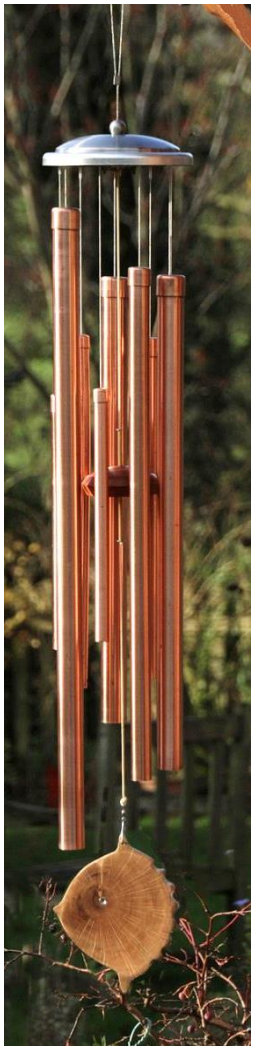
Copper Chimes by Gareth Thomas



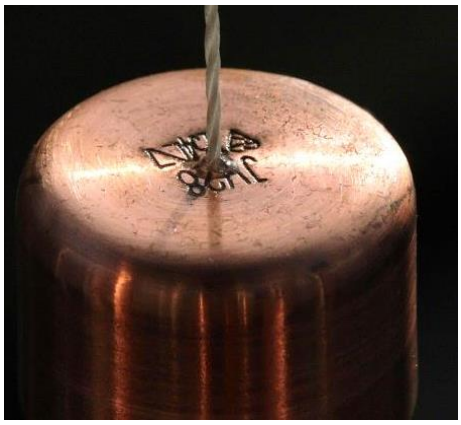
I approached the project from completely the other direction compared to most folks.

Because I am an incurable collector of 'bits that look as though they might come in for something vital in the future', I have accumulated (over 72 years!) a collection of bits of nice copper pipe from plumbing projects, none of which would be any use for anything on their own, but I had always nurtured plans to make a wind-chime from them at some time – then I came across your amazing site!

So I used 9 tubes, 3 of each size, 15mm, 22mm, & 28mm, longest of which is 27" and shortest 10½", so a huge spectrum of possible tones. They are all 'old copper', which means they are thick-walled, but not necessarily perfectly uniform, made 50 or more years ago.

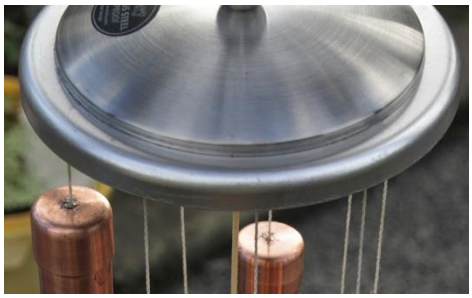
With one slight exception, the tones are pretty true, with amazing harmonics and sustain time. I wanted them to be in a proper chord, so using the longest as the leader, I then tuned all of the pipes to harmonize with it, which in fact turned out to be the key of C#, and the chord I finished up with was C#major9th (as opposed to C#9th).

The fundamentals of the tubes are: C#, F, G#, C and D#. That is my interpretation anyway. Bottom line, they sound great together, which is the object of the project, with the 7th and the 9th adding tension.



I used the end caps suggested on the website. They are secured in place using Araldite. A 1.5mm hole in the end cap, well countersunk, takes the cord, with a small blob of Araldite around the bottom of the cord as it enters the hole.

The 6¼" top carrier (support disk) I made from two different parts of bird feeders that are stainless and aluminium. The stainless top has a convenient stainless steel braided wire loop ending in a stainless steel ball. The top cap conceals some lead counterweights needed to balance support disk to trim it to horizontal, on account of the large disparity in tube weights. (Curved wheel-balancing weights).



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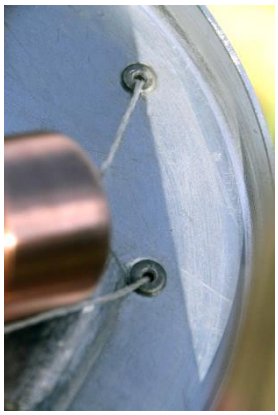
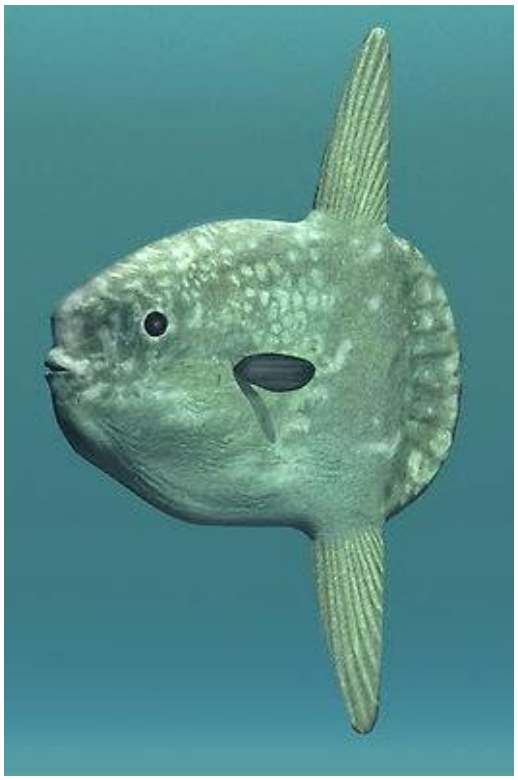


As suggested I used pop rivet shells to make ferrules for the cords thru the aluminium top. The cord for the tubes is braided nylon, about 65lb B/S.

I turned the striker (3¼”x1¼”) at a friend’s workshop from a lovely piece of Yew (*Taxus baccata*) heartwood, which is very hard and has a vibrant colour. I don’t believe you have that species in USA, but other *Taxus* spp. occur, I think.

I used a thin brass tube as an axle and a pop ferrule top & bottom to avoid fraying. The position chosen to strike was 1 inch above the centre line of all the tubes which are arranged as centrally aligned (because of the huge difference in tube lengths), and the striker is fixed centrally on the cord between the sail and top, to provide some resonant effect. The cord is about 200lb braided nylon.

The sail is made of Oak heartwood, with nice radiating rays. It is fashioned in the impressionistic form of an Ocean Sunfish, *Mola mola*, which seemed to fit the piece.



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All of the wood is soaked 24 hrs. in preservative first and then saturated 12 hrs. in Danish oil, which is a good weather proofer. The tubes were 'spun' in a hand drill using fine emery and wire wool, and then very thinly coated with Vaseline – really! – which is a remarkable protector against weather corrosion. Yes, it takes a bit of gloss off, but I did not want to lacquer them.
And the applied verdigris effect that one of your visitors has chosen did not appeal.
The photos show the Vaseline-coated tubes.

So the overall effect is neither dramatic nor ground-breaking, but it fitted the bill for what I needed, and not unattractive.

Thanks so much for your help and advice with this project – I should have been lost without this website. And the intricacies of the fundamentals, harmonics and overtones are a complete revelation to me!

Some brief stats:
Overall hanging length from top of stainless loop to bottom of sail: 42"

Striker 3¼", with a striking gap of ¼" all round, gives a ***striking diameter*** of 3¾"

Tubes of three different diameters are set on three separate radii: the narrower ones closer to centre, with outer tubes just inside support disk. The inside contact point of each tube is exactly on the ***striking diameter***, & tubes are arranged on this so that the contact points are equidistant from each other on that circle. This gives all an equal chance of being struck.

By Gareth B Thomas
Ludlow, England
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