

TimerGate

User Manual

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Introduction

The TimerGate system is designed to provide timing for subjects passing through a series of gates. Each gate is a part of the TimerGate system. Up to four gates can be connected together.

Hardware

Comprises 1 a single Master gate which connects directly to the PC via a USB cable, and up to 3 Slave gates. The Slave gates are chained: the first one connects to the Master gate, and subsequent Slaves connect to the previous Slave gate. All gates are provided with a tripod stand. Each gate also comes with a reflector on its own stand. It is recommended that the tripod stands for the gates and their reflectors are set to approximately waist height for the intended subjects.

Each TimerGate should be set up with its reflector 2 to 4m away such that the red dot from the beam is visible on the yellow reflector panel. When the gate does not get a clear reflection from the reflector the beam will flash. When the gate has a clear signal back from its reflector, the beam will stop flashing and show a steady light. The corresponding lamp on the software will show red if there is no clear reflection, and green when the signal is steady. A grey lamp means the PC has not detected the TimerGate gate.

WARNING! Do not look directly into the beam emitter on the TimerGate Units. Whilst the LEDs used in the TimerGates are not powerful enough to cause eye injury (they are Class I led light sources) they can cause irritation and so the beam emitters on the TimerGates must not be looked directly into while operating.

Software

The software can be downloaded from our website: http://www.thetametrix.co.uk/site/clinician_products/timergate and installed onto the PC or laptop to be used.

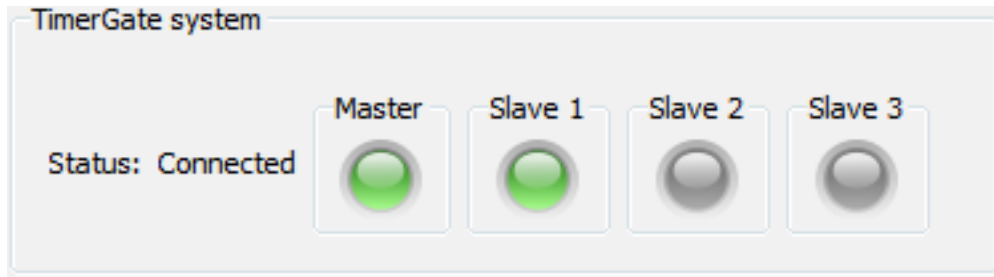
TimerGate Software

This is the main display of the TimerGate Software and is the dialog shown on launch.



The main screen of the TimerGate software shows 2 sections:

Timergate system section



This shows whether a TimerGate is connected and shows the status of the gates. Once plugged in via the USB cable the TimerGate will automatically connect after a few seconds. If any problems in connecting to a gate are experienced, it may be necessary to restart the software.

The indicator lamps show the status of the connected TimerGate system. The lamps for all the gates connected should show green before a run is timed.

Lamp States:

Green: The gate is present and is detecting the beam reflection

Red: The gate is present but is not detecting the reflected beam. Check the alignment of the reflector

Grey: No gate detected

Session section

This section allows you to setup the names of subjects, to setup and select the gate sequence to be used, and to monitor and record data from these runs.

The screenshot displays the 'Session' configuration window. At the top, there are two dropdown menus: 'Subject name' set to 'subject 1' and 'Gate sequence' set to 'run 1-2-1'. Each dropdown has a small wrench icon to its right for configuration. Below these is the 'Run progress' section, which includes a 'Start run' button, an 'Auto advance to next subject' checkbox (which is unchecked), and a 'Run view' button. The central area shows the current state as 'Idle' and a sequence of three gates: 'Start point' (Gate 1), 'Checkpoint 1' (Gate 2), and 'Checkpoint 2' (Gate 1). At the bottom, there is a table with the following headers: 'Subject Name', 'Total Time', 'Checkpoint 2', and 'Checkpoint 3'. The table is currently empty. To the right of the table are two icons: a blue diamond and a pair of binoculars.

Subject Name	Total Time	Checkpoint 2	Checkpoint 3
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Subject name

This shows the current runner. This drop down can hold a list of participants. The configure button next to the subject dropdown will call up a small dialog to allow entering and editing multiple subjects (see later section). You can also type the name directly.

