PERGAMON COMPUTER DATA SERIES

THE QUEEN'S AWARD TO INDUSTRY 1966

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VINTAGE COMPUTERS

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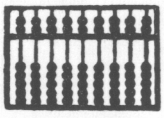

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C O N T E N T S

SECTION 1.

PREFACE

There is little doubt that when one lists certain products as being out dated, there will be differences of opinion.

However, Computer Consultants Limited, have no vested interest in out dating any particular pieces of equipment and the opinions which result in the publication of this volume are impartial and based on experience and, we hope, on a reasonable amount of common sense.

Broadly speaking we have tried to include in this volume, computers and their associate equipment which users are unlikely to have a real interest in in the future to the extent of not being ready to purchase or rent this equipment.

At the time this volume was prepared, in May 1965, there were, in fact, outstanding orders for some of the equipment, but these orders could have been outstanding at that time because negotiations and preparations would have been carried to a stage where, despite the announcement of newer and perhaps more suitable equipment, it would not be economical to change plans at that point.

Also, there are occasions where equipment of a certain type has been installed and used and it is desirable, when requiring to increase capacity, to install more equipment of the same type although, by then, there may be more modern equipment available.

The word "Vintage"has been very carefully chosen. It does not mean that equipment cannot still be used for many years to come and there are instances, regrettably, where for example many vintage cars are still on the road and giving far better performance and reliability than their modern counterparts, and indeed these vintage cars will probably still be on the road when some of the modern cars will be on the scrap heap.

This publication is intended to be a book of reference for a period of about 5 years and with this in mind, the list of installed and on order computers presupposes that those computers on order when the book was written will be installed and not cancelled, and they are, therefore, included as such.

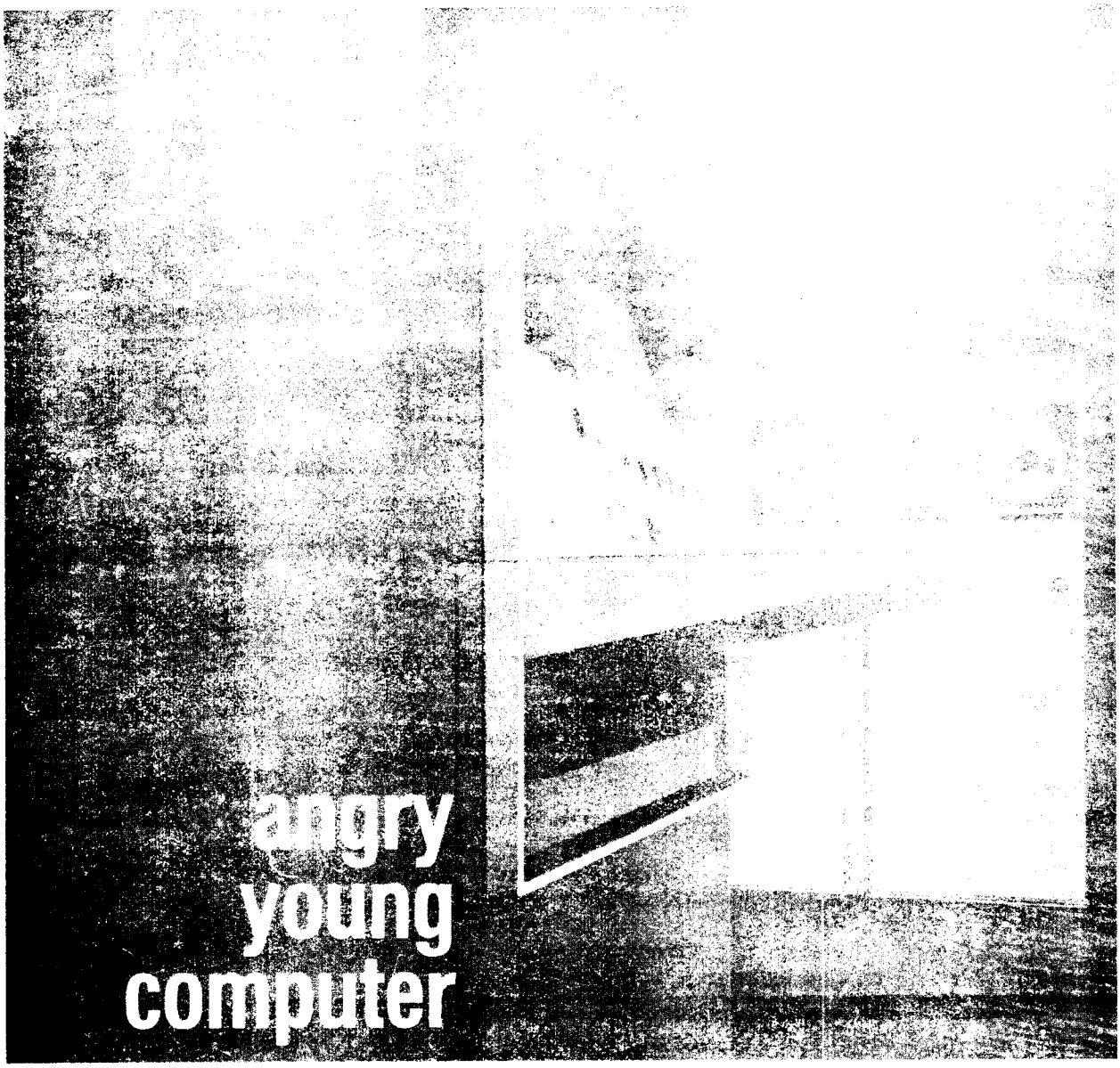
Included in the list of the older computers installed are computers which at the time of writing this publication, have been replaced by other machines for some considerable time. For the record however, with a publication of this sort they should, in our opinion, still be shown as having been installed, as indeed they were at one time or another.

