



# CLS-E RUDDER with Toe Brakes.

Your choice for certified PTTs and FNPTs up to Level I.

BRUNNER is defining new standards in high performance Active Force Feedback flight simulator devices. As an element of our Control Loading System portfolio of leading drop-in devices, the CLS-E Rudder integrates perfectly into many new or existing PTT and FNPT cockpit environments. Further, it is the perfect match for all ambitious private pilots as a stand-alone Device especially in combination with our CLS-E Yoke. The integrated proportional Toe brakes allow a realistic aircraft simulation. Our CLS-E Rudder provides excellent quality, high fidelity and unique durability at an affordable entry-level cost. It is unmatched in its class: intelligent brushless DC Servo technology, a compact and sophisticated product design and a realistic simulation of

flight effects creates training solutions which provide optimum training value. The BRUNNER CLS-E Rudder is supporting single as well as dual pilot applications. A unique real-time synchronization logic enables unmatched and automatic pilot/co-pilot take-over functionality. Additionally, the CLS-E Rudder simulates and represents various functions like autopilot and trim and allows easy and fast installation and setup through real Plug-and-Play capability. Enabled by our CLS2Sim software-environment, the CLS-E Rudder communicates easily with commercially available simulation software such as X-Plane, M-FSX, and Prepar3D®. Any third party flight simulation solution connects via a simple TCP/IP or UDP remote interface protocol.



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## Features.

- BRUNNER Drop-In or stand-alone: all included - even Power Supply and Control Unit
- High fidelity for most realistic flight experience
- Proportional Toe brakes
- Simulated effects: engine, ground, turbulence, real trim, autopilot, stall etc.
- Dynamic pressure dependent force profile
- BRUNNER real-time synchronization logic for dual-pilot cockpit with automatic pilot/co-pilot take-over (MCC)
- Plug & Play (CAN or USB), optional Ethernet via high-speed Ethernet2CAN gateway
- Reliable, smooth and maintenance free design
- No fan, very quiet, high efficient
- Contactless high-resolution position feedback
- Direct support for X-Plane, FSX, FSX Steam edition, Prepare-3D with BRUNNER CLS2Sim SW, X-Plane plugin for Windows, Linux and Mac
- Swiss Made
- 2 Years Warranty

## Specification.

<b>Peak Force</b>	200 N / 45 lbs	<b>Power</b>	100 W peak
<b>Travel</b>	150 mm / 5.9 in	<b>Operating Voltage</b>	19-25 VDC (DC Power Jack 2.6/5.5 mm), ext. Power Supply included (no fan)
<b>Interface</b>	USB (USB-2 Type-B), CAN (RJ45), Ethernet via optional high-speed E2CAN gateway	<b>Size</b>	380 x 427 x 211 mm 15 x 17 x 8.3 in
		<b>Weight</b>	6.1 kg / 13.5 lbs

## Dimensions.

