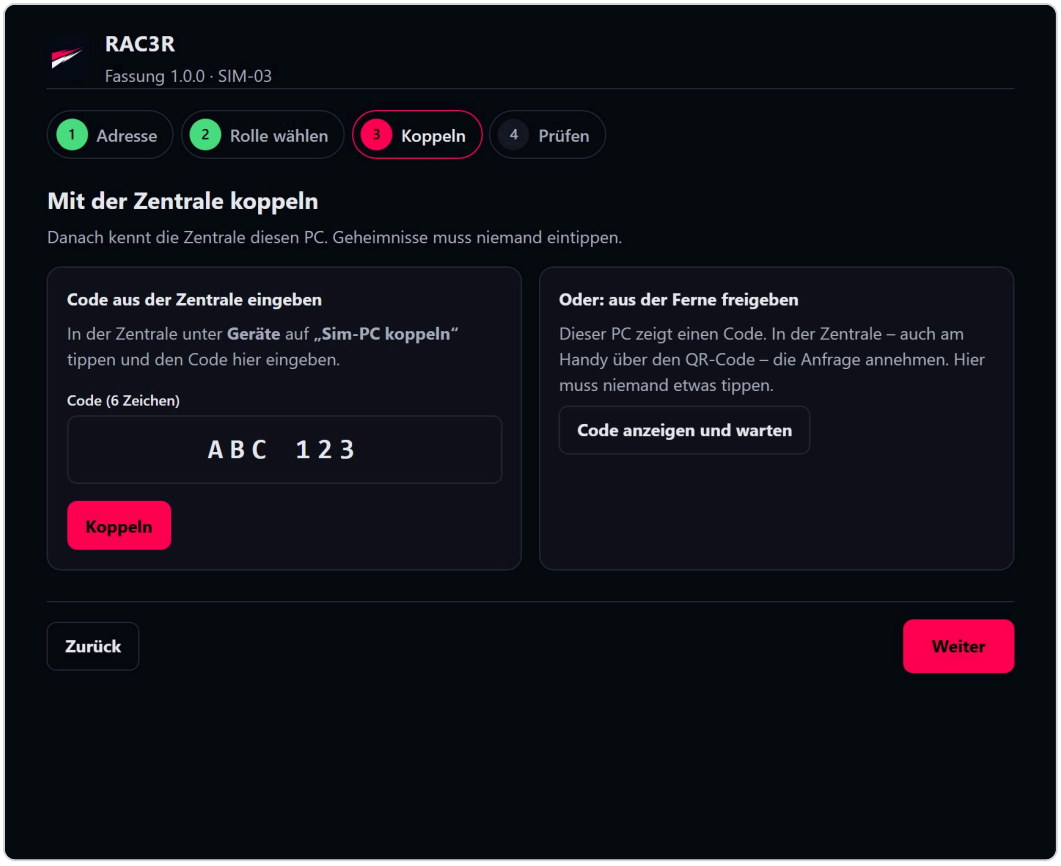


Figure 4.3 The two ways of pairing. Option B is particularly suited to setup via a remote support tool.

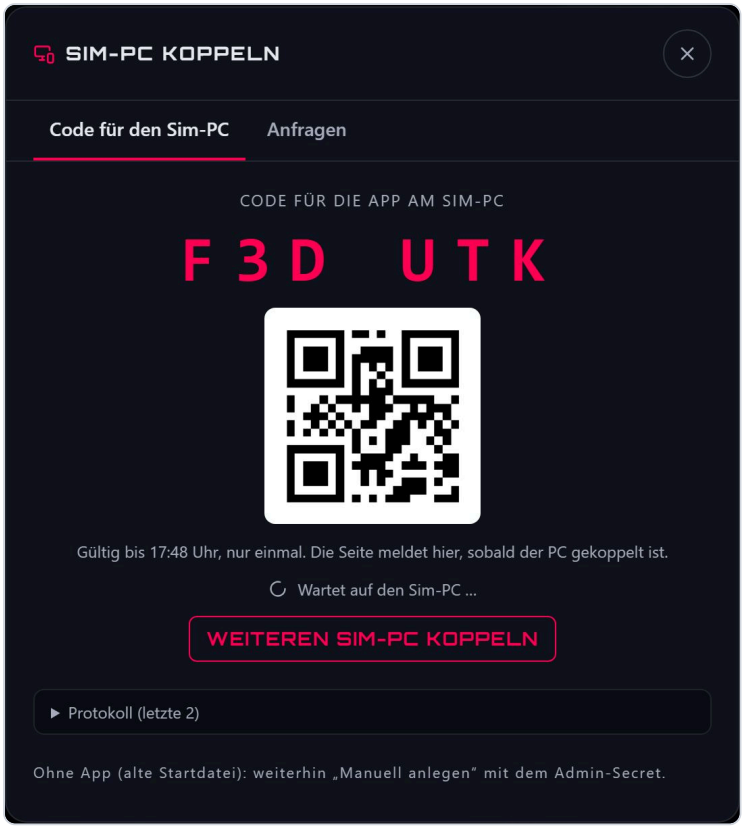


Figure 4.4 The counterpart in the Control Center: **Devices** / **Pair sim PC** with a generated code. Only admin accounts can pair.

Once paired, the app shows “Paired as “Sim 3”.” (or “… with access for the screens”) and moves on to step 4. A PC that only runs the Control Center needs no pairing: “There is nothing to pair for the Control Center – you sign in with your own account in the Control Center window.” If you need to skip this step, use **Continue without pairing** at the bottom.

Step 4: Check

The app shows what it has found on the PC: “Connection to the Control Center”, for screens also “Monitors” and “Access for Hall of Fame and leaderboard”, for the Control Center role “Control Center window” (opens after “Done”). For a sim PC, the **“Sim ready for use?”** list follows (section 4.4). Deal with open items using the button in their row, check with **Check again** and finish with **Done**. The app reports “Setup complete.”; after about 30 seconds the sim appears as “Online” in the Control Center under **Devices**.

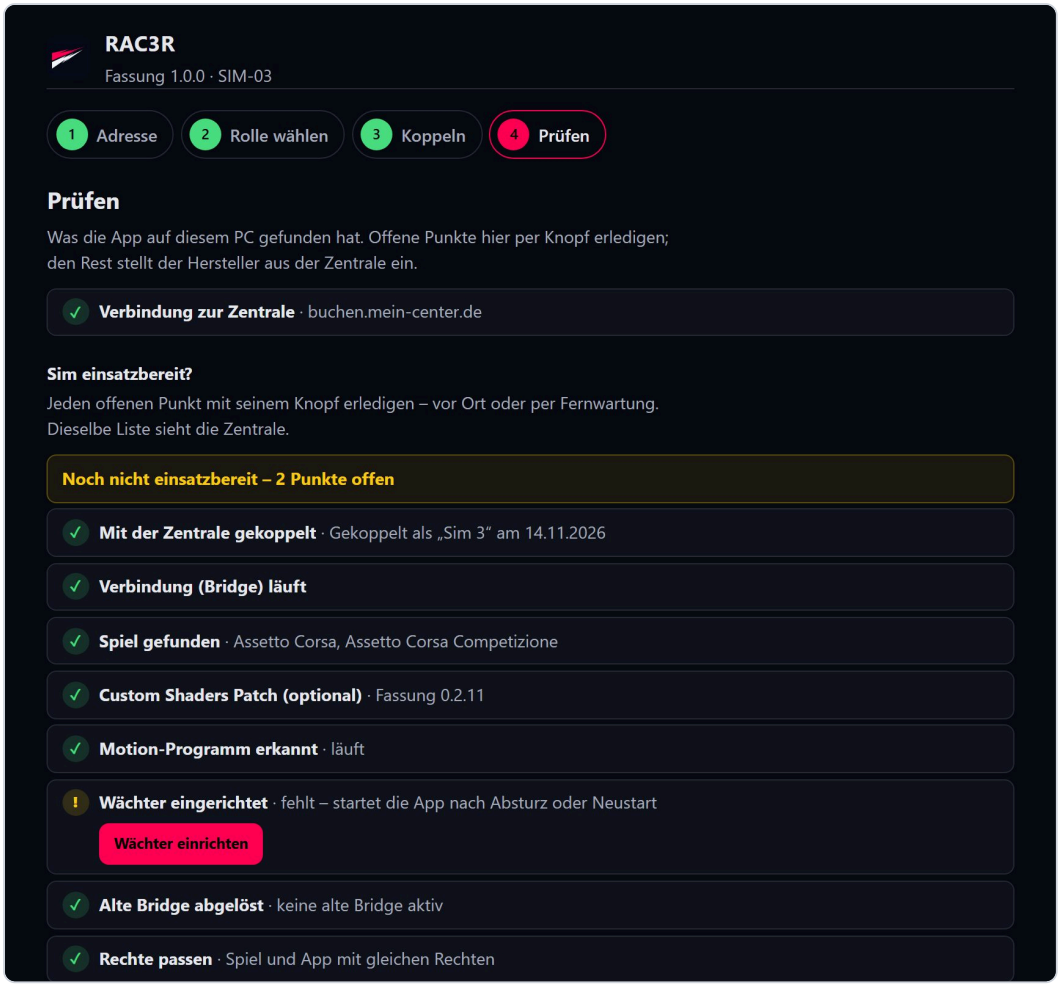


Figure 4.5 The “Check” step on a sim PC with two open mandatory items (detail). Each open item has its own button.

4.3 WHAT THE APP FINDS ON ITS OWN

On a sim PC, the app looks for the following without any help from you:

- **Games:** Assetto Corsa, Assetto Corsa Competizione, rFactor 2 and Le Mans Ultimate – in all Steam libraries on every drive. If Assetto Corsa is installed outside Steam, you can set its folder (section 4.5, “Advanced”).
- **Content Manager** and **Custom Shaders Patch**, including their versions.
- **Motion software** and **sim manufacturer launcher:** whether they are installed and running. If the app is not sure about the motion software, it shows candidates for you to confirm.
- **Driving data from the game:** whether the live data can be read (“can be checked as soon as a game is running”).

- **Permissions:** whether the game starts with administrator rights – if it does, lap times and live data are missing.
- **Firewall rule for joint races** (Windows Firewall) and whether an older Bridge is still running from a start file.

The Bridge – the program that connects the simulator to the Control Center – comes with the app. It stores its files under `C:\racecenter\scripts` and runs in the background without a window.

4.4 THE "SIM READY FOR USE?" LIST

A sim is ready for use when all mandatory items are done. The top of the list then reads "Sim ready for use", otherwise "Not ready for use yet – 2 items open". The Control Center shows the same list under **Devices** / **Setup**.

Item	Required	If open, this is how to fix it
Paired with the Control Center	yes	**Pair** (opens step 3).
Connection (Bridge) running	yes	**Start connection**.
Game found	yes	"Install Steam, install the game and start it once. If it is outside Steam, the manufacturer sets its folder from the Control Center."
Custom Shaders Patch	optional	Only needed for "Box" and "Reset".
Motion program detected	yes	Start the motion software on the sim and click **Check again**. Then confirm the candidate: **"…" is the motion program** – or **Sim without motion**.
Watchdog set up	yes	**Set up watchdog** (section 4.8).
Old Bridge replaced	yes	**Replace old Bridge** – only on PCs that used to run with a start file.
Permissions match	yes	Right-click the game, then **Properties** / **Compatibility**, untick "Run this program as an administrator" and restart the game.
Firewall rule for multiplayer races	optional	**Set up firewall rule**. Windows asks once for administrator rights (User Account Control).
Test session detected	yes	Start the game on the sim (Steam, Content Manager or the sim manufacturer's launcher), drive onto the track, then click **Check again**. **Show live data** lets you see whether data is coming in.

> **VIA REMOTE SUPPORT**
> Everything in this list can also be done through a remote support tool. The User Account Control prompt is only visible remotely if the remote support tool is installed on the PC, not just started.

4.5 THE SETTINGS WINDOW

After setup, the window has six tabs. Open it from the app's icon in the taskbar (**Settings …**) or, in the Control Center window, via **File** / **Settings …** (Ctrl + ,). Changes in the **Overview**, **Sim PC**, **Screens** and **Advanced** tabs take effect after **Save** at the bottom right ("Saved and applied."). The **Stream (OBS)** tab saves on its own.

“Overview” tab

The roles of this PC (multiple selection, effective after “Save”), the “Start with Windows (in the background)” switch and – on a sim PC – the pairing status, for example “Paired as “Sim 3” on 18/11/2026.” If the manufacturer has specified roles from the Control Center, the tab also shows “Specified by the Control Center: …”.

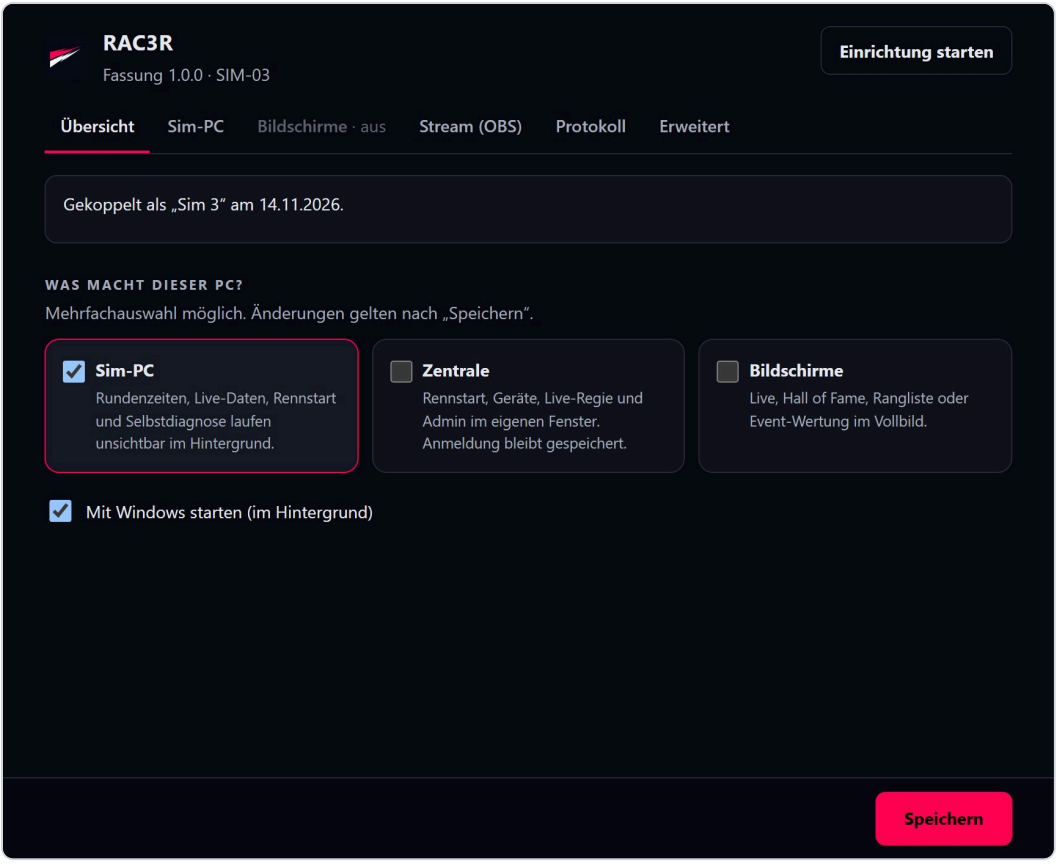


Figure 4.6 The “Overview” tab. The “Sim PC” and “Screens” tabs are dimmed while their role is switched off.

“Sim PC” tab

- **Connection:** the state of the Bridge – “connected”, “restarting …” or “off” – with **Start**, **Restart** and **Stop**. If the Bridge stops unexpectedly, the app restarts it after 15 seconds.
- **Sim ready for use?** The list from section 4.4 with **Check again**. “Found on this PC (details)” lists every individual result.
- **Watchdog:** “set up” or “not set up”, with **Set up watchdog** and **Remove watchdog**.
- **Tools:** **Show live data**, **Diagnostics for support**, **Firewall rule for multiplayer races** and **Open log folder** (section 4.10).
- **Idle screen and briefing** (version 1.2 or later): what reaches this PC, for example “Idle screen on. It appears after 60 seconds without input while nobody is driving.”, plus the Windows update status.
  Show idle screen for 15 seconds plays it as a test on the main monitor. You set the content and the briefing in the Control Center (chapter 06).
- **Stream Deck** (version 1.2 or later): interface for buttons at the sim, see section 4.11.
- **Radio** (version 1.2 or later): “Microphone”, “Volume”, **Test microphone**, **Test sound** and this sim’s “Talk button” (chapter 05, Radio).

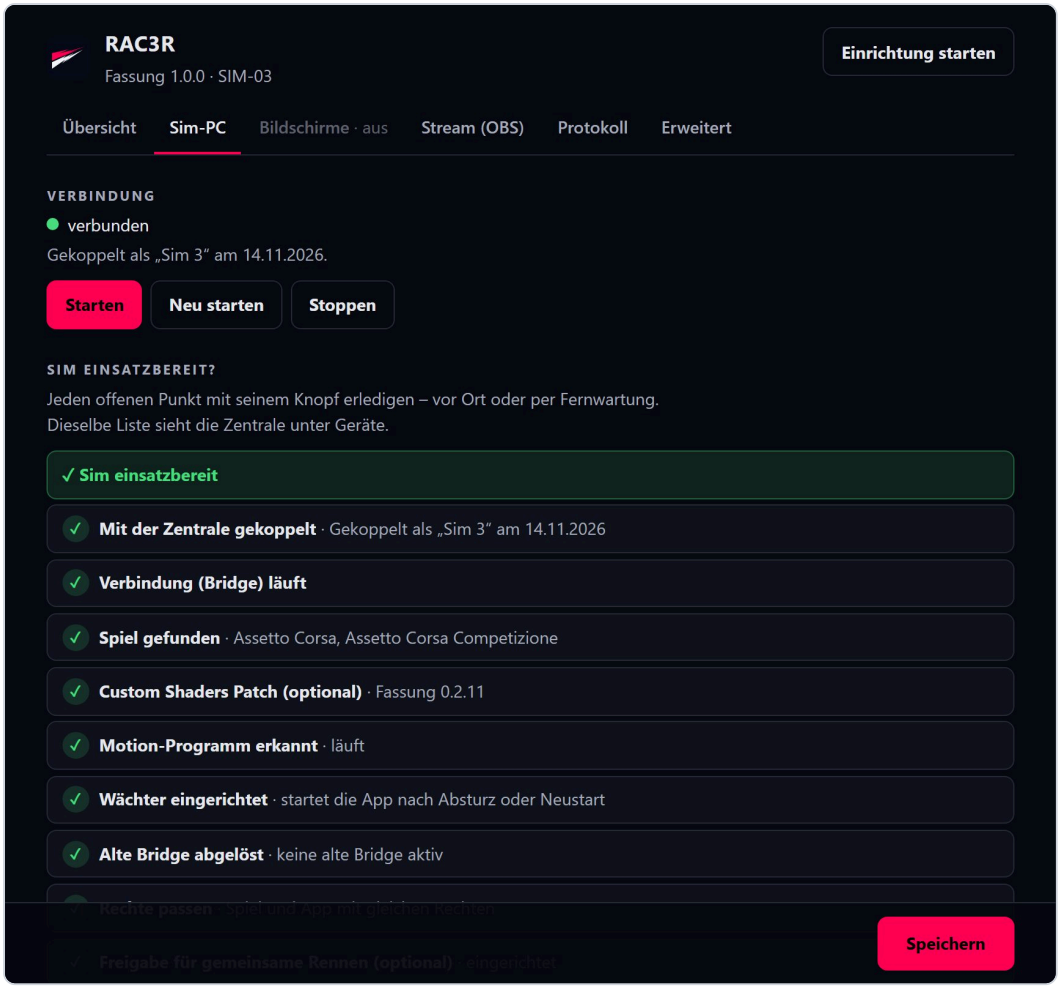


Figure 4.7 The “Sim PC” tab on a simulator that is ready for use (upper part; watchdog and tools follow below).