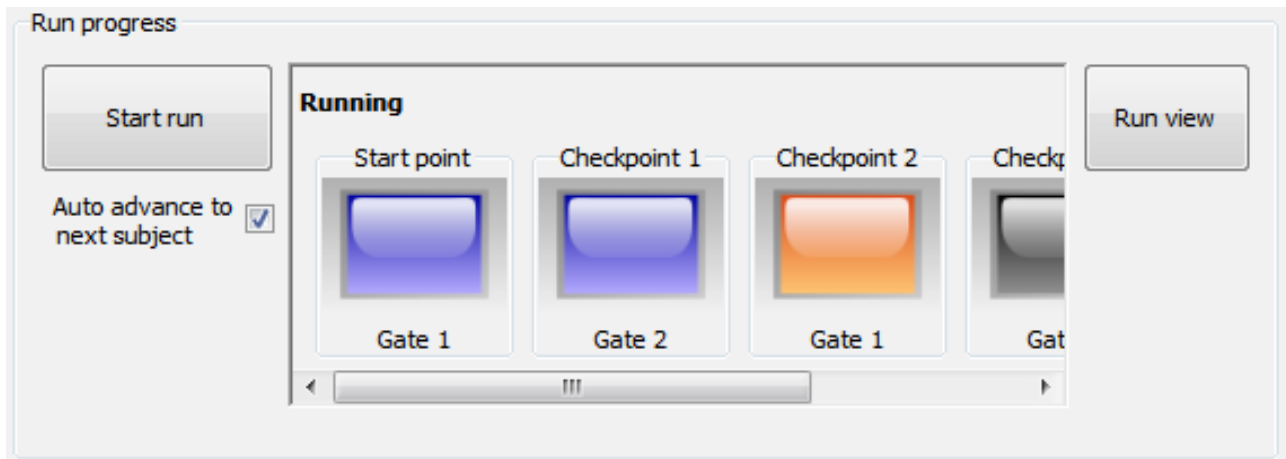
Gate sequence

A Gate Sequence is the order that the subject must pass through the gates.

Different sequences can be configured using the setup button to the right. The dropdown holds a list of the gate sequences already configured. The button to the right of the dropdown calls up a small dialog allowing the creation and editing of Gate Sequences (see later section).

Run Progress

The run progress area shows the status of the current run.



Start Run button

will start timing the subject run

"Auto advance to next subject" checkbox

selects whether the system will automatically select the next subject in the subject dropdown and start this run automatically once the current run is complete.

Central display area.

The central display area shows the current status of a run : idle, waiting to start, running.

There is an icon for each gate in the selected Gate Sequence shown in a scrollable area These icons will show the checkpoint number and be coloured:

Blue, for a completed gate

Orange, for the gate waiting to be passed

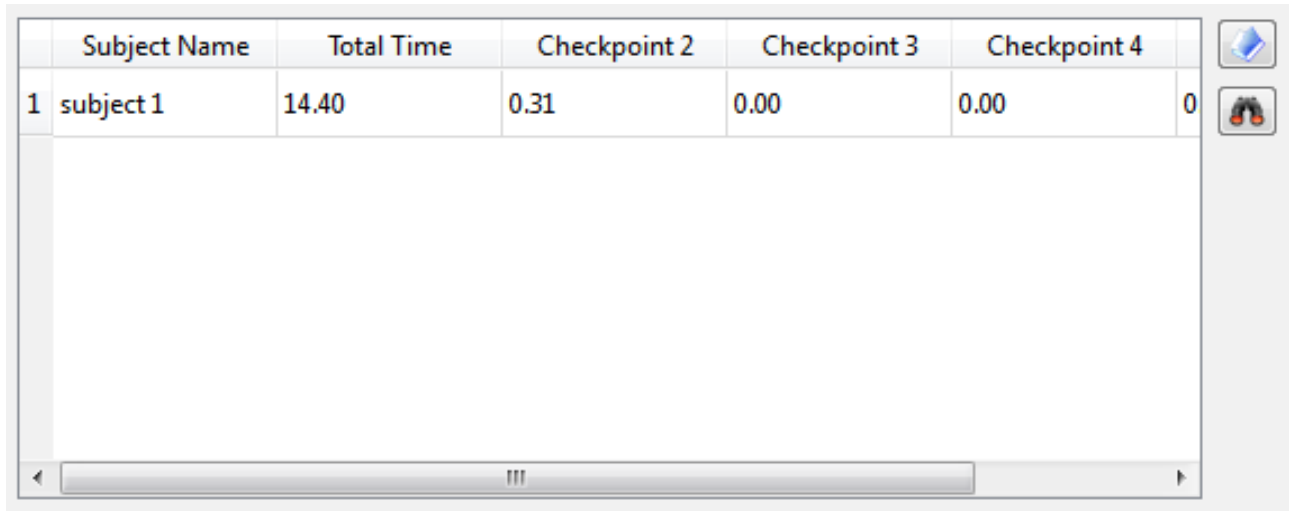
Grey, for a gate that is not yet active

Run view button

shows a large display of the timings for the current subject run (see later section).