Future publications issued by Computer Consultants Limited will not contain any of the material included in this particular volume. The other publications will concentrate on equipment which is of a more serious immediate interest to potential computer users.

Colman House,
Enfield, Middx.
England.

R.H.Williams
Managing Director.

May 1965.



Our B 200 can outdo any computer in its class. Any computer, regardless of name or initials. So naturally, when it sees a system being bought or leased on the basis of name or initials, the B 200 gets angry. Because it knows it can do a better job for fewer dollars. If you know anybody who's considering a computer, do him a favor. Mention the Burroughs B 200. The same goes for anybody who's angry with his present computer. And we hear a lot of people are.

Burroughs

Burroughs Offices in principal cities of France, Germany, Denmark, Sweden, Holland, Belgium and Italy.

All informations : Burroughs International S.A.
18 rue Saint-Pierre, Fribourg - Switzerland

SHORT NOTES ON ALL VINTAGE COMPUTERS

DEVELOPED AND MANUFACTURED

THROUGHOUT THE WORLD

* ACE

This computer was developed by the National Physical Laboratory, London. There was an original pilot "Ace" development and this machine is in the South Kensington Science Museum. This pilot model was also the basis for the EEL/DEUCE I, II and IIA. The Ace at the National Physical Laboratory is much larger and is valued at £400,000. Date of installation 1958. Maximum number ever installed - 1.

ACE ORIGINAL

This was the pilot model of the Ace computer from which were developed several other British machines. The original computer is now in the South Kensington Science Museum. It was built approximately two years before the Ace computer and only one was made.

* AEI 1010

This computer was developed by the Associated Electrical Industries Limited, and is a development of original work done by Metropolitan Vickers on the Metrovick 950. A typical system is valued at £200,000, but ranges from £100,000 to £400,000. First installation 1961. Maximum number ever installed - 10.

AEI METROVICK 950

This computer was manufactured by the Metropolitan Vickers Electrical Company Ltd, was first installed in 1957 and the price is £20,000. Maximum number ever installed - 3.

AF CRC

Manufactured by Remington Rand, Univac, the system is used for general purpose scientific computations and as a flexible buffer for transferring data to paper tape. This computer later developed into the Univac Solid State 80, 90. First installation 1961, selling price of an average system is £270,000. Maximum number ever installed - 1.

ALWAC 1

A computer produced by the Alwac Division of El-Tronics Inc., and from which the other Alwac computers were developed. Only one version of this computer was produced.

* ALWAC II

This computer was first installed in 1953 and two installations were made. The average price was £35,000, built by the Alwac computer division of El-Tronics Inc., of Hawthorne, California, U.S.A. This machine is no longer in production.

ALWAC III

This computer was first installed in 1954, two installations were made. Built by the Alwac Computer Division of El-Tronics Inc., of Hawthorne, California, U.S.A., it does not make use of magnetic tape, but does have a line printer. The price of an average system was about £37,000. No longer in production.

* ALWAC IIIE

This computer built by the Alwac Computer Division of El-Tronics Inc., makes use of magnetic tapes. First installed in 1954, forty one installations were made but it is not now in production. The design and logic of the Wegematic 1000 is based on the Alwac IIIE. In Sweden the Sales Company for Alwac is Autronic A.B. and the Manufacturing Company is titled Alwac A.B. The average price of a system without magnetic tape was about £13,000, with magnetic tape £40,000. No longer in production.

ALWAC IV

This is another computer built by the Alwac Computer Division of El-Tronics Inc., California, and is a transistorised version of the Alwac III. The price of an average system is about £50,000. First installed in 1962. No longer in production. Maximum number ever installed - 1.

ALWAC 800

This was to be a high speed, low cost computer designed by the Alwac Computer Division of El-Tronics but the project was terminated by them and the equipment shipped to Wegematic in Sweden, their Swedish Associates. First installed 1963 - £50,000. Maximum number ever installed - 1.

AMDEC 960

This machine is designed by Addressograph-Multigraph and was first installed in 1963. The system works in conjunction with Addressograph Plates and printing equipment. The average price of a system is £30,000. Maximum number ever installed - 14.

AMDEC 943

This is a computer produced by the Addressograph-Multigraph Corpn., and was first installed in 1961. The average cost of a system is £180,000. Maximum number ever installed - 5.

AMOS

This computer manufactured by the National Bureau of Standards is used as a research tool in exploring the concept of the Automatic Weather Station. This private computer is the only one in use, hence no price is available. First installed in 1960.

AN/ASQ 28 (v) MDC

This is manufactured by the International Business Machines Corp. See IBM AN/ASQ 28 (v) MDC. Maximum number ever installed - not known.

AN/FSQ 7 AN/FSQ 8 Sage

See IBM AN/FSQ 7 AN/FSQ 8 (Sage). Maximum number ever installed - 50.

AN/FSQ 32

See IBM AN/FSQ 32. Maximum number ever installed - 2.

AN/TYK 4v COMPAC

See Philco AN/TYK 4v. Maximum number ever installed - not known.

AN/TYK 6v BASICPAC

See Philco BASICPAC. Maximum number ever installed - 7.

ASI 11

This computer was designed by the Advanced Scientific Instruments Inc., of Minneapolis, U.S.A. The price of an average system was £300,000. First installed in 1962. Maximum number ever installed - 1.

ASI 210

This computer is built by Advanced Scientific Instruments Inc., and the price of an average system is about £40,000. First installed in 1962. Maximum number ever installed - 24.

ASI 420

This computer built by the Advanced Scientific Instruments Inc., and the price of an average system is £165,000. First installed in 1962. Maximum number ever installed - 1.

ASI 2100

This is another computer manufactured by Advanced Scientific Instruments Inc., a division of Electro - Mechanical Research Inc. Its software is compatible with the 210. Average cost about £30,000. First installed in 1963. Maximum number ever installed - 9.