“Screens” tab

Under “Monitors on this PC”, you choose a view for each monitor: “Off”, “Live (like the live page)”, “Hall of Fame”, “Live leaderboard”, “Event ranking”, “Signage” (the screen’s playlist, chapter 05) or “Up next” (queue call-up, chapter 06) – the last two from version 1.2. “Live” shows the same as the live page and follows the live director. Without a selection of your own, every monitor except the main display shows “Live” (if there is only one monitor, that one does). **Open now** and **Close** control the full-screen views immediately.

- On the screen itself, close a view with **Alt** + **F4**; reopen it from the icon in the taskbar.
- The screens register in the Control Center under **Screens** ▸ **Registered in the center** and can be switched from there.
- If a view crashes or hangs, the app reloads it; if the network is not available at startup, it tries again every 15 seconds. While screens are open, the monitor does not go to sleep. When a monitor is plugged in or unplugged, the app rearranges the windows.
- “Access for Hall of Fame and leaderboard” comes with pairing. Hall of Fame, leaderboard and Signage need it; Live, Event ranking and Up next work without it.

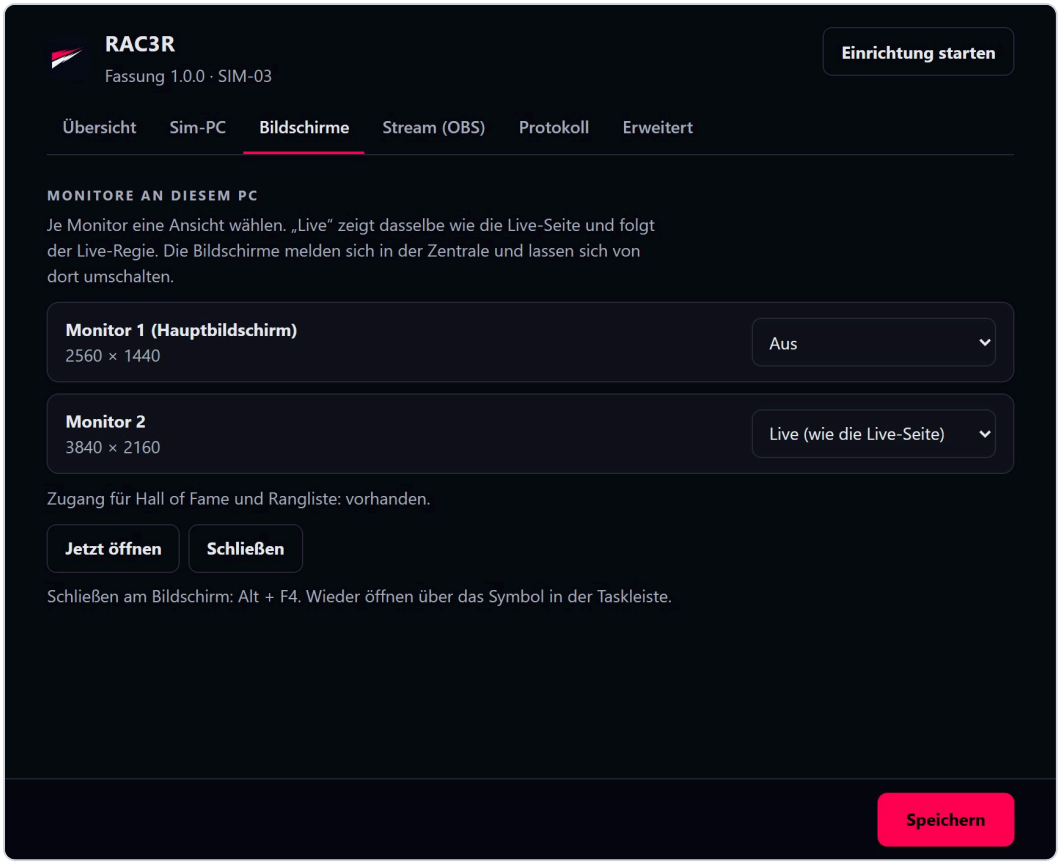


Figure 4.8 The “Screens” tab: the TV (monitor 2) shows “Live”.

“Stream (OBS)” tab

Sets up OBS for streaming from the center – see section 4.7.

“Log” tab

“The latest messages. Complete log in the folder C:\racecenter (file bridge.log).” Here you can see, for example, when the PC was paired and when sessions started and ended. The file `C:\racecenter\bridge.log` starts afresh when it reaches 5 MB.

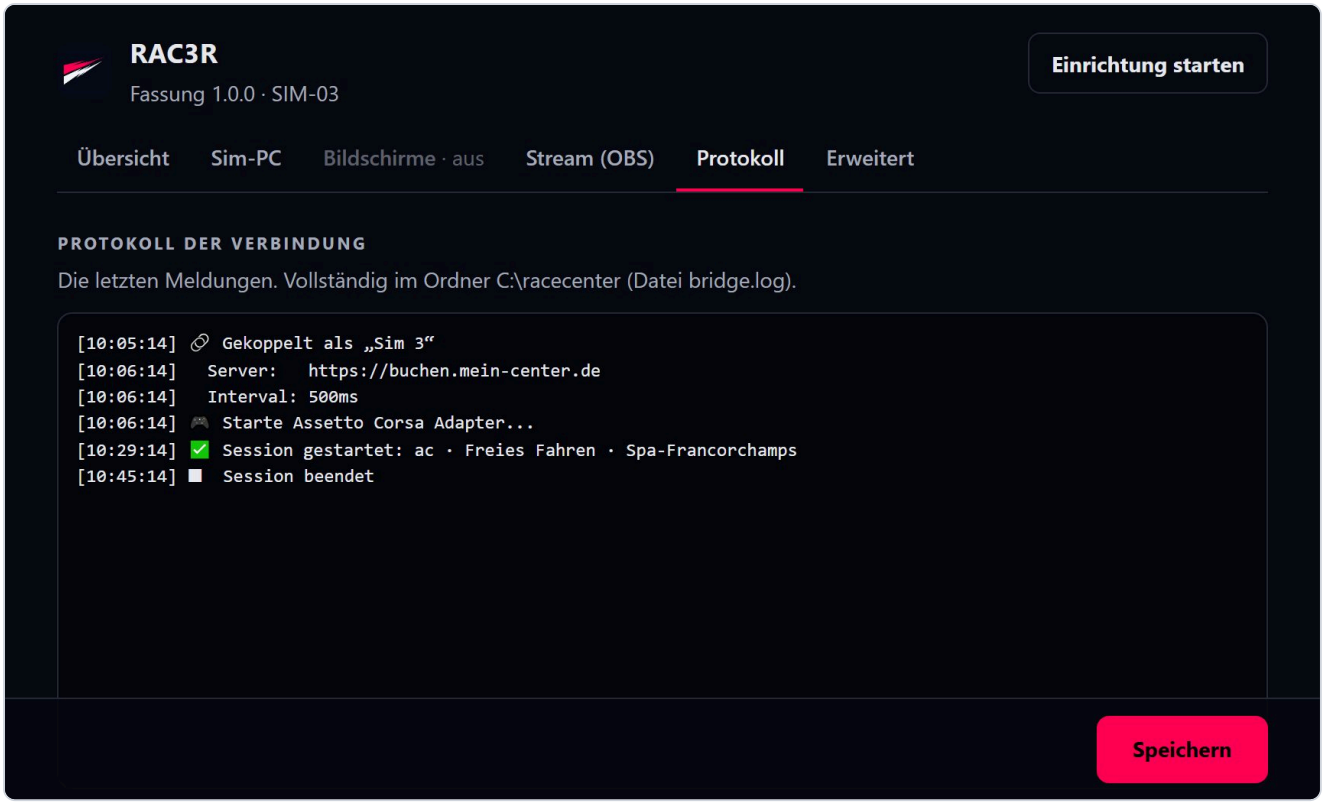


Figure 4.9 The “Log” tab.

“Advanced” tab

“Only for special cases or when instructed by the manufacturer. Normally the setup fills in everything automatically.”

Section	Contents
Server	“Control Center address” with **Test connection** (checks the address like step 1; it is only saved with “Save”).
Enter device manually	“Device ID”, “Device key”, “Bridge secret (older servers only)” and “Game” (default “Detect automatically (recommended)”). Only without pairing. Saved keys are never displayed: “Saved. Leave empty to keep the value.”
Screen access	“Access for Hall of Fame and leaderboard (normally comes with pairing)”.
Paths and hardware (formerly in the start file)	“Empty means default.” Among others “Assetto Corsa folder”, “Assetto Corsa settings folder”, “Race server folder”, “Content Manager (program file)”, “ACC: broadcast password”, “rFactor 2: port” (default 5397), “Le Mans Ultimate: port” (default 6397), “Motion program (process name)”, “Sim manufacturer launcher”, “Image cache” (default `C:\racecenter\bildcache`), “Live data interval (ms)” (default 500). Settings made by the manufacturer in the Control Center take precedence over these values.
Updates	Update status and “Update address (empty = no automatic updates)” – section 4.9.
About	Name and version of the app.

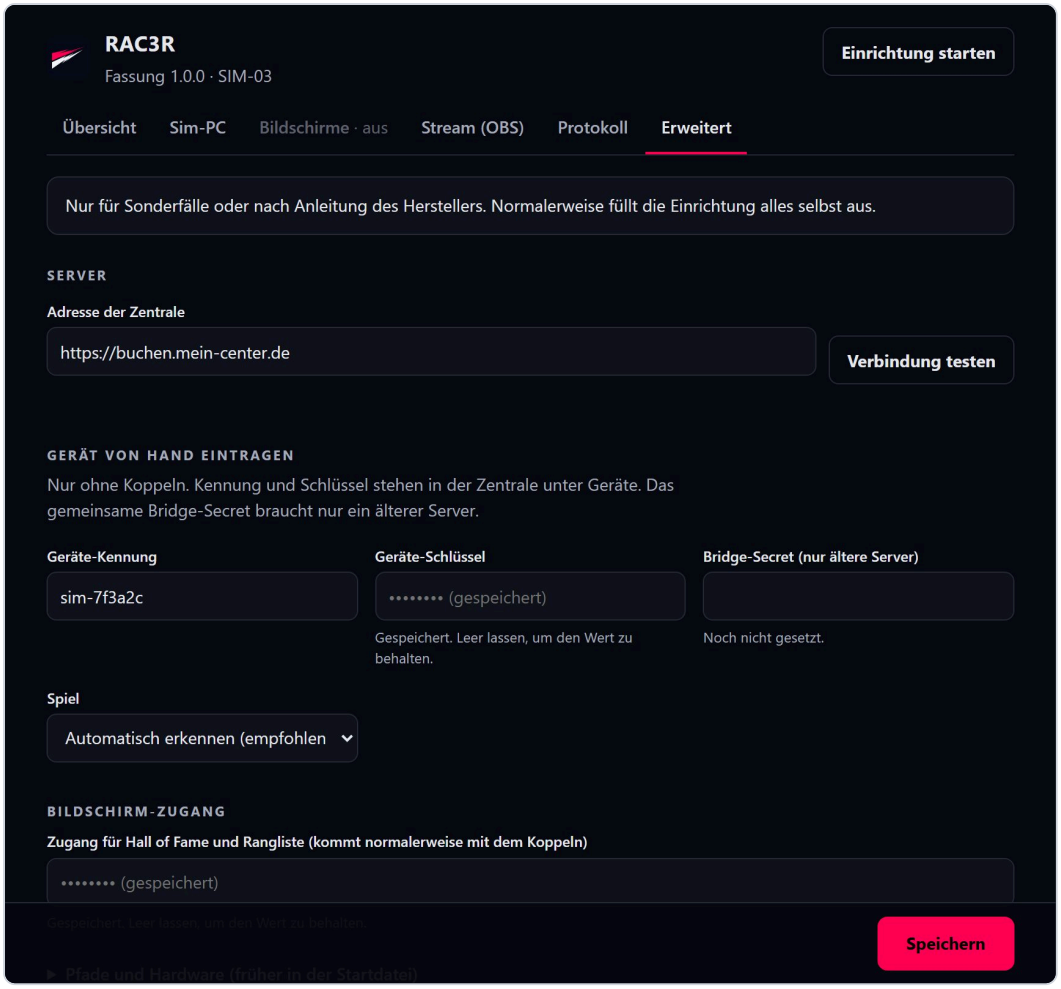


Figure 4.10 The “Advanced” tab (upper part). In everyday use, everything here stays as the setup entered it.

4.6 SETUP VIA REMOTE SUPPORT

Every step in this chapter can also be done remotely with a remote support tool. The most convenient way:

1. Install and start the app on the PC, enter the address and choose the role.
2. In step 3, click **Show code and wait** – then accept the request in the Control Center under “Requests”, on a phone if you like.
3. Work through the “Sim ready for use?” list. For the firewall rule for joint races, the User Account Control prompt must be visible (remote support tool installed, not just started).

Anything that still differs afterwards – a game folder outside Steam, the name of the motion software, the launcher, the app’s roles – the manufacturer sets with their technical account in the Control Center under **Devices / Setup / Remote settings**. The sim applies the change within a few seconds; if the Bridge has to restart, it waits until a running session has ended. The app then shows “Set from the Control Center: …”.

4.7 STREAMING WITH OBS

“Stream from your center to Twitch or YouTube – with leaderboard, driver and event ranking on screen. One click installs OBS (free), creates the scenes and opens OBS.” This works on every PC with the app, including the one at reception.

1. In the **Stream (OBS)** tab, click **Set up stream**. The app shows every step: checking access to the overlays, looking for OBS, downloading the latest version, checking the download (checksum), installing, choosing the game to capture, creating the scenes, starting OBS.
2. During installation, Windows asks for administrator rights – confirm with “Yes”. This takes 1–2 minutes.
3. If OBS is currently open: **Close OBS and continue**.
4. If “Access to the overlays” is missing (only on PCs that are not paired): in the Control Center, generate a code under **Devices / Pair sim PC / Screens only** and enter it with **Pair and continue** – or, under **Screens / Stream overlay**, click **Copy** next to “Leaderboard” and paste the link with **Apply and continue**.

Then: “Done – OBS is set up.” The scenes **Rennen live** (game capture, leaderboard, driver lower third), **Event** (event standings with customer logo) and **Pause** have been created – they keep these names in every language. Under Screens, the Control Center shows “Stream set up on …”.

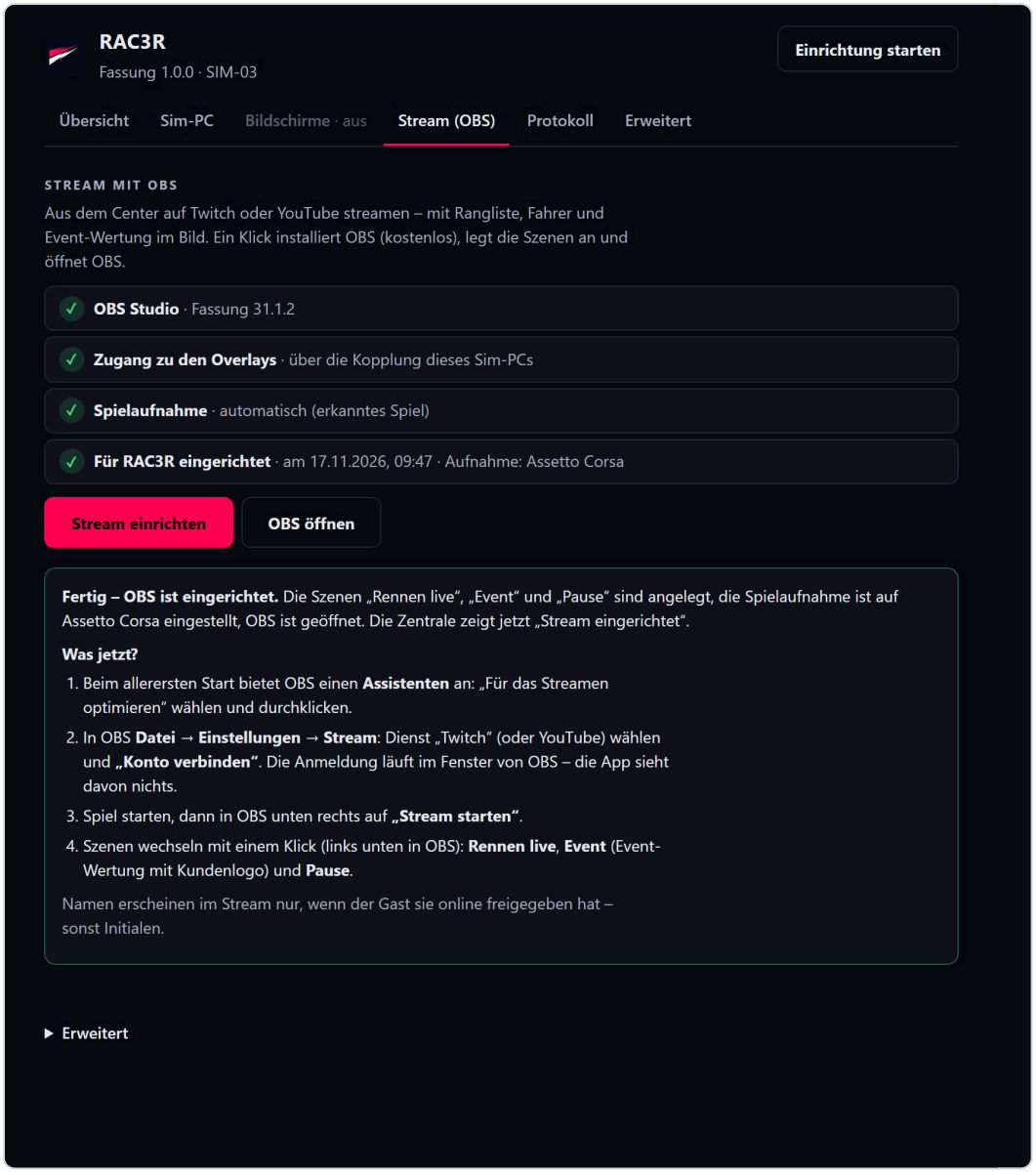


Figure 4.11 The “Stream (OBS)” tab after setup, with the next steps.

