

## Building Switch Skills

### Stage 1: Choosing a Switch

The first step is to decide which type of switch would be best for this person. This may take some trial and adjustment. When making this decision, it is important to think about:

- **Physical ability**—how are they going to access the switch?
  - Be sure to think about access methods when taking into account physical ability—what part of the body is thought to be most accurate and independent for this person to activate the switch (e.g., hand, head, foot, knee, elbow, etc.). Consult with the occupational therapist on the team as needed.
- **Positioning** of the switch
- **Mounting** of the switch
- The **goal of using the switch**, which may change as their skills develop
- **Type** of switch
- **Color, shape, texture** of switch
- The **number of switches** needed

Encourage interaction with the switch, and problem solve if there are aspects of the switch that are difficult for the person (for example access method). Make modifications as needed for ease of access and use.

### Stage 2: Developing Switch Awareness

Develop **awareness** of and **tolerance** for the switch. At this point, you want to be practicing with one switch, even if the goal is to add more over time.

The goal at this point is to help the person become comfortable with the switch in their presence and begin to interact with it. This is most often done by pairing the switch with a favorite activity. This creates motivation for engaging with the switch and builds comfort. Even if the person does not yet understand that using the switch relates to their favorite activity, if the same response happens every time they access the switch, they can build that connection.

Even if the person is pushing the switch away, that shows that they are aware of the switch. Build comfort through paired activities, practice, and modeling. If it is difficult to find a highly preferred activity, focus on building interest and awareness of the switch during more preferred or routine activities.

#### Goals in this stage:

- **Attend the switch when presented** (ex: visually, tactually, body position)

- **Tolerate the switch in personal space**
- **Reach out and touch the switch**
- **Activate the switch**

Remember: at this stage of development the person has not necessarily made the connection of understanding what the switch is used to communicate-- they are gaining comfort and understanding that the switch is present and accessible to them.

### **Stage 3: Switch Accessibility**

In this stage, the goal is to help the person activate the switch accurately.

#### **Goals in this stage:**

- **Reach out and touch the switch** (continued from stage 2)
- Ability to **activate the switch** (continued from stage 2)
- **Remove hand or body part from the switch once activated**
- **Activate the switch once for each target event** (e.g., presentation of favorite activity)

If the person is having difficulty removing their hand/body part from the switch, look at possible positioning adjustments to help them do this with better accuracy.

At this stage of learning, if the person is hitting the switch multiple times, there are a few ways to teach them single activation:

- **Access:** Change a part of the person's access method to the switch, such as the switch angle or the switch position—see if that makes a difference.
- **Redirect:** Redirect the person when switch activations are not timely or are repeated in quick succession.
- **Changing:** Note reasons that the person might be activating the switch multiple times—make adjustments as needed (Do they like the sound the switch makes?, Are they unsure if they activated it properly?, Could it be the color or feel of the switch?)
- **Differential Reinforcement:** It is possible to set up some switch accessible computer programs to ignore repeated switch activations and only activate (play music, show a video, etc.) when the switch activations stops. As they practice, this kind of support can help people learn to just press once at a time.

### **Stage 4: Cause and Effect**

In this stage, the person needs to build the **connection between their activating the switch and the motivating event occurring as a result.**

#### **Goals in this stage:**

- The person activates the switch **only when the motivating event has ended.** The person continues in the attempt to reach for the switch **and then stops when the switch is activated, and the desired event begins.**

- The person demonstrates **awareness of cause and effect consistently** over different days, environments, and activities.

### Stage 5: Timing Switch Access

In this stage, the person is working on activating the switch **at the right time within an activity**. The person has been introduced to some skills related to timing in earlier stages, such as hitting the switch once and activating the switch for the target activity. Now, they need to demonstrate their knowledge of **when the switch should be used**. This allows them to participate in ongoing activities and express their message within the right context.

Timing can also relate to building switch access for automated or 2-step scanning.

#### Goals of this stage are:

- The person will **activate the switch within \_\_\_ seconds** of being presented
- The person will **activate the switch appropriately in response to an activity**
- The person will **operate the switch in response to and anticipation of a motivating activity**

#### Examples of ways to add on as progress is made:

##### Moving from One to Two Switches:

For some people, one switch will be the best set up, as they can access it independently and accurately.