AV 41

This computer was built by Autonetics Division of North America Aviation Inc. of California. The installation for a U.S. Government department was made in 1962, and no price of a typical system is available. The company has now withdrawn from the computer field. Maximum number ever installed - 1.

AVIDAC

This is a special purpose scientific computer built by Argonne National Laboratory for their own private use. First installed 1958. Maximum number ever installed - 1.

AV RECOMP II

This computer is manufactured by the Autonetics Division of North America Aviation Inc., and the selling price of an average system was £31,700. First installed in 1958. Company has withdrawn from the computer field. Maximum number ever installed - 66.

* BULL GAMMA 60

This computer was built and developed by Compagnie des Machines Bull in France. The price of a system ranged from £500,000 to £1,000,000. First installation was in 1960. Maximum number ever installed - 11.

* BULL GAMMA 150

This computer built by Compagnie des Machines Bull, France, is basically a calculator. The price of an average system is £60,000 and was first installed in 1961. Maximum number ever installed - 141.

BULL GAMMA 300

The Bull Gamma 300 is a smaller version of the Gamma 150 and again like the Gamma 150 is basically a calculator which becomes a computer when a magnetic drum and associated equipment is added to the system. First installation was in 1962 and costs of the order of £22,000. Maximum number ever installed - 117.

BULL GAMMA 500

This computer sold by the Bull Organisation is priced at £31,000 and was originally the SEA/CAB 500. The first installation was made in 1963. This machine was also called the G.5.S. by the Bull Organisation. Maximum number ever installed - 56.

BR 33

This computer is manufactured by Bunker Ramo Corporation. It is used as a sub-miniature digital control system. Price £80,000. First installation was in 1960. Maximum number ever installed - 25.

BR 130

This computer is built by the Bunker Ramo Corporation and marketed by International Systems Control Ltd. Although built for military purposes, this computer is now classed as a multi - purpose digital computer. The U.S. Navy version is called AN/UYK - 1. The first installation was made in 1962. The price of an average system is £40,000. Maximum number ever installed - 28.

* BR 300

This computer was manufactured by the Bunker Ramo Corporation, and had a selling price for an average system of £50,000. Manufactured also by International Systems Control Ltd, of Wembley, England. It was primarily a control computer for government use. First installed in 1959. Maximum number ever installed - 40.

BR 330

This computer is manufactured by International Systems Control Ltd., as well as its parent Company in the U.S.A. It is specifically designed for industrial process control and originally designed for government use. First installed in 1960, the price of an average system is £75,000. Maximum number ever installed - 30.

BR 530

This computer was first installed in 1961 and is manufactured by the Bunker Ramo Corporation. Selling price is from £50,000. Maximum number ever installed - 29.

BURROUGHS B204

This was a pilot computing system built by Burroughs in 1952, but is now obsolete. Thirteen were installed. Price £40,000.

* BURROUGHS B.205

This computer is built by Burroughs. The cost of an average system is from £20,000 to £67,000. The first installation was made in 1954. It is still available but no longer in production. Maximum number ever installed - 99.

BURROUGHS B220

This computer was built by Burroughs and the cost of an average system was £160,000. First installation was in 1958. Now obsolete. Maximum number ever installed - 58.

BURROUGHS D104

This computer is manufactured by Burroughs Corp. of America, and little information is available. Maximum number ever installed - 106 with D, 105.

BURROUGHS D.105

This is a real time missile guidance computer built by Burroughs Corporation, it is also known as the ATLAS model III guidance computer. Maximum number ever installed - 106 with D.104.

BURROUGHS D. 107

This is a general purpose computer built by Burroughs Corp., availability twelve months. Maximum number ever installed - 1.

BURROUGHS D201

This computer is manufactured by Burroughs Corp. of America, and little information is available. Maximum number ever installed -2 with D202.

BURROUGHS D202

This is a general purpose airborne computer designed primarily for bombing and navigation computation; it is also for military use. Maximum number ever installed - 2.

BURROUGHS D204

This computer built by Burroughs is currently utilized for stabilization of submarine periscope and radio metric sextant in on-line, real time applications. The cost of a system is £54,000. Maximum number ever installed - 5.

BURROUGHS D209

See Burroughs MADDAM. Maximum number ever installed - 1.

* BURROUGHS E101

This computer is a desk machine made by Burroughs. The British selling price is £16,400. First installed 1955. Still available but no longer in production. Maximum number ever installed - 127.

BURROUGHS E102

This computer was made by Burroughs; the selling price was £10,000. First installation was in 1958., it is now obsolete. Maximum number ever installed - 7.

BURROUGHS E.103

This computer which is a development of the E101 was first installed in November 1960; it is built by Burroughs. Price of an average system is £8,500. Maximum number ever installed - 157.

* BURROUGHS DATATRON

This computer was built by Electric Data Corp., now absorbed by Burroughs, was first installed in 1954. Price of average system - £39,800. Maximum number ever installed - 1.

BURROUGHS MADDAM

The Maddam computer is manufactured by Burroughs Corp., it was first installed in 1962. It is built of conventional components and uses a heat exchanger. Also known as the D.209. Maximum number ever installed - 1.

NOTE

Burroughs computers now have two numbers for the same systems, ending in 0 or 1. This is to facilitate overseas marketing.

CE 55

This computer is built by Computer Engineering Limited. First installation was made in 1960 and the average price for a system is £2,000. Maximum number ever installed = 4.

CE 102

This computer is built by Computer Engineering Limited. First installation was made in 1961. The selling price is £10,000. Maximum number ever installed = 1.

CELLARTRON SER 2

Built by Mercedes Buromaschinen, Eastern Germany, this is a desk machine which uses an electric typewriter for input and output. First installed in 1960. The estimated price is £9,000. Maximum number ever installed = 6.

CEP

This is a scientific computer built by the University of Pisa for their own use. First installation 1961. Maximum number ever installed = 1.

