

1 System Overview

The system comes with the following items:

- 3x Wireless Referee Remotes
- 1x Wireless Receiver
- 1x Micro USB Cable
- 1x Protective Carry Case

The system is designed to run on a standard Windows 10 computer (NOT INCLUDED).

Display of referee decisions is via a monitor (NOT INCLUDED) connected to the computer.

2 Wireless Referee Remote Overview

The three wireless referee remotes are identical.

They run off standard 2x AA batteries.

The wireless communications for the system are in the;

- 900 MHz ISM band for the original PwrSys, or
- 2.4 GHz worldwide ISM band for PwrSys2.4.



Figure 1: Wireless Referee Remote, PwrSys Original

3 Software Overview

When the software starts you'll be presented with the Timekeeper and Display forms. If you have followed each step in the PwrSys Setup Guide, the Display form will automatically maximise to fill the second monitor.

An **ERROR MESSAGE** means your setup was not completed correctly. Please read the error messages and consult the PwrSys Setup Guide to rectify the situation.

The Display form can be normalised by clicking on the Display form and pressing the ESC key and maximised by double clicking on the title bar.

The Timekeeper is responsible for ensuring the competition runs smoothly. If the Timekeeper fails to perform their duty, namely starting and stopping the lift timer, the system will not register referee decisions.

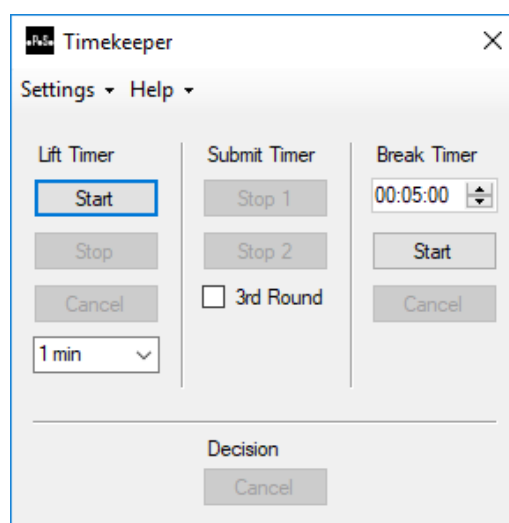
The screenshot shows a window titled "Timekeeper" with a standard Windows interface including a title bar with a close button (X) and a menu bar with "Settings" and "Help" options. The window is divided into three main sections: "Lift Timer", "Submit Timer", and "Break Timer". The "Lift Timer" section contains a "Start" button (highlighted with a blue border), a "Stop" button, a "Cancel" button, and a dropdown menu currently set to "1 min". The "Submit Timer" section contains "Stop 1" and "Stop 2" buttons, a checkbox labeled "3rd Round" which is currently unchecked, and a "Cancel" button. The "Break Timer" section contains a digital display showing "00:05:00", a "Start" button, and a "Cancel" button. At the bottom of the window, there is a "Decision" section with a "Cancel" button.

Figure 2: Initial Timekeeper Form



Figure 3: Initial Display Form

3.1 Connecting Remotes

Remotes need to be connected to the software installation once installed. To connect the remotes, click on the Settings drop down menu, and select Connect Remotes. Follow the prompts on the Configure form. Connecting remotes to the software is only required when first installed.

WARNING: Once this process begins it cannot be cancelled.

