

RZTEC TILLER SYSTEM

# RZTEC TILLER SYSTEM

---



# RZTEC TILLER SYSTEM

## 1. Product Overview

The RZTEC Tiller is a high-precision USB controller designed for realistic control of the nose wheel steering axis in flight simulators. The use of a contactless Hall sensor ensures wear-free and precise input. The device is automatically recognized as an HID game controller and requires no additional driver installation.

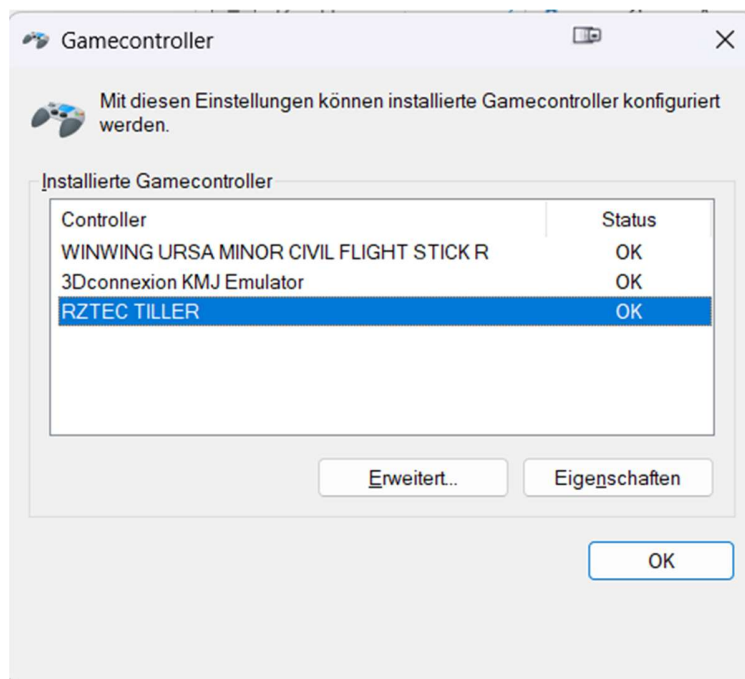
## 2. Main Features

- Plug & Play USB HID device
- Precise control via Hall sensor
- Automatic center position calibration on every restart
- Customizable response curve
- LED lighting with dimming function
- Advanced calibration function directly on the device
- All settings stored in EEPROM
- Non-blocking firmware for stable performance

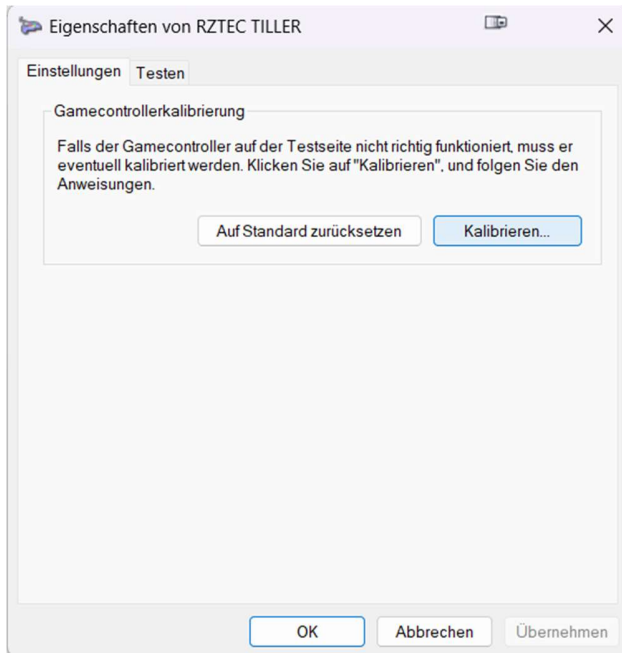
**Plug & Play – no driver installation required**

## 3. Setup on Windows

1. Open Windows Search and enter 'Set up USB game controller'.
2. Select the RZTEC Tiller.
3. Open the Properties.
4. Go to the 'Settings' tab.
5. Start the calibration and follow the instructions.



