Adaptable Tactile Switch

(Switch Access Kit – EC COE)

Description:	Image:
The Adaptable Tactile Switch is a wired mechanical switch. It was designed to provide users with increased tactile input from the bumpy surface of the switch. It is also a bright yellow color with a red ring, making it highly visible for some students who may have low vision. It is 7 × 5.95 × 2.45 in., and weighs 0.285 lbs. The Adaptable Tactile Switch could be used as an external input for speech-generating devices (SGDs), computers and mobile devices, switch-adapted toys, and a variety of other electronic and battery-operated devices. However, depending upon the device and function of the device, an additional switch interface may be needed between the switch and the device. The Adaptable Tactile Switch can be plugged directly into most switch-adapted toys and other devices that have a standard, mono 3.5mm switch jack and have a simple on/off function.	  Purchasing Information

Who Might Benefit?

Those who…

- Can adequately press to activate a mechanical switch.
- Need a larger activation surface than a standard-size switch. This may include children with low vision or blindness and children with motor challenges.
- Needs tactile and visual sensory supports to encourage switch interaction. This may include children with low vision or blindness.
- Have motor challenges and need an alternate form of access to engage in activities associated with computers, mobile devices, speech-generating devices, adapted toys, and other electronic and battery-operated devices (small kitchen appliances, fans, lights, etc.).
- Have motor challenges and need a way to access and engage in childhood activities that may be simulated through electronic means (playing a board game, reading a picture book, creating art, listening to music, playing with cars, cutting with scissors, etc.)

Why Use?

Provides an opportunity to…

- Interact with toys and other switch-adapted electronic devices.
- Access communication devices.
- Engage in switch-accessible computer/tablet activities.

Instructions for Use:

Environmental Considerations

- The Adaptable Tactile Switch can be used in most environments. Because it has electronic parts and mechanical features, it is probably best to avoid environments where the switch would be submerged in water or be placed directly in dirt or sand.

Positioning

- The child can be in any position where they can see the device, and they can access the switch, and the device attached to the switch can work safely. Most typically, the child would be seated in a chair or on the floor.

Alternate Positioning

- Alternate positioning of side-lying, lying on the belly (prone), supine (lying on the back), kneeling, etc. may also be possible. However, as mentioned above, the device attached to the switch needs to be in a position to be able to work safely, and the child needs to be able to see the device and access the switches.
- If alternate positioning of the switch is needed, the OCALI lending library offers a variety of articulating switch mounting systems that can be positioned in a variety of ways. The switch is then mounted to the arm, and the arm can be mounted to a table or child's seating system.

Adaptation Ideas:

Optional Additional Materials/Supplies

- Velcro
- Non-skid matting such as Dycem

Stabilize It

- The switch has a suction cup stabilizer on the back that can be used to anchor it in place.
- Non-skid matting or Velcro could also be used under the switch to keep it from moving on a surface.
- The Adaptable Tactile Switch can also be mounted onto a switch mounting arm for stabilization in various positions other than on a flat surface. Often, these are used if a child has limited ability to reach with their arms and/or another body part is being used to activate the switch, such as the knee, foot, etc. The optional switch mounting arms can be borrowed from the OCALI Lending Library.



Add Sensory Cues

- Because the switch is mechanical, there is a clicking sound when activating. The switch has a high-contrast color (yellow) and a bumpy surface. Because of the bumpy surface, it would likely not be conducive to attaching picture symbols or braille labels to designate the function of the switch.

Basic Play/Use

- Plug the Adaptable Tactile Switch into the jack on your switch-adapted toy/device.
- If you must use an adapter, make sure that you use a MONO adapter, not a STEREO adapter.
- Make sure that the connection between the Adaptable Tactile Switch and your toy/device is completely plugged. There should be no gaps.
- Simply press anywhere on the textured yellow plate to activate your toy/device.
- The toy/device will only remain activated while the yellow plate is depressed. Once you release the yellow plate, the toy/device will turn off.

Extended Play/Use

- Some activities require that the child maintain pressure on the switch for the activity to continue. If the child can't maintain continuous pressure on the switch, a switch latch timer could be used to set up the switch so the child needs only to depress the switch once to start the activity. The activity would continue until the switch was depressed again by the child. The OCALI lending library has switch latch timers that can be loaned to make this simple adaptation. They can be found in the Switch Connection Kit.
- If you wish to run an electrical appliance with a switch, such as a fan, hairdryer, or blender, an electrical switch interface will be needed between the device and a switch such as the Powerlink. This device can also be requested from the OCALI Lending Library.
- Some devices need switch interfaces to send the correct switch functions to the device for switch scanning. Devices such as computers and mobile devices

Communication Support

- Communication boards could be developed with keywords needed to engage in the specific activity the device is being used to support (cooking, art, math, literacy, gardening, etc.). Additionally, words such as more, go, stop, start, and help should be included to support the actual functions of the device. If the communication device is being used by students with low vision or blindness, it may be necessary to consider the size of items on the communication board, auditory cueing of vocabulary, and possibly the use of braille labels.

Alternative Uses

- Other switches included in the Low Vision Switch Access kit could be trialed if the Adaptable Tactile Switch is not successfully used by the child. The OCALI lending library also has several other kits with multiple types of switches that can be trialed.

DIY Alternatives

- It may be possible to use a battery interrupter to quickly switch adapt a standard battery-operated toy that does not have a switch port but has a specific on/off function. The video describes how to make this adaption. (NOTE: The battery interrupter needed is specific to the size of the battery in the device.) Learn How to adapt a toy in minutes using a battery interrupter and switch (YouTube).



typically require a USB connection. Switch interfaces can also be found in the OCALI Lending Library for loan through the Switch Connection Kit that allows switches to be used with these types of devices and switch-accessible software.	
Play/Use with Others This switch is a single switch intended to be used by one person. It could be used in a turn-taking activity with an appropriate accessory (toy or device) attached to the switch. However, if the switch-adapted device has multiple switch ports and functions, the use of multiple switches can allow multiple players to do various parts of an activity based on the software used for the activity	

Additional Considerations:

- The Adaptable Tactile Switch is neither waterproof nor completely water resistant.
- Do not immerse the Adaptable Tactile Switch in water or any other liquid. Make sure that no liquids are spilled on the switch.

Additional Resources:

- If you wish to learn more about how switches can provide access for children with significant motor challenges go to the OCALI Assistive Technology Internet Modules: Switch Access - WATI - Part I and Switch Access - WATI - Part II which will describe in more detail how to assess the need for, setup, and use switches for a variety of access needs.
- CPS Assistive Technology Switch Scanning Resources - Provides information on how to teach switch use and progressions as well as provides links to many other resources.
- Linda Burkhart's Stepping Stones to Switch Use Chart - A guide to teaching step-by-step switch use. The guide also contains activity examples for each step.

Ohio Early Learning Standards

- SC: Science Inquire and Application: Develops ability to reason about cause and effect. (1.b.).
- Additional Ohio Early Learning Standards would be dependent on the specific activities accessed and supported by the switch and accompanying toy/device.

Words to Encourage Play/Use

- Words to encourage play would be primarily dependent on the activity the switch is activating.
- Additional words to encourage use might be press, release, and hold while the child is initially learning the function of the switch.

Adapted from: Haugen's Modes for Adapting Toys based on materials from the "Let's Play" Project at the University of Buffalo

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