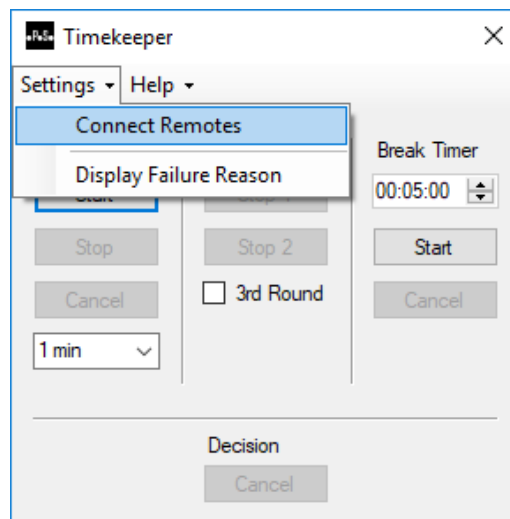


Figure 4: Connect Remotes on Timekeeper Form

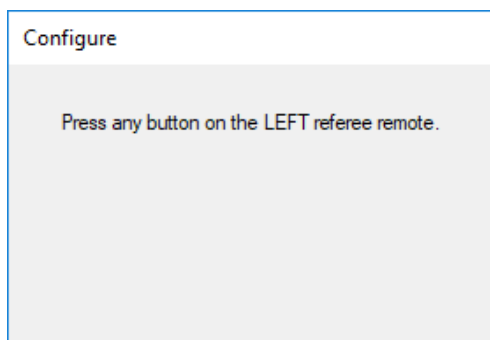


Figure 5: PwrSys Configure Form

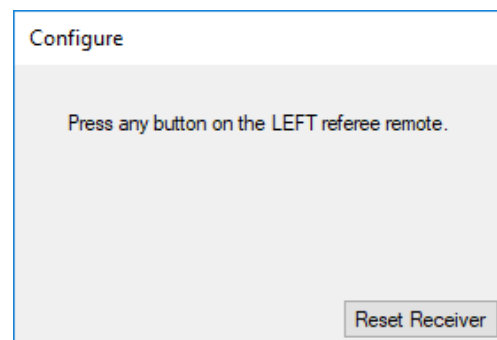


Figure 6: PwrSys2.4 Configure Form

3.1.1 Reset Receiver – PwrSys2.4 Only

WARNING: Clicking Reset Receiver will cause the Receiver to change operating frequency. On each remote, as many as **50** button presses may be required for the Remote to find the Receiver on the new frequency.

WARNING: Pressing buttons on the Remote when the Receiver is not connected to a USB port will cause the Remote to cycle through frequencies looking for the Receiver. As many as **50** button presses may be required to connect the Remote to the Receiver.

The PwrSys2.4 Receiver selects a frequency of communication and uses that frequency indefinitely. Under normal circumstance this is okay. However, if a strong signal is present at the same frequency, communication between the Referee Remotes and Receiver may be intermittent.

If Remotes communicate reliably when 1 metre away from the Receiver, but intermittent at usable range, you may have interference. In this circumstance click the Reset Receiver button to force the Receiver to select a new frequency of operation; away from interference.

3.2 Lift Timer

On the bar loaded call, the timekeeper shall start the Lift Timer by pressing the Start button in the Lift Timer column. The Lift Timer can be set to 1, 2, 3 or 4 minutes, always defaulting to 1 minute, using the drop-down box in the Lift Timer column.

NOTE: 2, 3, and 4 minute lift timers should only be used for compensatory rest time in the event of a wrongly loaded bar at the end of a round.

When the lift has started, the Timekeeper **MUST** stop the timer by pressing the Stop button in the Lift Timer column. If the Timekeeper fails to press the Stop button, the Lift Timer will continue to count down and referee decisions will **NOT** be registered.

If the Timekeeper accidentally presses the Stop button before the lift has started, the Lift Timer can be continued by pressing the Start button again.

If the bar or rack has been incorrectly set and this is noticed after the Lift Timer has started, the Timekeeper can press the Cancel button in the Lift Timer column to cancel the Lift Timer countdown.