## RZTEC TILLER SYSTEM

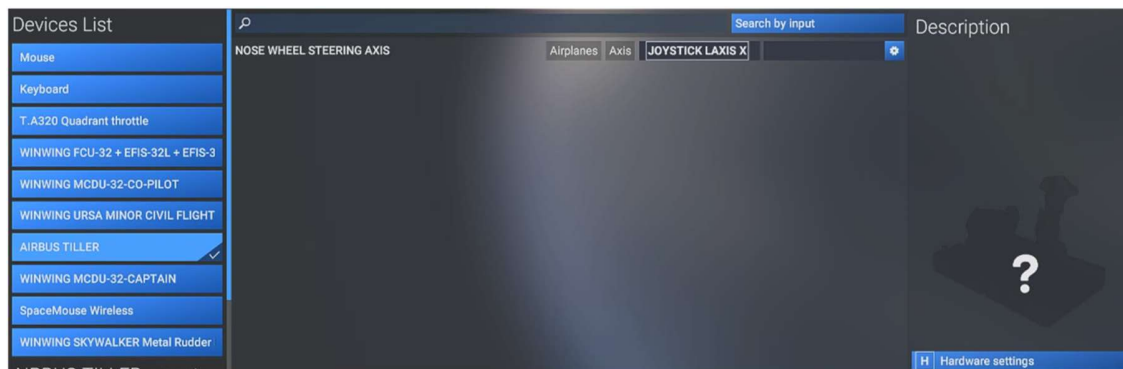


### 4. Setup in the Simulator

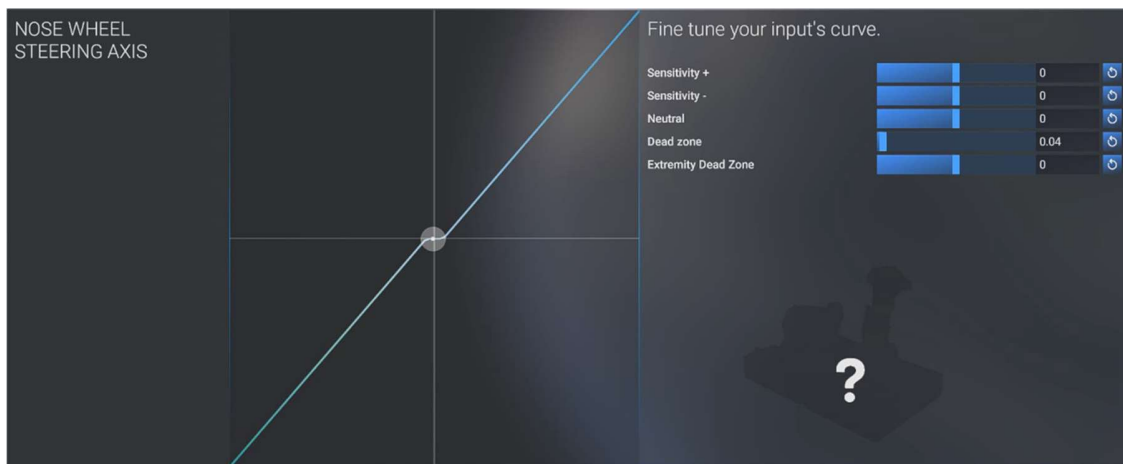
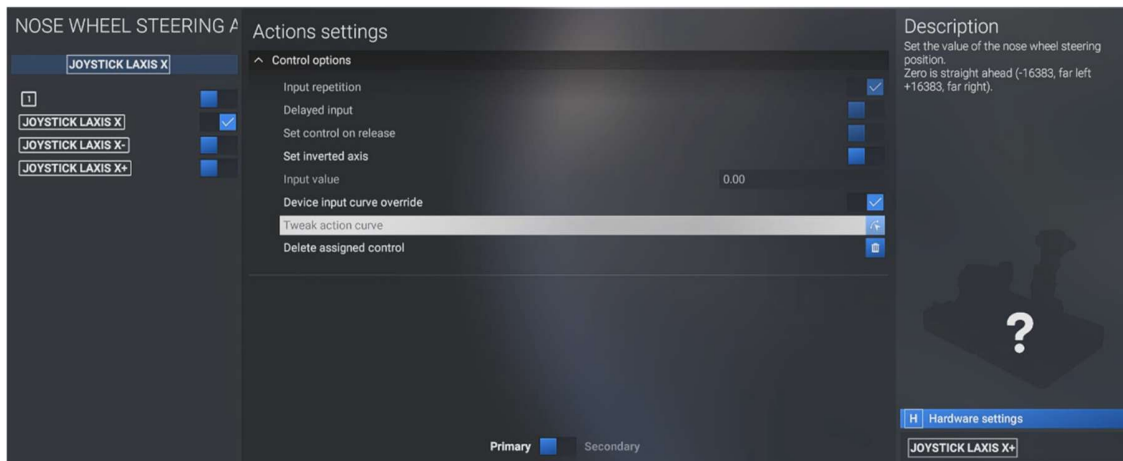
Assign the tiller axis to the 'Nose Wheel Steering' function.

