BARROW WOMBEL Components

BARROW WOMBEL
MADE POSSIBLE BY

Westmorland & Furness Council

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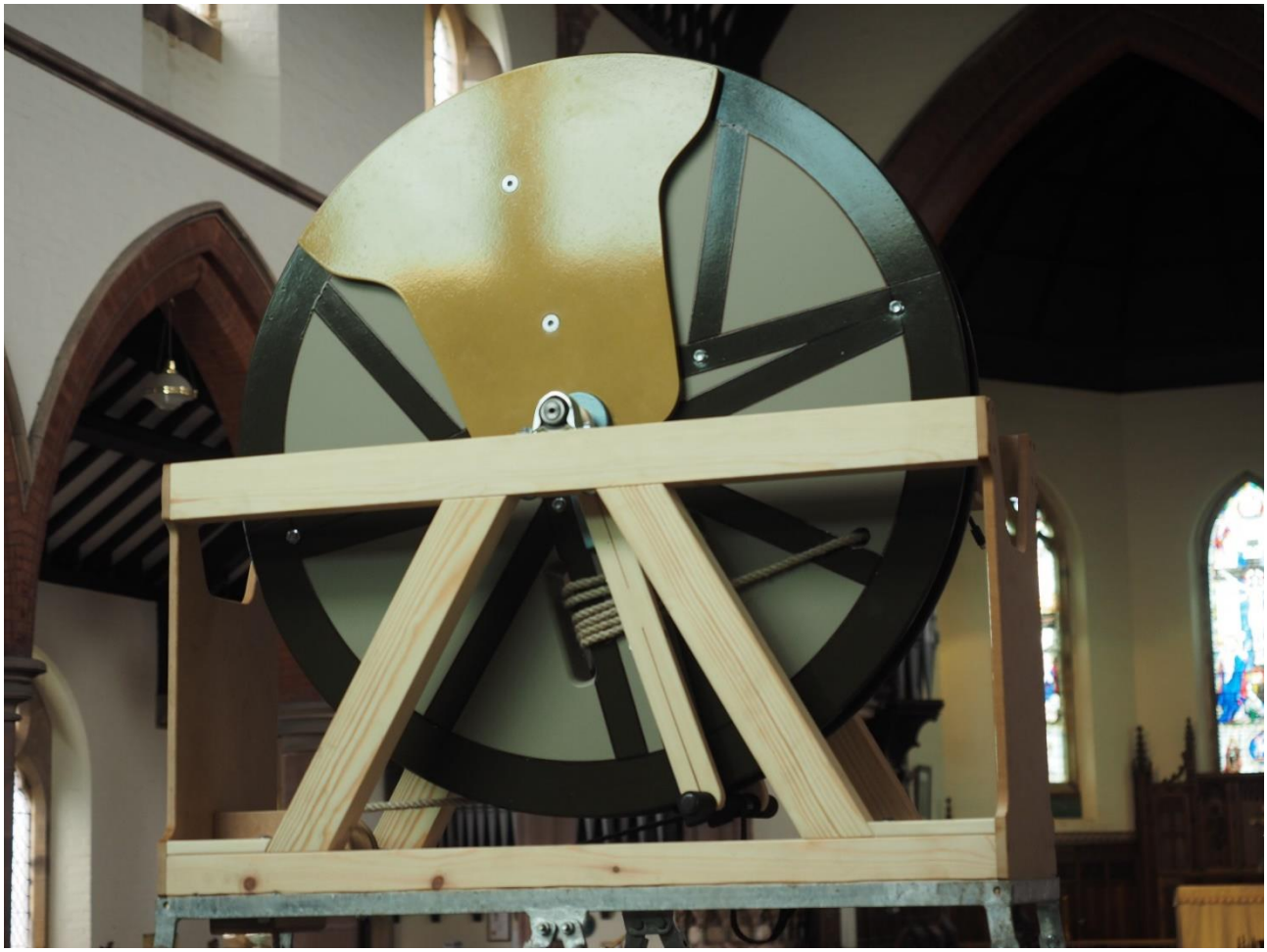
Furness & South Lakeland
branch of the LACR
(Lancashire Association of Change Ringers)

Made possible with Heritage Fund

BAE SYSTEMS

Wombel Simulator

This is the central feature of the Wombel, and comprises a number of components.



