

Smyle Mouse – Adaptive Switch Mode

A. What is Adaptive Switch Mode?

Smyle Mouse is an award-winning head mouse software that enables complete control over the mouse pointer via simple facial gestures that are captured by a regular webcam. While providing mouse control is the primary goal of Smyle Mouse, it can also be used to simulate adaptive switch input.

The “Adaptive Switch Mode” in Smyle Mouse allows the user to translate their smile gesture into a “switch press” and “switch release” action. This in turn allows the user to use their computer (such as a Speech Generation Device) or any software on their Windows computer (such as AAC software or eye control software) that accepts switch input, without using a physical adaptive switch.

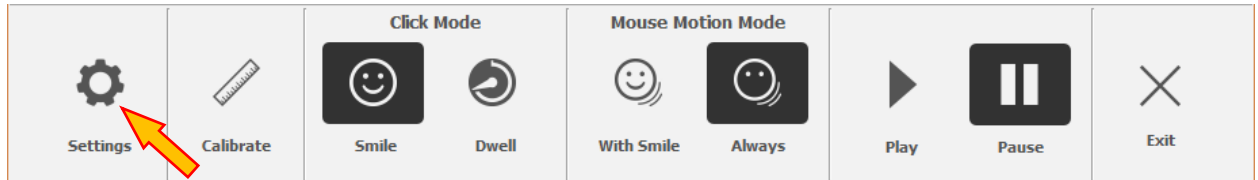
B. What are its benefits?

Adaptive Switch Mode can provide several valuable benefits. E.g. –

- Convenience to Care-givers.
 - No need to carry around additional hardware (adaptive switches) to every place the user goes.
 - No need to set up adaptive switches in every place/setting the user will be in. E.g. on the user’s wheel-chair, bed, etc.
- Ease of Use to the User.
 - Rapid start up. Smyle Mouse’s smile calibration takes less than 10 seconds, where as some switches such as sip-And-puff can take several minutes of tweaking various physical aspects of the switch set up, every time before the user can start using the switch.
 - Non-obstructive. There are no wires or hardware around the face or body of the user. As long as the user’s face is reasonably visible to the webcam of the device, the user can exercise switch control with their smile.
 - Low effort. The user does not have to bob their head to hit a head switch, or move a knee to hit a knee switch, etc. A simple smile can work as a switch press/release. This can be especially helpful to users with Cerebral Palsy as they may already be experiencing muscle tightness in various body parts required to use traditional adaptive switches.

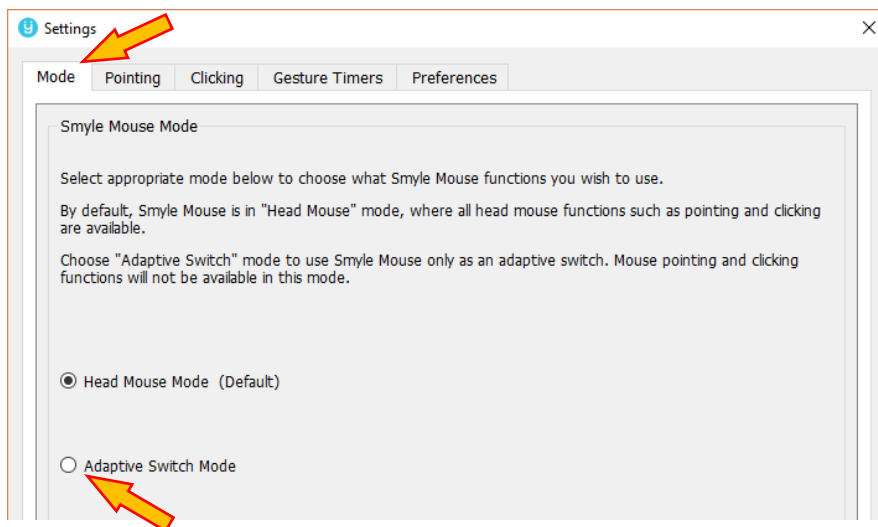
C. Set Up Instructions

1. Install and run Smyle Mouse on your Windows device. On the main windows on Smyle Mouse, click on the "Settings" button on the toolbar.



This will bring up the Settings window.