CIFA III

This computer is manufactured by the Institute of Nuclear Physics Bucharest, Rumania. It was first installed in 1960, three such machines have been built, all of which are used for research and training.

CIFA 101

Announced by the Institute of Nuclear Physics, Bucharest, 1962. The machine has a magnetic drum memory, and is suitable for mass production. Maximum number ever installed - 1.

CALDIC

This machine was manufactured by the Electrical Engineering Division of the University of California, and was used for instruction and laboratory experiments. It has a magnetic drum storage. One computer was produced and actually installed in the University of California, Berkeley 4, California. Average cost of a basic system was £41,000.

CIRCLE

This is manufactured by the Hogan Laboratories Incorporated. It is a general purpose scientific computer used for engineering research and development. The cost of a basic system with 4,096 word storage, is £27,000. First installed in 1954. Maximum number ever installed - 2.

CITAC 210B

Built by Compagnie Industrielle de Telephones, Paris. It uses paper tape, magnetic tape and seems to be aimed at process control activities. Costs about £25,000. First installed in 1962. Maximum number ever installed - 5.

* CLARY DE-60

This machine was built by the Clary Corporation of America. The first installation took place in 1960 and over 200 more computers have since been installed. Price of an average system is £8,000. Maximum number ever installed - 217.

CLARY DE-60M

This computer built by the Clary Corporation is a four-wheeled mobile computer of the DE-60 system. The average selling price for a system is about £7,000. First installed in 1961. Maximum number ever installed - 26.

CNET ANTINEA

This computer is manufactured by Centre National D'Etudes Des Telecommunications, France. Very little is known about this computer. Maximum number ever installed - 1.

CNET RAMSES

This computer is also manufactured by Centre National D'Etudes Des Telecommunications, France. It is a slightly faster version of the Antinea. Maximum number ever installed - 1.

COLLINS C 8200

Built by the Collins Radio Company for message switching, this is one of the 8000 Series of control computers. First installed in 1962. Maximum number ever installed - 3.

CORBIN

This computer was manufactured by the Corbin Corporation. One was produced.

COMPUTER CONTROL DDP 19

This computer is built by Computer Control, Framingham, U.S.A., and was first installed in 1961. It is a scientific computer and the price of an average system is £40,000. Maximum number ever installed-3.

CONTROL DATA 140

This computer is built by Control Data Corporation, Very little information is available. Maximum number ever installed - 1.

* CONTROL DATA 1604

This computer is built by Control Data Corporation and was first installed in 1960. It was the result of a breakaway development by former Remington engineers and enjoyed rapid success. Cost: £460,000. Maximum number ever installed - 58.

CONTROL DATA 1604A

This computer manufactured by Control Data Corporation, was first installed in 1960. Cost of a system is from £100,000 to £500,000. Maximum number ever installed - 6.

CONTROL DATA CUBIC TRACKER

This is a little known computer, originally manufactured by the Cubic Corporation of America. See Cubic Tracker. Maximum number ever installed - 7.

* CP 266

This computer is built by North American Aviation Inc.,It is a scientific computing and data processing computer, also used for field work. Also known as Recomp I. Installed 1957. Average price £20,000. Maximum number ever installed - 1.

CUBIC AIR TRAFFIC

Manufactured by the Cubic Corporation, this computer is intended for future air traffic control applications. Installed 1960. Maximum number ever installed - 1.

CUBIC TRACKER

This computer is manufactured by Cubic Corporation and it is a special purpose real time computer. First installed in 1959. See CDC Cubic Tracker. Maximum number ever installed - 7.

* CYCLONE

This computer was produced by the Iowa State University, Ames, Iowa. It is utilized for general purpose computing to support research work on campus. It is not manufactured for sale. Installed 1960. Maximum number ever installed - 1.

DASK

This was a Danish computer built by Regnecentralen. First installation was in 1957. Only one model built.

DATAMATIC 1000

This computer was manufactured by Honeywell Regulating Company, Datamatic Division, Massachusetts. The price of an average system was about £584,000; it is still available but no longer in production. The first installation was in 1957. See Honeywell Datamatic 1000. Maximum number ever installed - 7.

DAYSTROM 46

This computer is built by Daystrom Incorporated. It is a special purpose computer and was first installed in 1958. Taken over by Control Data. Average price: £50,000. Maximum number ever installed - 12.

DAYSTROM 136

This computer built by Daystrom Incorporated was first installed in 1961. It is a special purpose computer, designed to work in vans and under extreme temperatures. Taken over by Control Data. Average price: £80,000. Maximum number ever installed - 2.

DAYSTROM 636

This is another computer built by Daystrom Incorporated and is designed for special purposes to operate under extreme temperatures, including process control. First installed in 1963. Now taken over by Control Data - now Control Data 636. Maximum number ever installed-8.

DIANA

This computer was built by the Laboratory for Electronics Incorporated, America. It was designed for general purpose business applications. It is now installed and operating at International Computers and Tabulators, facilities, England. Installed 1960. Average price: £50,000.

* DISADEC

This machine built by Disa-Elektronik A/S Denmark, uses paper tape input/output and an electric typewriter. It was the result of the joint effort of two Institutes - the Royal Danish Institute of Geodetics and the Danish Institute for computing machinery, and was first installed in 1961 and the price is about £41,500. Is now re-developed as the GIER computer. Maximum number ever installed - 21.

DATAKEEPER 1000

This machine was manufactured by the Ford Instrument Division of the Sperry Rand Corpn. In general, the Datakeeper computer can be utilized effectively in applications which require the rapid processing of large amounts of random data. One model was installed at the place of its manufacture, Long Island City, 1, New York.

* DYSEAC

This computer was manufactured by the National Bureau of Standards. Electronic Computer Laboratory, Data Processing Systems Division, America. It is a general purpose, simulation, real time computer. The first installation was in 1954 to the Signal Corps. Average price £100,000. Maximum number ever installed - 1.

