

Unreal Heaven UT99 SOCD

Disclaimer, Responsible Use & Technical Explanation

What is UT99 SOCD?

Unreal Heaven UT99 SOCD is a software-based keyboard input utility designed for Unreal Tournament 99.

The purpose of the project is to provide owners of conventional keyboards with access to **software-based SOCD (Simultaneous Opposing Cardinal Directions)** behaviour, similar in principle to features now built into some modern gaming keyboards.

The project was created in response to the increasing use of keyboards featuring technologies such as **Snap Tap, SOCD and Hall-effect switches** within competitive gaming.

The intention is to provide an alternative for players who do not own specialist hardware, rather than requiring them to purchase a new keyboard simply to obtain similar directional-input behaviour.

What does it actually do?

UT99 normally receives keyboard inputs such as:

- W = Forward
- S = Back
- A = Strafe Left
- D = Strafe Right

With a conventional keyboard, it is possible for opposing keys to be pressed simultaneously.

For example:

A + D

or

W + S

The game receives those inputs according to its normal keyboard-input handling.

UT99 SOCD operates between the physical keyboard and the game. It uses the Interception keyboard driver to receive keyboard input at a low level, examine the directional keys being pressed, and then generate the appropriate keyboard input for Unreal Tournament.

When opposing directions are detected, the software can apply the selected SOCD behaviour.

Depending on the configured mode, this can include:

Last Input Wins

The most recently pressed opposing direction becomes the active direction.

For example:

D held → A pressed

The software releases D and sends A to the game.

The result is that the player's movement changes immediately to the newly selected direction rather than leaving both opposing directions active.

Neutral

When opposing directions are held simultaneously, neither direction is sent until the conflict is resolved.

For example:

D held → A pressed

The software can suppress the conflicting movement rather than allowing one direction to remain active.

Forward Priority / Back Priority

The software can give priority to one direction when opposing forward/back inputs are detected.

These behaviours are applied to the configured movement keys and are intended to reproduce the type of directional-input handling associated with modern SOCD-capable gaming hardware.

What the software does NOT do

UT99 SOCD does **not** modify Unreal Tournament's movement physics.

It does not directly change:

- Player movement speed
- Acceleration
- Strafe speed
- Weapon accuracy
- Hit registration
- Server tickrate
- Network latency
- Player collision
- Game physics
- Weapon behaviour

The software operates on **keyboard input**.

Its purpose is to change how conflicting directional keyboard inputs are presented to the game.

Why use software instead of buying an SOCD keyboard?

Modern gaming keyboards can provide SOCD and similar functionality directly within the keyboard hardware.

Some keyboards also use **Hall-effect switches**, allowing the keyboard to detect key movement electronically and configure extremely short actuation distances.

A software solution cannot completely reproduce the physical characteristics of this hardware.

With a conventional mechanical keyboard, the physical process is approximately:

Finger movement → key movement → switch actuation → keyboard electronics → Windows input → Interception → UT99 SOCD processing → game

A modern Hall-effect keyboard can detect the key's physical movement much earlier and can perform its input processing within the keyboard itself.

Therefore, UT99 SOCD should **not** be considered a replacement for specialist hardware from a pure latency perspective.

The software provides an accessible alternative using existing hardware, but a purpose-built keyboard can have inherent hardware advantages.

In particular, software cannot make a conventional mechanical switch physically actuate at a shorter distance than the switch itself allows.

For this reason, users should not interpret UT99 SOCD as claiming to provide the exact same physical response characteristics as a dedicated Hall-effect/Snap Tap keyboard.

The project is intended to provide **similar input behaviour**, not identical hardware performance.

Why was this project created?

Competitive UT99 has evolved considerably over the years.

Modern keyboards increasingly provide features such as:

- SOCD

- Snap Tap
- Rapid Trigger
- Adjustable actuation
- Hall-effect sensing
- Dynamic actuation

These features can alter how quickly and consistently opposing movement inputs can be changed.

Players using conventional keyboards may therefore find themselves at a hardware disadvantage against players using these technologies.

UT99 SOCD was created as a software-based way of allowing a conventional keyboard to implement a form of SOCD behaviour.

The goal is to make the feature accessible without requiring every player to purchase new hardware.

Important: Server and Community Rules

Using UT99 SOCD is entirely subject to the rules of the server, league, tournament or community in which you are playing.