Recommended settings:

- Deadzone:  $\leq 2\%$
- Linear characteristic curve
- No inversion (check depending on setup)



## RZTEC TILLER SYSTEM



### 5. LED Dimming Function

Start:

- Press twice briefly

Operation:

- Hold the button down → Brightness changes continuously
- Release → current value is saved after release

Behavior:

- LEDs flash when idle for orientation
- Automatically exits after approx. 5 seconds without input
- Minimum and maximum values are indicated visually

## RZTEC TILLER SYSTEM

### 6. Calibration on the device (if necessary)

Calibration is normally not required, as the Tiller automatically performs a mean value detection upon startup.

Manual calibration is only necessary if:

- the center position is not detected correctly
- the deflection is uneven
- the tiller does not travel the full range in the simulator

Start:

- Press the button 3 times briefly
- Hold down after the third click

#### Step 1 – Center position:

- LEDs dim slowly (breathing)
  - Move the tiller to the middle position
  - Hold the button down for about 1 second
- 4 flashes = saved

#### Step 2 – Left stop:


- LED flashes 2x cyclically
  - Move the tiller all the way to the left
  - Hold the button down
- 4 flashes = saved

#### Step 3 – Right limit:

- LED flashes 3 times in a cycle
  - Move the tiller all the way to the right
  - Hold down the button
- 4 flashes = saved

Completion:

- If the values are valid, the calibration is saved
- If the values are invalid, the previous settings are retained