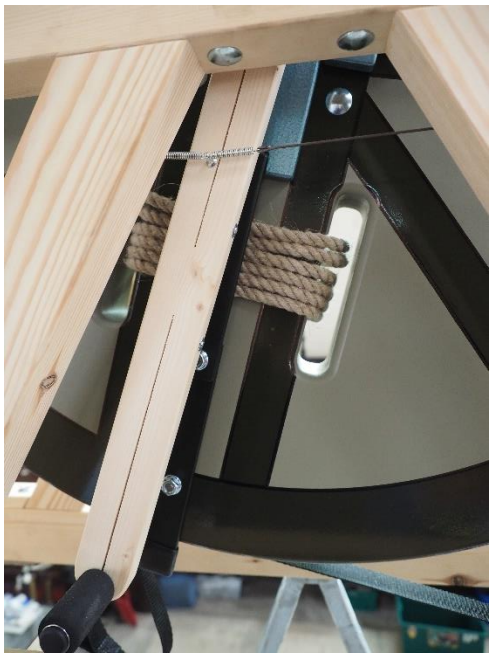
Sub-Components

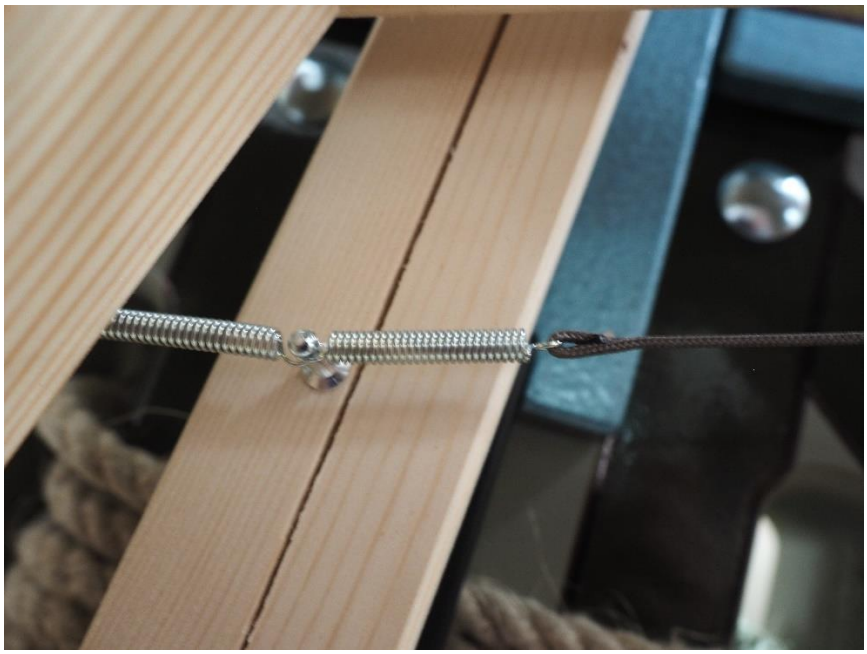
- **Wooden Bell Frame** (with permanently attached Wombel frame galvanised top-section)
- **Wheel** – can separate into two halves for access/transport if required. Normally attached to bell frame but can be removed with care not to lose any bolts/fittings.
- **Bell Rope**
- **Bell Weights x 2**
- **Stay mechanism with webbing and dowels**
- **Sprung wire (function = stay anti-clack)**
- **Tools – 3 x Hex Allen Keys; 2 x Spanners**

Wooden Bell Frame has pairs of holes to receive dowels – holes nearer centre of frame make for deeper set.