2. Click on the Mode tab of the Settings Window.

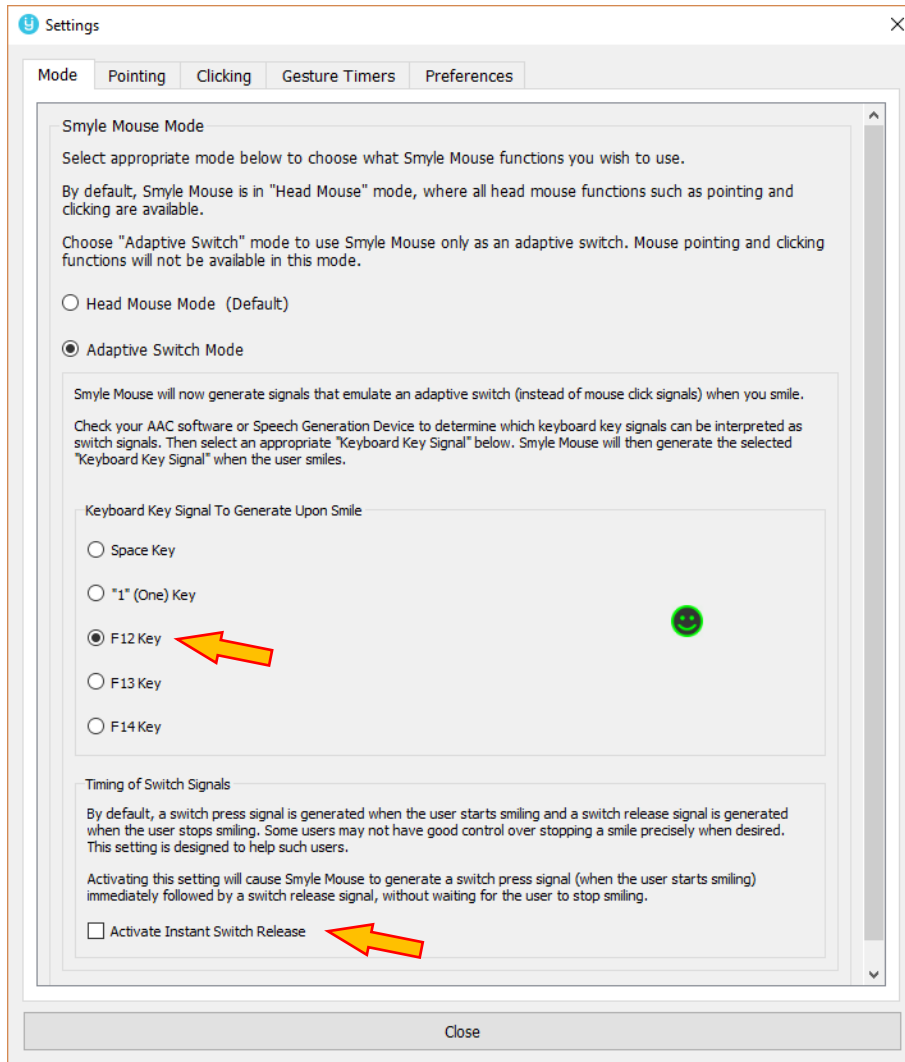


You will notice that "Head Mouse Mode" is selected by default.

3. Click on the Adaptive Switch Mode radio button. That will open up various options (shown on next page).

NOTE:

All mouse pointer motions and related features of Smyle Mouse are disabled when Adaptive Switch Mode is activated.



4. Select one of the options under "Keyboard Key Signal to Generate Upon Smile". Every time the user performs the facial gesture (smile), Smyle Mouse will generate the selected key signal.
 - ❖ Make sure to configure your AAC software, eye tracking software or SGD to use the same key as switch input. E.g. If you select "Space Key" above then also configure your SGD/AAC software to use "Space" as a switch input.
5. OPTIONAL: If there is no need to distinguish a switch press from switch release action, and/or the user does not have sufficient control on their face muscles to stop the facial gesture (smile) on time, also select the "Activate Instant Switch Release" checkbox above.

NOTE: Additional face gestures (such as opening mouth, raising eye brows, etc.) are being planned to generate switch input (in place of smile) in the future.
