

Wireless Switch Transmitter



(Switches Not Included)

The battery powered WST uses low-power infrared light to transfer the state of up to three normally-open switches directly to the HeadMouse Extreme. These switches are used to emulate the “LEFT”, “RIGHT”, and “MIDDLE” buttons of a standard desktop mouse. When emulating the Apple Macintosh mouse, the HeadMouse Extreme uses the “LEFT” input for the primary mouse button and the “RIGHT” input to generate Control-Clicks. The WST has two 1/8-inch (3.5mm) microphone jacks and accepts commonly available adaptive switches. A photograph of the WST rear panel is shown in Figure 1.

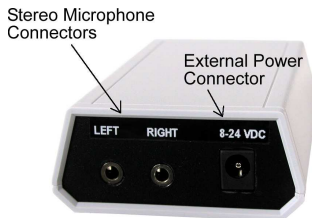


Figure 1 Plug in standard adaptive switches for “Left” and “Right” mouse buttons. In addition to internal batteries, the WST can be powered from an external source.

Using standard mono plugs the WST can transmit “LEFT” and “RIGHT” mouse buttons. With stereo plugs the WST can also provide the “MIDDLE” mouse button. When configured for the “STEREO” mode a two-position switch with one 1/8-inch (3.5mm) stereo microphone plug can be used for both the left and right mouse buttons. Table 1, describes the function of the connector jacks for both modes and Figure 3 illustrates the jumper position on the WST printed circuit board.

The 1/8 inch (3.5mm) microphone jacks are stereo connectors and by changing a jumper inside the WST, it can be configured to accept mono or stereo plugs (factory default is for mono plugs).

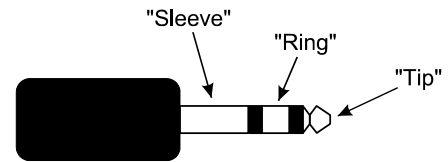


Figure 2. 1/8 inch (3.5mm) stereo microphone connector—sleeve is switch common.

Please note that if a mono plug is used with the WST in the “STEREO” mode that the “ring” contact of the connector will be shorted to the “sleeve”. This will cause the transmitter to continuously send the “RIGHT” mouse button command. Not only will this continuous “RIGHT” button command cause erratic computer behavior; it will also rapidly deplete the transmitter batteries. *Therefore DO NOT use mono plugs when the transmitter is in the “STEREO” operating mode.*

Table 1. Wireless Switch Transmitter (WST) programming options. The “STEREO” option allows three mouse buttons to be emulated or the use of a two-position switch with one stereo plug.

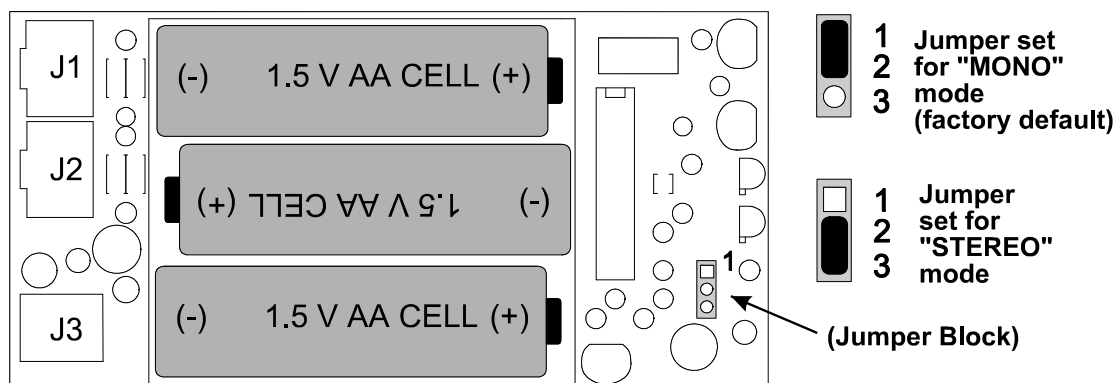
Jumper Position	Mode	Jack	Connection	Description
1 to 2*	MONO	J1	TIP	“LEFT”†
		J1	RING	No Connection
		J2	TIP	“RIGHT”
		J2	RING	No Connection
2 to 3	STEREO	J1	TIP	“LEFT”†
		J1	RING	“RIGHT”
		J2	TIP	“MIDDLE”
		J2	RING	No Connection

(SLEEVE on both jacks is switch common.)

* - Factory Default Setting

† - Apple Macintosh Mouse Button

The WST has a built in feature to guard against accidentally leaving a switch actuated for long periods of time and depleting the batteries. If one or more switches are actuated for longer than two minutes the WST will stop all transmissions until any connected switch changes state.



Be absolutely certain the batteries are inserted in the proper orientation. If they are inserted incorrectly the transmitter will be damaged.

Figure 3. Inside the Wireless Switch Transmitter (WST). Mode selection jumper. Use 1.5 Volt AA-Size alkaline batteries. Remove the four bottom screws for access to the internal batteries.

The WST is normally powered using three internal AA-size alkaline batteries. A typical user will see battery lifetimes of many months. However, battery life is dependent on usage and some users may see substantially longer or shorter battery lifetimes. Remove the four bottom screws for access to the internal batteries. For best results use alkaline cells and replace all cells at one time.

The WST can also be powered by connection to an external 8- to 24-volt DC power source. The external power input is specifically designed for direct connection to a wheelchair battery. Figure 3 is an illustration of the mating power plug with dimensions and contact polarity.

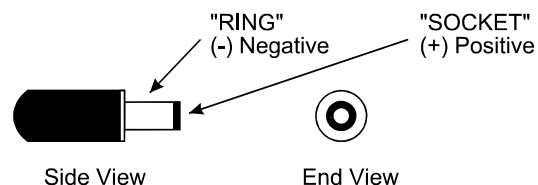


Figure 4 Mating power connector for the Wireless Switch Transmitter (WST). Center conductor is 0.08 inch (2.1mm) in diameter and the outside ring diameter is 0.21 inch (5.5mm).