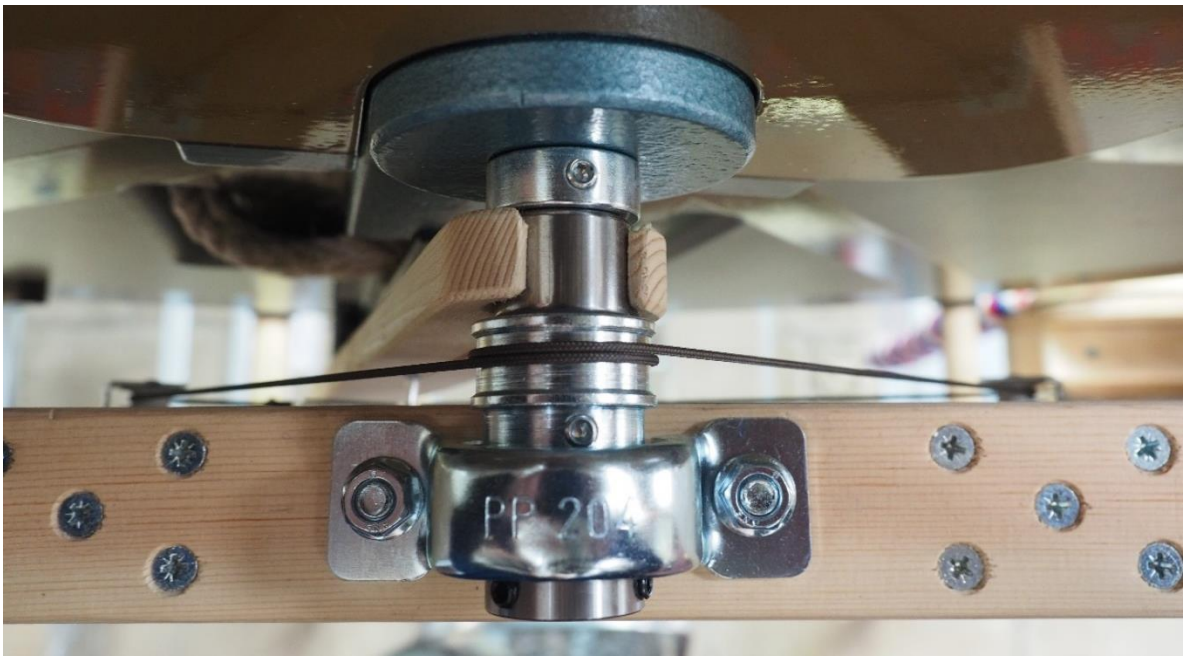
Dowels have 3 sponge washers fitted, two to retain the webbing centrally, the other is fitted to the dowel on the end that engages with the deeper rebate in the bell frame to prevent dowel from going too deep during ringing operation which cold allow the dowel from coming out of the shallow recess and coming free (effectively have no stay on that stroke)

View from beneath Wombel Simulator showing the rope boss and pulley wheel, but also the stay dowel with 3 foam washers, two to contain the webbing centrally and the third to prevent the dowel going too deep into the rebate to allow the dowel to fall out of the opposite rebate.





Sprung wire assembly that helps stop the stay mechanism clack – spring end hooks on pin, then goes through mini pulley wheel, wraps 360 degrees around axle (as illustrated below) back down and through second mini pulley, than other sprung end clips on the stay pin.



TOOLS – 3 x hex Allen Keys, along with two 13mm spanners. Can be found next to pulley

Wombel Frame

Box frame sections

- *2 x A-Frame Ladder Ends* <TODO>
- *1 x Base + carpeted board insert* <TODO>
- *4 x diagonal cross braces* <TODO>

