

# BARROWMORE

## MODEL RAILWAY GROUP

*"Modelling to a high standard amongst friends"*



### Workshop Notes

(Ultrasonic baths are perhaps best known to most people for their use in cleaning jewellery ...but they can be very useful to modellers .....)

#### Science working for the modeller...

by Iain Kirk

So you have just done some work on that nice etched brass kit you treated yourself to and now comes the bit you hate – cleaning off all that used flux and other gunk. It's messy and irritating and yet also maybe not quite as thoroughly clean as you'd like maybe? This is when the world of science can help in the form of ultrasound; specifically, an ultrasonic cleaning bath.

Essentially, an ultrasonic cleaning bath is a cleaning device that uses ultrasound (usually from 20–400 kHz.) and an appropriate cleaning solution to clean delicate items. The ultrasound can be used with only water but a form of solvent or cleaning solution is advised for the best results - it enhances the effect of the ultrasound on the item to be cleaned. Ultrasonic cleaning works by using high frequency sound waves to agitate in an aqueous or organic compound. Cavitation bubbles induced by the agitation, act on any contaminants adhering to the brass or any other substance. This action also penetrates blind holes, cracks, and recesses. The intention is to thoroughly remove all traces of contamination tightly adhering or embedded onto the surface of what is being cleaned.

Now when it comes to cleaning solutions, the best to use I find through my professional background, is Neutracon. A specialised surface active cleaning agent/decontaminant, it is supplied as a liquid concentrate, for dilution with water. Neutracon is biodegradable, phosphate-free, non-toxic, non-flammable and non-corrosive and totally rinses away. It leaves no residues on your work in other words. It is also most effective when used in an ultrasonic bath. It is worth noting that one should be very careful about what one uses as your cleaning solution as well. It is best to avoid flammable solvents as they are not worth the risks involved.

Ultrasonic baths come in all shapes and sizes; the cheapest option available for the modeller probably comes from the Aldi supermarket chain, when available. Failing that check out some of the modellers' tool shops, such as Eileen's Emporium.

Neutracon is available from scientific suppliers. However, one wonders if it is the sort of thing that could be sold by the modellers' tool shops? I feel maybe some enquiries may be in order.

#### References

Aldi - [www.aldi.co.uk](http://www.aldi.co.uk)

Eileen's Emporium - [www.eileensemposium.com](http://www.eileensemposium.com)

Decon [Makers of Neutracon] - [www.decon.co.uk](http://www.decon.co.uk)

---

Iain Kirk. For personal non-commercial use only.

All Rights Reserved © 2011 Barrowmore Model Railway Group

See more Workshop Notes on the 'BMRG Website'