Not every Unreal Tournament server, competition or community will consider SOCD software acceptable.

Some communities may permit hardware-based SOCD but prohibit software implementations.

Others may prohibit all forms of SOCD or input manipulation.

Some servers may have their own anti-cheat systems or rules regarding keyboard input.

You are responsible for checking the rules before using this software.

Do not assume that because a feature exists in a commercially available keyboard, it is automatically permitted on every server.

If a server administrator, league administrator or community specifically prohibits the use of UT99 SOCD, **do not use it on that server.**

Respect the rules of the community you are playing in.

Responsible Use

UT99 SOCD is provided as a tool for keyboard-input experimentation and competitive gameplay.

Users are expected to use the software responsibly.

Please:

- Check the rules of the server before using the software.
- Follow tournament and league regulations.
- Respect server administrators and community decisions.
- Disable the software where SOCD is prohibited.
- Do not use the software to circumvent an anti-cheat system.
- Do not attempt to conceal the use of the software from administrators.
- Do not represent software-based SOCD as being equivalent to a particular hardware keyboard.
- Do not use the software to gain an advantage in environments where it is explicitly prohibited.

The fact that the software is technically capable of performing a particular input behaviour does not mean that the behaviour is permitted everywhere.

Permission is determined by the rules of the server or competition, not by the software itself.

Interception Keyboard Driver

UT99 SOCD uses the **Interception keyboard driver** to access keyboard input at a low level.

The driver is a system-level component and is fundamentally different from an ordinary application that simply reads keyboard events through standard Windows APIs.

The installer therefore requires administrator privileges.

By installing UT99 SOCD, you acknowledge that:

- The Interception keyboard driver will be installed.
- The driver operates at a low level within Windows.
- Administrator privileges are required.
- Windows may require a restart before the driver becomes active.
- The software depends on the driver for its keyboard-input functionality.
- Removing the application may also remove the Interception driver installed by the application.

You should only install the software if you understand and accept these requirements.

Keyboard Input and Safety

Because UT99 SOCD operates at the keyboard-input level, users should ensure that the application is configured correctly before playing.

If the application is disabled, input is passed through normally.

The software is also designed to release its managed movement inputs when the target game is no longer active, reducing the possibility of movement keys remaining artificially held when switching away from Unreal Tournament.

Nevertheless, users should understand that low-level input software can behave differently from ordinary desktop applications.

If you experience unexpected keyboard behaviour, disable or close UT99 SOCD and investigate the configuration before continuing to use it.

No Guarantee of Competitive Advantage

UT99 SOCD does not guarantee improved performance, accuracy, movement or competitive results.

The effect depends on:

- Keyboard hardware
- Switch characteristics
- Keyboard firmware
- USB polling
- Windows input processing
- Interception processing
- Game configuration
- Network conditions
- Server configuration
- Player technique

A dedicated SOCD/Hall-effect keyboard may still provide lower overall input latency and more sophisticated hardware-level behaviour.

UT99 SOCD should therefore be viewed as a **software alternative for existing keyboards**, rather than a claim that ordinary hardware can be transformed into a high-end Hall-effect keyboard.

Fair Play Statement

The purpose of this project is to provide players with access to a particular category of keyboard-input functionality.

It is not intended to encourage cheating, exploit abuse, anti-cheat circumvention or dishonest play.

Competitive integrity ultimately depends on everyone following the same rules.

If a community decides that UT99 SOCD is not permitted, that decision should be respected.

Likewise, communities that permit the software should make their rules clear so that players understand what is and is not allowed.

Use the software responsibly, play within the rules, and respect the community you are playing in.

Final Disclaimer

UT99 SOCD is provided **as-is and without warranty**.

Installation and use of the software, including the Interception keyboard driver, is undertaken at the user's own discretion and risk.

The developers and distributors of UT99 SOCD accept no responsibility for problems resulting from incorrect installation, configuration, incompatibility, keyboard behaviour, operating-system issues, game issues, or the use of the software on servers or in competitions where it is not permitted.

By installing or using UT99 SOCD, you acknowledge that you have read and understood this disclaimer and agree to use the software responsibly and in accordance with the rules of the server, league, tournament or community in which you play.

If you are unsure whether UT99 SOCD is permitted, ask the server or competition administrator before using it.