Angle bar sections

- *1 x Top section (permanently attached to Wombel Simulator)* <TODO>

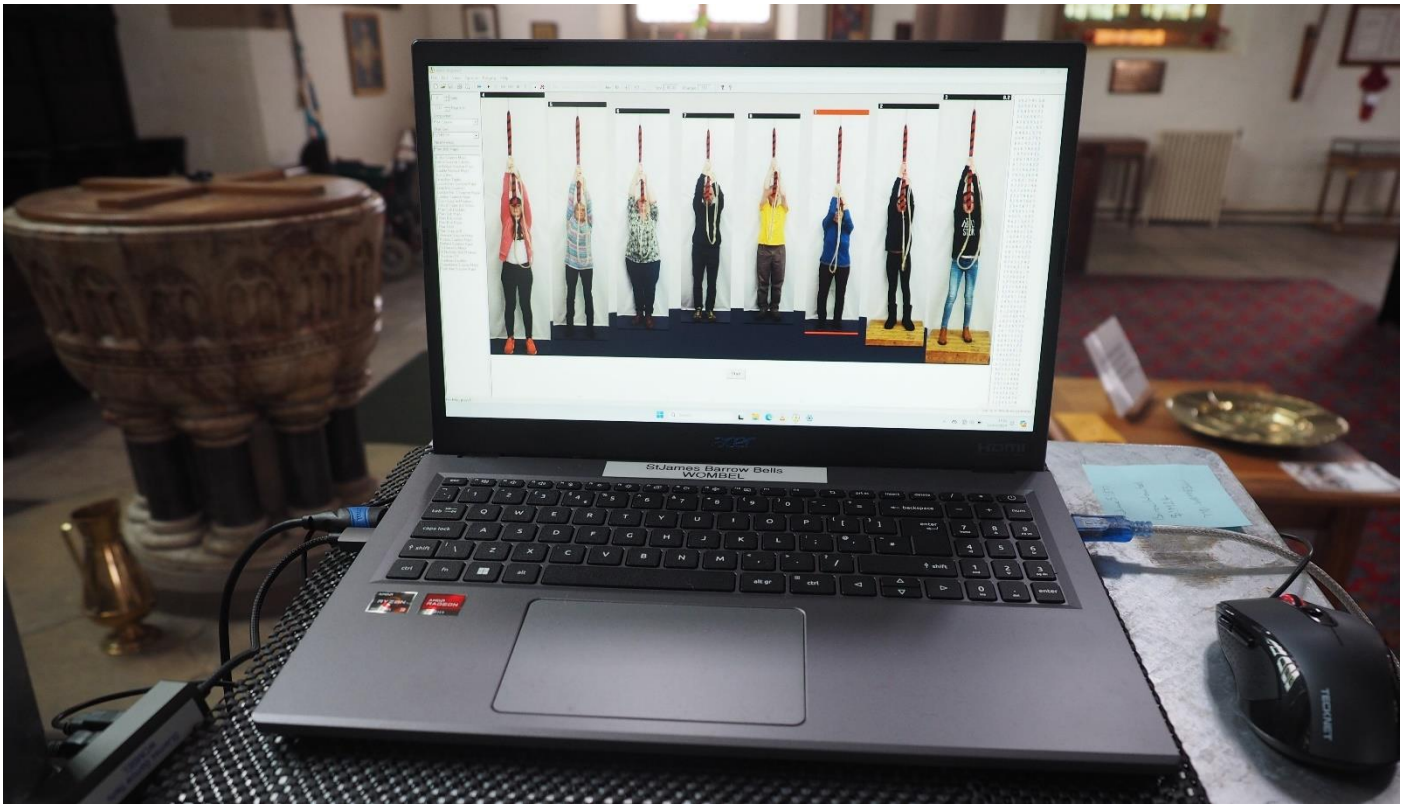
Shelves

- *2 x Shelf – fit over box section.*

One is a better fit than other and marked ‘top shelf for laptop’; the other ‘bottom shelf’.
The top shelf should be used exclusively for the laptop and mouse. Note there is a grippy mat in the accessories to prevent laptop slipping.
The bottom shelf can be used for speakers or other items when not using the AV projector/screen.

Wombel Computer

Laptop and Mouse



ACER Laptop + Technet wired Mouse

Connection sockets for Power, USB-C, HDMI, USB-A

Connection sockets for 3.5mm audio jack (headphones), USB-A, and Kensington lock.

There is also a two-part Power supply AC to DC ‘brick’) that is included in the cable pouch (see Laptop Rucksack + padlocks, with Laptop Sleeve and cable pouch section)

Footswitch

Take care not to strain the USB cable connection junction to the footswitch

USB Hub (3 x USB + 1 x RJ45 Network)

The USB HUB is kept in its retail box when not in use.

External DVD

The dual (combined) power and data cable to connect to the laptop is located in a rebate on the underside of the External DVD device, including both USB-A and USB-C connectors.

The DVD drive has its own protective pouch.

