

Delivery List and applications for the English Electric KDF9.

We have not been able to locate an authoritative delivery list from English Electric. Hence the information in Table 1 has been compiled from a number of sources, as indicated below.

| Location | Date first working | Date last working |
|-------------------------------------------------------------------------------|---------------------------|--------------------------|
| Admiralty Research Lab | (before Dec. 1965) | |
| Baric (service computer) | ? | |
| Birmingham University | June 1965 | 1972 |
| Bristol Siddley Engines (later Rolls Royce, Bristol) | 1964 | Later than 1977 |
| Bristol Siddley Engines (No.2) (fomerly Bristol Aeroplane Company's computer) | 1969 | Later than 1977 |
| Bristol Aeroplane Co | 1964? | 1968 |
| Culham Atomic Energy Authority | March 1965 | 1970/71 |
| De Havilland (Hatfield) | (before Dec. 1965) | |
| Edinburgh University | Dec. 1966 (rental) | Dec. 1969 |
| Glasgow University | May 1964 | Approx. 1972 |
| Imperial Chemical Industries no. 1 (Wilton, Teeside) | February 1964 | 1972 (second quarter) |
| Knutsford Nuclear Power Group | (before Jan. 1965) | |
| Leeds University | 1964 | Approx. 1976 |
| Liverpool University | 1964? | |
| Marconi (Chelmsford) | (before Dec. 1965) | |
| Meteorological Office | Before July 1965 | |
| Newcastle University | 1964? | August 1973 |
| National Computing Centre | April 1967 | 1970 |
| Nottingham University | 1965 | End 1970 – mid 1972 |
| National Physical Lab no. 1 | August 1964 | August 1980 |
| National Physical Lab no.2 (came from NCC) | February 1970 | August 1980 |
| Oxford University | January 1965 | December 1971 |
| Salford University | 1964? | Approx. 1974 |
| Stafford (English Electric) | (before Dec. 1965) | |
| Sun Life Assurance, Cheapside | (before Dec. 1965) | Later than 1975 |
| Sydney University, Australia | May 1964 | Mid 1974 |
| Whetstone (English Electric) | (before Dec. 1965) | |
| Wills Tobacco Co. Ltd. | April 1965 | March 1975 |
| Winfrith Atomic Energy Authority | December 1964 | |

Table 1: Details of KDF9 machines traced as of December 2009.

Further details and the sources are as follows.

Admiralty Research Laboratory, Teddington. Papers are available in the National Archives, but have not been examined for details of the KDF9. See also ref. 2 below.

Birmingham University. The main problem was that the Birmingham KDF9 was the first production machine and thus suffered, while the second and subsequent were much healthier! I always said English Electric completed their development onsite! (The KDF9 was not the last of such examples...). The biggest problem was that test software (written mostly by me in those early days) ran but Director and Applications fell over after 10 minutes. There were few lamps and indicators, no parity on core stores and the main application, a Mercury computer Simulator, when it failed simply output to the flexowriter "hoot hoot hoot", not very informative... Eventually problems were solved and the KDF9 proved a good second-generation computer. From 1964 till 1967 Robert Beard ran a post development and special engineering group for the KDF9, adding all sorts of extras to the system, among them, a fast plotter for the Met Office, modem i/f for Salford University and NCC KDF9's with prototype STC modems so that the two KDF9s could send data at 2.4Kbds over special Post Office coax (in 1965 this was a first in the UK). Source: Robert Beard. See also ref. 2 below.

Bristol Siddley Engines. This later became Rolls Royce. In 1969 the former British Aircraft Corporation (BAC) machine was relocated to Patchway where Bristol Siddley ran the only twin KDF9 operation that has been located. Both machines were linked to a DEC PDP10 which fed them with jobs, and accepted results for users. Source: Alan Freke. David Holdsworth reports: I believe that I've already told folks that Rolls-Royce had a KDF9 somewhere near Bristol. I went there in about 1970/71. I produced a magnetic tape version of the Eldon2 FORTRAN compiler and delivered it in person. They went bust before paying the bill. See also ref. 2 below. **Bristol Siddley Engines. No.2.** In any event, the Bristol Aeroplane machine was disused by 1968, and had just been bought by Bristol Siddley Engines when the Wills machine was put out of action. Wills used the BAC machine (paying Bristol Siddley) on BAC premises for about nine months to keep the business running. Source: Alan Freke.

Culham AEA. Source: Michael Poole. See also ref. 2 below.

Edinburgh University. Source: Graham Toal. This KDF9 was provided because the System 4 computer which was destined for Edinburgh Regional Computing Centre was late.

Glasgow University. The machine was almost certainly installed around May 1964. It seems unlikely that the machine was working before the Birmingham one. Source: John Patterson and Bill Findlay. See also ref. 2 below.

ICI1 (Teeside). Source: Neville Taylor. See also ref. 2 below.

Leeds University. The KDF9 was only for undergraduate use from 1972. Source: David Holdsworth. See also ref. 2 below.

Liverpool University. See ref. 2 below.

Meteorological Office, Bracknell. See: Hansard:
http://hansard.millbanksystems.com/written_answers/1967/dec/20/meteorological-office#S5CV0756P0-09093 See also ref. 2 below.

Newcastle University. See also ref. 2 below.

Nottingham University.

See: <http://www.chezfred.org.uk/University/ComputerXHistory/TheKdf9/>

Source: Eric Foxley. See also ref. 2 below.

NPL. Detailed information is provided in [ref.1]. The second KDF9 was obtained from the National Computing Centre (NCC). See also ref. 2 below.

Oxford University. See OU report 64/65 and OU report 71/72.
<http://www.oucs.ox.ac.uk/internal/annrep/annrep64-65.html> and
<http://www.oucs.ox.ac.uk/internal/annrep/annrep71-72.html> See also ref. 2 below.

Salford. From Nigel Morton. See also ref. 2 below.

Sydney University. See: Personal comments from John Barrett:
<http://users.tpg.com.au/eedeuce/author.html> and from J M Bennett and John Deane. See also ref. 2 below.

Wills Tobacco. The chief engineer at Wills who contacted me has the machine log books and furnished the following information. Machine delivered during March 1965. It went operational during April, with test programs, slowly moving to production work as programs were written and debugged. It was flooded by 3 feet of water at 23.30 on 10th July 1968. Wills' own engineers (assisted by engineers from Kidsgrove) had the machine running again in three weeks, and it went live on production work on 9th August 1968. The machine was finally powered down for the last time at 17.45 on 21st March 1975. See also ref. 2 below. Source: Alan Freke.

Winfrith AEA. See ref. 2 below

References.

[1] David M Yates. Turing's Legacy. Science Museum. 1997.

[2] English Electric Leo Computer Users Association. KDF9 Users. Issue 3, December 1965. (From John Deane, Australia. 23 machines listed.)

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