

## Oldest Digital Computer in the World Back in Action

Written by Marco Attard  
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After 3 years of restoration, the National Museum of Computing (TNMOC) at Bletchley Park houses the oldest working digital computer in the world-- the Harwell Dekatron, also known as WITCH.



Built in 1951, the 2.5 tonne titan has 828 flashing Dekatron counter tubes, 480 relays, 4000 connectors and a bank of paper tape readers. After 30 minutes worth of warming up, TNMOC visitors can witness the machine clacking back into action, doing its first jobs since the 1970s.

"In 1951 the Harwell Dekatron was one of perhaps a dozen computers in the world, and since then it has led a charmed life surviving intact while its contemporaries were recycled or destroyed," TNMOC trustee Kevin Murrell says. "As the world's oldest original working digital computer, it provides a wonderful contrast to our Rebuild of the wartime Colossus, the world's first semi-programmable electronic computer."

The computer was first used at the Harwell Atomic Energy Research Establishment, where it replaced human mathematicians working on interminable calculations. Using gas-filled Dekatron counting tubes instead of transistors, it slow but steady-- working for days not in binary, but in decimal.

By 1957 it was already rendered obsolete, but it got a second lease at life as a computer science teaching tool at the Wolverhampton and Staffordshire Technical College, where it earned the moniker WITCH (Wolverhampton Instrument for Teaching Computing from Harwell).

The WITCH even got a Guinness Book of Records title as Most Durable Computer in the World in 1973, before ending up in storage at the Birmingham Collections Centre.

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And durable it is. When it was moved to TMNOC on 2009, it still had 95% of original parts. And after a few years of cleaning, rewiring and repairs, the Harwell Dekatron is back in action.

They truly don't make them like they used to!

Watch [Harwell Dekatron/WITCH Reboot](#)

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