Report Summary

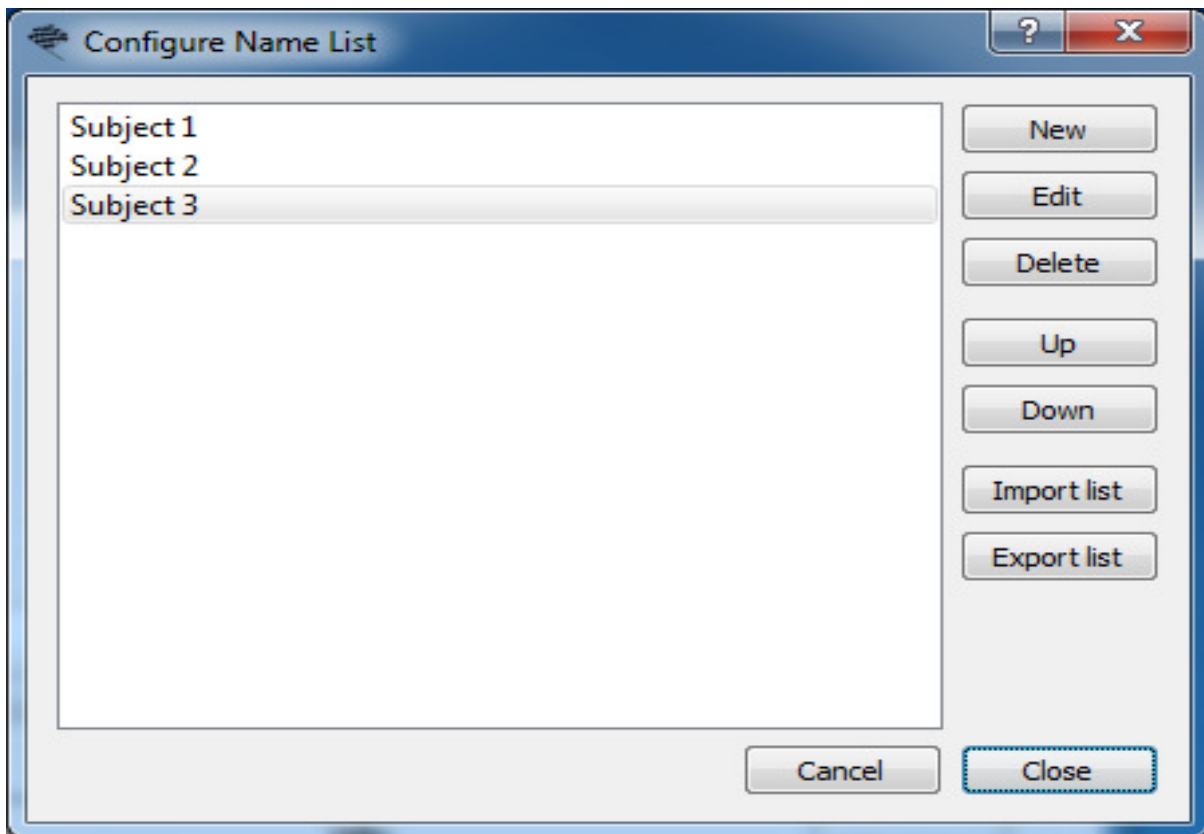
The lower part of the dialog shows a report summary of the subjects and their timings for the run. This report is automatically saved to file (in CSV format), for displaying with Ms Excel, Open Office or other installed software.



	Subject Name	Total Time	Checkpoint 2	Checkpoint 3	Checkpoint 4	
1	subject 1	14.40	0.31	0.00	0.00	0

The 2 buttons to the right of the report view will open the folder containing the reports, or display the current report in appropriate software such as MS Excel or OpenOffice (if installed).

Configure Subject Name



New button

adds a new subject.

Edit button

allows editing the selected subject name.

Delete button

deletes the selected subject.

Up button

moves the selected subject up in the list.

Down button

moves the selected subject down in the list.