In OBS – once only

1. The very first time OBS starts, it offers a wizard: choose “Optimize for streaming” and click through.

2. In OBS, go to **File** / **Settings** / **Stream**: choose the service “Twitch” (or YouTube) and click “Connect Account”. You sign in within the OBS window – the app sees none of it.
3. Start the game, then click “Start Streaming” at the bottom right in OBS. Switch scenes with a click at the bottom left.

Under “Advanced” in the tab: “Game to capture” (default “Automatic (detected game)”, otherwise one of the four games or “Any full-screen game”), **Install / update OBS**, **Create scenes for RAC3R**, **Open OBS**, **Check status**. OBS is downloaded directly from the OBS project (official version, the checksum is verified). The only things the app changes in OBS are the “RAC3R” scene collection and which collection opens at startup – and it makes backups first (extension “.rac3r-sicherung-...” in the OBS folder under AppData). Names only appear in the stream if the guest has allowed it online – otherwise initials are shown.

4.8 TASKBAR ICON, AUTOSTART AND WATCHDOG

The app runs with an icon in the notification area of the taskbar. Right-clicking it shows – depending on the role – the status (“Bridge: running”, “Screens: 2 open”) and these entries: **Open Control Center**, **Open screens** or **Close screens**, **Restart Bridge**, **Bridge log**, **Install update … now** when an update has been downloaded, **Settings …** and **Quit**. Double-clicking opens the Control Center (with the Control Center role), otherwise the settings.

- **Closing the window does not quit the app** while the Sim PC or Screens role is on – the Bridge and the screens keep running. To quit completely, choose **Quit** in the icon’s menu.
- **Start with Windows:** the app starts in the background without a window when the user signs in.
- **Watchdog** (recommended for sim PCs): a Windows task named “<app name> Wächter”, for example “RAC3R Wächter” (the task name is always German). It starts the app at sign-in and checks every minute that it is running. Nothing ever runs twice. Set it up and remove it in the **Sim PC** tab; this only works in the installed app.

The Control Center window

With the Control Center role, the Control Center and admin of your online installation open in a separate window – the same pages as in the browser, with your sign-in remembered. The app remembers the window’s size and position. Pages on other addresses open in your normal browser, downloads with “Save as”.

Menu	Entries
File	Settings … (Ctrl + ,), Close window, Quit
Go to	Control Center (Ctrl + 1), Devices (Ctrl + 2), Live director (Ctrl + 3), Admin (Ctrl + 4), Live page in browser, Booking page in browser
View	Reload, Actual size, Zoom in, Zoom out, Full screen, Developer tools
Help	Staff manual (PDF), About …

If the online installation cannot be reached, the window shows “No connection to the Control Center” with the button **Try again**.

4.9 UPDATES

If an update address is set (**Advanced** tab, “Updates”), the app checks for a new version at startup and every 4 hours and downloads it in the background. It is installed:

- at night between 4 and 5 a.m. – the center is closed then, and the sim PCs often run around the clock,
- the next time the app is closed normally, or
- immediately with **Restart and update now** or via the icon’s menu.

Windows reports “Update … has been downloaded and will be installed at 4 a.m.” The states shown in the tab are “Up to date”, “Checking for updates …”, “Downloading update …”, “Update downloaded – will be installed at 4 a.m.”, “Update check failed (details in the log)” and “Automatic updates off (no update address or development version)”. The new version also brings the matching Bridge files.

Without an update address, simply install a new version with the new installer over the old one; settings and pairing are kept.

4.10 SELF-DIAGNOSIS AND TOOLS

Tool (Sim PC tab)	What happens
Show live data	Opens a “Telemetry” window with the live data from the game. Useful for the test session.
Diagnostics for support	Opens an “AC diagnostics” window and checks processes, services and autostart, network ports, the Assetto Corsa installation and the driving data in six steps. In step 5 it waits up to three minutes for someone to drive on this sim. The result is a file in `C:\racecenter\diagnose` (named after the PC and the date, as .txt and .json) – please pass it on to support. It changes nothing on the PC. The texts in this window are in German.
Firewall rule for multiplayer races	Sets up Windows Firewall for joint races: rules named “RaceCenter AC-Rennserver” for ports 9600 (TCP and UDP) and 8081 (TCP) as well as for Assetto Corsa and the race server. Asks for administrator rights. When it succeeds, the message starts with “OK:” and confirms the firewall rules that were set up.
Open log folder	Opens `C:\racecenter` in File Explorer.

You can also see the condition of each sim’s hardware (wheel, pedals, displays, Wi-Fi, disk space, graphics card) in the Control Center under **Devices** (chapter 05).

4.11 STREAM DECK

With a Stream Deck at the sim, your staff have the most important actions on buttons: **Pit**, **Reset** (repair and back to the pits), **End session**, the driving aids **ABS**, **Traction control**, **Racing line** and **Automatic gearbox** on and off, and **Idle screen**. A **Sim status** button shows whether the sim is free, a session is running, a briefing is waiting or the Bridge is off. One Stream Deck per sim, connected to its PC; the buttons only act on that sim.

1. In the app, in the **Sim PC** tab under “Stream Deck”, tick “Turn on the interface for Stream Deck”. Port (default 47800) and access key are shown below; click **Copy key**.
2. The plugin comes with the installer; with the standard installation it is located at `%LOCALAPPDATA%\Programs\RAC3R\resources\streamdeck\de.rac3r.steuerung.sdPlugin`. Copy this folder to `%APPDATA%\Elgato\StreamDeck\Plugins\` and restart the Stream Deck software. The “RAC3R” category then appears there.
3. Drag a button onto the deck, enter the port and key in its settings and apply them. This applies to all the plugin’s buttons; “Connected” shows that it works.

Without the plugin, you can use the Stream Deck action “Website”: tick “GET request in background” and enter the address from **Copy example link**. For other buttons, change the end of the address: `box`, `zuruecksetzen`, `beenden`, `wartebildschirm`, `hilfe/abs`, `hilfe/tc`, `hilfe/ideallinie`, `hilfe/automatik`. The interface can only be reached on the PC itself (127.0.0.1) and only with the key. **Create new key** invalidates the old key immediately; enter the new one in Stream Deck as well.

LIMITATIONS

- Pit, Reset and the driving aids only work in Assetto Corsa with Custom Shaders Patch. They run directly on the PC, without going through the internet.
- Whether a driving aid can be toggled depends on the version of Custom Shaders Patch. If it can’t, the button shows a warning.
- “Idle screen” shows it immediately until the next input, or hides it for 30 minutes.
- The Stream Deck software is not available in Turkish; there, buttons and settings appear in English.

4.12 WHERE THE APP STORES ITS DATA

Location	Contents
`%APPDATA%\RAC3R\einstellungen.json`	Settings of this Windows user. Keys and logins are stored encrypted (readable only by this user on this PC). Next to it: `fenster.json` (position of the Control Center window).
`C:\racecenter\scripts`	Bridge files (supplied with the app).
`C:\racecenter\bridge.log`	Connection log.
`C:\racecenter\fern-einstellungen.json`	Settings the manufacturer has made from the Control Center.
`C:\racecenter\diagnose`, `C:\racecenter\bildcache`	Diagnostic results, image cache.
`%APPDATA%\obs-studio\basic\scenes\RAC3R.json`	The “RAC3R” scene collection in OBS (only after “Set up stream”).

The folder under `%APPDATA%` carries the name of the app – “RAC3R” for the version in your delivery. To open it, type `%APPDATA%` into the address bar of File Explorer.

4.13 RESETTING AND UNINSTALLING

- **Set up again** (different sim, different role): **Start setup**; in the Pair step, use **Pair again** to enter a new code.
- **Full reset:** quit the app via its icon, delete `%APPDATA%\RAC3R\einstellungen.json` and start the app – setup begins from scratch.
- **Uninstalling:** first click **Remove watchdog** in the **Sim PC** tab (otherwise the Windows task is left behind). Then uninstall “RAC3R” in Windows Settings under **Apps** / **Installed apps**. Your settings in `%APPDATA%\RAC3R` and the folder `C:\racecenter` are kept – if you reinstall, the PC is paired again straight away. If you don’t want to leave anything behind, delete both folders by hand.
- If you replace a sim PC with a new one, pair the new PC “For an existing sim” – that way the sim’s name, lap times and history are kept.

CHAPTER 05

THE CONTROL CENTER

This is where you control the simulators: start sessions, keep an eye on the hardware, steer the live views and screens. The Control Center opens in the browser at your address (sign in via `/login`), on a phone or in the Control Center window of the Windows app.

FINDING YOUR WAY AROUND

The menu with two groups is on the left (at the bottom on a phone). At the top left you see the name of the app and, below it, “Simulators” (Control Center) or “Admin”.

Group	Menu items
Control Center	Race start, Queue, Devices, Idle screen, Safety briefing, Live director, Radio, Screens, Liveries, Content, Self-start, API and webhooks, License, Location
Admin	Dashboard, Bookings, Calendar, Closures, Gift vouchers, Subscriptions, Cash book, Withdrawals, Events, Championship, Results, Export, Booking systems, Settings

- **Quick search:** Ctrl + K or / (or Search …). Finds pages, actions such as “Create new booking” or “Open manual (PDF)”, as well as bookings and gift vouchers.
- **Notifications** (bell): Turn on notifications, then one switch per topic – “Simulators” (a sim is unreachable, and the all-clear), “Bookings” (every new booking and inquiry, without names) and “License” (reminder before it expires). Send test checks that notifications arrive.
- **Manual (PDF)** opens your center’s staff manual; **Install app** puts the admin area and Control Center on your phone as an app.
- At the very bottom: “RAC3R · Support” and the manufacturer’s notice with the license status.

Sections with a padlock in the menu are locked without a license (chapter 01) or – for self-start and the screens – switched off by you (“Not unlocked”, button Unlock).

RACE START

The start page of the Control Center. Running sessions are listed at the top with their remaining time; end them with the stop icon next to the sim or with End all. At the top, “How to start a session” expands into a short guide. You start a session in six sections:

1. **Who is driving?** Tap the booking – simulators, duration and the first name are filled in. For walk-in guests, choose “No booking”. Labels: “Not paid”, “Please check”.
2. **Which simulators?** Tick the sims and enter a name for each one (“Driver’s name (for the leaderboard)”). Only with a name does the time count for the Hall of Fame and the challenge.
3. **Where to?** Tap the Hot-Lap Challenge or choose track, track layout, car and livery – or a setup “From Content Manager”.
4. **How much assistance?** “Beginner”, “Advanced” or “Pro”.

5 **How long?** “Time” (15, 30, 45, 60 min or a custom value) or “Laps” (5, 10, 15 laps or a custom value).

6 **Fine-tuning** (“applies immediately”): single session or joint race, format (Free driving, Qualifying, Race, Race weekend, Hotlap, Time trial, Drift), conditions, steering force (“Normal”, “Light · 70 %”, “Kids · 40 %”), field of view, seat position, “Individual assists”, “Realism” and “AI opponents”. Then click **Start**.

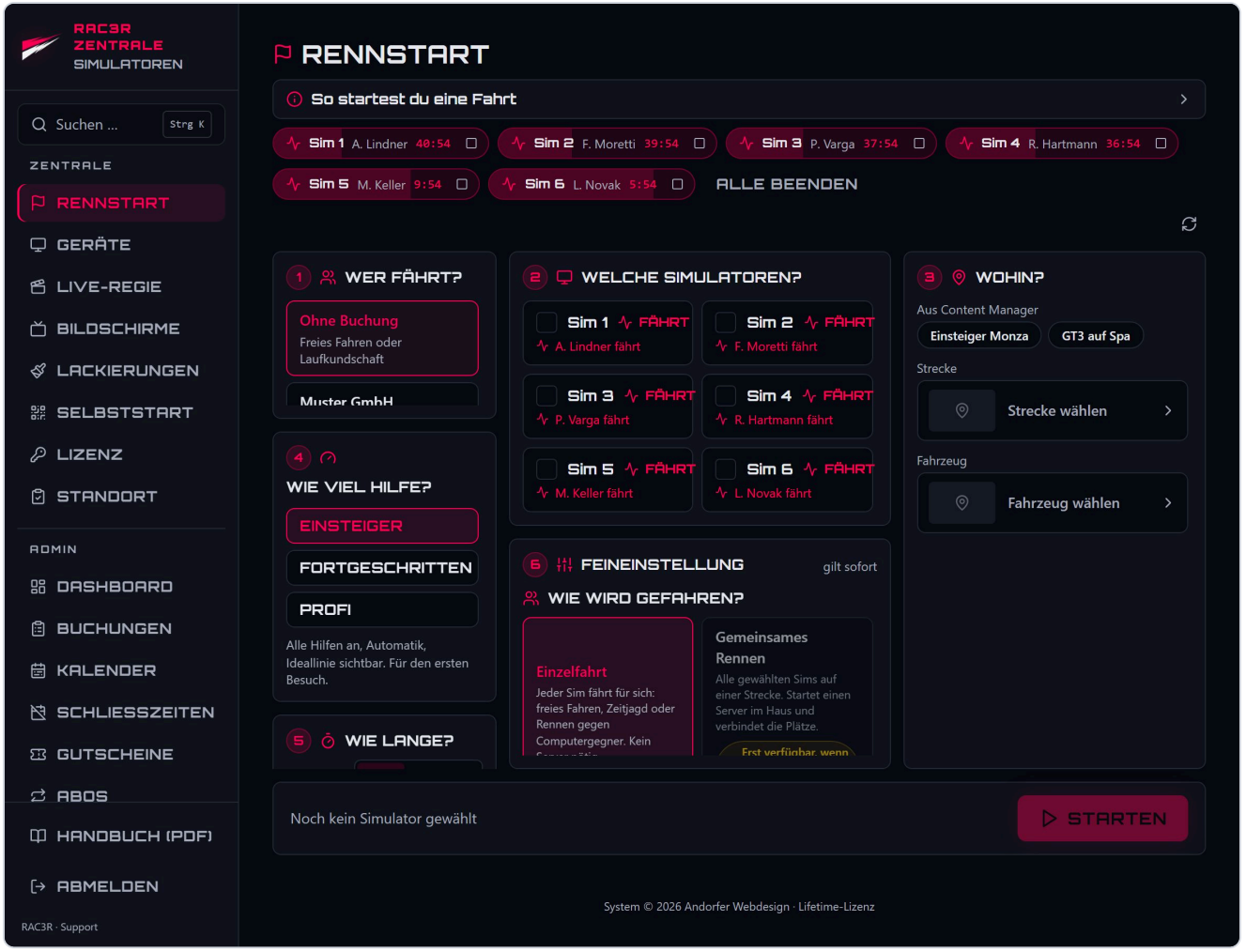


Figure 5.1 Race start with six running sessions and the day’s bookings.

- On a running session: **Box** (puts the car in the pits), **Reset** (repairs the car and puts it in the pits – time and laps keep running) and **Reload** (the game restarts, approx. 30–60 seconds, with the remaining time). Box and Reset need Custom Shaders Patch.
- “Motion program is not running – please start it on the sim” on a tile: start the motion software on the sim. RAC3R never starts it itself.
- If someone is currently driving on a selected sim, the Control Center asks “Someone is driving there” with **Cancel** or **Start anyway**.
- If the safety briefing is switched on, the game only loads once the guest has confirmed it at the sim (chapter 06).

Joint race and in-house race server

Several sims race against each other on one track. One sim PC hosts the Assetto Corsa race server, and the others connect over the local network – no cloud and no extra computer. Until all sims are set up, the tile shows “Only available once all … sims are set up”.

1 Tick the sims, enter the names, choose track and car. In Fine-tuning, choose “Joint race”, plus the format (Free driving, Qualifying, Race or Race weekend), lengths, weather, assists and realism.

2. In the **In-house race server** section, choose the server sim under “Race server on” or leave “Automatic (first ready sim)”. The server sim does not have to take part; it needs the Assetto Corsa race server and the firewall rule for joint races.

3. **Start**. The server sim starts the race server with track, car, starting list and weather. As soon as it responds, all participants receive their start command and connect on their own.

The section then shows on which sim and at which address the server is running, the session and remaining time, how many drivers are connected and the status of each participant (“in the game”, “connected”, “error”). If the server stops unexpectedly, the last lines of its log appear there. **End race** ends all sessions first and then the server; **Stop server only** leaves the games running, and they then lose the connection.

Before the start, the Control Center runs checks and refuses with a reason if two sims are signed in with the same Steam account or if the server sim is missing the race server or the firewall rule. If you choose more drivers than the track has pit boxes, it tells you the number of pit boxes. Limitations: Assetto Corsa only, everyone drives the same car, and the race server does not support Hotlap, Time trial and Drift. If two participants have the same name (“Guest” twice), the “connected” display cannot tell them apart.

In-game display

During the session, the guest sees a small, semi-transparent overlay on screen: the **gap to the best time** of this session (green faster, red slower), the **sector times** compared with their own best time (purple for the fastest sector of the session, green faster, yellow slower than the best lap), the **remaining time** or “Lap 3/8”, and the **active driving assists**. It sits at the top center and does not cover the rev counter, gear display or mirrors.

- You set it up in Race start under Fine-tuning, in the **In-game display** section: the “Show in-game display” switch for the whole center, the individual elements, “Position on screen” (top, bottom, left, right) and “Larger text”.
- The setting applies to all sims from the next start, including self-start. The display is on by default.
- The labels appear in the language of the app on the sim (**Devices** / **Setup**, “App language”).

