

Ferranti Mark I and Mark I*: list of references.

The background to all the early British stored-program projects from 1945 – 1951 is summarised in: ***Alan Turing and his Contemporaries: building the world's first computers***. Simon Lavington [ed]. Published by BCS in 2012. 111 pages; many illustrations. ISBN: 978-1-90612-490-8.

Another general account, spanning the period from the late 1940s to the mid-1960s, is: ***Early British Computers*** (Simon Lavington). Published by Manchester University Press (in the UK) and Digital Press (in the USA) in 1980. 139 pages, many illustrations. ISBN: 0-7190-0803-4. Available online at: <http://ed-thelen.org/comp-hist/EarlyBritish.html>

Recent research into the Ferranti Mark I and Mark I* is covered in: *Stardust: tales from the early days of computing, 1948 – 1958*. Simon Lavington. Book in preparation, November 2018.

Ferranti Mark I: Hardware and systems architecture. Original papers.

1. Williams, F C and Kilburn, T, *A storage system for use with binary-digital computing machines*. Proc. IEE, vol. 96, part 2, no. 30, 1949, pages 183 ff.
2. Williams, F C, Kilburn, T and Tootill, G C, *Universal high-speed digital computers: a small-scale experimental machine*. Proc. IEE, vol. 98, part 2, no. 61, Feb. 1951, pages 13 – 28.
3. Kilburn, T, *The University of Manchester universal high-speed digital computing machine*. Nature, vol. 164, no. 4173, October 1949, page 684 – 687.
4. West, J C and Williams, F C, *The position synchronisation of a rotating drum*. Proc. IEE, vol. 98, part 2, no. 61, 1951.
5. Williams, F C and Kilburn, T, *The University of Manchester computing machine*. Proceedings of the Manchester University computer Inaugural Conference, July 1951, pages 5 – 11. This paper was also presented at the Joint AIEE-IRE Computer Conference, Philadelphia, December 1951. For comments on reliability, see also pages 33 and 34 of this Conference.
6. Williams, F C, Robinson, A A and Kilburn, T, *Universal high speed digital computers: serial computing circuits*. Proc. IEE, vol. 99, part 2, no. 68, April 1952, pages 107 – 123.
7. Williams, F C, Kilburn, T and Thomas, G E, *Universal high-speed computers: a magnetic store*. Proc. IEE vol. 99, part 2, 1952, pages 94 – 106.

8. Robinson, A A, *Multiplication in the Manchester University high-speed digital computer*. Electronic engineering, Jan. 1953, page 6 – 10.

9. Pollard, B W and Lonsdale, K, *The construction and operation of the Manchester University Computer*. Proc. IEE, vol. 100, part 2, 1953, pages 501 – 512.

(b). Ferranti Mark I: Software and programming systems. Original papers.

10. Anon, *Programmers' handbook for Manchester Electronic Computer Mark II*. Undated 109-page manual, typed and reproduced by the Computing Machine Laboratory, University of Manchester, and probably issued in March 1951. Although not explicitly stated, the author of this manual was Alan Turing. Despite the somewhat confusing title, this document does indeed refer to the computer that soon became known as the Ferranti Mark I computer.

11. Brooker, R A, *programmers' handbook (second edition) for the Manchester Electronic Computer Mark II*. 109-page manual, typed and reproduced by the Computing Machine Laboratory, University of Manchester, and dated August 1952.

12. Dodd, K N, *The Ferranti Electronic Computer: parts 1 and 2: the Mark I model*. Report 10/53, Applied Mathematics and Mechanics Division, Armament Research Establishment, Fort Halstead, April 1953.

13. Dodd, K N, *The Ferranti Electronic Computer: parts 3, 4 and 5: the Mark I* model*. Report 11/53, Applied Mathematics and Mechanics Division, Armament Research Establishment, Fort Halstead, May 1953.

14. Brooker, R A, *An attempt to simplify coding for the Manchester electronic computer*. British Journal of Applied Physics, vol. 6, Sept. 1955, pages 307 – 311.

15. Brooker, R A, *The programming strategy used with the Manchester University Mark I computer*. Proc. IEE, vol. 103, part B, supp. 1 – 3, 1956, pages 151 – 157.

16. Brooker, R A, *The Autocode programs developed for the Manchester University computers*. Computer Journal, vol. 1, 1958, pages 15 – 21.

In addition, two early machine-code programs appear to have survived. Many thanks to David Link for identifying the following sources:

Program name	Author	Date	Current location of manuscript
Draughts	Christopher Strachey	1951	Special Collections and Western Manuscripts section, Bodleian Library, Oxford University, catalogue ref. CSAC 71.1.80/C.27 to C.31: "Draughts".
Love letters	Christopher Strachey	1951	Special Collections and Western Manuscripts section, Bodleian Library, Oxford University, ref. code NCUACS 71.1.80, catalogue ref. CSAC 71.1.80/C.34 and C.35: "Love Letters program".

(c). General, and applications-specific. Contemporary publications.

17. Anon, *Long distance test of the University of Toronto Computer*. Unsigned article, The Ferranti Journal, vol. 14 no. 1 1956, page 19.

18. B W Pollard, *Rome, December 14th 1955: the inauguration of a Ferranti computer*. The Ferranti Journal, vol. 14, no. 1, 1956, pages 9 – 11.

(d). Retrospective publications.

19. B B Swann, *The Ferranti Computer Department – an informal history*. Typescript for private circulation only, produced in 1975. See the National Archive for the History of Computing, catalogue number NAHC/FER/C30.

20. Lavington, S H, *A history of Manchester computers*. Published by the National Computing Centre, Manchester, 1975. *Second edition* published by the British Computer Society, 1998, ISBN 0-902505-01-8.

21. Campbell-Kelly, M. *Programming the Manchester Mark I: early programming activity at the University of Manchester*. Annals of the History of Computing, vol. 2, no. 2, 1980, pages 130 – 168.

22. Croarken, M (1993): *The beginnings of the Manchester computer phenomenon: people and influences*. IEEE Annals of the History of Computing, volume 15, no. 3, pages 9 – 16.

23. Wilson, J F *Ferranti: a History. Building a family business, 1882 – 1975*. Carnegie Publishing Ltd., Lancaster, 2001. ISBN: 1-85936-080-7. Volume 2: *from family firm to multinational company, 1975 - 1987*, published in 2007 by Crucible Books, Lancaster. ISBN: 978-1-905472-01-7.

24. Lavington, S H, *Stardust: tales from the early days of computing, 1948 – 1958*. Book in preparation, November 2018.

(e) Meg and Mercury, the follow-on computers from the Mark I.

25. Kilburn, T, Edwards, DBG and Thomas, G E, *The Manchester University Mark 2 digital computing machine*. Proc. IEE Vol. 103 Part B Supp.1-3, 1956, pages 247 – 268.

26. Lonsdale, K and Warburton, E T, *Mercury, a high-speed digital computer*. Proc. IEE Vol. 103, Part B, Supp. 1-3, 1956, pages 483 – 490.