Import list button

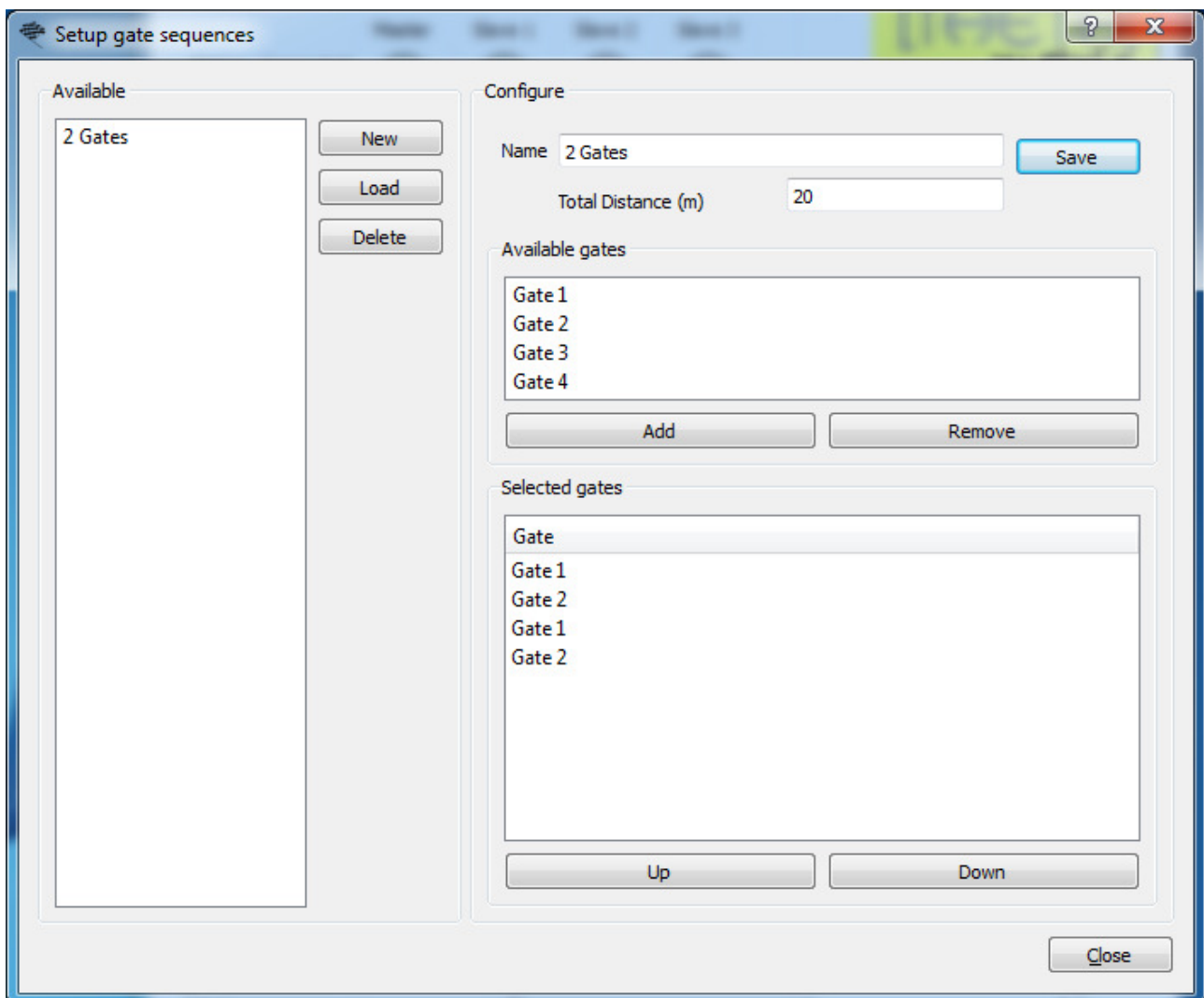
will prompt the user to select a file containing a list of names, either in CSV format or one name per line. This list will then be imported into the subject list at the end of any names already present.

Export list button

will prompt the user to select a file name to save the current list of names.

Configure Gate Sequence

The configure button to the right of the Gate sequence dropdown shows a dialog allowing the setting up and editing of Gate Sequences which can be saved for later use:



New button.

creates a new gate sequence.

Load button

loads the saved gate sequence selected in the Available list.

Delete button

deletes the saved gate sequence selected in the Available list. A dialog will pop up asking for confirmation before deleting.