D26J- 1 MONICA

This computer is manufactured by North America Aviation Inc. First installed 1964. Maximum number ever installed - 1.

EDP 900 SYSTEM

Manufactured by Addressograph-Multigraph Corp. First installed 1961. Cost of average system about £100,000. Maximum number ever installed - 12

* EDSAC

This was one of the original British computers developed at Cambridge University, England, in the late 1940's. It was from this development that the LEO 1, in particular, came into being. Maximum number ever installed - 2.

EDSAC II

A newer development of a digital computer at Cambridge University., England. This embodied many new original concepts and was completed in 1958. Maximum number ever installed - 1.

* EDVAC

This computer was manufactured by the Moore School of Electrical Engineering, University of Pennsylvania. Only one has been installed, the selling price was £158,000. First installed in 1950.

* EEL/DEUCE I

This computer was built by the English Electric Company, Ltd, and was first installed in 1955, it was one of the first computers to use magnetic tape. The machine was developed by the Nelson Research Laboratory of the English Electric Company and was based on the ACE pilot machine. The price of an average system was about £45,000. Maximum number ever installed - 23

EEL/DEUCE II

This computer built by English Electric Co. Ltd., was designed for commercial work. It was also developed by the Nelson Research Laboratory of the English Electric Company and was based on the ACE pilot machine. The price of an average system was about £50,000. First installed in 1958. Maximum number ever installed = 6.

EEL/DEUCE IIA

This computer also built by English Electric Co. Ltd., is an extension of the Deuce II. The price of an average system is about £55,000. First installed in 1959. Maximum number ever installed = 5.

* EEL/KDP 10

This computer has a selling price of about £400,000 and is largely built by English Electric. It is the RCA 501 computer and comprises five units, built under licence for R.C.A. It was first installed in Britain in 1962, and as the RCA 501 in the U.S.A. in 1959. Maximum number ever installed = 9.

* EEL/LEO 1

This was the pilot development made by Leo Computers Ltd, and was based on the original Edsac machine. English Electric-Leo Computers Ltd., was founded in 1963 by the merger of Leo Computers Ltd with the Data Processing and Control Systems Division of the English Electric Company Ltd. The original machine installed in 1953 is still in use. Costs about £95,000. Maximum number ever installed = 1.

EEL/LEO II

This computer which is manufactured by English Electric-Leo Computers Ltd., is a better version of the LEO 1. It has a selling price of £95,000. the first installation took place in 1957. Maximum number ever installed = 11.

EEL/LEO III

The Leo III is a fully transistorised parallel high speed general purpose data processing computer. It has a selling price of from £100,000 to £300,000. It was first installed in 1962. Maximum number ever installed = 34.

* ELLIOTT 401

This was a computer development by Elliott Brothers(London) Ltd., built in 1954. Maximum number ever installed = 1.

* ELLIOTT 402

This computer was built by Elliott Bros. The price of an average system was £22,000. The first installation took place in 1955. Maximum number ever installed = 7.

ELLIOTT 402 E

This computer built by Elliott Bros., was first installed in 1958. The price of an average system is £25,000. Maximum number ever installed = 1.

ELLIOTT 402 F

This machine was built by Elliott Bros., and the average price of a system was £35,000. It was first installed in 1958. Maximum number ever installed = 3.

ELLIOTT 403 (WREDAC)

This computer was manufactured by Elliott Brothers (London) Limited and exported. It was first built in 1955 and the cost of an average system was £100,000. Maximum number ever installed - 1.

* ELLIOTT 502

This computer is built by Elliott Bros. Price of an average system is £100,000. First installed in 1961. Maximum number ever installed - 2.

ELLIOTT 802

This computer is built by Elliott Bros., and was first installed in 1959. The price of an average system is £17,000. Maximum number ever installed = 7.

* ELLIOTT 803

This computer built by Elliott Bros., is a development of the 802. The price of an average system is £22,000 to £100,000. It was first installed in 1960. Marketed by the National Cash Register Co. Maximum number ever installed = 241.

ELLIOTT 803 B SYSTEM

This is a special version of the 803 built by Elliott Bros., and was first installed in 1963. Marketed by the National Cash Register Co. Maximum number ever installed = 3.

ELLIOTT 803 C

This computer accepts Elliott 803 programs, but is much faster than the original machine, and has a completely redesigned central processing unit. Built by Elliott Bros., the cost of an average system is in the order of £90,000. Marketed by the National Cash Register Co. Maximum number ever installed = 1.

EPOS

This computer was designed by Dr. A. Svoboda and J. Oblonsky at the Research Institute for mathematical machines in Prague. It was built by State Statistical Department, Czechoslovakia and was first installed in 1960. Only two were made.

EPSCO 275

This computer, developed at Cambridge, Massachusetts, was to cost about £35,000 and to be similar to the GE 225. Now cancelled.

FACIT EDB

This machine is built by Facit Electronics Division AB, Atvidabergs Industrier, Sweden and was first installed in 1957. The price for an average system is about £120,000. Maximum number ever installed = 9.

FACIT DS 9000

A special Carousel computer built for Swedish Air Force. First installed in 1960. Maximum number ever installed = 1.

FACOM 201

This computer is manufactured by Fuji Manufacturing Company of Japan. First installed in 1958. Maximum number ever installed = not known.

FACOM 202

This computer was also manufactured by the Fuji Manufacturing Company of Japan. First installation was in 1959, very few were built. Maximum number ever installed = not known.

FACOM 212

This is yet another computer built by the Fuji Manufacturing Company of Japan. First installation was in 1959. Maximum number ever installed = not known.

FACOM 222

This is a computer which uses a random access drum storage and which sells for about £50,000. It was built by Fuji Manufacturing Company of Japan in 1960. Maximum number ever installed = not known.