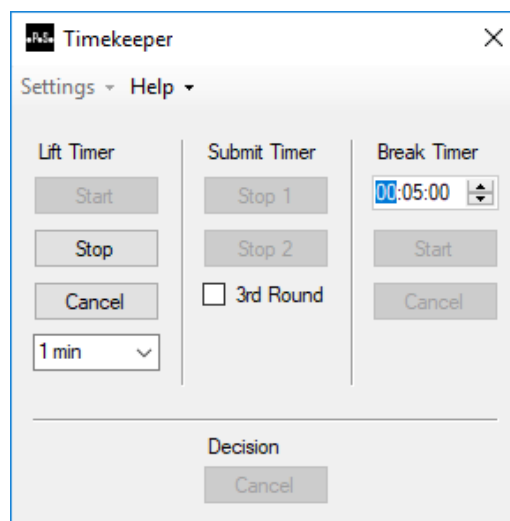


Figure 7: Lift Timer Start Button Pressed

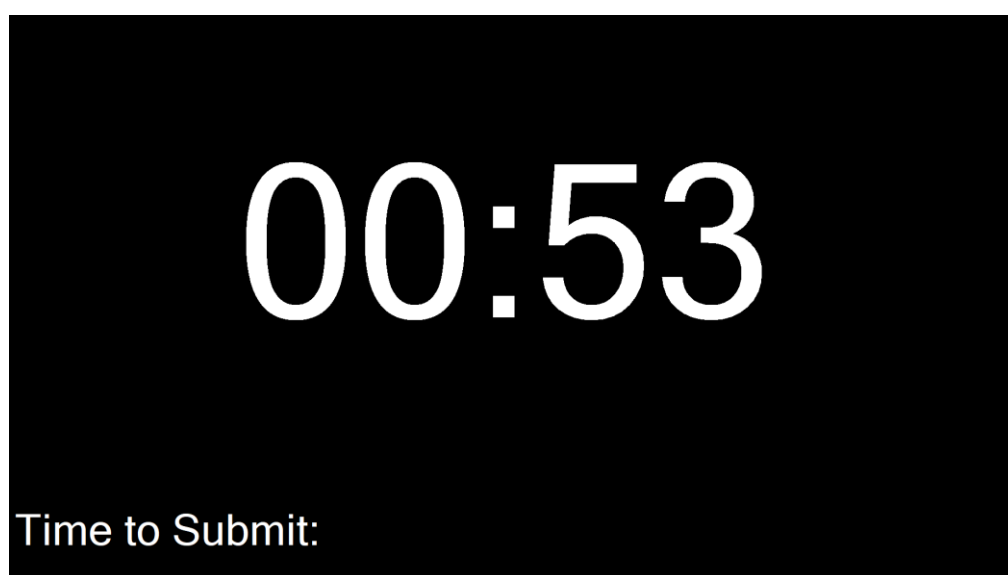


Figure 8: Lift Timer Counting Down

3.3 Referee Decisions

For the referees' decisions to be displayed, all three referees need to push at least one button on their remote. The referees' decisions are displayed no more than 1 seconds after the final referee has pressed their first button.

The software will always display the final button pressed by each referee, prior to the display of referee results. E.g., if a referee presses the red button followed by the white button, the software will display a large white circle for that referee.

