



THE CENTRAL COUNCIL OF CHURCH  
**BELL RINGERS**  
 UK Registered Charity No. 270036

*News from the Ringing Centres produced by the Ringing Centres Committee: Paul Marshall, Barrie Dove, Phil Bailey & Maureen E Frost*

# TRAINING TIMES 12

**WELCOME** to what may be our final edition. Since the Ringing Centres movement started there have been some significant changes. ART (the Association of Ringing Teachers) have shown us alternative ways of teaching bell handling. Simulators have become more common and ringers have found innovative ways of using them. Video cameras have been largely superseded by mobile phones and technical improvements to sensors and other kit can be hard to keep track of.

From the annual survey we know that some Ringing Centres have reduced their activities in recent years or ceased altogether. Leaders are becoming tired and helpers can be hard to find although the need is not diminishing.

The good news is that some Ringing Centres are determined to survive by exploring new ways of operating. Some active towers are seeking to become new Centres by installing Dumb bells and simulators.

If you are thinking about establishing a new ringing centre, or reviving an old one, do think long-term. Put some thought into a constitution or terms of reference, be clear about who owns the kit, the library or other resources and make sure that any financial arrangements are beyond question.

Ringing Centres are essentially about people: people who want to learn, people who want to progress, people who want to teach well; people who enjoy one another's company, share one another's success and strive to further the art of change ringing in their locality.

So this may be the last TT but the Ringing Centres movement is still developing – there are a lot out there and they are all different.

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## **Why did the last survey of Ringing Centres ask about Fair Trade refreshments?**

Most dioceses, if not all, support Fair Trade. A huge number of parishes serve only FAIR TRADE tea, coffee and biscuits. Nearly all sugar, these days, bears the FT logo (so that is easy) and if you purchase through your local FT rep you can usually command a discount.

If you want to foster good relations with the parish, serve Fair Trade in your refreshment breaks.

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## **Where can I find information about matters to do with Ringing Centres?**

CCCBR .....

Includes Guidelines, Maps, a Directory and back copies of this newsletter.

<https://cccb.org.uk/services/ringing-centres/>

FACEBOOK .....

With hundreds of members this is often the best place to go for a quick answer or a bit of advice. It is ideal for exchanging views, raising issues, sharing experiences and celebrating your successes.

[Photos marking your achievements and reports of new initiatives are especially welcome.](#)

<https://www.facebook.com/groups/ringingcentres/>

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## **Building your own Dumbbell** By *Paul Marshall*

As a reasonably competent bodge merchant, I decided that I would have a go at designing and constructing my own dumbbell with the object of installing it in my own home. This article is a brief description of how I designed and built my first dumbbell. (If you are planning to install a dumbbell in church premises please take care to obtain the necessary permissions.) If you would like more detail then please visit *Bell Ringing Centres* Facebook page and leave a message for my attention.

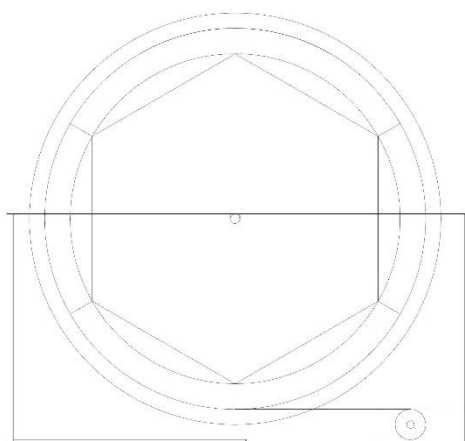
Before I start describing the construction of the dumbbell I have to apologise for using mixed units, this is simply for convenience due to the materials used. For example, chipboard comes in 8 x 4 ft sheets which are 18 mm thick!

My first decisions were how big this dumbbell was going to be and what materials I was going to use. The first question was answered by the second. I decided to use 18 mm thick chipboard which comes in 8 x 4 ft sheets. The "frame" for the dumbbell is a simple rectangular box and the simplest way to build this was to make the sides from two complete sheets of chipboard. The ends and base are also 18 mm chipboard and the whole frame is held together with chipboard screws and steel (later I used plastic) corner brackets.

This defined the maximum diameter of the wheel. To keep things simple, I chose a wheel diameter of 1 metre. With the shrouds, the total diameter of the wheel is 1080 mm which gives a clearance of about 2 inches between the wheel and the base. The wheel is offset in the frame to allow room for the rope pulley at one end of the frame.

