

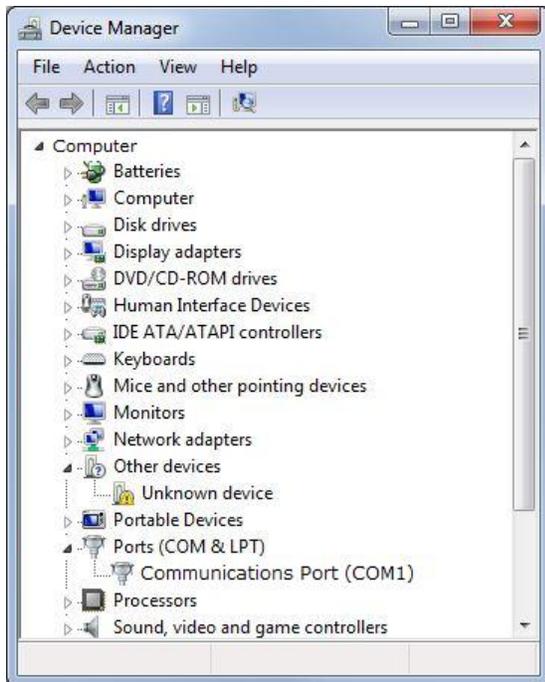
Using the Serial Response Box in E-Prime

Before You Begin

Please fully read through the **Serial Response Box Technical Manual** before attempting to test the Serial Response Box in E-Prime. The instructions included in this document are intended for testing purposes only. Connecting, troubleshooting, and other hardware issues related to the Serial Response Box are covered in the full manual.

Configuration

You can find the proper settings of your Serial Port in the Control Panel of Windows. The Device Manager in the System folder includes the current settings for your Serial/COM Port.



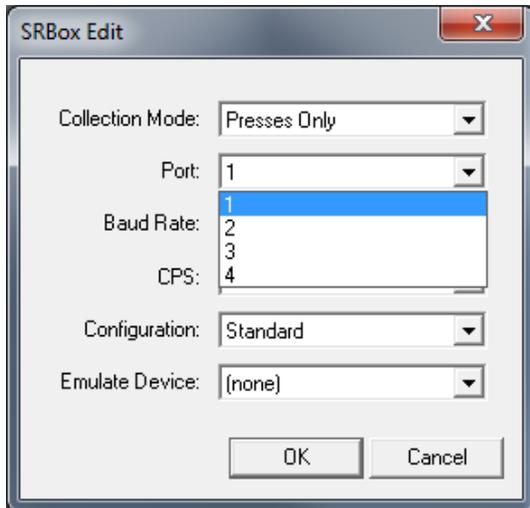
Adding the Serial Response Box Device in E-Prime

The Serial Response Box is not added by default as an input device in E-Prime. To add the Serial Response Box as an allowable device in any experiment, you must do the following:

- Double-click the Experiment Object (at the top of the Structure window) to open its Properties pages
- Click on the "Devices" tab on the Experiment Object's Properties pages
- On the Devices tab, click the "Add" button
- Select the SRBox by clicking it, then click "OK"
- If necessary, edit the SRBox settings by clicking "Edit."
- Dismiss the Experiment Object's Properties by clicking "OK"

You can change the settings for your SRBox in E-Prime by opening the Experiment Object, going to the Devices tab, selecting the SRBox, and clicking Edit. Each setting has a scroll-down menu that allows you to access all the

available settings for the SRBox. In the image below, the Port menu has been accessed. Use the scroll-down menus to change the SRBox settings in E-Prime. The settings should match the ones you viewed for the Serial/COM Port in the Control Panel.



The Serial Response Box is now added globally as an allowable device in the experiment. Advanced Tutorial 3 in the E-Prime Getting Started Guide illustrates how to add the SRBox as an input device for an E-Object.