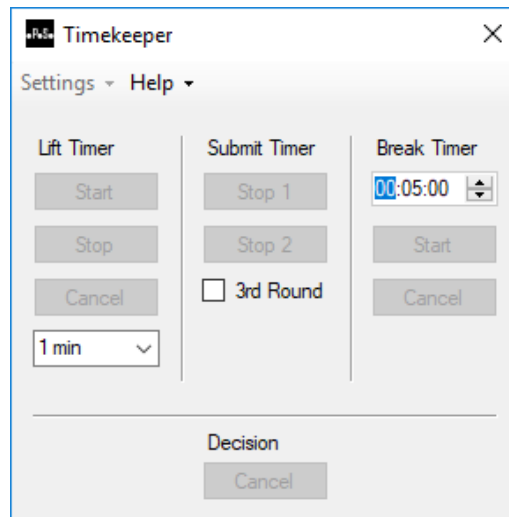


Figure 9: Timekeeper After Button Press on All Remotes

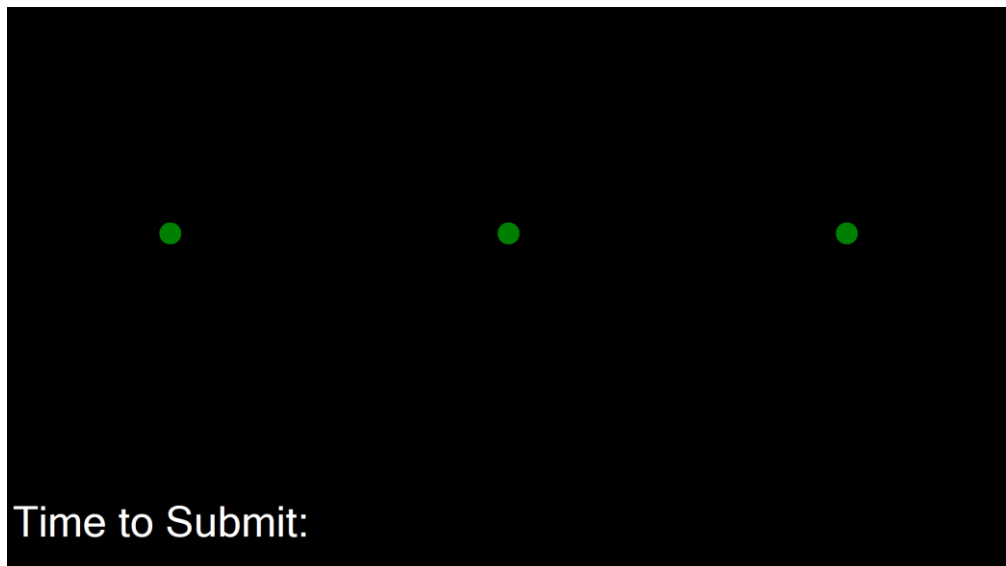


Figure 10: Display After Button Press on All Remotes

3.3.1 Failure Reasons

The reasons for lift failure can either be displayed or hidden. By default, failure reasons are hidden. To enable failure reasons, in the Timekeeper form, click on the Settings drop down menu and select Display Failure Reason. The reason for lift failure given by each referee will now be displayed.