ASSETTO CORSA WITH CUSTOM SHADERS PATCH ONLY

Assetto Corsa Competizione, rFactor 2 and Le Mans Ultimate have their own displays; RAC3R adds nothing there. In a joint race, the display shows the guest’s own times, not the gaps to other drivers. If the installed version of Custom Shaders Patch does not provide a value, only that line is missing; the game keeps running.

GUEST SELF-START

With self-start, guests start their booked session themselves: the booking confirmation contains a start link with a QR code. From 10 minutes before the start time, the guest chooses a free sim, track, car and experience level, accepts the terms of participation and safety instructions and taps **Start session**. The driving time comes from the booking; afterwards the session ends on its own. Parties and corporate events are still started by your staff.

1. Self-start is locked at first. Open **Control Center** / **Self-start** and click **Unlock**.

2. Under “Tracks” and “Cars”, specify what guests may choose, plus “Buffer at end of slot” (0–15 min, default 2) and “End the session automatically at the end (close the game)”. Click **Save** – “Saved – applies to all start links immediately.”

3. Self-started sessions appear in Race start labeled “Self-start”; End, Box and Reload work as usual.

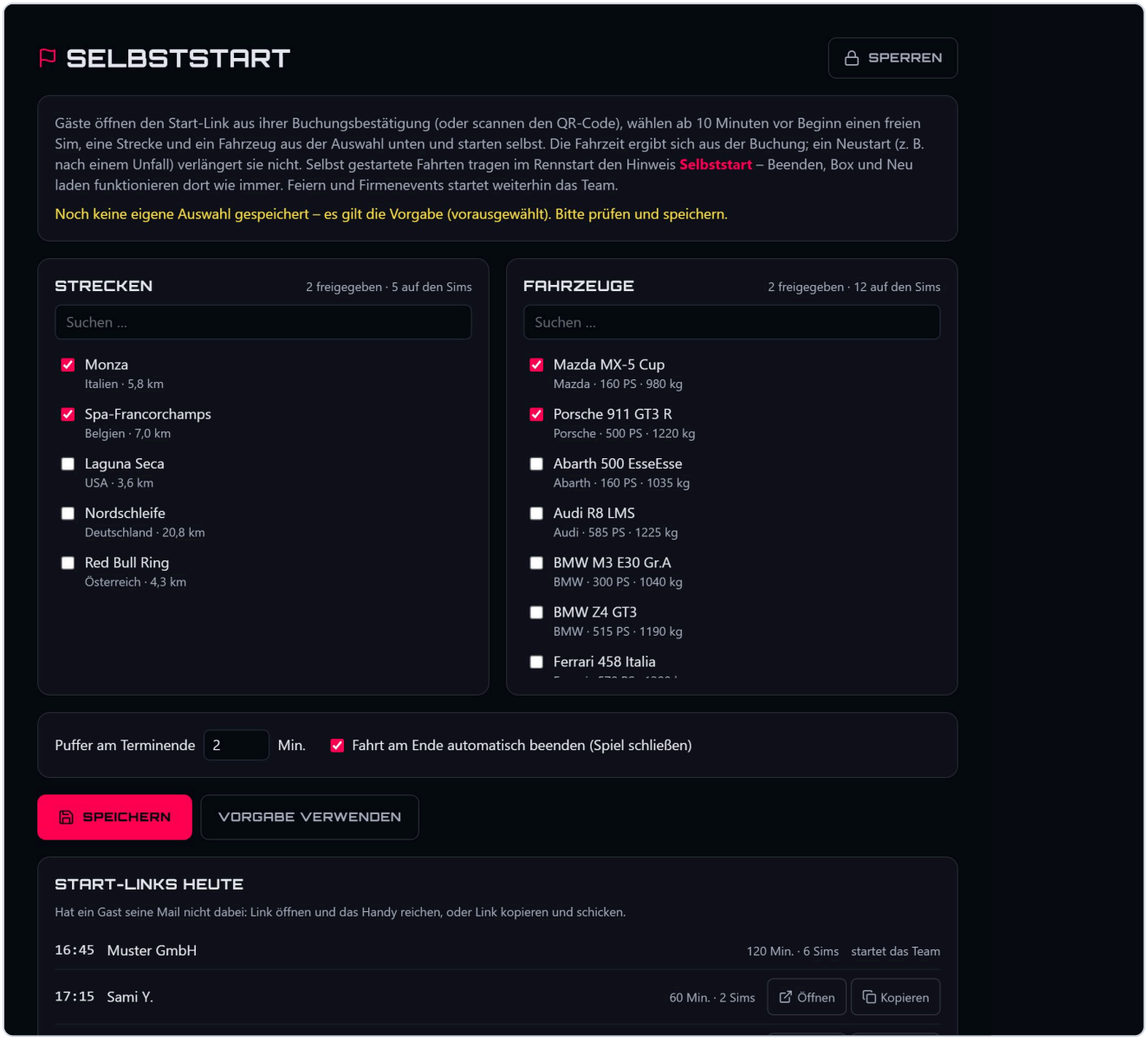


Figure 5.2 Control Center / Self-start.

If a guest does not have their email to hand: under “Start links today”, click **Open** and hand over the phone, or click **Copy** and send the link. **Lock** switches self-start off immediately; guests then see “Self-start is not available right now. Please ask at the front desk.”

DEVICES

The overview of all simulators. At the top: “Online”, “In session”, “Uptime” (7 days) and “Sessions” (last 24 h). For each sim: the status “In session”, “Online” or “Offline”, the availability ring, “Contact” and the “Last 24 hours” bar (gray = center closed, not counted). The page refreshes every 30 seconds.

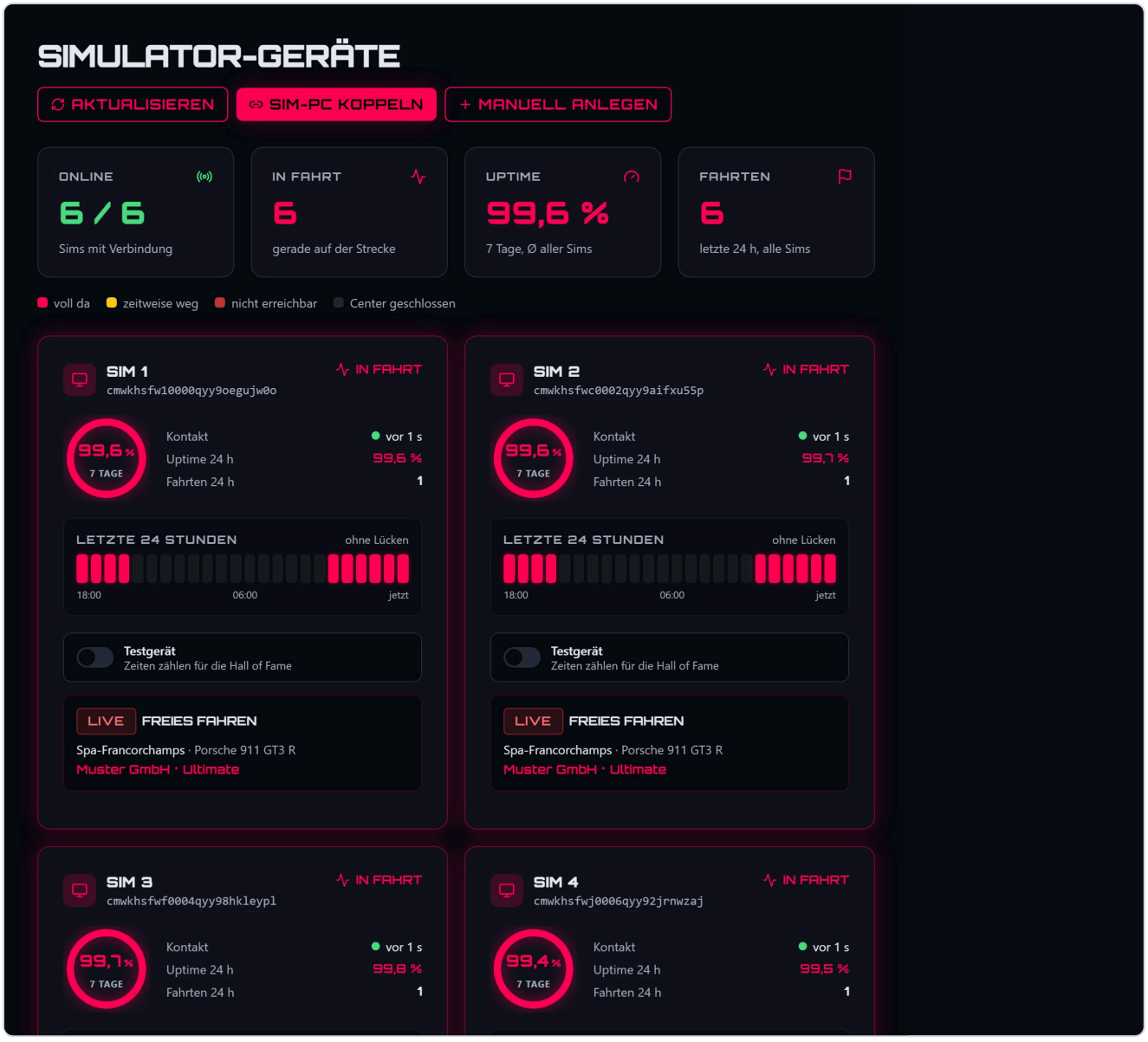


Figure 5.3 Devices with six simulators.

- **Test device:** while the switch is on, this sim's times do not go into the Hall of Fame – handy while you are adjusting things.
- **Pair sim PC:** registers new or replaced PCs (chapter 04). **Add manually** is only intended for older installations without the app.
- **Hardware status:** when a sim reports its status, a colored line appears below the bar – green "Hardware OK", a note in the accent color, yellow for something unusual, red for a fault. Clicking it shows what is wrong and what to do, plus "Readings" (Wi-Fi, drive, memory, graphics card, displays) and "Steering wheel, pedals and other input devices".
- **Setup** (in the same window): the "Sim ready for use" list and what is installed on the PC. All accounts can view it.

> **MANUFACTURER ONLY**
>
> "Remote commands" (Check now, Quit game, Restart PC, Shut down PC, Restart Bridge, Update Bridge) and "Remote settings" are reserved for the manufacturer's technical account. The exception is the restart in the "At the rig" section (below). This account only sees the technology – no bookings, customer data or revenue. You create it as a user when needed.

At the rig: screenshot, restart, Windows updates

Every sim card under Devices has an **At the rig** section. Screenshots and the Windows update status need the app on the sim in version 1.2 or later with the Sim PC role.

Entry	What it does
Screenshot	The app captures the sim's main monitor; after a few seconds the picture opens in the Control Center. Below it you can see who requested it. Only the latest screenshot per sim is stored; you can reopen it via "Screenshot …" with the time. With a triple-screen setup via the graphics driver, this is the whole picture.
Restart PC	With the confirmation "Really restart the PC?". Windows restarts after a 30-second warning – never while a game is running; in that case the sim refuses and you end the session first. The restart is logged with your name, and the card shows "Last restart".
Windows updates	"up to date", "Restart required" or "3 updates pending", with the time of the last check below. The app reads this every hour, never during a session, and installs nothing itself. If the information is more than three days old, it turns yellow – was the PC switched off for a long time? Do updates and restarts outside opening hours.
Idle screen	"on" / "off" switch for this sim (chapter 06).
App on the sim	Version of the Windows app on this PC.

If a start is waiting for the safety briefing, this section shows "Start is waiting for the safety briefing: …" with **Approve** and **Cancel** (chapter 06).

LIVE DIRECTOR

Determines what runs on the live page `/live` and on the center's screens in the "Live" view. Changes take effect after a few seconds ("Saved – /live and the center TV apply it within a few seconds").

- **Mode:** "Auto director", "All in grid", "Picture-in-picture", "Duel", "Leaderboard", "Rotation" (switches every 10–120 s), "Single view", "Selection".
- **Simulators:** "on /live" or "off" for each sim; at the top, **All off** or **All on /live**.
- **Pop-ups & break:** "New best time", "Track record", "Lap ticker", "Break programme" (when nobody is driving: records, top 5, booking) and "Ticker (empty = off)", for example "Welcome Example Ltd".
- **Event on the screens:** "Automatic" (an event appears from one hour before it starts), "Show now" or "Show no event" (applies for up to 12 hours).
- **Show on screens now:** immediately puts something on the signage screens, such as "Award ceremony in 5 minutes" (see Signage below).
- On the right is the **Preview**. When nobody is driving, it shows sample drivers – only there, never on /live.
- **Game images on public pages:** a switch below the director settings, off by default. Off means that the live page, challenges, and the guests' self-start and queue pages show tracks and cars as text only. The Control Center and the in-house screens that run through the screen shell with screen access always show the images.

RIGHTS TO GAME IMAGES

RAC3R shows preview images, track maps and car images from the center's game installation in the Control Center and on the in-house screens. On public pages (live page, challenges, guest self-start and queue) they only appear if you switch on the setting. These images come from the game publisher or from the mod creators. Car badges are often trademarks of the car manufacturers. The center is responsible for making sure it may show them in this way.

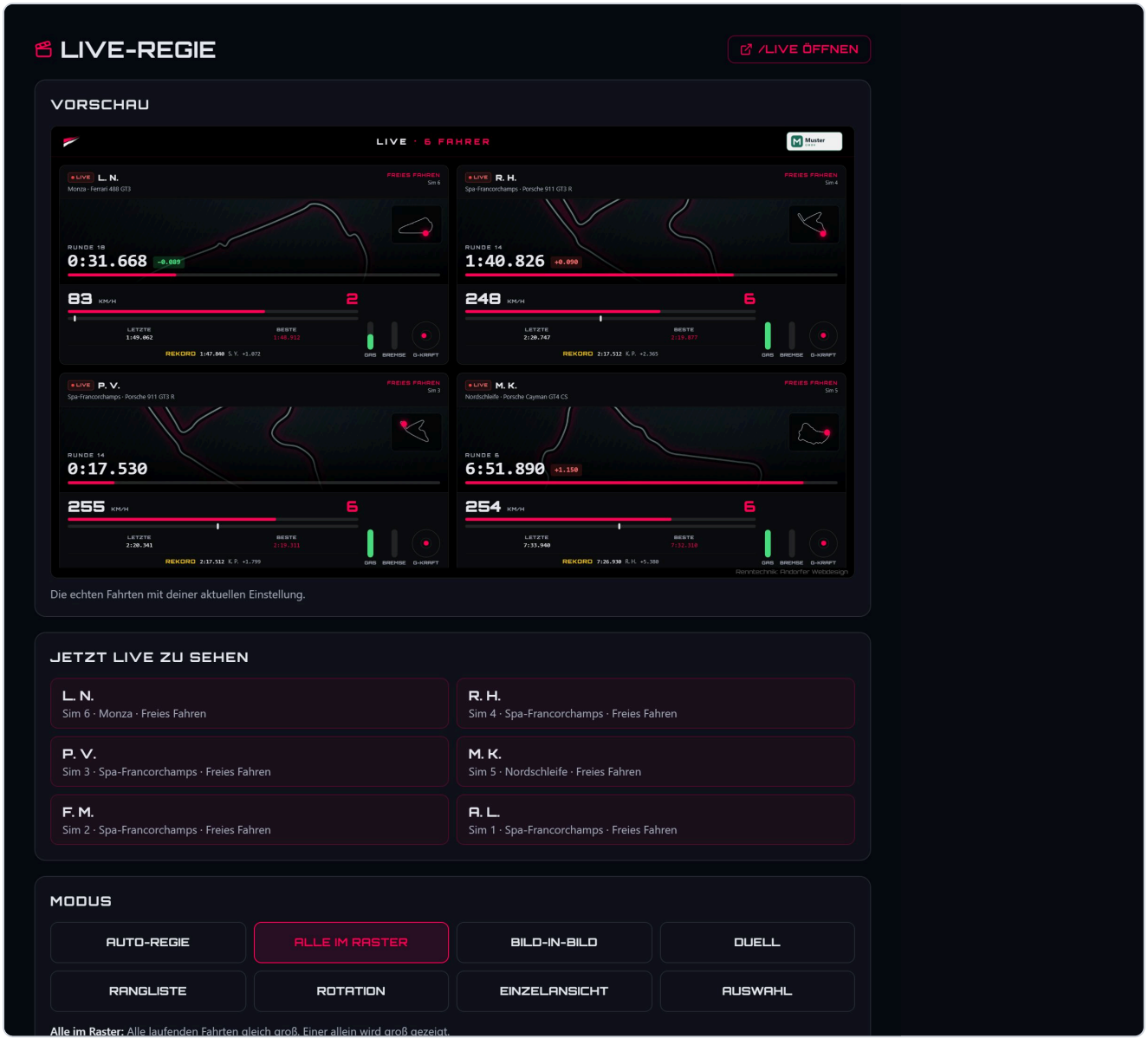


Figure 5.4 Live director.

SCREENS

There are six views for TVs and monitors in the center: "Live (Live director)", "Hall of Fame", "Live leaderboard", "Event ranking", "Up next" (queue call-up, chapter 06) and "Signage" (your own playlist, see below). The easiest way to open them is with the Windows app (Screens role, chapter 04). Without the app, use Chrome or Edge on the PC connected to the screen:

1. Open the **Screens** page, click **Detect monitors** and answer the window management prompt with "Allow".

2 Choose a view for each monitor and click **Open on monitor 2**. For continuous operation without the browser bar: **Kiosk start file**.

At the top, under **Registered in the center**, you see every running screen – on a phone too: “running”, “running, not full screen” (click the screen once) or “no signal” (nothing heard for more than 90 seconds). From there you can choose the view, **Reload** or **Rename** (for example “TV Lounge”). The screen applies the change within 15 seconds at most.