Security Cable (Kensington lock)

Combination Security Cable for laptop to secure to the Wombel Frame

Laptop Rucksack + padlocks, with Laptop Sleeve and cable pouch

Contents of the cable pouch are illustrated on the next page

Contents of the cable pouch are illustrated below

HDMI to Micro HDMI video data cable;

USB Serial Adapter cable

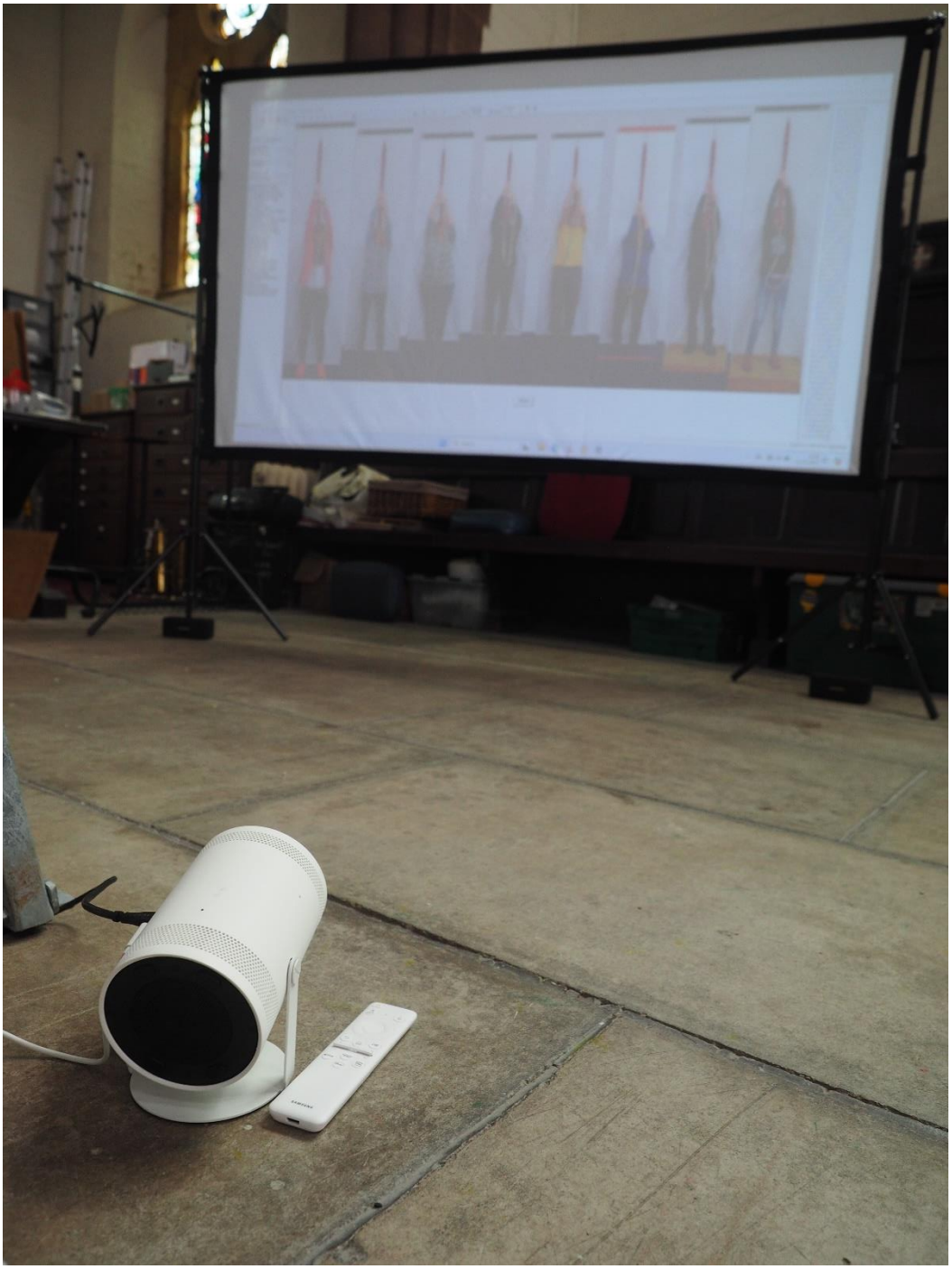
Power Cable for Laptop

Extension leads (2 x USB and 1 x Coax)

<TODO> lengths

Wombel Audio-Visual

Projector, screen, battery pack, speakers, including power/data/charging cables



USB C Power (10m) cable, and video HDMI (7.5m) extension cable

Projector Kit

Samsung Freestyle Projector and lens cap

Carry Case

Mains power adapter plug

In the zip compartment of carry case:

- Remote control
- USB C power cable
- Handbook.