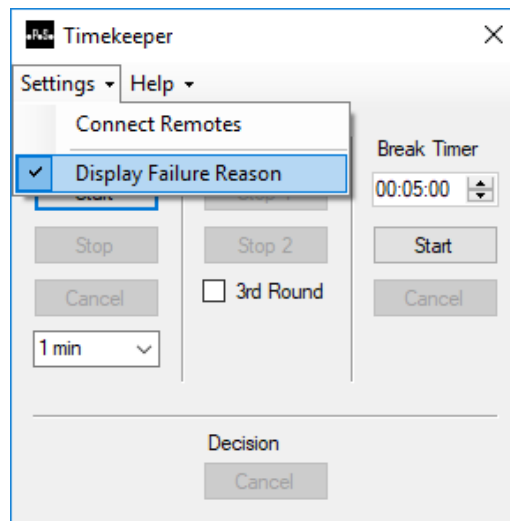


Figure 11: Display Failure Reason Setting

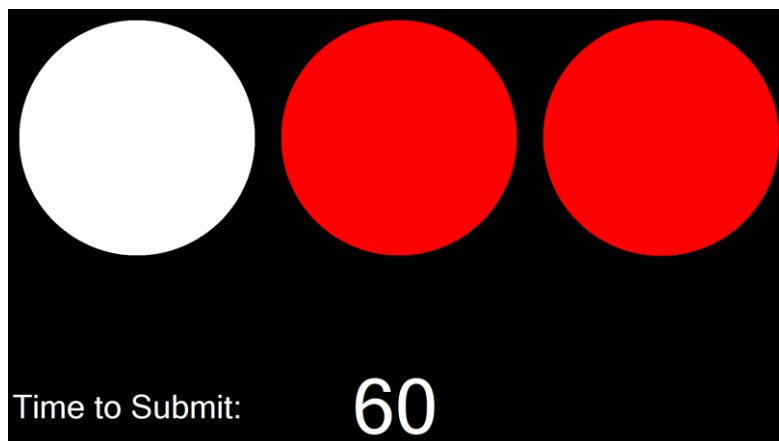


Figure 12: Failure Reasons Hidden

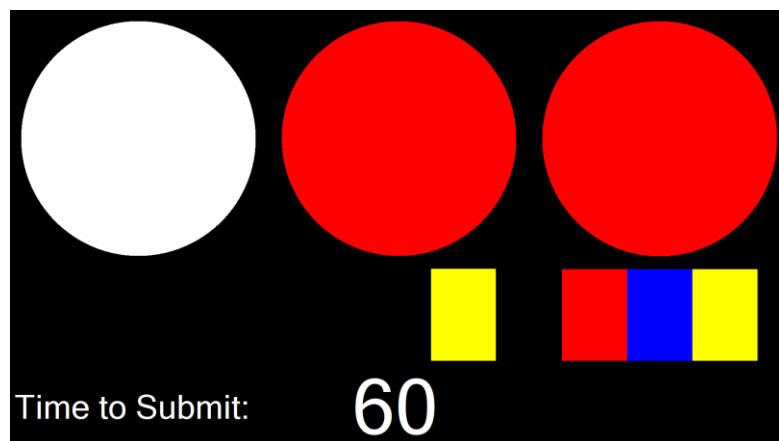


Figure 13: Failure Reasons Displayed

3.3.2 Clear Referee Decisions from Display

The referees' decisions are cleared automatically after being displayed for 5 seconds. The Lift Timer Start and Break Timer Start buttons become enabled once cleared. This allows the Timekeeper to start the Lift Timer or Break Timer as required.

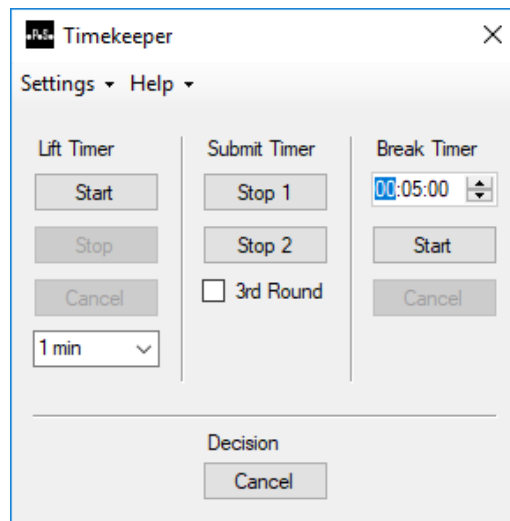


Figure 14: Timekeeper after Decisions Automatically Cleared

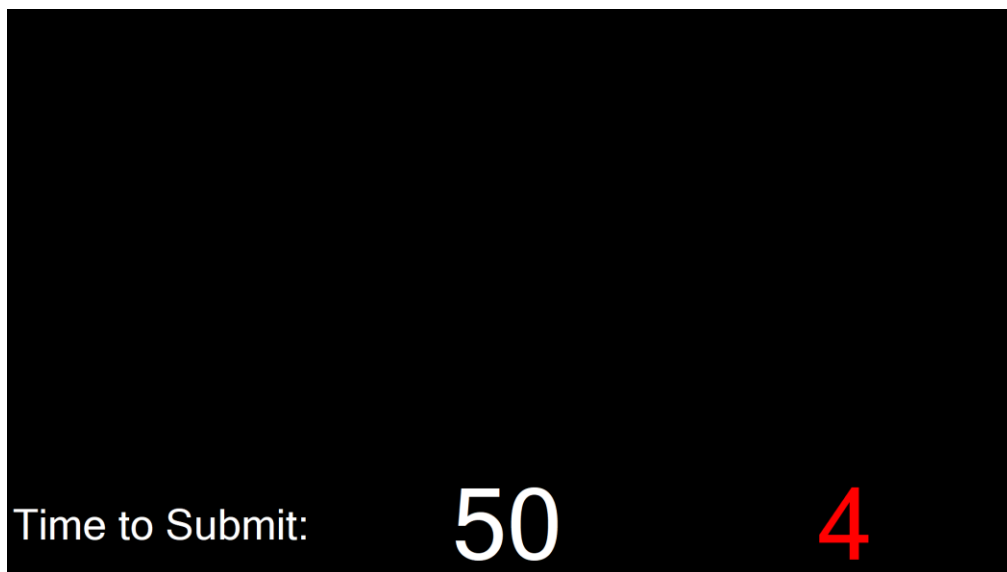


Figure 15: Display after Decisions Automatically Cleared (timers will vary)

3.3.3 Cancel Referee Decisions

If a referee has pressed the wrong button and that decision was displayed, the decision and Submit Timer for that lifter can be reset. The Timekeeper can initiate the reset by pressing the Decision Cancel button. The software will then wait for the referees to re-enter their decisions using the wireless hand remotes.

NOTE: this should only happen under direction from the Chief Referee or Jury.

