

## SOA Start Clocks

### Quick Guide

- Place the Start Clock at the start.
- Place the Pre Start Clock at pre Start
- Connect the two displays with the data cable. Note that the plug only goes one way – don't force it. The plug has a locking screw cover for security - screw this up.
- Turn on the Start Clock. Turn on the Pre Start clock. ON is the left position.

Later:

- Turn off the displays and return the clocks so they can be re charged.
- Each display has a charger, the charger connects to the socket, the switch must be in the **Off** position for the charger to operate.
- The Charger light is **RED** when charging then **Green** when the battery is charged.
- There are two dials on the large NiMH Charger. These are set to '10 Cells' and 500mAh.

### Longer Guide

Each Clock set has a Master and Slave Display. The Master Clock has an accurate 'Real Time Clock' synchronised by the GPS satellites and will display real time. The slave is controlled by the Master Clock and will display the Call Up or Pre Start Time. The displays are Red LEDs showing Hours Minutes and Seconds e.g. **12.35.22**

The Master clock will give a warning 'beep' at 50 and a count down 'beep' at 57 , 58 and 59 seconds then a start BEEP each minute.

The clocks are probably best placed off the ground on a small table or stand. The wooden box makes a suitable stand. Place the Master Clock near to the start line where it can be seen by starters and Start officials. Some protection in extreme weather is recommended.

Place the Slave Clock by the Pre Start where it can be seen by waiting competitors and Pre Start officials. Connect the master to the slave with the signal cable – the sockets can only fit one way into the plugs. Turn on the clocks.

Following a self test the start and pre start times will show. TMR shows at bottom right of the LCD screen. The Real Time Clock will be updated by the GPS unit shortly after being turned on. The display freezes during the update. Once a GPS time is available GPS shows at bottom right of the LCD screen. If the clock does not start within a minute turn off and turn on again. The screen also confirms DST (Daylight Saving Time) and the Time Zone setting.

The Pre Start delay can be adjusted from +9 minutes to 0. The buzzer can be set to 1 minute or 30 second start interval or OFF.

With no buzzer and a Pre Start of **0** both displays will show race time and the displays can be set up at the finish so finishers can see their finish time. The clock can be adjusted for Summer Time (DST) and a Time Zone offset if required.

The displays have rechargeable NiMH batteries which should last for 6 hours use. The batteries will need to be recharged before the next use. The charger fits to the signal plug. To charge the batteries place the switch in the **Off** position.

For help or support contact Ted Finch [ted@finchhouse.org](mailto:ted@finchhouse.org) or call 07980 010924

## Adjusting the Clock settings

The Master Clock has a LCD Display and key pad. On the key pad use UP (2), DOWN (0), STAR(\*) and OK (#) keys .

**UP** and **DOWN** will scroll through the menu options. **OK** will select a Menu Options  
**UP** and **DOWN** can then be used to adjust values e.g. adjust Pre Start delay,

### First or Top Screen shows (typical)

```
Start          Call Up
12:34:56      12:37:56
↓↑ TZ Offset 00:00 GPS
```

Press **Down** Key to Buzzer Screen

### Buzzer Screen

```
Buzzer is ON
Buzzer Set OK
↓↑ GPS
```

Press **OK** to go to Buzzer Setting Screen.  
Press **Down** to Go to Pre Start Screen

### Buzzer Setting Screen

```
Buzzer is ON
Off, On, 30s U/D
OK = Done
GPS
```

Use **Up** or **Down** to change Buzzer setting.  
**Off** is Off, **On** gives Start every Minute, **30s** Gives Start every 30 seconds.  
Press **OK** to return to Buzzer Screen.

### Pre Start Screen

```
Set Pre Start OK
Delay - 00 Mins
↓↑ GPS
```

Press **OK** to go to PreStart Setting Screen.  
Press **Down** to Go to **DST** Screen.

### PreStart Setting Screen

```
Set Pre Start U/D
Delay - 00 Mins
OK = Done      GPS
```

Use **UP** or **DOWN** to adjust the Pre Start in the range 0 – 9 minutes.

## DST Screen

DST is ON * = Off	
↓ ↑	GPS

Press \* to toggle Summer Time / DST On or Off  
Press **Down** to Go to **Time Adjust** Screen

## Time Adjust Screen

Time Adjust OK	
12:34:56	
↓ ↑	TMR

Press **OK(#)** to enter Time adjust mode  
Press **Down** to Go to **Time Zone Adjust** Screen

Hours U/D OK=Mins	
12:34:56	
* = Done	TMR

Use **UP(2)** or **Down(0)** to change Hours.  
Use **OK(#)** to move to Minutes.  
Use \* to Finish

Mins U/D OK=Secs	
12:34:56	
* = Done	TMR

Use **UP(2)** or **Down(0)** to change Minutes.  
Use **OK** to move to Seconds.  
Use \* to Finish

Secs OK=00	
12:34:56	
* = Done	TMR

Use **UP(2)** or **Down(0)** to change Seconds.  
Use **OK(#)** to Zero Seconds when synchronising to another clock.  
Use \* to Finish

## Time Zone Adjust Screen

```
Time Zone Adjust  OK
12:34:56  00
↓↑                               TMR
```

Press **Down** to Go to **Start** Screen

Press **OK(#)** to enter **Time Zone Adjust** mode

```
TZ Hours U/D  OK=Mins
12:34:56  00:00
* = Done                               TMR
```

Use **UP(2)** or **Down(0)** to change Hours Time Zone Offset.

Use **OK(#)** to move to Minutes.

Use **\*** to Finish

```
TZ Mins U/D  OK=Secs
12:34:56  00:00
* = Done                               TMR
```

Use **UP(2)** or **Down(0)** to change Minutes Time Zone Offset.

Use **\*** to Finish

### To re synchronise with the GPS time.

At TOP Screen:

Press **OK(#)**

Sync GPS Press **\***

Press **#** when done.

For help or support contact Ted Finch [ted@finchhouse.org](mailto:ted@finchhouse.org) or call 07980 010924  
use the contact form at [www.finchhouse.org](http://www.finchhouse.org) - Clock Project - Feedback Form