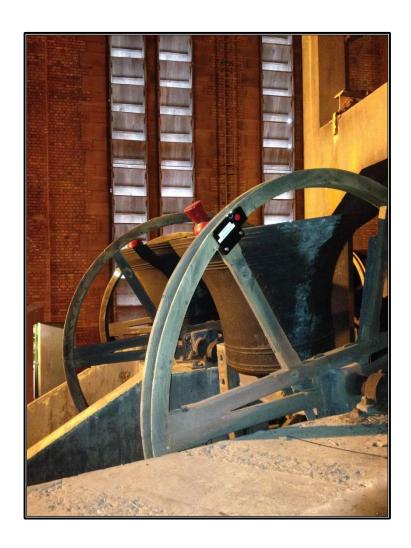# Type 2 Liverpool Ringing Simulator

00 – RELEASE NOTES

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Date: 14 April 2025
Version: 1.1

Contents

Document History

Version	Author	Date	Changes
1.0	A J Instone-Cowie	27/06/2024	First Version.
1.1	A J Instone-Cowie	14/04/2025	Type 1 – Type 2 Interface Adapter, Upcoming KiCad migration.

Cover photograph: Prototype magnet mount, Liverpool Cathedral treble.

Licence

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[1] http://creativecommons.org/licenses/by-sa/4.0/

RELEASE NOTES

June 2024

Documentation Updates
After several years, the entire documentation set has now been updated, part numbers checked and amended, and guides updated with the latest tested versions of Simulator Software.

Component Costs
The price of many electronic components and other parts used in the simulator (particularly neodymium magnets) have increased dramatically over the last few years. The indicative cost of an 8-bell simulator with magneto-resistive sensors, which in 2019 would have been around £220, is now closer to £325. The **Cost Estimation Tool** spreadsheet has been updated with current, June 2024, prices. You may be able to reduce costs by sourcing parts from other vendors, but take particular care with low-priced semiconductors (which may not be as described), and with anything with obvious safety implications (such as power supplies).

ATmega328P
Microchip have recently announced that the ATmega328P microcontroller is "no longer recommended for new designs", the first step towards being discontinued. However, the microcontroller is still widely available. The Simulator Interface code will in theory work on the ATmega168P microcontroller, but changes to the build process are required for this. Contact the project if this applies to your build.

Component Changes
Some minor component changes have been made to reflect changes in availability from vendors:

- The 5V voltage regulator previously specified has been discontinued. An equivalent replacement has been selected.
- Some IC socket part number have been changed, to reflect availability and minimum order quantity changes.
- The Screwfix part number for 20mm closed grommets has changed.

April 2025

Type 1 – Type 2 Interface Adapter
PCB design files and Gerbers have been provided for a simple interface adapter, which allows Type 2 sensors to be connected to a Type 1 interface, and vice-versa. As this is expected to be something of a niche requirement, the details are documented in the **Technical Reference Guide**, not the **Build & Installation Guide**.

RIP Eagle, PCB Migration to KiCad
The fortunes of the once-popular Cadsoft Eagle PCB design tool among the hobbyist and maker community have waned over recent years, following the acquisition by AutoDesk and changes to the

licensing regime. AutoDesk have announced[2] that Eagle will cease to be available or supported as a free-standing product in June 2026.

Like many other small projects, the Liverpool Ringing Simulator Project will migrate PCB designs to the open source KiCad EDA tool over the coming months. Existing Gerber files remain valid in the interim.

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[2] https://www.autodesk.com/support/technical/article/caas/sfdcarticles/sfdcarticles/Autodesk-EAGLE-Announcement-Next-steps-and-FAQ.html