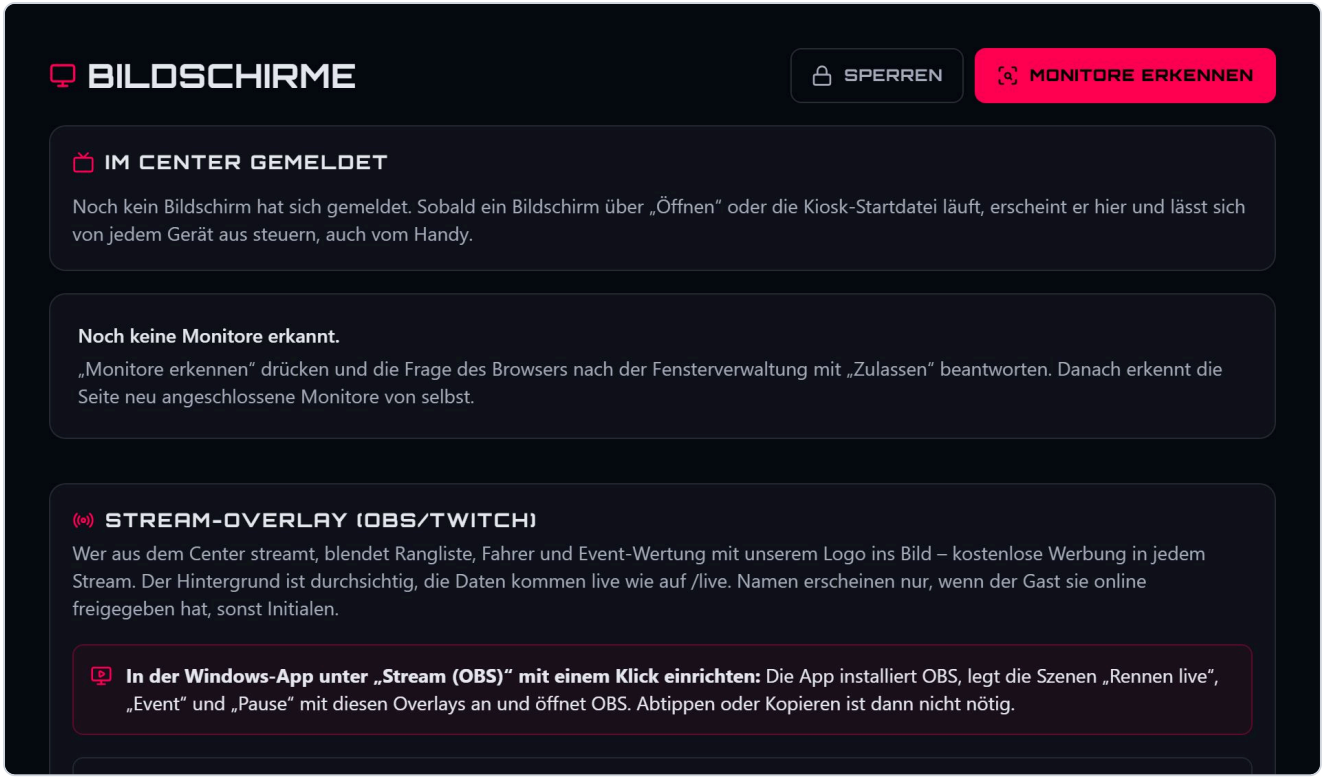


Figure 5.5 Upper part of the Screens page – here still without a registered screen.

If the TV is showing something else (the game, for instance), switch the control off with **Lock**; **Unlock** brings it back without losing anything.

Stream overlay (OBS/Twitch)

At the bottom of the Screens page are the overlays for streams: “Leaderboard” (`/overlay/rangliste`), “Driver (lower third)” (`/overlay/fahrer`) and “Event ranking” (`/overlay/event`), each with **Copy**. With the Windows app, there is no need to copy anything (section 4.7); afterwards this section shows “Stream set up on … on … (OBS …)”. To set it up by hand in OBS: add a “Browser” source, paste the address, width 1920, height 1080. The background is transparent.

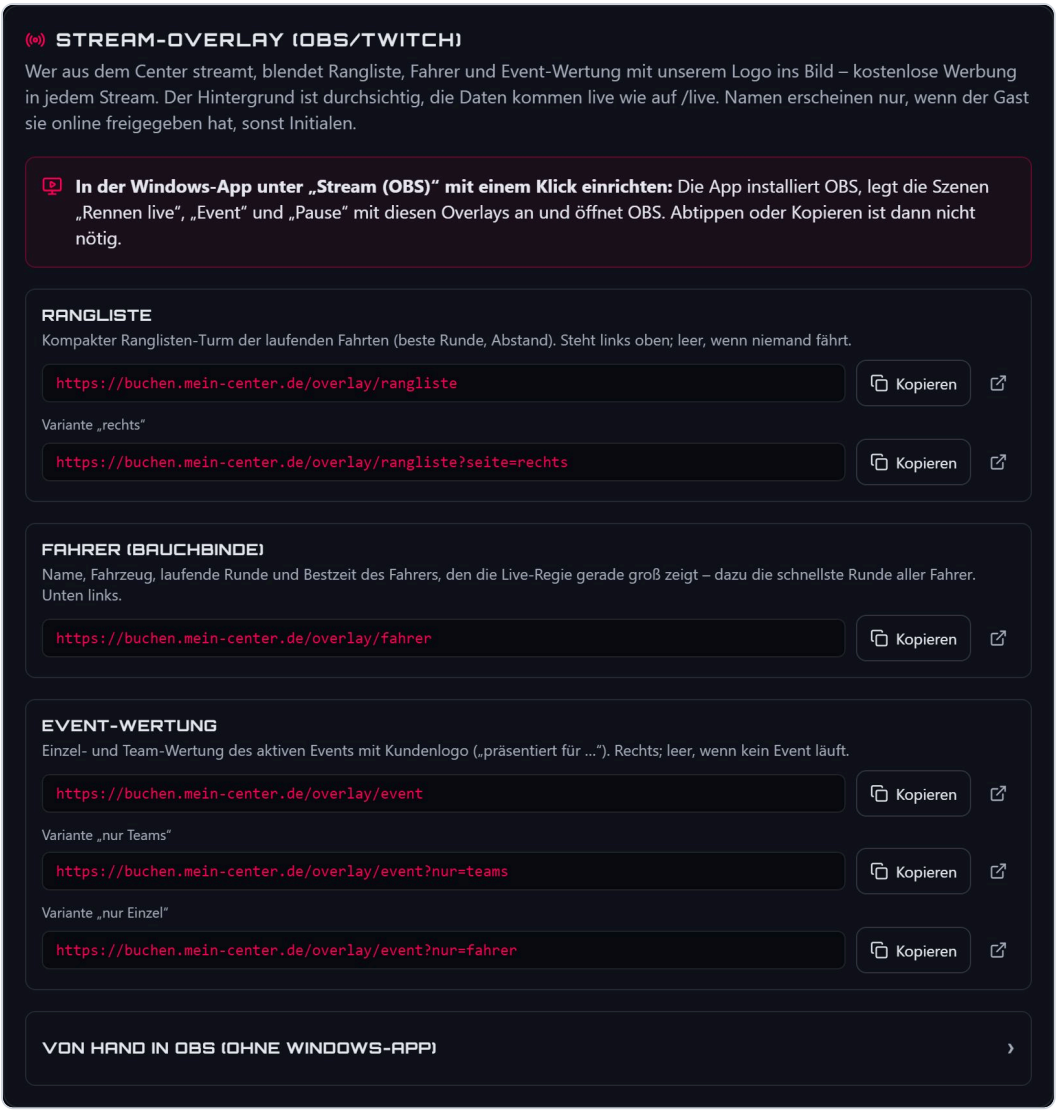


Figure 5.6 Stream overlay on the Screens page.

Signage

With signage, the TVs show a playlist of your own in rotation: live views with real data, your own images and videos, announcements in the center's colors and sponsor slides that only run during their event. You open the editor on the Screens page with the **Signage** button.

1. **Create a playlist:** enter a name (for example “Lounge”) and click **New playlist**. The first playlist becomes the default; it runs on every signage screen that has no playlist of its own.
2. **Add slides:** “Live view”, “Image”, “Video”, “Announcement” or “Sponsor”. On the right, the preview shows exactly what the TV will show.
3. **Images and videos** are uploaded to the media library at the bottom. Before uploading, you confirm that you hold the rights. Images are scaled down to 1920 pixels; videos as MP4 (H.264) or WebM up to 200 MB, played without sound.
4. **For each slide:** duration in seconds (videos can also play to the end), days of the week, time from–to and date range. 22:00 to 02:00 runs past midnight. The center's local time applies.
5. **Assign screens** under “Runs on these screens”. A screen belongs to one playlist at most.

6 **Save**: the screens apply the change within 10 seconds. **Save and start on screens** switches assigned screens that show a different view over to “Signage”. **Test playback** opens the playlist in full screen in a new tab.

Show now: in Live director under “Show on screens now”, or in the editor for each slide, you choose a live view, a short announcement or a slide, plus the duration (1 minute to 2 hours, or “Until I stop it”) and the screens. This takes priority over the playlist and schedule; afterwards the playlist carries on with the next slide. **Stop** returns immediately. Without an end, a pop-up runs for no more than 12 hours.

- If no slide is currently due (no playlist, everything outside the schedule, server unreachable), the screen shows the live view. It never goes black. Incomplete slides are skipped and flagged in the editor.
- Limitations: no more than 20 playlists and 60 slides per playlist, duration 5 to 600 seconds. Videos need a connected file storage (like liveries); without it, only images work. There is no sound.
- From version 1.2, the Windows app opens “Signage” and “Up next” directly (Screens tab, section 4.5). Older versions only open Live, Hall of Fame, leaderboard or event ranking; there you switch views under “Registered in the center”.

RIGHTS TO IMAGES, VIDEOS AND MUSIC

For every image and video you need the rights of use, including for public display in the center, as well as the consent of any people shown and the rights to logos and trademarks. Videos play without sound, but any music they contain is still part of the video; copyrighted music may require a license from the collecting society in your country (GEMA in Germany). The system stores which account confirmed the rights.

LIVERIES

“Upload your own liveries per car – for example for a corporate event. The sims fetch them automatically; afterwards they can be selected in Race start under “Livery”.”

1 Under **New livery**, choose the “Car” and enter the “Name (as shown in Race start)”.

2 Choose the “ZIP file with the livery”: exactly one livery, the folder with the textures (.dds/.png/.jpg), 200 MB at most, no RAR/7z. Optionally “Remove automatically on” and “Note”.

3 **Upload**. The sims fetch it within 5 minutes, never during a session. On the right you see “distributing · 2/6” up to “on all 6 sims”.

The switch (“On the sims” / “Removed from the sims”) takes a livery off the sims without deleting it. If guests upload their own livery via their booking, it appears at the top under **Awaiting approval** – with **View file (ZIP)**, **Approve** and **Reject**. It only goes onto the sims once approved, and is removed automatically after the booked slot. Only upload designs for which the rights have been cleared.

CONTENT: CARS AND TRACKS

Under **Control Center** / **Content** you can see which cars and tracks are on which sim, what is missing and where a version differs – the most common reason a joint race fails. You upload a car or track here once and roll it out to the selected sims, instead of installing it on each PC separately.

- **At the top**, one card per sim: Custom Shaders Patch with version, Content Manager, number of cars, tracks and liveries, disk space used and last report.
- **Inventory** (at the bottom): a table of content by sim with “installed”, “missing”, “different version” and “installed from the store”. The filters “Missing somewhere” and “Version differs” find the problem cases.

1. Under **Roll out content**, choose the type (car or track) and enter the “Name in the Control Center”.
2. Choose the “ZIP file”: the folder of the car or track, exactly as it sits under `content\cars` or `content\tracks`. The page checks the file immediately and shows what it has detected, for example “Detected: car “rc_porsche””.
3. “Which sims?”: “All sims (including ones added later)” or individual sims. Only tick “Replace existing version” if a manually installed folder with the same name is to be replaced.
4. Confirm the rights and click **Upload and roll out**. The sims install the content within 10 minutes, never during a session.

On the right, under **Rolled-out content**, each package shows its status on every sim (“installed”, “pending”, “error”, “own version present”). The switch (“Being rolled out” / “Removed from the sims”) takes content off the sims again; **Delete** removes the file and the content everywhere. Only folders that RAC3R installed itself are removed.

MOD RIGHTS AND SECURITY

Third-party cars and tracks are protected by copyright. Only roll out content your center may use commercially; the account that confirms this is recorded. Every ZIP file is checked in the browser, on the server and on the sim. Programs and scripts inside it are never installed; the limit is 4 GB per ZIP file and 20 GB unpacked.

Limitations: Assetto Corsa only; liveries are still handled under Liveries. RAC3R compares versions by file size, not by content. Without file storage, uploading is not possible; without the migration, the overview only shows what the sims report at startup.

RADIO: VOICE LINK ON THE LOCAL NETWORK

Your staff talk from the Control Center via microphone to all sims or to a single one, for example “yellow flag” or “box”. At the sim, “Control Center talking” then appears at the top center. With driver radio, the drivers hear each other, using a talk button on the wheel or keyboard. The audio runs directly between the devices on the center’s network, not over the internet, and is never recorded. You open the **Radio** page at `/zentrale/funk` ; ideally in a window of its own or on a tablet next to Race start and Live director.

1. **Switch radio on** . The apps on the sims start the radio within a minute; you can switch off individual sims in the list.
2. Under “Driver radio”, choose who hears whom: only drivers in the same joint race (default), all sims or only the Control Center. Drivers can always answer the Control Center.
3. **Connect radio** . The browser asks once for access to the microphone. The connection stays up as long as the page is open; **Disconnect** releases the microphone immediately.
4. Under “Talk to”, choose all sims or one, and hold down the large button – or the space bar. “Listen to driver radio” plays the drivers’ replies in the browser.
5. Assign the talk button once on each sim: in the app, in the **Sim PC** tab under “Radio”, click **Assign button** and press the button on the wheel or the key on the keyboard. A key the game does not use, such as F9, works well.

REQUIREMENTS AND LIMITATIONS

- Windows app version 1.2 or later on the sims, one headset per sim and the `migration-add-sprachchat.sql` migration. Without the migration, the radio stays off and the page tells you so.
- The computer running the Control Center and the sims must be on the same local network. Windows Firewall asks the first time; allow “Private networks”. If a sim stays on “connecting …”, the cause is almost always the firewall or separate networks (guest Wi-Fi, VLAN).
- The Control Center needs an up-to-date Chrome, Edge or Firefox and an https address. Radio is part of the license.
- A keyboard talk key applies to the whole PC; the game no longer receives that key. In exclusive full-screen mode, Windows does not show the notice on the sim, but the radio itself keeps working.
- “Joint race” in driver radio only knows the in-house race server (Assetto Corsa). For other games, choose “All sims”.

EVENTS WITH TEAM RANKING AND CUSTOMER LOGO

You create corporate and tournament events in the admin area under **Events** (chapter 07). Below each event, **Ranking, teams & customer logo** opens the settings: “Corporate customer (“presented for …”)”, “Customer logo” (PNG, JPG or WebP), “Customer accent colour (optional)”, “End of event (empty = start + 4 hours)”, “Team ranking” with a team for each participant, and “Per team, count the best”. During the event, the logo appears on /live, on the screens, in the stream overlay and on the certificate; the “Event ranking” view shows individual and team rankings.

LICENSE AND LOCATION

- **License:** see chapter 03.
- **Location** (“Location check”): “What the location needs – space, power and network, technology, safety, legal, operations and the game licenses.” Filters “All”, “Required”, “Recommended”, “Depends on the case”; each item states who is responsible (Operator, Software maker, Simulator manufacturer, Specialist contractor). **Print / save as PDF** turns the filtered list into a checklist.

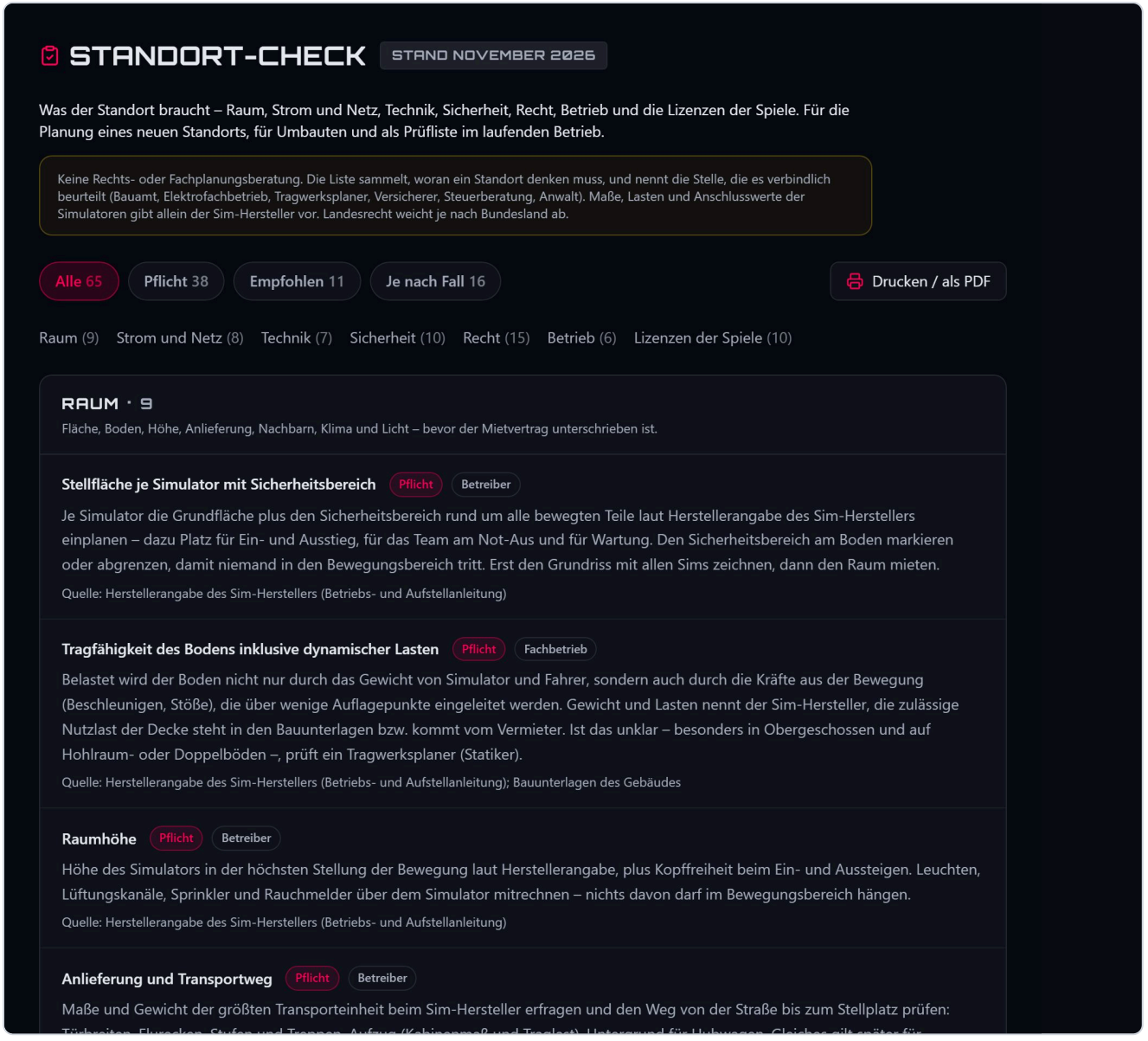


Figure 5.7 Location check – available even without a license.