 **Tip: Calibration is only necessary when needed or if there are discrepancies with the tiller axis.**

### 7. LED Legend

Breathing = Set to center position

2 flashes = left stop

3 flashes = right limit

4 flashes = Value saved

## RZTEC TILLER SYSTEM

### 8. Firmware Update and Curve Adjustment

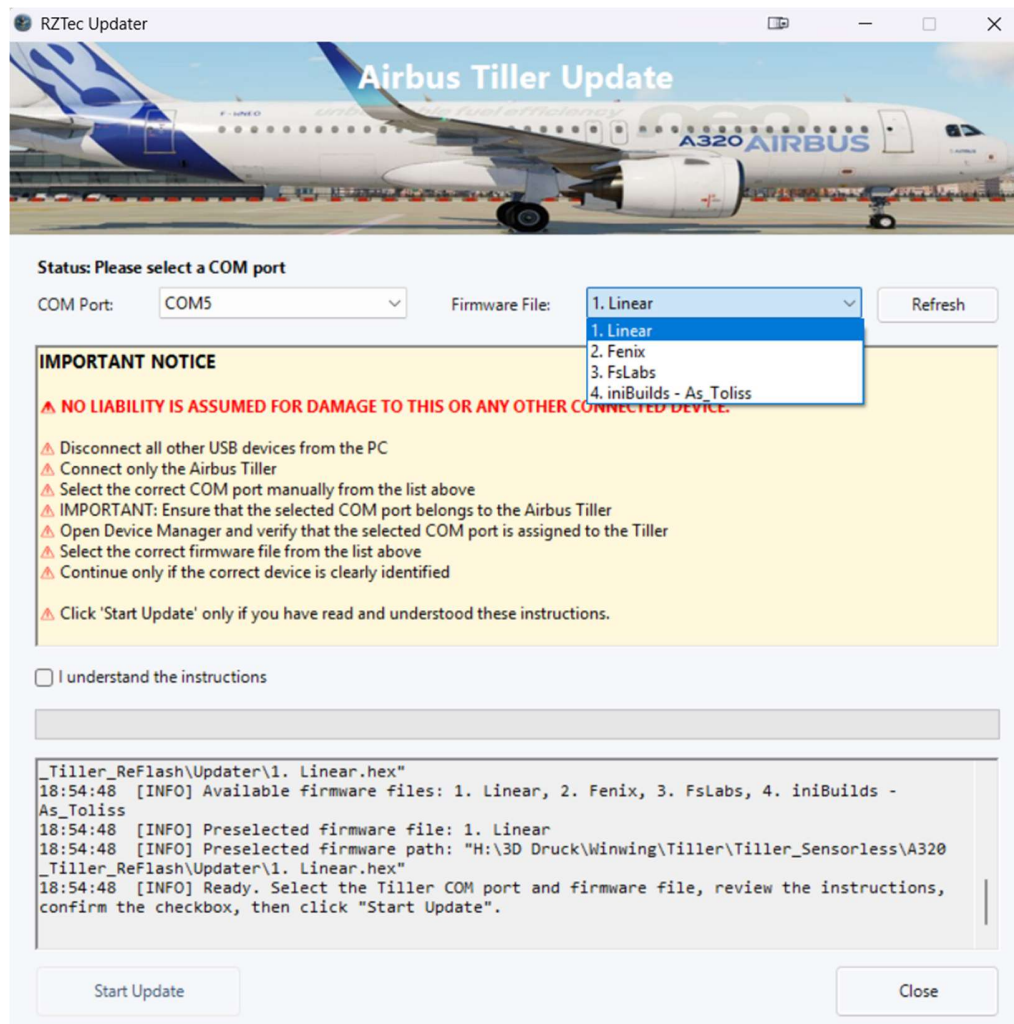
**Warning: The Tiller will be reflashed during a firmware update and after every curve adjustment! The firmware update and curves are only compatible with version 2 of the Tiller.**

**Make sure you carefully select the correct COM port for the Tiller.**

**We assume no liability for devices that are overflashed during the attempt and consequently become unusable.**

**Make sure to select the correct COM port for the Tiller in Device Manager!**

- The Tiller is shipped with the Linear curve.
- Curves are available for Fenix, FsLabs, iniBuilds, and As/Toliss aircraft.
- When using the curves, the degree values on the scale are matched to those of the Tiller in the model.
- You can switch between curves as often as you like.



## RZTEC TILLER SYSTEM

### 9. Troubleshooting

Problem: Center position is incorrect

→ Perform calibration again

Problem: Uneven deflection

→ Perform calibration again

→ Ensure that both end stops are fully reached

Problem: No full deflection in the simulator

→ Check Windows calibration

→ Check simulator settings

Problem: Device not responding

→ Check the USB connection

→ Try a different USB port

→ Restart the device

**⚠ Note: Old calibration values remain active until a new calibration is fully completed.**