Testing the Serial Response Box in E-Prime

A program to test your Serial Response Box with E-Prime is available on the PST website at <http://pstnet.com/hardware.cfm?ID=102>. This page includes the downloadable SRBox Utilities program for E-Prime. Download the program now, and continue reading for instructions on using the program to test your SRBox in E-Prime.

E-Prime offers support for 5 keys, 5 lamps, and voice key. Support for the Refresh Detector and the Foot Pedal is also included. Expansion of the SRBox is possible in E-Prime, but it is limited to a maximum of 8 keys and 5 lamps.

Using the Utilities Program

After you have downloaded the SRBox Utilities program from the PST website, open the Utilities.es or Utilities.es2 file in E-Prime, depending on the version you own. The Utilities program will open in E-Studio. In the Utilities program, the Serial Response Box has already been added as an allowable device. You will not have to add the SRBox to run the following tests.

In E-Studio, click the Run icon, press F7, or select Run from the File menu to run the program.

The E-Prime Utilities program for your Serial Response Box includes the following options:

1. Lamps

The Lamps test will simply flash the lamps of the Serial Response Box on and off. Running this test is the most efficient way to check that your SRBox configuration in E-Prime is correct. If you do not see the lamps flash on and off, see the the Troubleshooting section on page 12 of the full Technical Manual for more information about properly connecting your SRBox.

2. Response Keys (1-5)

The response keys available by default are keys 1 through 5, numbered sequentially from left to right on the Serial Response Box. The Response Keys test will simply test that responses made on keys 1 through 5 are being recognized, and that they are being properly identified in E-Prime. This test will prompt you to press a specific number key. Then it will evaluate your response. If the response keys are not registering correctly, please check the settings of your SRBox configuration again.

3. Voice Key

The Serial Response Box will allow you to collect vocal latencies using E-Prime. Vocal responses are coded to key "6" on the SRBox, so that a vocal response looks exactly like a 3.5 ms press on key number "6." To add the voice key as allowable input in E-Prime, you must enter the number "6" in the Allowable Input field of the Duration/Input page on the object that is collecting input.

In the Utilities test, the voice key has already been enabled. To trip the voice key, simply speak into the microphone when prompted. If the voice key trip is successful, E-Prime will report your reaction time.

4. Refresh Test

The refresh detector will allow you to gauge the drawing time your monitor requires for a certain stimulus. This refresh test will display a white "A" in the center of the display screen. Please refer to page 17 of the full Technical Manual for instructions on properly mounting your Refresh Detector and connecting it to your SRBox.

The E-Prime Refresh Test performs two very important functions:

- E-Prime reads the refresh rate of your monitor directly through the Display Device. The first section of the Refresh Test will read the refresh rate of your monitor this way. In this test, the value that is returned is in both Hz and ms/refresh.
- The Refresh Detector simulates the subject's eyes. Presentation of a stimulus is dependent not only on the speed of your monitor, but also on the nature of your stimuli and the amount of drawing time required. Drawing time varies across stimuli. The refresh detector will return a response time, which tells you exactly how long it takes to draw to the center of the screen from the beginning of the refresh cycle. The RT is the exact time at which the stimulus becomes perceivable by the subject.

For more information on Refresh Rate and other timing issues in stimulus display, we recommend that you read the Critical Timing chapter of the E-Prime User's Guide. Testing your refresh rate is highly recommended if you will be presenting stimuli at a rate of less than 100 ms.

5. Foot Pedal Test

The Foot Pedal will allow you to collect responses via the expansion port on the SRBox. The Foot Pedal is wired to key 8 by default. To add the Foot Pedal as allowable input in E-Prime, you must enter the number "8" in the Allowable Input field of the Duration/Input page on the object that is collecting input.

Finishing Up

Once you have successfully completed all of the Serial Response Box tests in E-Prime, you are ready to begin using the SRBox in your own experiments. If you need assistance, or if your Serial Response Box failed to work in any configuration setting, please contact PST Technical Support at <http://www.pstnet.com/support>.

Thank you for purchasing the SRBox for use with E-Prime!