CHAPTER 06

GUESTS ON SITE

Walk-in guests join the queue by QR code and are called up as soon as a sim is free. If booked guests don't show up, their sim is released after a set time. Before the session, the safety briefing appears on the sim's screen, and while nobody is driving, the monitor advertises your center.

QUEUE

Guests without a booking join the queue without having to wait at the counter. When a sim is free and ready, RAC3R calls up the next guest: on the "Up next" screen, on the guest's phone and, if you like, as a notification to your staff. Booked guests always have priority. You will find everything under **Control Center** / **Queue**.

1. **Open:** the top of the page reads "Queue closed"; click **Open**. While the queue is closed, nobody can join by QR code.
2. **Put up the QR code:** the "QR code to join" is on the right. Print it and place it at the counter, or switch a screen to the "Up next" view – the code is shown there too.
3. **The guest joins:** they enter their name or nickname, fill in your own fields, consent to the processing of their data and tap **Sign up & join the queue**. They get a number and can see on their phone how many people are ahead of them and roughly when it will be their turn.
4. **Guests without a phone** are entered under "Add at the counter" with their name and minutes. The guest keeps an eye on their number.
5. **Call-up:** when a sim is ready, the guest at the front is called up. They have the set time to start, 5 minutes by default.
6. **Start:** if guest self-start is unlocked and "Guest starts the session on their phone" is on, the guest chooses track, car and experience level from the self-start selection and starts on their own. Otherwise your staff start the session: in the queue with **Start**, or as usual in Race start on the assigned sim with the guest's name – RAC3R recognizes the start.
7. **End:** the session ends by itself after the session length. After the changeover time (3 minutes by default), the sim is ready for the next guest.

What your staff can do

Button	Effect
Move up / **Move down**	one place forward or back
Skip	moves the guest behind the next one; the guest stays near the front
Assign sim	assigns a sim by hand, including an excluded one or one in its changeover time
Start	starts the session for the guest who has been called up (track, car, experience level)
Back to the list	withdraws the call-up; the sim is free again
Remove	takes the guest out of the queue
Mark as done	closes a running session in the list
Back into queue	under “Done today”: puts guests who missed their turn or were removed back at the front
Automatic assignment	“off, manual only”: RAC3R no longer calls anyone up by itself

How RAC3R assigns sims

- A sim is **ready** if it is online and licensed, is not a test device, is not listed under “Never assign these sims automatically”, has no session running and its last session ended at least one changeover time ago. If several sims are ready, the one that has been free the longest gets the guest.
- **Bookings have priority:** a session from the queue may not take a sim that a booking needs during its time slot. If the session of the guest at the front no longer fits before the next booking, the next guest with a shorter session gets the sim; the skipped guest stays at the front.
- **Not started in time:** the guest is marked “Missed”, and the sim goes to the next guest.
- **A sim drops out** while a guest is called up: the guest goes back to their place and is called up again for the next free sim.

Settings

Under “Settings” on the same page: “Session length per guest (minutes)” or “Guest chooses the session length from the packages”, “Changeover time between two drivers (minutes)”, “Time to start after the call-up (minutes)”, “Guest starts the session on their phone”, “End the session automatically when the time is up”, “Notify staff on every call-up” (to all devices with notifications in the “Bookings” category) and “Never assign these sims automatically”. Plus the Sign-up and No-show sections (below).

GOOD TO KNOW

- The guest’s page refreshes every 5 seconds, and the phone vibrates on call-up. With “Turn on notifications”, the call-up also comes through when the page is in the background – on an iPhone only if the page has been added to the home screen as a web app.
- The waiting time is an estimate based on session and changeover times. Guests pay at the counter; the queue does not charge anything.
- RAC3R assigns sims as long as sims, guests, a screen or the Control Center are checking in. If all sims are off and no page is open, nothing happens.
- Without an active license there is no queue; the guest’s page then reports “The queue is closed right now. Please ask at the counter.”

CHECK-IN BY QR CODE WITH CONSENT

Guests sign up on their own phones – for the queue via `/anmelden` and for an event via `/anmelden?event=…`. You only ask for what you really need, and you have a record of every consent.

Field	Required
Name or nickname (appears on the screens)	yes
Your own fields	as configured
Consent to data processing with a link to the privacy policy	yes
Newsletter (the email field only appears once the box is ticked)	no

- **Own fields** are created under **Queue** / **Settings** / **Own fields**. Ready-made templates with labels in all five languages: “Company”, “Age confirmation (18+)”, “Shoe size”, “Phone”, “Team”. In addition, “Custom field” as text, number, checkbox or selection; its label appears exactly as you type it. Under “Fields for”, each event can have its own list if you wish.
- **Record:** for each consent, the type, time, version and exact wording in the guest’s language are stored, plus a shortened hash of the IP address – never the address itself. The newsletter only applies after the guest clicks the link in the confirmation email.
- **Deletion:** by the guests themselves with “Delete my sign-up”, by your staff under “Sign-ups” with **Delete**, and automatically after “Delete sign-ups after (days)” (30 by default). The sign-up, the consents and the places in the queue are deleted.

UPDATE YOUR PRIVACY POLICY

On-site sign-up is a separate processing activity. Add its purpose, storage period and recipients to your privacy policy. An event sign-up here is the on-site list of participants; it does not count against the free places of the online registration and does not send a confirmation email.

RELEASING NO-SHOW BOOKINGS

If a booked guest does not turn up, their sim would sit empty until the end of the slot. With this rule, RAC3R releases the slot to the queue after a set time.

1. Switch it on under **Queue** / **Settings** / **No-show**: “Release the slot when a booked guest does not show up” and “Release after (minutes from slot start)”, 10 by default.
2. When a booked guest arrives, check them in under “Today’s bookings” with **Check in** – or start their session in Race start **with the booking selected**. A self-start counts as well.
3. If, after the set time, the guest has neither been checked in nor started, the booking is marked “No-show”, its sims go to the queue, and your staff receive a notification (“Bookings” category).
4. If the guest turns up after all: **Guest is here after all**. The mark disappears, and their sims are reserved again as soon as they become free; a session that is already running continues to the end.

OFF BY DEFAULT – AND WHY

The rule only works if your staff check in booked guests or start their session with the booking. If you start a booked guest in Race start without the booking, check them in first. Status, payment and refunds of the booking never change; there are no automatic refunds. The day rate and slots that have already ended are never affected. Online booking and the calendar continue to count the slot as taken.

SAFETY BRIEFING

The location requirements call for a safety briefing for every guest before their session. RAC3R shows it in full screen on the sim’s main monitor, has the guest confirm it and stores a record: who, at which sim, when, which version and how it was confirmed. The on-screen briefing does not replace the verbal briefing by your staff; it documents it. You set it up under **Control Center** / **Safety briefing**.

1. **When the briefing appears:** “Off” (default), “Before a guest’s first session” (per booking and driver; without a booking, per name and day) or “Before every session” (recommended in the location requirements).
2. **Time limit (minutes)**, 1 to 30, 5 by default: this is how long the start waits. After that it is cancelled, and your staff start again.
3. **Steering wheel button:** “Any button” or a specific one. Click, touch, Enter and space bar always work. A press only counts 2 seconds after the briefing appears.
4. **Content:** headline and steps with title, text and image, for each language. German is mandatory; if a language is missing, the sim shows German. **Load default** fills in five steps in all languages: sitting correctly and buckling up, hands and feet inside the simulator, stopping and giving signals, putting away loose items, reporting any discomfort immediately.
5. **Save**. Every change to the content creates a new version, which is included in every record.

What happens at a start

Race start or self-start creates the start command as usual. If a briefing is due, it appears on the sim in the guest's language; the guest can change the language at the top. Once they confirm with "Got it, let's go", the wheel button or a key, the game loads. Alternatively, your staff approve it: under **Control Center** / **Safety briefing** at "Waiting for confirmation", or under Devices in the "At the rig" section, with **Approve** (meaning you briefed the guest yourself – the record says so) or **Cancel**.

The records are on the same page, searchable by guest, sim or booking, with the status "waiting", "confirmed", "approved by staff", "cancelled" or "timed out". They are not deleted. With self-start, the time spent on the briefing is deducted from the booked session time; with "Before a guest's first session", this only happens once.

LIMITATIONS

- Needs the app on the sim in version 1.2 or later and the `migration-add-rig.sql` migration. Without the migration, the briefing is treated as not required; starts run as before.
- If the server does not respond three times at the start, the session starts without a briefing; the Control Center reports that the briefing was not checked.
- While a briefing is waiting, the sim does not accept any further commands, not even End. **Cancel** ends the wait immediately.
- Windows reports steering wheels as game controllers. To find out which button has which number, press it during the briefing; "Any button" is the safe choice.

IDLE SCREEN

While nobody is driving, the sim's monitor shows a full-screen display with your center's name and logo, your own slides and a QR code. Waiting guests see what you offer and book their next session on their phone. You set it up under **Control Center** / **Idle screen**.

1. Tick "Turn on idle screen", enter the "Headline" (empty means the center's name) and the "Subline (e.g. offer of the week)", and switch "Show logo" on or off.
2. "QR code": "Online booking", "Live page", "Custom address" (`https://` only) or "No QR code". You can overwrite the "Text next to the QR code".
3. Create slides: **Text slide** with title and text, or **Image slide** (JPEG, PNG or WebP). For each slide, set the duration in seconds (3 to 120) and "show"; change the order with the arrows. Without slides, the center's name is shown large in the middle.
4. "Appears after (seconds without input)": 15 to 1800, 60 by default. Under "Sims" you can switch off individual sims.
5. **Save**. The sims apply the change within a minute.

- It only appears when no session is running, no game is open and nobody has used the mouse or keyboard for the set time.
- It disappears immediately when a start command arrives, a game starts or someone moves the mouse or uses the keyboard. After a start command it stays away for 3 minutes, even if the game is still loading.
- It never takes the focus: clicks go to the window underneath, such as the sim manufacturer's launcher. Your staff operate the sim as usual.

LIMITATIONS

- Needs the app on the sim in version 1.2 or later with the matching Bridge. With an older Bridge, no idle screen appears, because the app cannot then tell for certain whether someone is driving.
- Windows does not count the steering wheel and pedals as input. As soon as a game is running, the idle screen is gone anyway.
- The QR code does not lead to self-start; a guest's start link is personal.
- Slide images can be accessed publicly via their address. Do not upload confidential content.

CHAPTER 07

ADMIN: BOOKINGS AND ADMINISTRATION

The admin area is where you manage guests, appointments and money. It works independently of the license. Detailed everyday procedures are also described in your center's staff manual (menu item "Manual (PDF)").

DASHBOARD

The start page of the admin area: at the top, the quick buttons "New booking", "Gift voucher", "Race start" and "Calendar"; then "Today at the center" with the day's appointments, "To do" (for example "… bookings are awaiting payment"), "Monthly report for accounting" with **Download PDF**, and "This month" (paid online, excluding cash and card payments on site).

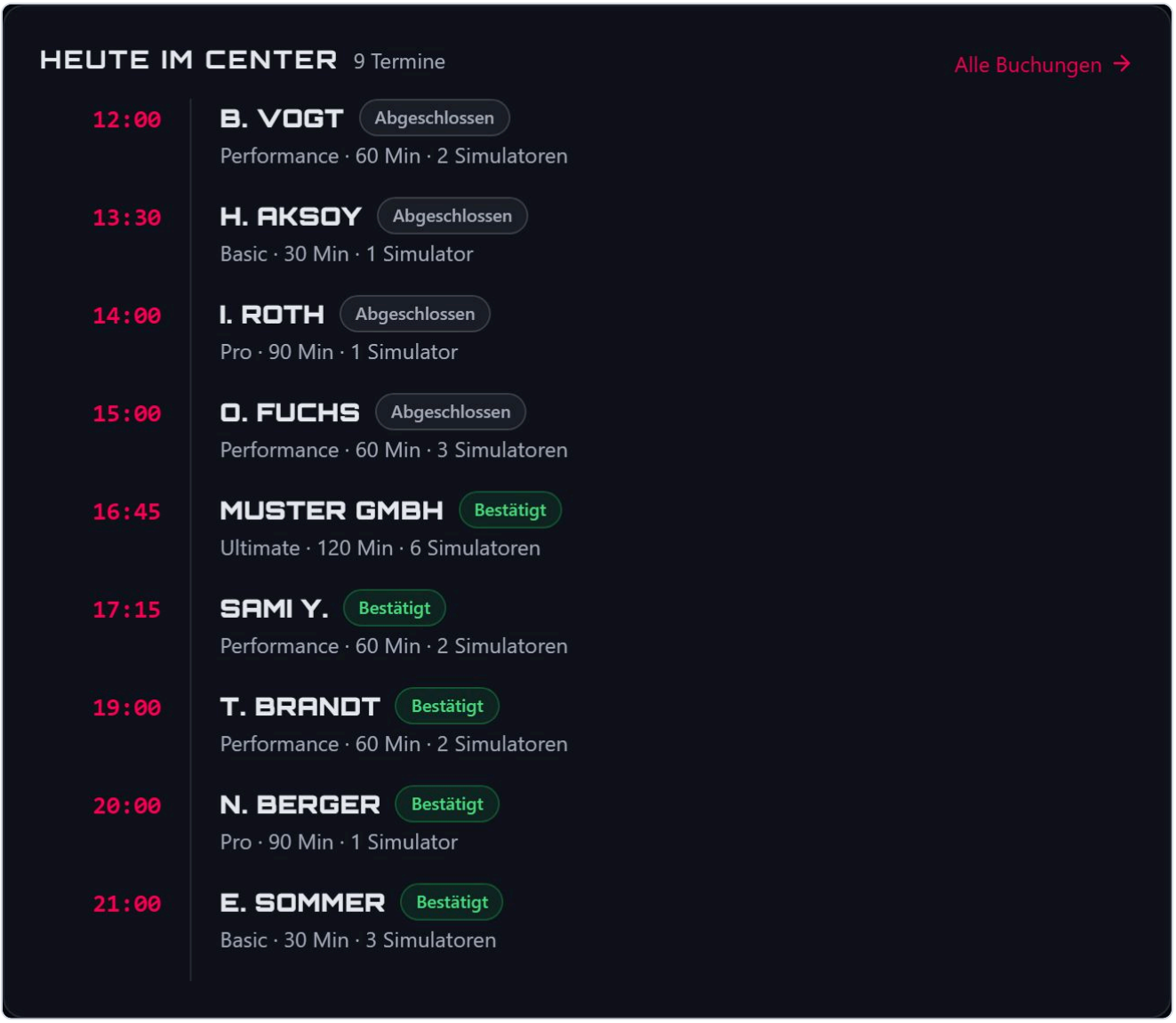


Figure 7.1 Dashboard, "Today at the center" section.

BOOKINGS

- Tabs “Upcoming” and “Past”, filters “All”, “Unpaid”, “Confirmed”, “Completed”, “Cancelled”, and search by name, email, phone or receipt number.
- **New booking** for phone bookings and walk-in guests: “Name *”, “Email”, “Phone”, “Package”, “Date”, “Time”, “Simulators”, “Duration (min)”, “Price (€)”, “Status”, “Simulator / device”, “Gloves *”, “Notes”; optionally “Send confirmation email to guest”. In the admin area you can also book slots that are already full – you then get a warning (overbooking, or outside regular operating hours).
- With **Status** you set Unpaid, Confirmed, Completed or Cancelled. Cancelling does not refund any money – you issue refunds through your payment provider.

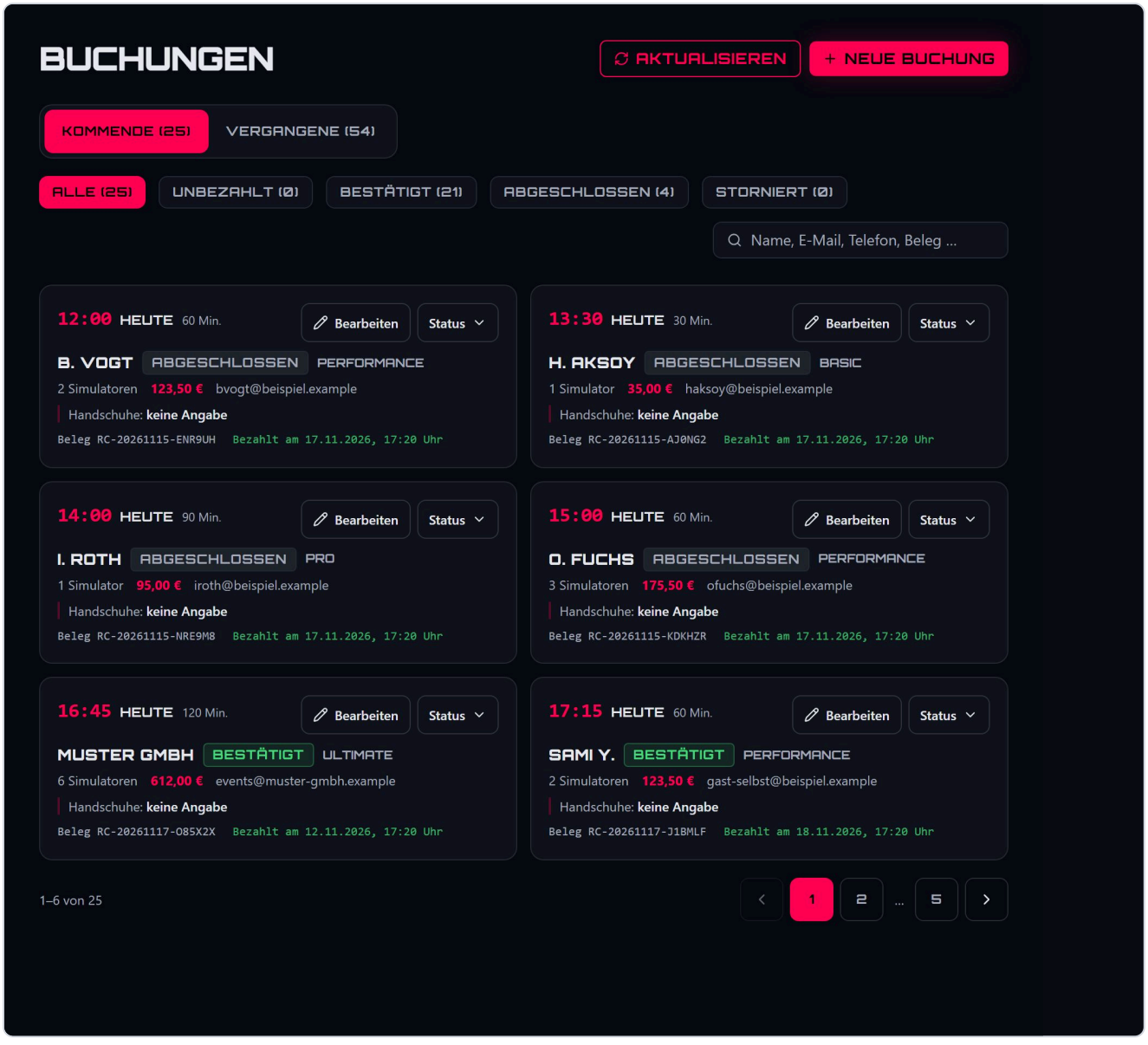


Figure 7.2 Bookings.