FLAC I,II

The original Flac machine was built by the Air Force Civil Service. A completely modified and redesigned Flac produced the Flac I which was manufactured by the Radio Corporation of America, and from these evolved the Flac II, also manufactured by the Radio Corpn. of America. The estimated original cost of the basic system was approximately £167,000 and later, the estimated cost was £250,000. One only was produced and installed at the Patrick Air Force Base, Florida.

FACOM 241

This computer which uses core storage and which is completely transistorised, is built by the Fuji Manufacturing Company of Japan. First installation was in 1961. Cost of a complete system is £40,000. Maximum number ever installed - not known.

FADAC

This computer is manufactured by the Autonetics Division, North America Aviation Incorporated and it was developed under the sponsorship of Frankford Arsenal. This is a military computer specially designed to be hard wearing and portable. It uses paper tape input. First installed in 1960. Maximum number ever installed - 1.

GALLO

This computer was developed in Denmark by Gallo Electronics, this small system is still due to be announced by a U.S.A. Brooklyn Company., but is perhaps a doubtful starter. It was invented by Dr. Renato G.C. Bambino in Denmark for the Danish National Insurance Co. Maximum number ever installed - 1.

* GE 100 ERMA

This computer is manufactured by the General Electric Company, Phoenix, Arizona. It is being used for commercial deposit accounting. It uses paper tape input, magnetic ink character reading. First installed 1958. The price of an average system is £700,000. Maximum number ever installed - 30.

GE 210

This computer is built by the General Electric Company Inc., U.S.A. and was first installed in 1961. The price of an average system is about £270,000. Maximum number ever installed - 61.

GE 250

This computer manufactured by the General Electric Co., Inc., U.S.A. is the largest of the 200 series. First installed in 1964. The price of an average system is about £250,000. Maximum number ever installed - 1.

GE 312

This computer was first installed in 1959 and is a special purpose machine used for process control. Built by the General Electric Co., Inc., of America, price for a basic system is £30,000. Maximum number ever installed - 4.

* GE/OARAC

This computer is manufactured by the General Electric Co. It is used for scientific computation and analysis. Approximate cost of a basic system is £62,000. First installed in 1953. Maximum number ever installed - 1.

GENERAL INTELITRONICS INCORPORATED 1-85

This general purpose digital computer sells for £5,000 and is built by the General Intelitronics Inc., of Yonkers, New York. It operates through a keyboard and can be best used for teaching the operations of a digital computer. Maximum number ever installed - 6.

GENERAL MILLS AD/ECS

This computer was first installed in 1960. Maximum number ever installed - 2.

GENERAL MILLS APSAC

This computer is built by General Mills. First installed in 1961, it is anticipated that this computer will be repacked to minimise space requirements. The price of an average system is £80,000. Maximum number ever installed - 1.

GENERAL MILLS EC 5

This was a private development by General Mills. It was not followed up as a commercial proposition, but it did result in the building of the EC 6. First installed 1958. The price of an average system was £80,000. Maximum number ever installed - 1.

GENERAL MILLS EC 6

This computer was first installed in 1958, it was built by General Mills but was not followed up. Price for an average system was £85,000. Maximum number ever installed - 1.

GEORGE

This computer was built by Argonne Laboratories, U.S.A., and was first installed in 1962. It has no published price as it was a government project. Maximum number ever installed - 1.

GP/AN/ASN24V

This computer, built by General Precision Inc., was first installed in 1963, and is a system designed for operation in missiles and aeroplanes. Maximum number ever installed - 150.

GP/L90

This is a special purpose government computer built by General Precision Inc., designed for use in missiles and aeroplanes at extreme temperatures. First installed in 1964. Maximum number ever installed - 4.

GP/L 3055

Built by General Precision Inc., and first installed in 1963. This is a government computer, but of more conventional design , which makes use of a 1,000 l.p.m. printer and punch card input/output. Maximum number ever installed - 1.

GP/LGP 21

This computer which sells for about £12,000 for a typical system, uses punched paper tape input/output, and was first installed in 1963. It is built by the General Precision Inc. Maximum number ever installed = 158.

* GP/LGP 30

This computer was originally manufactured by Royal McBee Corpn. The first installation took place in 1956 and the selling price of an average system is £18,000. It is still available from General Precision Inc., but no longer in production. Maximum number ever installed - 505.

GP/LIBRASCOPE ATC

This is manufactured by General Precision, Librascope Division, California. The first installation took place in 1960. Maximum number ever installed - 2.

GP/LIBRASCOPE MK 48

This computer was manufactured by General Precision Inc. Maximum number ever installed - 1.

GP/LIBRASCOPE CP 209

This was manufactured by General Precision Inc. Maximum number ever installed - 52, with the Librascope 500.

GP/LIBRASCOPE 500

This machine which is also manufactured by General Precision, Librascope Division, California, was first installed in 1960. Maximum number ever installed - 52, with the Librascope CP 209.

GP/LIBRASCOPE L 2010

This is a government computer which was first installed in 1963 and is built by General Precision Inc. It is designed for mobile operation, and is very light in weight and power consumption. Price is £85,000. Maximum number ever installed - 14

GP/LIBRASCOPE 3000

This system was first installed in 1960 and is a conventional digital computer with core storage. The price of a system is of the order of £750,000 and is built by General Precision Inc. Maximum number ever installed - 15.

GP/L 3060 System

This computer is manufactured by General Precision, Librascope Division, California. It was first installed in 1962. Maximum number ever installed - 1.

GP/LIBRATROL 500

This is manufactured by the Librascope Division of General Precision, Inc. Price £26,200. First installed in 1959. Maximum number ever installed - 420.

GP/LIBRATROL 1000

This computer built by General Precision Inc., is a special purpose machine making use of paper tape and with a line printer. It was first installed in 1960 and costs of the order of £150,000. Maximum number ever installed - 6.

GP/LINK Mk. 1

This is a government computer built by General Precision Inc., and was first installed in 1963. It has 128 input and 256 output analogue channels. It is designed for real-time aero-space simulation and for operation in mobile transport. Maximum number ever installed - 10.

