

List of probable English Electric DEUCE computer deliveries.

Delivery date	No. of machines	Customer & location	Application/ remarks
Feb 55	1	EE Nelson Research Lab., Stafford	Internal computing service for the English Electric Co.
May 55	1	National Physical Lab., Teddington	NPL Computing Service. Machine switched off July 1966.
May 55	1	Royal Aircraft Establishment, Farnborough. (RAE)	Aircraft research. Machine known as GERT.
?	1	EE, Marconi House, Strand, London	Computing Bureau
?	1	EE, Main Works, Stafford	Transformer design.
June 56	2	Bristol Aeroplane Co., Filton.	Machine switched off July 1968. (British Aircraft Corp.)
Aug 56	1	New South Wales University of Technology, Sydney, Australia.	Machine known as UTECOM
Sept 56	1	Atomic Weapons Research Establishment, Aldermaston	
Dec 56	1	RAE, Farnborough	Machine known as DAISY
Feb 57	1*	Bristol Siddeley Aero-Engine Co., Patchway, Bristol.	
June 57	1	BP, Aldgate, London	Seismic work.
Sep 57	1	Short Bros & Harland, Belfast	Aircraft design
Nov 57	2	EE Co. (later BAC), Warton, near Preston	Aircraft design
Feb 58	2	EE Mechanical Engineering Lab., Whetstone, Leicester.	
?/58	1	Glasgow University	
?/58	1	Central Bureau of Statistics, Norsk Regnesentral, Oslo, Norway	
Nov 58	1	EE Co., Guided weapons Division, Luton	
?	3*	Ministry of Agriculture, Fisheries & Food, Guildford, Surrey.	
Late 59?	1	Liverpool University	Later (1964) moved to Stafford Technical College.
?	1	Queens University Belfast	
?	1	National Engineering Labs. (DSIR), East Kilbride.	
?	1	Central Electricity Generating Board, London	
?	2	EE Computers Bureau, Kidsgrove	
?	1	UK Atomic Energy Authority, Capenhurst	
??/60	1	EE Co., Liverpool	
?	1	Admiralty Research Establishment, Teddington	
?	1	EE Co., Stafford	

Notes on the above Table.

* Most survivors from the English Electric Co. Ltd. (EE) agree that the total number of DEUCE computers built was **33**. There is some evidence that Bristol Siddley had two machines. There is some doubt about the three machines shown for the Ministry of Agriculture, Fisheries & Food (MAFF). For example John Barrett [eedeuce@optusnet.com.au] wrote: "I find three machines at MAFF very doubtful. I was one of the engineers there, leaving in November 1961. There was no mention of additional machines when I left and my wife kept in contact with the staff there and additional machines were never mentioned".

Confusion may sometimes arise due to one machine being passed on by an original organisation to another location, when a DEUCE became surplus to the first site's requirements. For example Marconi, part of the English Electric empire, was known to have had a DEUCE computer at its Chelmsford headquarters but the date of installation has not yet come to light. The presence of the DEUCE at AWRE Aldermaston might have been withheld from some publicly-available lists on security grounds.

The contents of the Table is based on information given by P J (Jeremy) Walker: Jeremy 'at' dial-barn.co.uk - see:

www.members.optusnet.com.au/deucepix/pjwalker.htm

See also: <http://members.dodo.com.au/~robin51/deuce.htm>

Additional comments come from

<http://users.tpg.com.au/eedeuce/people.html#sindex> and from Peter Stanley [phstanley 'at' tiscali.co.uk] and Robin Vowels [robin_v 'at' bigpond.com].

The following 30 installations were listed in the English Electric publication *DEUCE News 66* in September 1961:

Site	Type (see below for explanation)
Bristol Aircraft	Mark I (2 machines)
Bristol Engines	Mark I (1 machine, a second being installed)
BP London	Mark 0
CEGB London	Mark I
EE Kidsgrove	Mark I and Mark IIA
EE London Computing Service	Mark I
EE NRL	Mark II
EE Luton	Mark I
EE Stafford	Mark IIA
EE Warton	Mark I (2 machines)
EE Whetstone	Mark I and Mark IIA
Glasgow University	Mark I
Liverpool University	Mark I
MAFF Guildford	Mark IIA
Marconi Chelmsford	Mark II
NEL East Kilbride	Mark I
CBS Norway	Mark II

NPL Teddington	Mark 0
Queens University Belfast	Mark I
RAE Bedford	Mark II
RAE Farnborough	Mark I (2 machines)
Short Bros Belfast	Mark I
UKAEA	Mark II
University of NSW	Mark I

What version of DEUCE?

According to Robin Vowels, "Models delivered before about September 1957 were the "original" DEUCE, and later known as Mark 0, to distinguish them from post-September 1957 machines which were called Mark I and which were the standard or basic machine. All except one of these were upgraded in the field to Mark I.

"Some machines may have been installed as a different model and subsequently upgraded in the field. A Mark I machine could be upgraded in the field to Mark II, but this would have been much more expensive than just buying a Mark II, and although I do not know of any machine that was upgraded that way, it doesn't mean that none was.

"The Ministry of Agriculture, Fisheries, & Food had three DEUCE, and if the first one was delivered before about 1959, it would have been a Mark I. If so, possibly it was upgraded to Mark II, as they are known to have had three Mark II.

"A Mark IA or Mark IIA machine had seven extra delay lines of 32 words each. While it is true that the Mark I machines had separate devices for input and output, adapted from Hollerith machines, and the Mark II had a single combined reader and punch from IBM, the essential difference was that the Mark I machine was for scientific uses, whereas the Mark II was for scientific and commercial uses. The Mark II had hardware for converting card columns to 6-bit characters and vice versa, and that this hardware conversion was buffered to and from store and was completely automatic, while the Mark I required programmed input and output. The 80 column Read and Punch equipment (IBM 528) could also read and punch in the same manner as the Mark I machines, namely, programmed input and output. In other words, the Mark II was upwards compatible with the Mark I".

Additional information on the DEUCE at NPL will be found in the book by D M Yates, *Turing's Legacy – a history of computing at the national Physical Laboratory 1945 – 1995*. Published by the Science Museum, London, 1997.