CALENDAR AND CLOSURES

The **Calendar** shows the month with the bookings for each day and the totals for the month. Under **Closures** you block “Whole days” or “Specific hours only” with a “Reason (shown on the website)”; existing bookings in that period remain in place and are listed.

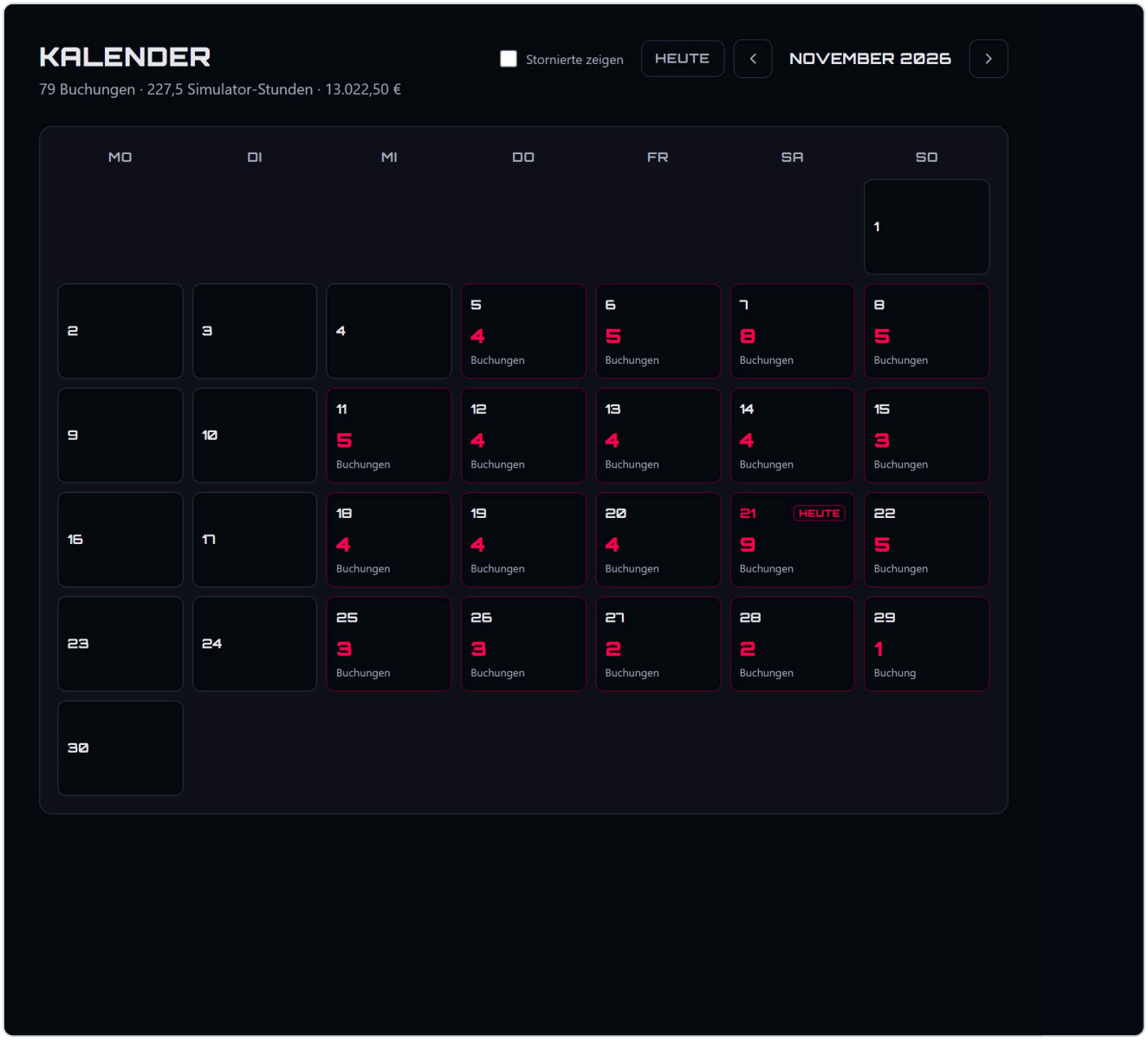


Figure 7.3 Calendar.

BOOKING SYSTEMS – CONNECTING YOUR EXISTING SYSTEM

If you already have a website with a booking system, you can keep it. Under **Admin** / **Booking systems** you connect it once – from then on, every booking made there automatically appears in the calendar, in the occupancy, in Race start under "Who is driving?" and in self-start. Guests continue to pay through your system. The booking carries the label "via …" with the name you assign.

Connecting in three steps

1. **Connect booking system**, then "1. Which system do you use?" – choose the system.
2. "2. Which method?" – the first method is the "recommended" one:
   - **Calendar feed (iCal):** "A link is enough." RAC3R checks every 3 minutes while the admin area or Control Center is open, and every morning.
   - **Webhook (instant):** bookings arrive within seconds – directly from the provider or via an automation service such as Zapier, Make or n8n.
   - **CSV file:** upload an export file as often as you like (2 MB at most).

3 “3. How it works with …” – follow the instructions (table below), enter the “Name” (and, for a calendar feed, the “Calendar feed address”) and click **Create**. Then click **Test** on the new entry: you see straight away which appointments would be imported and how. The webhook address is under **Settings**.

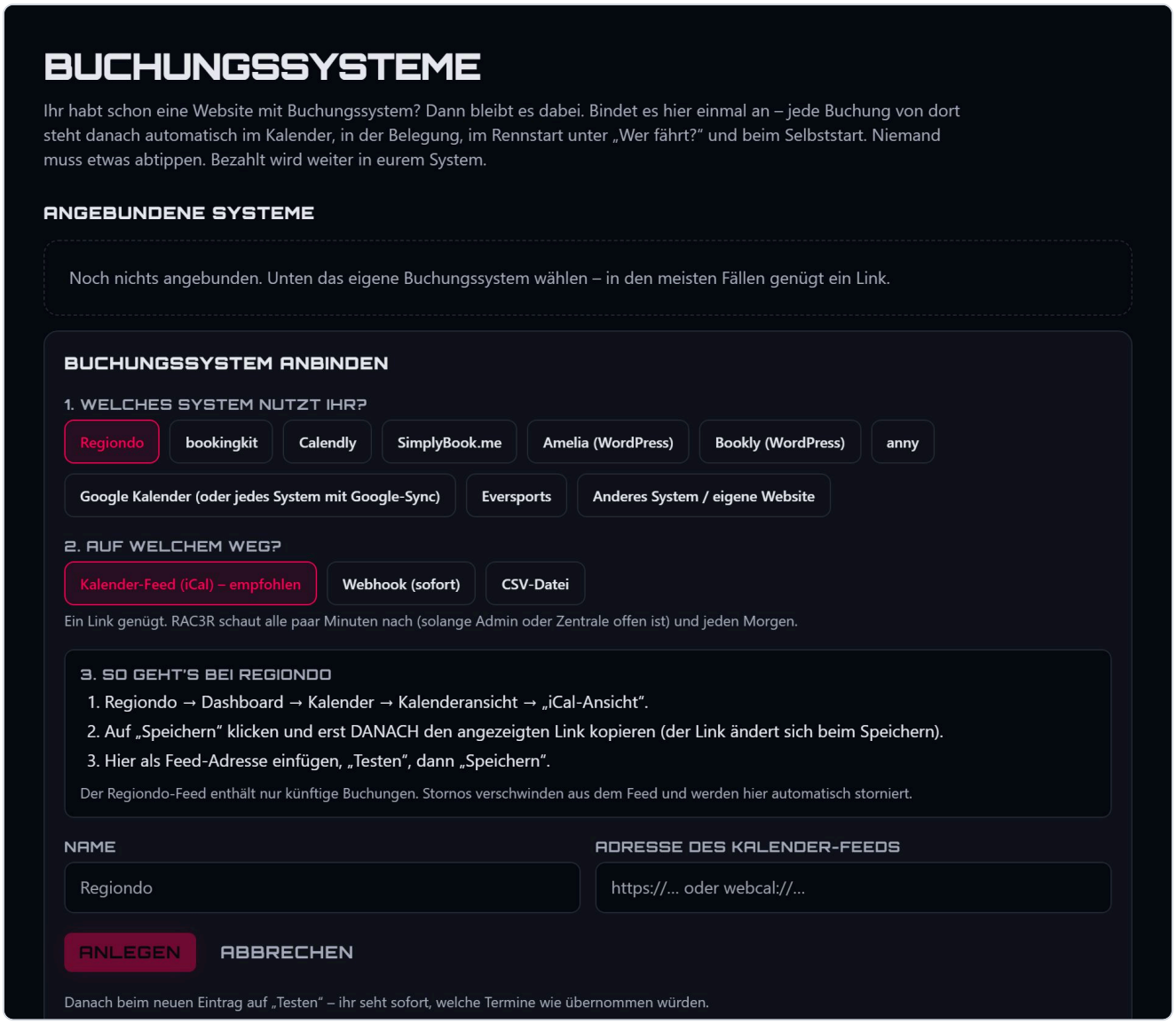


Figure 7.4 Booking systems while connecting.

Supported systems

System	Methods	How it works (as in the instructions on the page)
Regiondo	Calendar feed, webhook, CSV	Feed: **Dashboard** / **Calendar** / **Calendar view**, “iCal view”, click “Save” and only then copy the link (it changes when you save). Webhook via Zapier, trigger “Regiondo – New Booking Event”. CSV: **Bookings** / **Bookings** / **Download** / **CSV**. The feed only contains future bookings; cancellations disappear from the feed and are cancelled here automatically.
bookingkit	Calendar feed, webhook, CSV	Feed: **Settings** / **Calendar feed**, choose the period (e.g. 0 months back, 6 months ahead), copy the link. Webhook: create a channel with the “bookingkit” template and send the address to bookingkit support, asking them to set up the “order created/changed” webhook. CSV: **Statistics** / **Export** / **Orders**. The calendar feed is the safe option.

System	Methods	How it works (as in the instructions on the page)
Calendly	Webhook, CSV	Create a channel with the “Calendly” template. In Calendly, generate a personal access token under **Integrations / API and webhooks**. On the channel, open **Settings**, paste it under “Connect Calendly” and click **Connect** – the webhook is set up automatically and the token is not stored. Requires the Calendly “Standard” plan or higher; each person becomes one booking with 1 sim.
SimplyBook.me	Webhook, CSV, calendar feed	Webhook: activate “Zapier Connector” under “Custom features”, then use Zapier. CSV: **Reports / Booking report**, export as CSV. Feed via “Calendar Sync” (Google) and Google Calendar.
Amelia (WordPress)	Webhook, calendar feed, CSV	Webhook via Amelia’s Zapier connection. Feed via the Google Calendar connection. CSV: export the appointments.
Bookly (WordPress)	Calendar feed, CSV	Feed via Google Calendar synchronization. CSV: **Appointments / Export**.
anny	Webhook	Official connection for n8n and Make: trigger “Booking created/cancelled”.
Google Calendar	Calendar feed	For any system that writes to a Google Calendar: open the calendar in the browser, go to “Settings and sharing” for that calendar and, at the very bottom, copy the “Secret address in iCal format”. Outlook works the same way: “Publish calendar”, ICS link.
Eversports	CSV	**Analytics / Reports / Booking list** (sent by email), then upload it here. Eversports offers neither a feed nor webhooks.
Other system / own website	Calendar feed, webhook, CSV	In the system, look for “iCal”, “ICS”, “calendar feed” or “subscribe to calendar”; otherwise use a webhook (JSON) or CSV from Excel.

For bookingkit, Calendly and some other methods, the page points out in yellow that they were built according to the provider’s documentation and have not yet been tested with a real account: “Please check with a test booking after setup.” Do this for every system.

What happens to a booking

Under **Settings** on the channel, you specify the “Package if nothing matches” (default Performance), “Duration if no end time (min)”, “Sims if none specified”, whether people count as a number of sims, and keyword rules (**Keyword rule**, for example “children’s birthday” sets package and duration). If self-start is unlocked, RAC3R can send the guest their start link before the appointment (“Send start link”: never, or 2 to 48 hours beforehand) – only if “We may email our guests about their booking.” is ticked.

Please check: overlaps

If a booking arrives for a time that is already full (overbooked – … of … sims were already taken) or that falls within a closure, it is still imported – the guest has booked. You receive an email and a notification “Please check external booking”, and the booking appears at the top under **Please check**. Sort it out (move it, free up a sim, call the guest) and tap **Done**. If a large number of future appointments suddenly disappears from the feed, RAC3R does not cancel them, to be on the safe side, but reports it.

Reporting occupancy to your system

To stop your system from selling a slot that is already taken here (walk-in guests, phone bookings, parties), enter one of these addresses there as an external calendar, under “Report occupancy to your booking system”:

- “Every booking (for systems with several places)” – `…/api/kalender/<key>.ics`, entries such as “Belegt: 2 von 6 Sims” (2 of 6 sims taken),
- “Only when fully booked (for Calendly, Google & co.)” – `…/api/kalender/<key>.ausgebucht.ics`, entries “Ausgebucht” (fully booked).

Neither contains guest data, only times, number of sims (including changeover time) and closures, and both cover the period from 7 days back to 400 days ahead. The entries are written in German. “Create new address” invalidates the old one immediately.

Switching off your own online booking

If you only take bookings through your own system: under “Online booking via RAC3R”, enter the “Address of your booking page”, click **Save address**, then set the switch to “Off – guests book via your own page”. The booking page then shows “Book now” with the button **Go to booking**, which leads to your page. Gift vouchers, subscriptions, events and booking in the admin area stay as they are.

GIFT VOUCHERS AND SUBSCRIPTIONS

Gift vouchers: an overview with the outstanding value, filters “All”, “Valid”, “Redeemed”; **Create gift voucher** as a package, an amount or a discount (validity 24 months by default), with **Send**, **Invalidate** or **Reactivate**.
Subscriptions: running racing subscriptions for viewing (Active, Cancelled, Payment outstanding, Ended); guests cancel themselves via the website.

CASH BOOK AND MONTHLY REPORT

The website is not a cash register. Individual cash sales belong in a cash register with a certified security module (TSE) or in the cash report of an open till. Under **Cash book** (“Cash book – daily total”), you enter the “Daily cash total in euros” for each day (“Today” or “Yesterday”, “Note (optional)”) and click **Record daily total**. Entries cannot be changed or deleted; they can only be corrected with **Cancel entry** and a reason.

The **monthly report for accounting** (Dashboard, **Download PDF**) contains online bookings, gift voucher sales, subscription payments, daily cash totals and cancellations. It is an internal overview, not a tax document – agree with your tax adviser how you record cash and card payments.

WITHDRAWALS, EVENTS, CHAMPIONSHIP, RESULTS, SETTINGS

- **Withdrawals** (“Withdrawals & cancellations”): declarations submitted via “Withdraw from contract” and “Cancel contracts here” on your website. Nothing is refunded automatically: check the deadline, block the gift voucher or end the subscription, refund through your payment provider and mark it with **Done**.
- **Events:** “Title *”, “Type”, “Game”, “Date & time *”, “Entry fee (€)”, “Track *”, “Car *”, “Max. participants”, “Description”, “Published”. Sign-ups for each event, **Email everyone**, plus ranking, teams and customer logo (chapter 05).
- **Championship:** monthly Hot-Lap Challenge with **New challenge**. “Detected by the sims” lists the reported lap times – enter the names and click **Assign**; the time then appears in the challenge and the Hall of Fame.
- **Results** (“Manage results”): enter times by hand; under “Anonymise a person’s times”, you remove a guest’s name from the leaderboards at their request.

- **Settings:** “Hall of Fame rotation” – which track/car combinations the Hall of Fame screen shows (“Shown” / “Hidden”).

EXPORT (CSV)

Under **Admin** / **Export** you download your figures as CSV files – for bookkeeping, your tax adviser and your own analysis. Double-clicking opens them in Excel with special characters and amounts intact. Only admin accounts can export; no license is required.

1. Choose the “Period”: “This month”, “Last month” (preselected), “This year” or “Custom” with From and To, ten years at most. It applies to all files.
2. Each card shows how many entries the period contains. **Download CSV** saves the file, for example `RC-buchungen-2026-10-01_2026-10-31.csv`.

File	Contents
Bookings	appointments in the period with package, status, payment method, amounts (net, VAT, gross) and gift voucher, plus the guests’ name, email and phone
Cash book	daily cash totals with receipt number and who recorded them, cancellations including the reason
Gift vouchers	gift vouchers sold or redeemed in the period with value, status and remaining value
Results	every stored lap time with driver, game, track, car and position
Best times	the fastest lap for each game, track and car in the period
Event participants	sign-ups for events taking place in the period, including cancelled ones
Sign-ups with consent	queue sign-ups, one row per consent with wording, text version and time – your record under Art. 7 GDPR

Format for Excel with German regional settings: UTF-8, semicolon as separator, amounts in euros with a decimal comma, dates as DD.MM.YYYY in the center’s time zone. Column headers are in your language; the values are uniform codes such as CONFIRMED or ONLINE; 1 means yes, 0 means no.

PERSONAL DATA

Files marked “Personal data” contain your guests’ data, such as name, email and phone. Store them only where unauthorized people cannot access them, pass them on only when necessary, and delete them as soon as you no longer need them.

CHAPTER 08

API AND WEBHOOKS

Your accounting software, POS system, website or an automation service read bookings, lap times and devices directly from RAC3R, instead of someone typing up lists. If you wish, the Control Center also passes on new bookings, best times and finished sessions immediately.