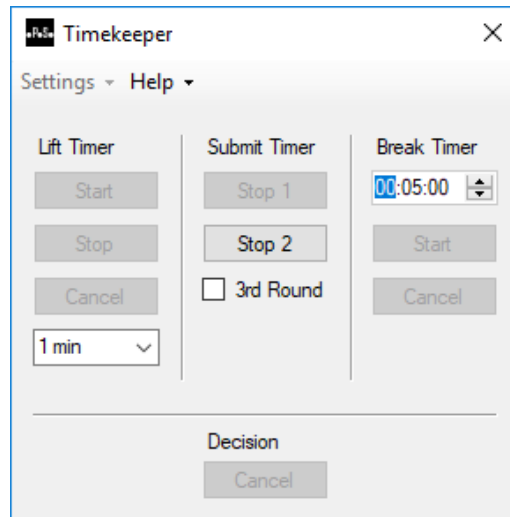


Figure 16: Timekeeper after Decision Cancel Clicked

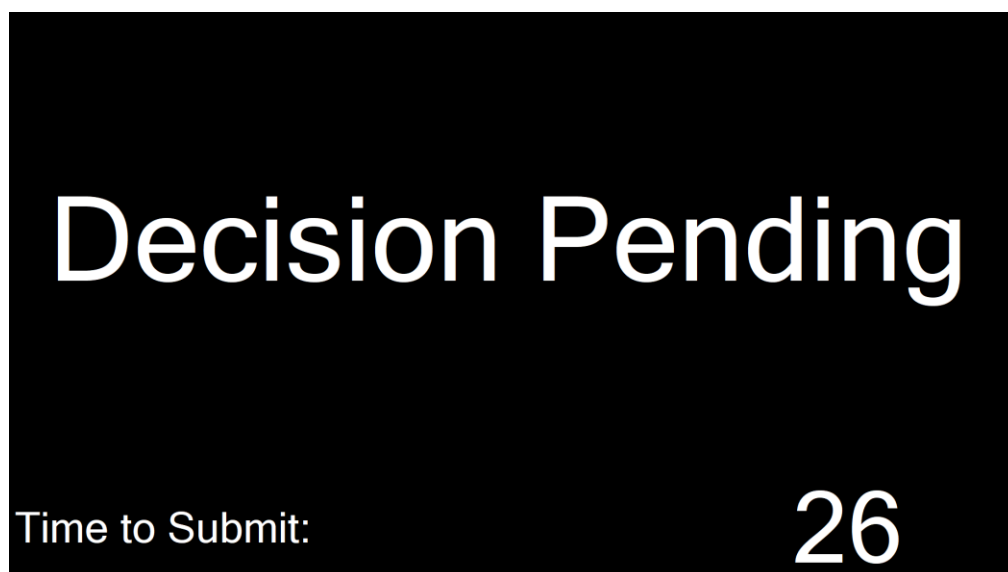


Figure 17: Display after Decision Cancel Clicked

3.4 Submit Timer

Once referees' decisions are displayed, the attempt Submit Timer for that lifter is started automatically and displayed on the Display form.

The Timekeeper can stop the Submit Timer for the lifter by pressing the Stop 1 button in the Submit Timer column. Pressing the Stop 1 button removes the attempt Submit Timer from the display.