GP/MARK 130 Mod. 9

This was first installed in 1961 and is a government computer built by General Precision Inc. It makes use of paper tape input/output and is designed for use in ships and in extreme temperatures. Price is £50,000. Maximum number ever installed - 1.

GP/RPC 4000

This computer was originally manufactured by Royal McBee Corp. The price of an average system is £29,200. First installed in 1960. See RPC 4000. Maximum number ever installed - 139.

GP/RPC 9000

This computer was first installed in 1960 and was originally manufactured by Royal McBee Corp. The price of an average system is £40,000. See RPC 9000. Maximum number ever installed - 27.

GUIDANCE FUNCTION

The Guidance Function was built by Northrup Aircraft Inc. There is record of one installation at Northrup Aircraft Inc., Hawthorne, California.

HAMPSHIRE CCC 500

This computer is manufactured by the Hampshire Engineering Company. It is used with automatic tracking theodolites to give real time display and rapid tabulation of aircraft position in rectangular co-ordinates. Price is approximately £27,000. Installed 1961. Maximum number ever installed - 1.

HAMPSHIRE TRTDS 932

This is another computer manufactured by the Hampshire Engineering Company. It is a real time computer and the display system is used with Contraves Phototheodolites to produce precision plots and tabulation of aircraft position in rectangular co-ordinates. Price is from £27,000 to £34,000. First installed 1960. Maximum number ever installed - 1.

HIPAC 101

This computer is built by Hitachi Limited of Japan and was first installed in 1958. The price of an average system is about £25,000. Maximum number ever installed = 6.

HIPAC 103

This computer was first installed in 1960 and is built by Hitachi Limited of Japan. It uses paper tape input and output and drum storage. Cost of an average system is of the order of £25,000. Maximum number ever installed = not known.

HIPAC 201

This machine built by Hitachi Limited of Japan was first installed in 1961. It uses paper tape input and output and a 120 linesper minute printer. Cost of an average system is about £40,000. Maximum number ever installed = not known.

HIPAC 301

This computer was first installed in 1959. It uses both paper tape and punch cards and has a 300 lines per minute printer. Price for an average system is £80,000. Maximum number ever installed = not known.

HOC 300

This computer is manufactured by Hokushin Electric Works Limited, Japan. Very little is known about this computer. Maximum number ever installed = not known.

HONEYWELL 290

This digital process control computer built by Honeywell Controls, was first introduced in 1960. The price of a system is from £60,000. Originally a government development. Maximum number ever installed =11.

HONEYWELL DATAMATIC 1000

This computer built by Honeywell was first installed in 1957. The price of an average system was from £584,000. It used magnetic tape as an input media. It is available but no longer in production. Maximum number ever installed - 7.

HONEYWELL PICO

This is a subminiature inertial computer used for navigation purposes and built by Honeywell. It weighs 20 lbs. and operates in extreme temperatures. First installed in 1963. Maximum number ever installed = not known.

HRB SINGER

This computer is manufactured by the Singer Manufacturing Co. The cost of a basic system including telephone and press button input, printed paper tape output and computer is £5,000. It will accept numerical information for storage from either a push-button or telephone input. Maximum number ever installed - 3.

HUGHES 330

This computer is built by the Hughes Aircraft Corporation and was first installed in 1963. It uses a line printer operating at a thousand lines per minute and fast paper tape input and output. The cost of a system will be of the order of £750,000. Maximum number ever installed - 1.

HUGHES H 3118

This is a government computer first installed in 1963 and built by the Hughes Aircraft Company. Maximum number ever installed - 30.

HUGHES HCM 101

This is a government computer first installed in 1961. Built by the Hughes Aircraft Company. Maximum number ever installed - 10.

HUGHES HCM 111

This is a government computer designed for operation in vans or ships. First installation 1963. Built by Hughes Aircraft Co. Maximum number ever installed - 4.

HUGHES HCM 120

This is a government computer built by the Hughes Aircraft Company and first installed in 1960. It is designed for aeroplanes and extreme temperatures and weighs 75 lbs. Maximum number ever installed - 11.

HUGHES HCM 121

This is another government computer built by the Hughes Aircraft Company and first installed in 1960. Maximum number ever installed - 1.

HUGHES HCM 122

This is a government computer first installed in 1961 and built by the Hughes Aircraft Company. It was designed for vans, missiles, ships, aeroplanes and extreme temperatures. Maximum number ever installed - 4.

HUGHES HCM 201

This is another government computer built by the Hughes Aircraft Company. First installed in 1962. Maximum number ever installed - 4.

HUGHES M 252

This computer manufactured by the Hughes Aircraft Company is currently being produced as a guidance computer to be used in Minneapolis - Honeywell Inertial Guidance System for the Fairchild SD-5 Surveillance Drone. Maximum number ever installed - **Not known.**

HUGHES ADV AIRBORNE III

This computer is also manufactured by the Hughes Aircraft Co. It is used for control of aircraft and aircraft equipment. In the specific application for which the computer was built, it performs navigation, flight control, weapons control, receiving targets and flight data as inputs and generating flight and weapons control signals, as outputs. Maximum number ever installed - **Not known.**

HUGHES BM GUIDANCE

This system is a special purpose computer for guidance of ballistic missiles. It performs steering and timing calculations for the missile. It was first installed in 1960 and is built by the Hughes Aircraft Company. Maximum number ever installed - **Not known.**

HUGHES DIGITAL MA I

This was a government computer first installed in 1957 and built by the Hughes Aircraft Company. Maximum number ever installed - 700.

HUGHES D PAT

This is also manufactured by the Hughes Aircraft Company. This system is used for automatic testing, check-out, fault isolation, sequencing and control missiles, aircraft vehicles and electronic equipment. Maximum number ever installed - 1.