OVERVIEW

- The API is **read-only**. Bookings are still created or changed via the booking page, the admin area or booking systems.
- You will find it under **Control Center** / **API and webhooks**. Only the center's admins manage keys and webhooks; other accounts can see the status.
- It is part of the license. Without a license, the API responds with "license_required", and no webhooks are sent.
- The receiving side is set up by someone with technical knowledge: a developer, or an automation service such as Zapier, Make or n8n.

CREATING AN API KEY

1. **Create key**, enter the "Application name", for example "Accounting".
2. Under "Allowed scopes", only tick what the application really needs (table below).
3. **Generate key**. The key starts with `rac3r_` and is shown **exactly once**. Copy it and enter it in the application; after that, the Control Center only shows the beginning.
4. If it is no longer needed or has fallen into the wrong hands: **Revoke**. Access ends immediately. If a key is lost, revoke it and create a new one.

Scope	Gives access to	Personal data
Bookings	`GET /api/v1/bookings`	none (no name, email or phone)
Times and best times	`GET /api/v1/results`, `GET /api/v1/best-times`	driver name only for times from the Hall of Fame
Devices and status	`GET /api/v1/devices`	none
Queue	`GET /api/v1/queue`	none (number instead of name)
Guest data	in addition to the above: name, email and phone of the booking, all driver names	yes – see data protection

A maximum of 20 active keys per center. Each key allows 300 requests in 5 minutes.

DATA PROTECTION FOR GUEST DATA

Without explicit permission, the API does not release any guest data. If you release guest data, you need a legal basis for the disclosure and, as a rule, a data processing agreement with the recipient; recipients outside the EU only with the necessary safeguards. Add the disclosure to your record of processing activities and your privacy policy. Pass on guests' deletion requests to the recipients as well.

THE API AT A GLANCE

Address: `https://<your address>/api/v1`. The key is sent in the header, as `Authorization: Bearer rac3r_…` or `X-API-Key: rac3r_…`. `GET /api/v1` shows the key's name and scopes and all endpoints – handy for trying things out. Responses are JSON with English field names, times in UTC, lap times in milliseconds and prices in euros. Lists are paginated: if the response contains `next_cursor`, `?cursor=…` fetches the next page.

Endpoint	Contents
`/bookings`	bookings in the period `from` to `to` (if not specified: today until 31 days ahead, 366 days at most), filter `status`
`/results`	stored lap times, by default the last 30 days, filters for track, car, Hall of Fame
`/best-times`	best time for each game, track and car from the Hall of Fame
`/devices`	sims with status, last sign of life and current session
`/queue`	on-site queue: number, status, duration, sim, times

Errors come with an HTTP status and a code, for example 401 "unauthorized" (key wrong or revoked), 403 "insufficient_scope" (scope missing), 429 "rate_limited" (too many requests) or 503 "not_installed" (migration missing).

WEBHOOKS

A webhook reports events immediately to an address of your choice.

1. **Create webhook**, enter the "Name" and the "Receiver address". It must start with `https://` and be reachable from the internet; the Control Center rejects addresses on your own network.
2. Choose the "Events": "New booking", "Booking cancelled", "New best time", "Session finished".
3. Only switch on "Include guest data" if the recipient needs it.

4 **Save webhook**. The “Signing secret” (starts with `whsec_`) is shown exactly once; the recipient needs it to verify every notification.

5 **Send test** sends a test event immediately and shows the response.

- Every notification carries the header `X-RAC3R-Signature: t=…,v1=…`: `v1` is an HMAC-SHA256, computed with the secret over the timestamp, a dot and the unmodified body. The recipient discards notifications with a wrong signature or older than 5 minutes.
- Success means a 2xx response within 10 seconds. Otherwise, up to 6 further attempts follow over 32 hours. Because the Control Center has no scheduler of its own, retries run alongside normal operation; at night, when the center is closed, an attempt may be delayed until the next morning.
- Further buttons for each webhook: **Pause** / **Resume**, **New secret** (the old one stops working immediately) and **Delete**. A maximum of 10 webhooks per center.
- The “Delivery log” shows the last 50 notifications with status, attempts and response; individual ones can be sent again. The Control Center deletes entries older than 30 days.

CHAPTER 09

TROUBLESHOOTING

The messages appear here as the software displays them; a few that come from the server may still appear in German. If the solution does not help, create the file from **Diagnostics for support** on the affected sim and contact support (chapter 10).

WINDOWS APP AND PAIRING

Message or symptom	Cause	Solution
“No RAC3R Control Center is running at …. …”	Wrong address entered.	Enter the address you use to open the admin area in your browser.
“No server responds at … (address unknown). …” or “(connection refused)”, “(security certificate invalid)”	Typo, no internet or the address is not live yet.	Check the address and the internet connection; open it in the browser on the same PC.
“Server not reachable (…). Please check your internet connection and the server address.”	PC has no internet.	Check the network, then click **Check again**.
“The code has 6 characters (letters and digits).”	Code incomplete.	Enter the complete code (spaces don’t matter).
“Code unknown or expired. Generate a new one in the Control Center.”	Typo, or older than 15 minutes.	Generate a new code in the Control Center.
“This code has just been used.”	Each code can be used only once.	Generate a new code.
“Too many wrong codes. Please try again in 15 minutes.”	Protection against guessing.	Wait 15 minutes.
“The request has expired – please request again.” / “The Control Center rejected the request.”	Option B not accepted in time, or rejected.	**Show code and wait** again.
“The Control Center no longer knows this sim PC – please pair it again.”	Device deleted in the Control Center or key replaced.	**Start setup** and pair again (for the same sim: “For an existing sim”).
“Only admin accounts can pair.”	Signed in with a staff account.	Pair with an admin account.
“The Bridge from the old start file is still running on this PC.”	Old setup without the app is still active.	**Replace old Bridge**.
Watchdog: “only in the installed app”	The app is not running from the installation.	Install the app with the installer.
“Update check failed (details in the log)”	Update address not reachable.	Read the **Log** tab; check the internet connection. Operation carries on.

SIMULATORS AND RACE START

Message or symptom	Cause	Solution
Sim shows “Offline” under Devices	PC off, no internet, app closed.	Check the PC and the internet connection. With the watchdog set up, Windows restarts the app within a minute if it was closed. Otherwise restart the PC and check again after 1–2 minutes.
“Motion program is not running – please start it on the sim”	Motion software not started.	Start it on the sim. It never starts by itself.
“Race start is part of the licensed Control Center and has not been activated yet. …”	No active license.	Enter the license key (chapter 03). Until then, start via the sim manufacturer’s launcher.
“The license expired on …. Race start is locked until it is renewed (…).”	Term and 14-day grace period are over.	Enter a new key.
No lap times, no live data; “Permissions match” open	The game starts with administrator rights, the app does not.	Untick “Run this program as an administrator” in the game’s properties.
“Box” or “Reset” has no effect	Custom Shaders Patch is missing.	Install Custom Shaders Patch.
“… are signed in with the same Steam account – …”	Joint race: one account on two sims.	Sign in with a different Steam account on one of the sims.
“Firewall not yet opened for joint races (…) – …”	Firewall rule missing.	In the app on this sim: **Firewall rule for multiplayer races**.
“No sim can host the race server.” / “None of the selected sims has the race server (acServer.exe).”	The Assetto Corsa race server is missing.	Install Assetto Corsa completely; if necessary, set the “Race server folder” (Advanced).
“Not possible in a joint race – the driver would leave the race. “Reset” works.”	Box in a joint race.	Use **Reset**.
“The driving time has expired – please start again.”	The session time is over.	Start a new session.
Guest is driving ACC, rFactor 2 or Le Mans Ultimate	Race start only works for Assetto Corsa.	Start in the game; assign the times under **Championship** / **Detected by the sims**.
Lap time missing from the Hall of Fame	No driver name, or the sim is a test device.	Assign the time under “Detected by the sims”; check the “Test device” switch.
Red line under Devices, e.g. “… not detected”	Input device disconnected.	Click the line and follow the instructions (usually: check the USB plug).

SCREENS AND STREAMING

Message or symptom	Cause	Solution
“no signal” under “Registered in the center”	Screen off, window closed or PC off.	With the app: taskbar icon, **Open screens**. In the browser: reopen it or run the kiosk start file.

Message or symptom	Cause	Solution
“running, not full screen”	Full screen not active.	Click the screen once.
“The “Window management” permission is blocked.”	The browser has refused the permission.	Allow it in the browser’s site settings – or use the Windows app.
“Access to the overlays is missing.”	PC not paired.	Enter a code (“Screens only”) or paste an overlay link (section 4.7).
“The Windows prompt for administrator rights was answered with “No” – OBS was not installed. …”	User Account Control prompt declined.	Try again and click “Yes” (account with administrator rights).
“OBS could not be closed (…). …”	OBS is asking something or is streaming.	In OBS, choose “File”, “Exit”, then try again.
“The stream overlays are not available on the server (part of the license, or the module is switched off).”	No license, or module off.	Check the license (chapter 03).

BOOKING SYSTEMS

Message	Solution
“The calendar cannot be reached – is the address correct? It will be retried automatically.”	Check the address; otherwise wait.
“Access denied (HTTP 401/403). Is the link still valid? …”	Copy the link from the booking system again and enter it under “Settings” (some systems create a new link when you save).
“There is no calendar at this address (HTTP 404). …”	Copy the link again.
“The address returns a web page instead of a calendar. …”	Copy the link to the iCal/ICS feed, not the page in the browser.
“The calendar is too large (over 5 MB). …”	Reduce the feed period in the booking system.
“Addresses in your own network cannot be fetched – …”	Use the public link from the booking system.
“… future appointments are suddenly missing from the feed – NOT cancelled, to be on the safe side. …”	Check in the booking system; cancel appointments that really have been cancelled in the admin area.
Guest has booked, booking is missing	Under Booking systems: **Sync now**. If the message stays red, create the booking by hand until the issue is resolved.

GUESTS ON SITE AND AT THE RIG

Message or symptom	Cause	Solution
“The database tables are missing. …” or “The database is not yet prepared for this feature …”	Migration not applied.	Apply the migration (chapter 02, “Keeping the database up to date”).

Message or symptom	Cause	Solution
Guests see “The queue is closed right now. …”	Queue not opened, or no active license.	Under Queue: **Open**; check the license.
Nobody is called up although a sim is free	Automatic assignment off; sim excluded, a test device or in its changeover time; or a booking needs the sim.	Check “Automatic assignment” at the top and read the status under “Sims”. If need be, use **Assign sim**.
Booked guest is marked “No-show” but is here	Not checked in and started without the booking.	**Guest is here after all**; in future, check guests in or start with the booking.
“Start is waiting for the safety briefing: …”, but nothing is visible at the sim	App on the sim older than 1.2, or not running.	Under Devices, “At the rig”: **Approve** if your staff have given the briefing. Update the app on the sim.
Feedback that the briefing was not checked	The server could not be reached at the start.	Give the briefing verbally; check the internet connection at the sim.
Wheel button does not confirm	A different button number is set.	Set “Steering wheel button” to “Any button”. Click and Enter always work.
Idle screen does not appear	Off in the Control Center, switched off for this sim, app older than 1.2 or old Bridge.	Check the Control Center, then use **Show idle screen for 15 seconds** in the app. If it reports “The server has not sent an idle screen yet. …”, it has not been set up in the Control Center.
“No screenshot received. Is the app running on the sim (version 1.2 or later)?”	App missing, too old or without the Sim PC role.	Check and update the app on the sim.
PC does not restart despite “Restart PC”	A game is running.	End the session first, then try again.
Stream Deck: “Port … is already in use. …” or “Access key missing or wrong.”	Another program is using the port, or an old key is in Stream Deck.	Choose a different port, or copy the key again and enter it in Stream Deck.

CONTENT, SIGNAGE, API

Message or symptom	Cause	Solution
“No file storage connected. …” (Content) or “No file storage is connected for videos. …” (Signage)	The online installation has no file storage.	Have file storage set up; until then, signage works with images.
“The ZIP file contains several items (…). …” or “The ZIP file mixes cars and tracks. …”	More than one item in one ZIP file.	Pack each car or track into its own ZIP file.
Package shows “own version present”	The sim has a manually installed folder with the same name.	Switch on “Replace existing” for the package.
Joint race: “Race server failed to start” or “Race server stopped unexpectedly”	Race server missing, firewall rule missing or differing content.	Read the log lines in the “In-house race server” section; check “Version differs” under Content.
In-game display missing	A game other than Assetto Corsa, Custom Shaders Patch missing or display switched off.	Check “In-game display” in Fine-tuning; install Custom Shaders Patch.
Signage screen only shows the live view	No playlist assigned, all slides outside their schedule, no license or migration missing.	Check the playlist and schedule in the editor, then **Test playback**.
Webhook “Failed”	Recipient not reachable or does not respond with 2xx within 10 seconds.	Read the response in the delivery log, check the recipient, then send again.
API responds with 401 or 403	Key wrong or revoked, scope missing, no license.	Check the key and scopes with `GET /api/v1`; create a new key if necessary.

CHAPTER 10

SERVICES, SUPPORT AND LEGAL

What your license includes, what you can book in addition and how to reach us. The General Terms and Conditions (AGB) you received with your purchase are binding.

Non-binding translation – the German version prevails.

ALWAYS INCLUDED

- The license for the term you purchased (12, 24 or 60 months from activation, or Lifetime), the Windows app, this manual and the templates for your legal texts.
- **Security updates** and the **correction of software defects** throughout the entire term – free of charge.

Service	Buy It Now	Auction
Full Service	included: the first 12 months from the first activation, 24 months for Lifetime	not included; can be booked at any time as a support package
Setup via remote support	included, once, for one location	not included; can be booked at the hourly rate

What counts is what your listing states (“Full Service included”, “Setup included”). Booked services are payable when booked.

FULL SERVICE AND RENEWAL

FULL SERVICE

included 12 months, 24 months for Lifetime

from the first activation of the license key

- Feature updates of RAC3R, installed in your online installation or provided for the Windows app
- Help with questions and faults by message and remote support on working days – up to 2 hours per calendar month; for defects of RAC3R without limit
- Adjustments to updates of the supported games, where possible with reasonable effort

Can then be extended as a support package: €799.00 net per 12 months plus VAT (€950.81 gross), payable in advance; it follows on directly from the previous period and ends after 12 months without notice of termination. 20% cheaper when you renew your license: €639.20 net (€760.65 gross) per 12 months.

SETUP AND INDIVIDUAL HOURS

€19.00 net per hour

plus VAT (€22.61 gross), billed per 15 minutes or part thereof (€4.75 net) according to the actual time spent

Setup is included with Buy It Now – the one-time initial setup via remote support for one location; for an on-site appointment, we only charge travel time and travel expenses. After an auction, the hourly rate applies.

- Setup, for example of the online installation, pairing the PCs, stream setup
- Training for your staff
- Help outside Full Service or the support package, and other assistance
- via remote support or, by arrangement, on site (travel time and expenses by arrangement)

DAY LICENSE FOR EVENTS

For trade fairs, corporate parties and other jobs lasting a few days, there is the day license (chapter 03). It is available on request: tell us the date and the number of days, and we will send you an offer. Full Service and setup are not included unless the offer expressly states them; otherwise, we charge for help at the hourly rate.

You arrange the support package, a setup appointment, a day license and individual hours by message via the platform on which you made your purchase (for purchases on eBay: eBay messages). Full Service does not include the initial setup, on-site visits, individual customizations and extensions, or work on hardware, Windows, games, motion software and your online accounts – we provide these on request at the hourly rate.

HOW TO REACH US

- **Purchase on eBay:** write to us via the eBay messages for your purchase.
- **Manufacturer support:** via the “RAC3R · Support” link at the bottom of the menu in the admin area and Control Center – it opens an email to support.

So that we can help quickly

- the address of your online installation and the sim concerned (“Sim 3”) or the PC name
- the exact wording of the message or a screenshot, and since when it has been happening
- for sim problems, the file from **Diagnostics for support** (`C:\racecenter\diagnose`) and, if applicable, `C:\racecenter\bridge.log`
- for help via remote support: a remote support tool on the PC, ideally installed

LEGAL MATTERS IN BRIEF

- **One location:** the license applies to your own business at one location, with all simulators and PCs there. Passing on, renting out or otherwise making the software or the key available to third parties is not permitted, nor is circumventing the license check or removing the manufacturer’s notice.
- **Third-party rights:** you obtain the commercial game licenses and the rights to mods, content and liveries yourself.
- **Data:** booking and customer data are stored in your own accounts; you are responsible for them. The manufacturer’s technical account sees no bookings, customer data or revenue. Names only appear on screens and in the stream if the guest has allowed it online or has signed up in the queue with consent. For sign-ups, briefing records and the API, the notes in chapters 06 and 08 apply.
- **Your legal texts:** the supplied templates for general terms and conditions (AGB), privacy policy and terms of participation are drafts – have them reviewed by a lawyer before publishing them.
- **Safety:** a briefing before every session, an emergency stop within reach, motion only via the sim manufacturer’s software. The complete list is under **Control Center** **Location**.

GLOSSARY

Term	Meaning
Online installation	Your website with booking page, admin area and Control Center at your own address.
Control Center	The section for the simulators: Race start, Queue, Devices, Idle screen, Safety briefing, Live director, Radio, Screens, Liveries, Content, Self-start, API and webhooks, License, Location.
Windows app	The app for every PC in the center, with the roles Sim PC, Control Center and Screens.
Bridge	Part of the app on the sim PC: connects the simulator to the Control Center, starts sessions, reports lap times and live data. Runs invisibly.
Pairing	Registering a PC with the Control Center using a code.
Watchdog	Windows task that restarts the app after a crash or reboot.
Motion software	Your sim manufacturer's software that moves the seat.
Launcher	Your sim manufacturer's start interface; without a license, the way to start sessions.
Custom Shaders Patch, Content Manager	Add-on programs for Assetto Corsa; needed for Box and Reset, and for Content Manager set-ups respectively.
Live page (/live)	Public page showing the running sessions or the break programme, controlled via the live director.
Calendar feed (iCal), webhook	Methods by which another booking system passes its bookings to RAC3R.
Remote support tool	Software that lets someone work on a PC remotely.
Technical account	The manufacturer's login, which only sees the technology.
Queue	List of on-site guests without a booking; free sims are assigned automatically.
Idle screen	Full-screen display on the sim's monitor while nobody is driving.
At the rig	Section of every sim card under Devices: screenshot, restart, Windows updates, idle screen.
Signage	Your own playlist for the TVs: live views, images, videos, announcements, sponsors.
Migration	One-time extension of the database with the tables for a new feature.
API key	Access for a third-party application to the read-only API, limited to the scopes you allow.
Day license	License for 1 to 31 days, for example for trade fairs and events.