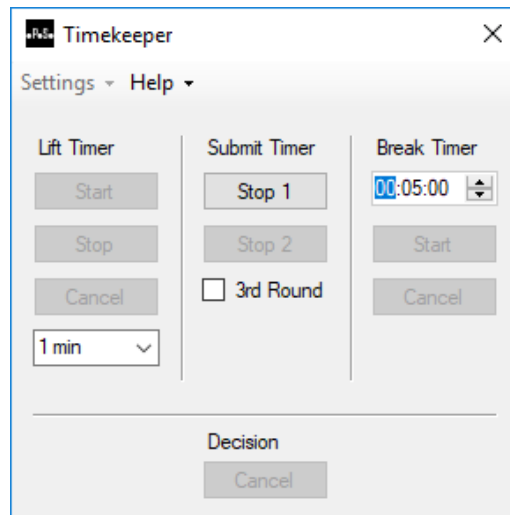


Figure 18: Timekeeper with Decisions Displayed and Submit Timer Started

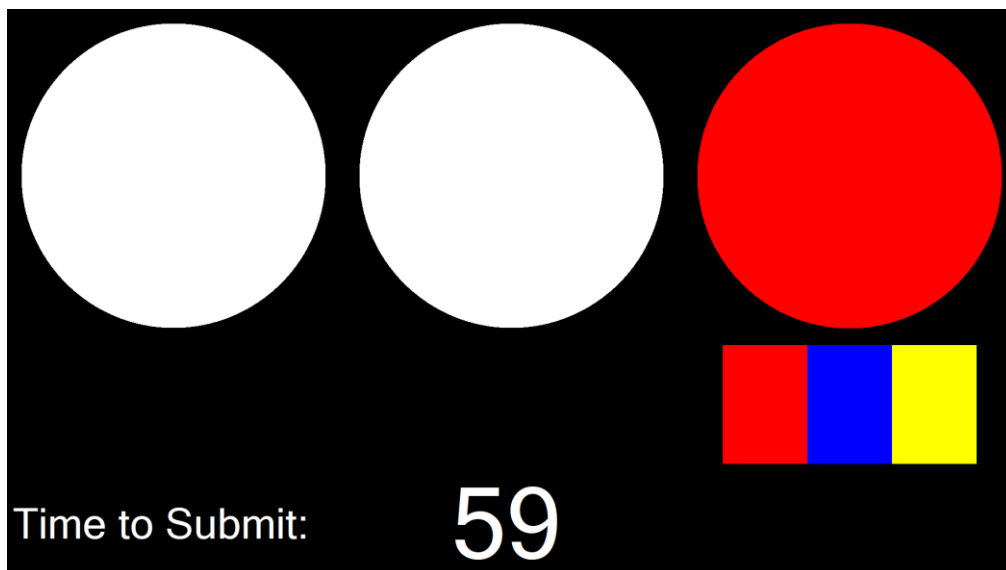


Figure 19: Display with Decisions and Submit Timer Shown

The Display form can have up to two Submit Timers on the screen at any one time. The latest lifter's Submit Timer is always displayed to the left and is Submit Timer 1. The oldest Submit Timer is always to the right of the Display and is Submit Timer 2.

The Timekeeper can stop either Submit Timer independently, given that attempts may be submitted out of order.