The wheel is made from three thicknesses of 18 mm chipboard; the central section being a 1-metre disc, solid except for the cut-outs for the rope. The outer sections are made up from 6 pieces of 18 mm chipboard which are fixed around the outside of the inner section. This leaves a reasonable space for the weights which are two flat bottom rail baseplates. After initial assembly, the wheel was finished off by mounting it in the frame, rotating it and smoothing off the rim with a power plane until it was reasonably circular.

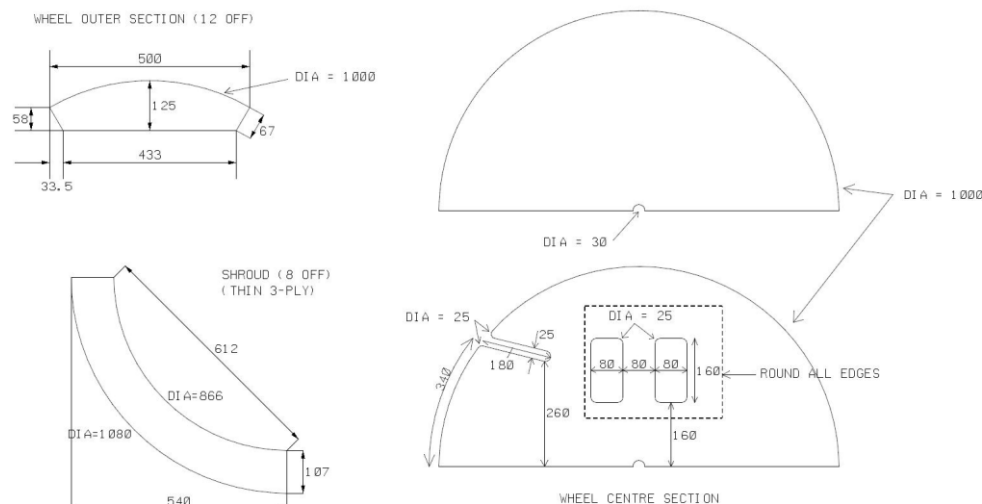
The shrouds are made from thin plywood, 4 x quarter circles per side. These are screwed to the wheel using short chipboard screws. These will need to be smoothed after fitting using a similar technique to the wheel.



**CAD drawing showing the wheel mounted in the frame**

The wheel is mounted using flanged ball bearings which are bolted to the wheel. This rotates around a fixed axle. The axle is simply screwed to the frame sides with long chipboard screws. I used 1-inch diameter stainless steel for the axle and this was set in to the side walls by the full 1 inch (this was

reduced in my later dumbbells to ½ inch). This was a bit of an overkill and I'm sure you would get away with a smaller diameter axle.



**The CAD design for the wheel components**

The width of the frame was determined by the overall width of the wheel with the weights fitted. If you manage to get BR1 baseplates then you will need a total width of about 9½ inches. Other baseplates are available but they may need more width and it would be best if you made the ends and base after obtaining the weights.



**The wheel during construction**



**The completed dumbbell**

Luckily, I am a volunteer on a heritage railway and obtaining old baseplates wasn't difficult. If you aren't so fortunate you should be able to get them from Network Rail: [www.railwayrecycling.co.uk](http://www.railwayrecycling.co.uk).

You will also need a floor pulley. I used small floor pulleys (about 2 inches diameter) which fit neatly in the base of the frame. These should be available from your local bellhanger. This is likely to be the most expensive part of the build, although you could have a go at making your own if you have the necessary facilities.



**A BR1 cast iron baseplate.** You won't need the rail unless you plan to run trains!



**My first dumbbell with homemade sensor mounted in the loft**



**Nerve centre**

If you decide to install your dumbbell in the loft at home, please ensure that the ceiling joists are strong enough to withstand the vertical forces generated by the rotating masses. The loft where I installed my first dumbbell had been fitted with floor boards which spread the load. I had to install additional joists in the next house to stop the ceiling from bowing when the bell was rung. If you are unsure about this I strongly suggest you get advice from a builder. You will also need a ceiling boss to protect the hole in the ceiling of the 'ringing chamber.' Ideally the rope should fall near where the computer is situated.

The dumbbell needs to interface with a computer running a simulator programme such as Abel (other simulators are available). I provided a foot switch to control the simulator functions. Full details of how to do this are available on the internet. A good source for this is David Bagley's website: <http://www.ringing.demon.co.uk/sensors/sensors.htm>.

- It should be mentioned that you can buy readymade dumbbells from various sources, most of which advertise from time to time in *The Ringing World*.