PowerBank Li-Ion Battery / Charger

Powerbank + handbook

Mains charger adapter plug + handbook

Cables: USB-A to USB-C (50cm), and USB-C to USB-C (1m)

Speakers

2 x Bogasing battery speakers, each with handbook and cables: 1m AUX audio 3.5mm jacks; 1m USB-a to USB-C

Projector Screen

lejiada Projector Bag

Projector screen; 2 x tripod vertical posts; 3 x horizontal (numbered) sections; 6 x guy lines; 6 x ground pegs

Note the wingnut and washer which are easy to lose down a grate or under obstacles (please take care when removing or putting them back on) The washer goes between the wingnut and the horizontal pole when assembled.

Wombel Accessories

Power 2-way 18m extension

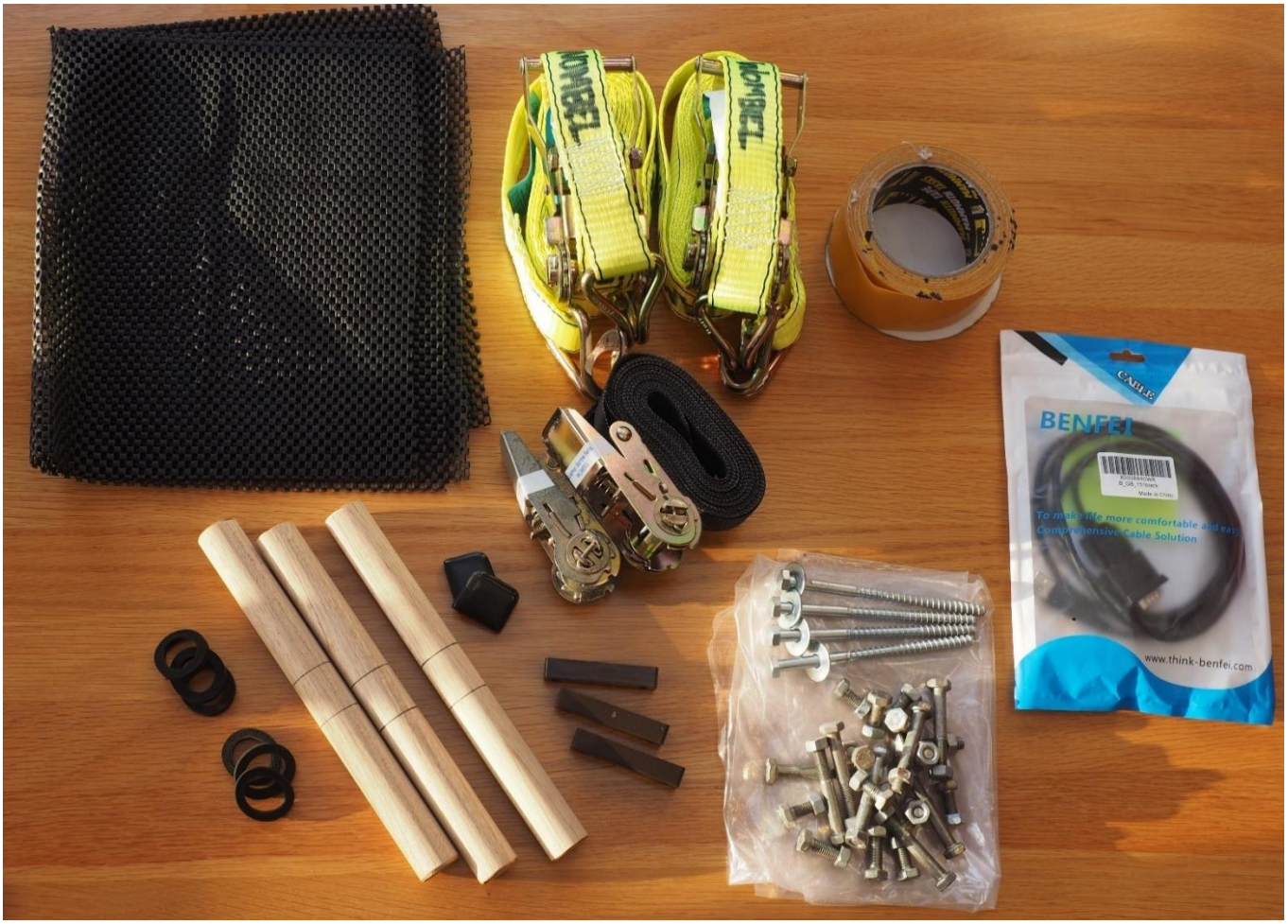
Normally kept in the laptop rucksack main compartment with the footswitch and cable bag.

