Instructions for Laptop Timing

To use computer timing to time a curling game, you need the following for each sheet of ice:

1. A computer, preferably a laptop or notebook computer.
2. A flat-screen monitor.
3. Sufficient extension cords with multiple sockets to provide power to each computer and monitor.
4. The "CurlClock" timing application. Download the PC version at www.curlclock.com or the Mac version from http://sourceforge.net/projects/curlingtimer/. Also available for download is the Quick Reference guide, which is copied below. Download these files in advance of your event, and provide an icon for the CurlClock program on your computer's desktop.

Hardware Setup

Position the laptop so the timing official will have easy access with a good view of the game. Mount the flat-screen monitor close to the glass, facing the ice, where the players and officials will be able to see it easily. The monitor should not obstruct the view of the timing official. A good location is generally in a corner of the glass, away from the center of the sheet.

Provide AC power to the laptop and the external monitor. These items consume very little power and if necessary, several sheets worth of equipment can draw power from a single outlet. To minimize the likelihood of an interruption during a game, tape together or otherwise securely attach the electrical connections. Laptops have their own battery and can withstand the temporary or even prolonged times without power, but if power is lost to the monitor, it will shut off immediately.

Connecting To the External Monitor

Plug the external monitor's 9-pin male plug into the 9-pin female connector on the laptop. Power up the laptop and the external monitor. In order for the monitor to show the same image as the laptop screen, you need to configure the laptop so that what is displayed on the laptop screen is also displayed on the monitor. Not every laptop is the same, so you may have to refer to your laptop's documentation. On many PC's, the procedure is to hold down the, <Alt> key and press the "F4" (display) key at the top of the keyboard. Pressing "F4" once will turn on the external monitor and turn off the laptop screen. Pressing "F4" again will activate both screens – this is what you want. Each time you press the "F4" key; wait a few seconds before proceeding. There often is a delay while the external monitor "wakes up." Repeatedly pressing "F4" while holding down the <Alt> key will cycle through the display options. On some computers, the "F5" key is the display key.

The display is best at 800 x 600 resolution. If your laptop does not automatically change the screen resolution to 800 x 600 when attached to an external monitor, change it manually.

When the monitor is showing the same image as the laptop, you are ready to open the CurlClock application.

Refer to the CurlClock Quick Reference instructions (below). Configure your display to match the handle colors on your sheet of ice. If one of the colors is yellow, the text should be changed to black for better contrast.

The software is an executable file stored on the computer's hard drive. It is not necessary to be connected to the internet when using the timing program. Download the files in advance of your event and familiarize yourself with the operation.

CurlClock Quick Reference

Shortcut Keys

Key	Action
R	Start Red Clock (this can be changed using the Configure option for the upper/lower clock)
B	Start Blue Clock (this can be changed using the Configure option for the upper/lower clock)
T	Start Timeout/Break clock
Space	Stop all clocks
↑	Add 1 minute to Timeout/Break clock
↓	Subtract 1 minute from Timeout/Break clock

Tips and Tricks

- Starting one clock automatically stops all the other clocks. There is no need to press the spacebar to stop the first clock.
- Use the Reset Clocks menu to reset both clocks at the start of the game or for an extra end. To change the time of one of the clocks individually during a match, click **Upper Clock** or **Lower Clock** and then **Set** to make a time adjustment.
- Using the up or down arrows, you can set the Timeout/Break clock handle timeouts (1 minute), end breaks (1 minute), or the 5th end break (5 minutes) as needed.

Want to save your customized clock colors and settings? Click **Settings**->**Save Current Settings**. Your settings will be pre-loaded next time you start the program.