

# Celeritas™ Optical Response System

Psychology Software Tools, Inc. has engineered the new Celeritas Optical Response System to accurately gather participant responses and verify signals – minimizing the chance of data loss. The new system can be customized to fit your research needs by selecting the combination of Button Response Units (BRUs) and Joysticks. The BRUs and Joysticks comfortably fit both small to large hand sizes and are constructed of entirely non-metallic components. The units communicate button presses through fiber optic cabling which connects to an Interface Console located in the control room through an available wave guide. The Interface Console provides real-time feedback of participant responses via LED indicators and includes a set of buttons that make responses for the participant as needed. The system seamlessly integrates with E-Prime® through a USB connection. The new Interface Console comes with an Optical Connector and a BNC Connector. These connectors allow the computer to accept either an optical or an electrical TTL pulse that the stimulus presentation computer interprets as another button press, allowing the user to synchronize their experiments with the MR scanner.



*Celeritas Button Response Unit*



*Multiple button configurations available*




*Celeritas Joystick*

## **Celeritas BRU Features:**

- Ergonomic design
- Wrist strap and adjustable wrist sled for a more comfortable fit
- Tactile indicator on index finger button
- Molded from high-impact, chemical resistant, medical grade, biocompatible plastic
- Custom molded wall mount holder for BRUs and cabling
- Contains no metal or conductive materials

## **Celeritas Joystick Features:**

- Omnidirectional analog stick with four buttons
- Comfortable ambidextrous design
- Hand strap for comfortable positioning
- Molded from chemical resistant, medical grade, biocompatible plastic
- Custom molded wall mount holder for Joysticks and cabling
- Contains no metal or conductive materials

 **PSYCHOLOGY  
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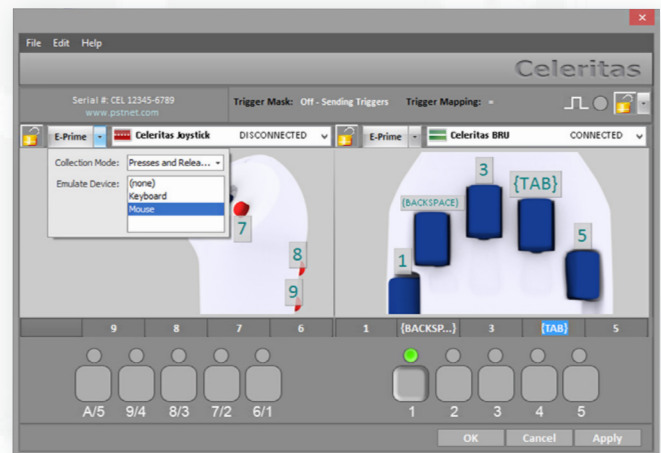
**Fiber Optic  
Interface Console**

## Celeritas Optical Response System Features:

- Thinner, more flexible cabling with easy-to-attach connectors
- Multiple cable lengths and extensions available
- Electrical and optical scanner trigger connections
- Supports any combination of BRUs and Joysticks on either hand
- Displays responses on the front panel in real-time
- External digital inputs and outputs for interfacing with third-party equipment
- Connects as a standard USB keyboard and joystick (HID - Human Interface Device) when not using E-Prime
- Ability to mask scanner trigger key responses when device is not in use
- Can store ten custom key mapping profiles

## Celeritas Monitor Features:

- User friendly interface for customization of BRU and Trigger key mappings
- Ability to create and store unlimited custom key mapping configurations to user created profiles
- Provides complete device status, feedback, and configuration information in a single easy to understand window
- Ability to hide scanner trigger responses when the device is not in use



**Celeritas Monitor  
E-Prime Configuration**

## Enhanced Features with E-Prime:

- Ability to customize responses and key mappings with the joystick.
- Automatically synchronizes with E-Prime's clock for improved response time accuracy
- Ensures every response gets queued for increased reliability

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