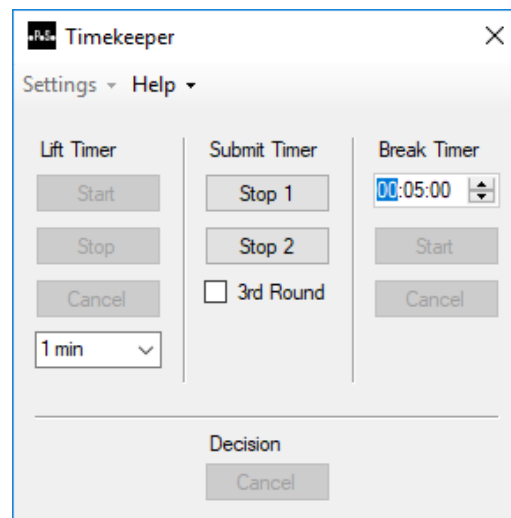


Figure 20: Timekeeper with Two Submit Timers Running

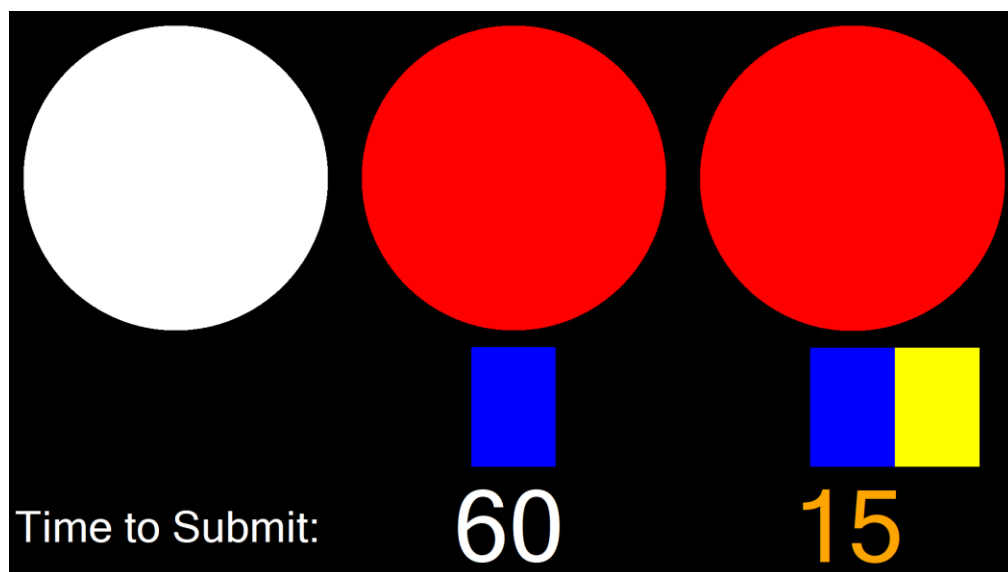


Figure 21: Display with Two Submit Timers Running

3.6 Break Timer

The Break Timer can be used to countdown an intermission period (e.g. between lift type or between sessions), or compensatory time for small groups. To start the Break Timer, click the Start button in the Break Timer column of the Timekeeper form.

Once the Start button is pressed the Break Timer will appear on the Display form. To cancel the Break Timer, click the Cancel button in the Break Timer column.

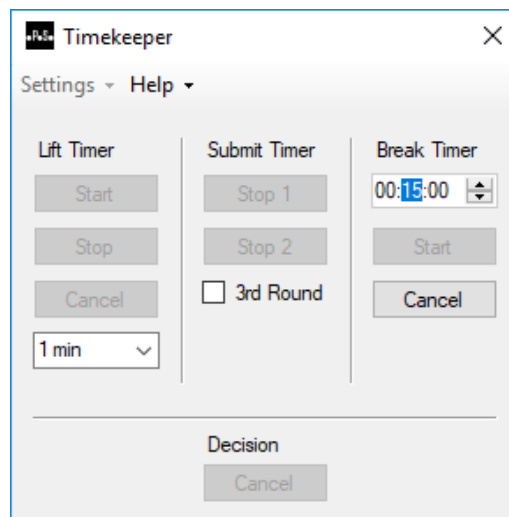


Figure 22: Timekeeper when Break Timer is Running

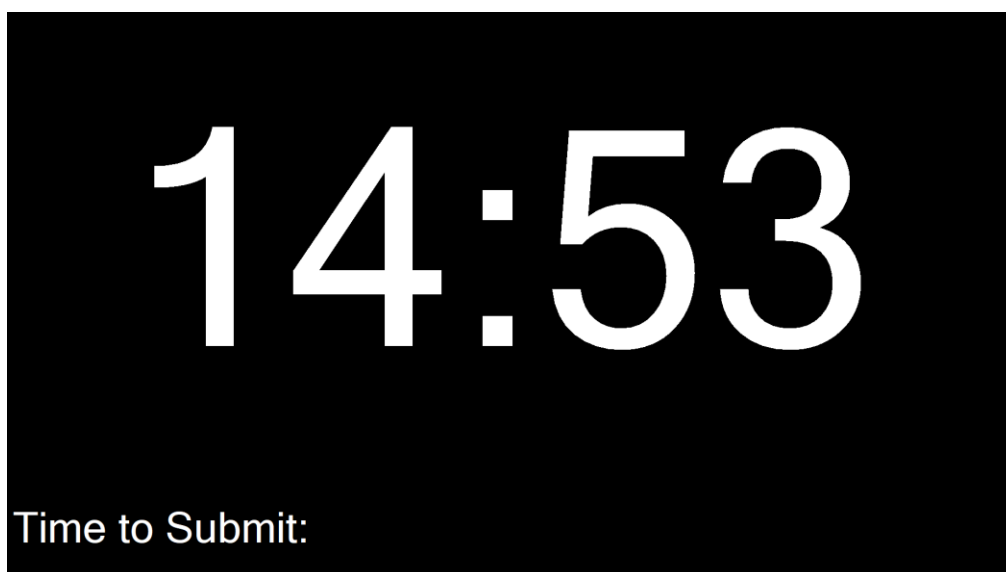


Figure 23: Break Timer on the Display