Save button

Saves this gate sequence

Add button

add the gate selected in the Available gates display to the selected gates section

Remove button

removes the gate in the Selected gates section from the gate sequence

To create a new gate sequence:

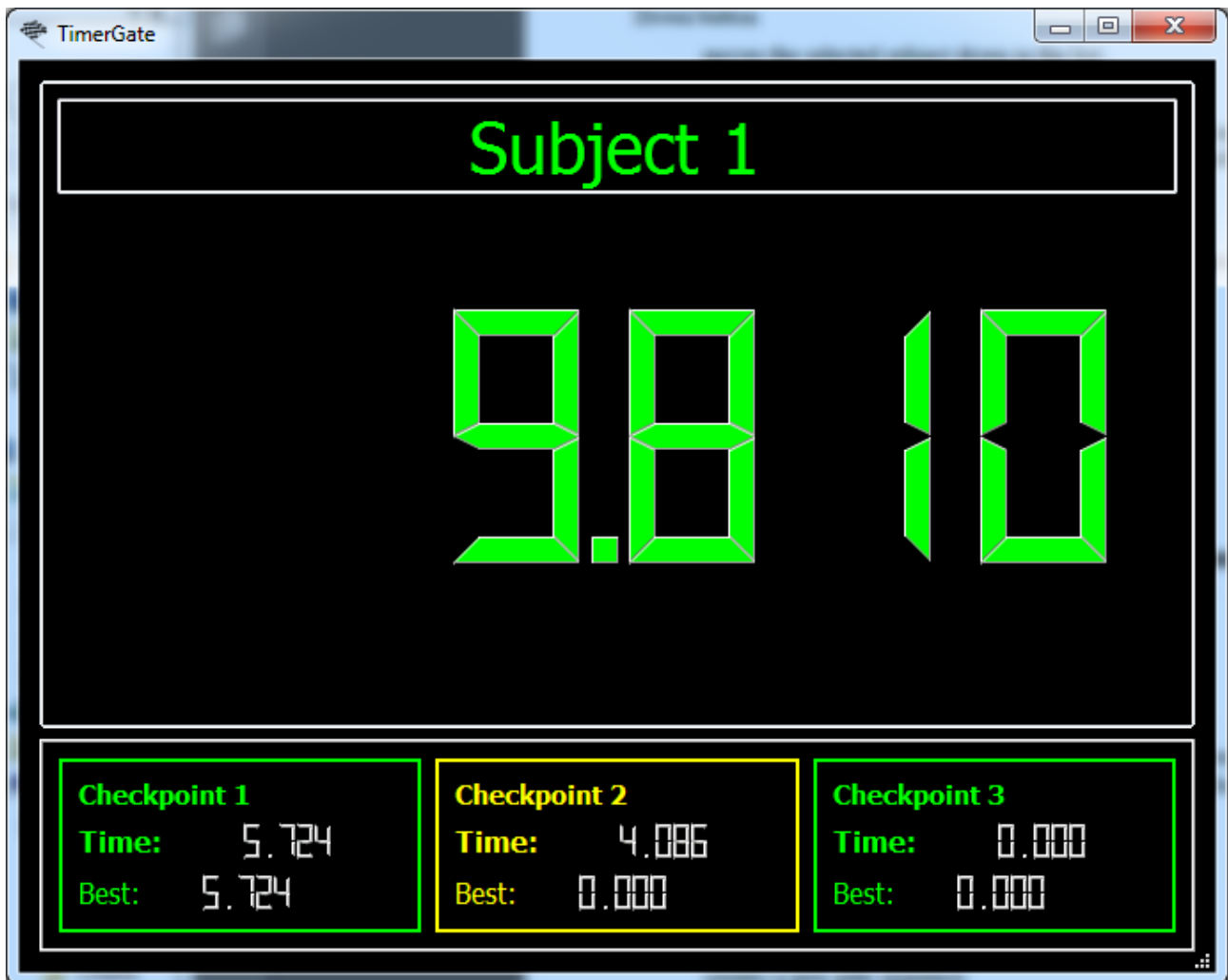
press the New button, this will create a new gate sequence with a default name and no gates. Change the name to something suitable. Gates can be added removed or using the Add or Remove buttons, or by double clicking on a gate in the available gates list, or by dragging and dropping gates from the Available gates list to the Selected gates list.

If a value is entered into the Total Distance field then the software will calculate the average speed of the run which will be entered into the report.

The order of the selected gates can be changed by dragging and dropping gates in the Selected Gates list or by selected a gate and using the Up or Down buttons.

Each gate may be used more than once in a sequence.

Run View



This provides a display of the current run in progress, showing the subjects name, the total time of the run so far, and smaller displays showing the time between checkpoints for the previous 2 or 3 gates. These also show the best times recorded so far for those checkpoints.