For others, they may start using multiple switches—see examples below.

When adding a new switch, consider the factors outlined in Stage 1 of choosing the switch:

- **Physical ability**—and access method
- **Positioning** of the switch
- **Mounting** of the switch
- The **goal of using the switch**, which may change as their skills develop • **Type** of switch
- **Color, shape, texture** of switch
- The **number of switches** needed

Of note: Switch skills allow for people to learn the **basics of voice output devices**—depending on their progress and continued skill, they can expand this skill to other voice output options.

#### Making Choices:

Switches can be used to make choices between items.

- The person may start with two preferred items and make a choice by activating the associated switch.

- Over time, as appropriate for the person, more choices can be offered (e.g., wider variety of choices and through more switches being presented at once)
- As the person learns, the choices can be varied to ensure their skill remains stable • Can add in a “null” switch or “foil” for the person—this helps them learn to make sure to activate the switch associated with the choice they want, and to be very intentional about activation of the accurate switch. As they activate the null or foil switch, they begin to pair that those relate to nothing happening or a non-preferred activity being presented.

#### **Using Two Switches for Routine Utterances:**

- Examples: yes/no, more/finished, go/stop, eat/drink, help/I need a break • These switches can be used during a variety of activities to share specific wants and needs.
- When presenting these switches, think about literacy aspects, such as “yes” presented on the left and “no” on the right (information flowing from left to right).

**Transitioning from single switches to a low-mid tech device:** Some people expand to using low-mid tech devices, which are similar to switches in their style and voice output qualities, however, allow for multiple topics (e.g., 4, 8, 16 cells) to be expressed within a single device. These devices often allow for multi-word utterances to be introduced (e.g., “more eat”, “want help”, “need bathroom”).

#### **Building Scanning Skills:**

Some people do best with a simple scanning set up using one switch and a routine phrase. For example, they might be given choices of activities and activate their switch to say “that is the one I want” when learning simple scanning. This kind of set up can be used during a variety of daily and routine activities, and use a variety of recorded phrases, such as “yes” or “I like that”.

- **Visual scanning:** Options are presented visually through real objects, visual-tangible symbols, or pictures. The number presented at one time will vary depending on the person’s needs.
  - The person can use total communication (e.g., vocalization, eye gaze, facial expressions, body movements) or AAC supports (e.g., activating a switch) to respond.
  - This access method can be used in conjunction with auditory cues, such as the presentation of labels, associated sounds, etc.
- **Auditory scanning:** Options are presented auditorily and total communication methods (e.g., vocalization, eye gaze, facial expressions, body movements) or AAC supports (e.g., activating a switch) are used to respond.
- **Partner Assisted Scanning:** This type of scanning involves the person’s conversation partner presenting the options (can be done through low tech means, such as objects, symbols, pictures, or high-tech presentation on an AAC device, and the person can make their selection through use total communication (e.g., vocalization, eye gaze, facial

expressions, body movements) or an AAC support (e.g., activating a switch).

- There is often an inherent auditory component to this scanning, as the communication partner will label the options, and they can be paired with visual supports as well, such as associated items, symbols, and pictures.

### Scanning with a high-tech device:

- Switches can also be used with high-tech devices through automatic or 2-step scanning
  - *Automatic scanning*: uses one switch—as the scan automatically reads the choices, teach the person to activate the switch when they hear the choice they want.
  - *2-Step Scanning*: Using 2 switches, scan and enter, use one switch (often the switch on the left) to scan, activating the switch each time to hear the options one at a time, and the enter switch, often presented on the right, to select to option and share the desired message.

As the person makes progress in their scanning skill, working on navigating the device with increased independence can be introduced.

Switch scanning can be paired with visuals, specific locations of target utterances, different activities, and can be tailored to the person’s needs and progress.

### Additional info:

As the person further develops use of any of these AAC supports, it is important to help them learn to:

- Carry their communication supports with them
- Keep their communication supports available and within reach
- These supports can be mixed and matched—a person might use 2-step scanning to engage in routine activities, have a yes/no switch for answering daily questions, and might also have a single switch available that says “I need help” for quick access.

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