Note when using please make sure the individual switches are in the correct on/off position

Cable tidy strip (x2)

Use for reducing trip Hazards

Spares & Miscellaneous kit



Illustrated above

- Cable tie and nylon string (if cut melt ends to avoid fraying)
- Grippy mats for Wombel Frame Shelves
- Webbing ratchet straps for securing Wombel frame sections and stepladder to roofbars
- Carpet tape
- Spare Wombel Parts – Stay Dowels and rings; reed sensors
- Spare nuts and bolts
- Benfei USB Serial Adapter compatible with Windows 10 and older (incompatible with Windows 11)
- Velcro (double sided) cable tie (illustrated on the right)

Stepladders

7 tread stepladders – use with care (with someone holding steady) when using to complete assembly (especially fixing weights to wheel) and servicing Wombel on top of frame

Blue tray slides up and clips on top to provide tray to put small and light objects.

Warning Signs

Display on Wombel when not superviseed.

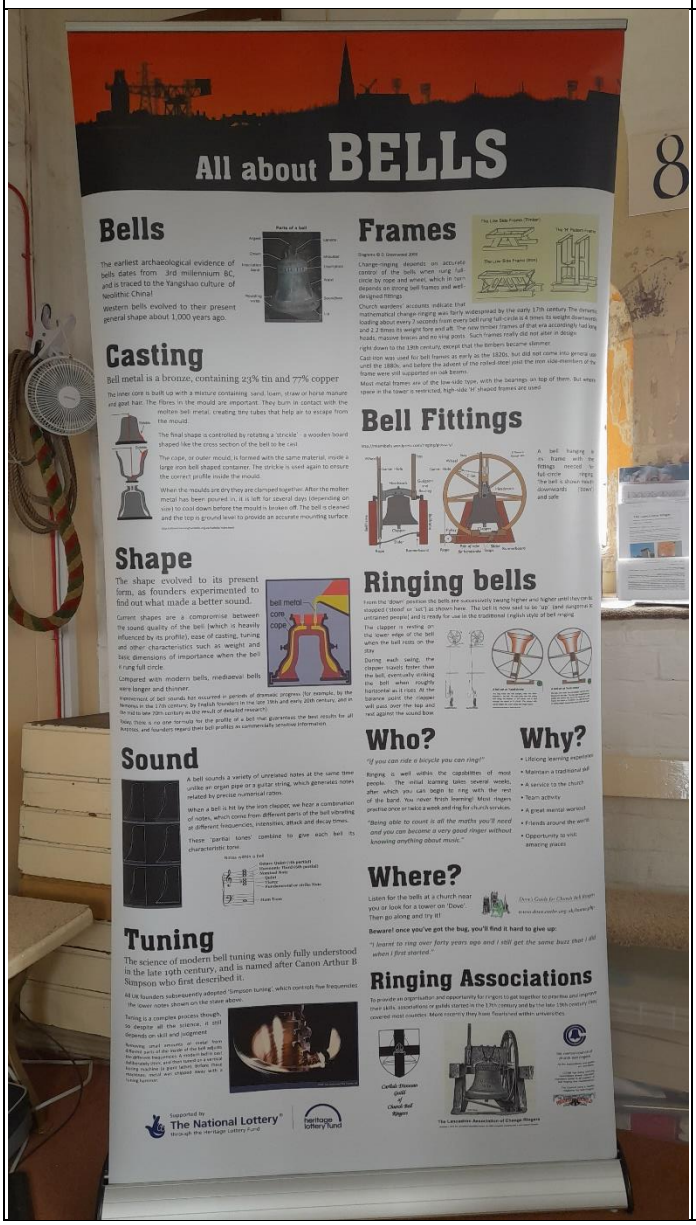
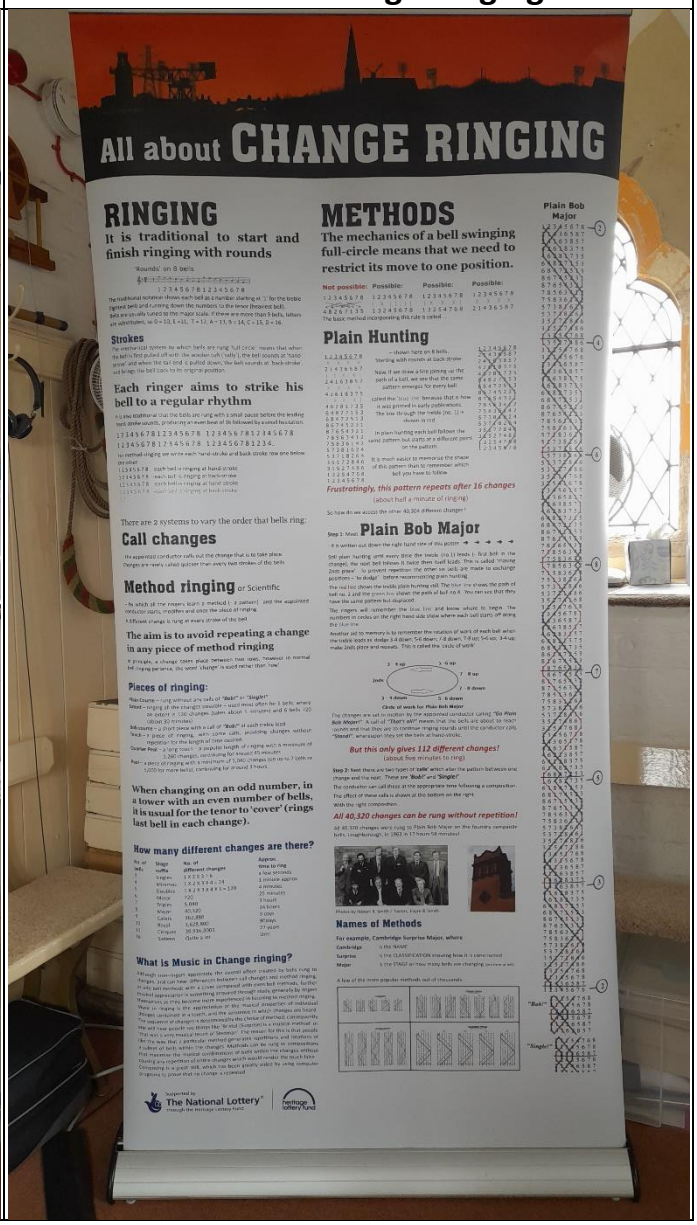
Cleaning (Laptop Screen)

Boxes (for shorter/younger persons)

Six boxes are available, 4 illustrated here. Two not illustrated are (i) a slimmer box than top box, and (ii) another the same height as middle size box illustrated.

Extra / Optional Props

Pop-up Display Panels

All About Bells	All About Change Ringing
	

Pole required for assembly is concealed in the front inside pocket of bag. Please ensure each panel is put back in the correct carry case.

Bell Parts

BELL WHEEL

6’ (1.8m) Diameter Bell Wheel – Splits into two (flanges at join have to be removed)

CLAPPER

HEADSTOCK

Tenor and treble headstocks (very heavy solid elm) – DANGER OF INJURY WHEN LIFTING – please handle with care by squatting, keeping straight back & use legs to power the lift. 2 person lift for treble headstock, 3+ person lift for tenor headstock.

ROPE

STAYS / SLIDER / RUNNING BOARD

Top = Running Board; Upper Middle = Slider; Lower Middle = Stay; Bottom = Broken Stay

BEARINGS