H - W 15K

This computer was built by the H - W Electronics Inc., and was first installed in 1963. It used paper tape input and output and the cost of an average system was about £8,000. Maximum number ever installed - 6.

* IAS

This computer was the forerunner of eleven similar operating systems and is considered worthy of a page to itself. Please see page 59. **Maximum number ever installed - 1.**

* IBM 305 1

This computer with a random access disc file was built by IBM and first installed in 1957. The price of an average system was £65,000. Maximum number ever installed - 950.

IBM 305 II

This computer was available in 1962. The price of an average system is £50,000. It is built by IBM and uses RAMAC. Maximum number ever installed - 35.

* IBM 650

This computer is built by IBM and was first installed in 1954. The price of an average system was from £130,000. It uses cards and magnetic tape. Maximum number ever installed - 1,150.

* IBM 701

This computer built by IBM and first installed in 1953, is now obsolete. Price of an average system £500,000. Maximum number ever installed - 1.

IBM 702

This is another computer built by IBM and first installed in 1955, but is now obsolete. Price of an average system £500,000. Maximum number ever installed - 3

* IBM 704

This computer was built by IBM andfirst installed in 1955. It is used for high speed calculating and the price of an average system is about £600,000. It is still available but no longer in production. Maximum number ever installed - 94

* IBM 705 I

This machine was first delivered in 1956 and there are now a large number of installations. The price of a typical system was £700,000. Manufactured by IBM., this computer is available but no longer in production. Maximum number ever installed - 95

IBM 705 II

This computer, an improved version of the Mark I, was built by I.B.M.and is available but no longer in production. It was first installed in 1957 and the price of an average system was £700,000. Maximum number ever installed - 63.

IBM 705 III

This machine was first installed in 1958 and is still available, but is no longer in production. Manufactured by IBM, the price of an average system was £750,000. Maximum number ever installed - 32.

* IBM 709

This machine also is still available but no longer in production. It was first installed in 1958 and the price of an average system was £1,000,000. Primarily intended for scientific work on a large scale. Maximum number ever installed - 50.

IBM 832

This is a desk-sized computer, built by I.B.M. In September 1962 it was said to be already marketed outside the U.S.A. We have not seen one. Maximum number ever installed - not known.

* IBM 1410

This machine manufactured by I.B.M., was first installed in 1961 and once again, a large number have been and are being installed. The price of an average system is £350,000. Maximum number ever installed - 660.

IBM 1460

This computer was first installed in 1963 and sells in the price range of £90,000 to £180,000. It has twice the speed of the IBM 1401, with all the usual 1401 facilities. Maximum number ever installed - 800.

* IBM 7030

This is the STRETCH computer built by I.B.M., which has not come up to expectations. A few were built to honour contracts, at revised prices of about £1,500,000. It was first installed in 1961., but is no longer in production. Maximum number ever installed - 6.

IBM 7034

This computer is under development by I.B.M., and is intended to be a super STRETCH. Maximum number ever installed - 1.

IBM 7040

This computer which is manufactured by I.B.M., was first installed in 1963. The price of an average system is £330,000. Maximum number ever installed -120.

IBM 7044

This computer was first installed in 1963. Manufactured by I.B.M., it has an average system price of £350,000. Maximum number ever installed - 57.

* IBM 7070

This computer with an average system price of £350,000, was first installed in 1960. Built by I.B.M., itis the basis of their "700 series" on decimal machines. Maximum number ever installed - 470.

IBM 7072

Manufactured by I.B.M. this computer was first installed in 1962, the price of an average system is £280,000. Maximum number ever installed - 56.

IBM 7074

This is also manufactured by I.B.M. and was first installed in 1961. Price is from £260,000. Maximum number ever installed - 106.

IBM 7080

The selling price for this computer is £840,000 to £1,200,000, and was first installed in 1961. It is manufactured by I.B.M. Maximum number ever installed - 77.

* IBM 7090

This machine was first installed in 1959 and is manufactured by I.B.M. The price of a system is from £880,000. It is the scientific version of the 709/7000 series. Maximum number ever installed - 68

IBM 7094

This machine is manufactured by I.B.M. and the price of a system is from £880,000. It was first installed in 1962 and is mainly a scientific large scale computer. Maximum number ever installed - 290.

IBM 7094 II

This computer which has a faster access than a normal IBM 7094 was first installed in 1964. The average price of a basic system is £1,000,000. Maximum number ever installed - 80.

IBM 7950

This computer was built by IBM and was installed in 1963. Price approximately £900,000. Maximum number ever installed - 1.

IBM 8000

This computer was manufactured by IBM and was originally intended to be one of their compatible families of computers. It is now believed that this project has been terminated.

IBM AN/ASQ 28 (V) MDC

This is a special purpose scientific computer built by IBM. Very little is known about this computer.

IBM AN/FSQ 7 (XD-1)

This is a government computer built by IBM in 1957 and weighing 113 tons. Maximum number ever installed - 50.

IBM AN/FSQ 32

This is a government computer built by I.B.M. in 1960 and a lighter version of SAGE, weighing only 90 tons. Maximum number ever installed - 2.

* ICT 1100

This computer was built originally by E.M.I. Electronics Ltd. The price of a system was from £70,000 to £250,000. This computer which was sold by I.C.T. and first installed in 1960 is now superseded. Maximum number ever installed - 14.

ICT 1101

This is the 1100 with an Anelex Printer added. Price ranges from £100,000 to £250,000, first installed in 1962 and is sold by I.C.T. Maximum number ever installed 14.

* ICT 1200

A punched card computer (HEC) built by the then Hollerith Co., now I.C.T., in 1955. Cost was £25,000, but it is now superseded. Maximum number ever installed - 6.

ICT 1201

The 1201 computer was an improved version of the 1200' manufactured by I.C.T. and the first installation was made in 1956, price was £33,000, but it has now been superseded. Maximum number ever installed - 45

ICT 1202

This computer replaced the 1201 and was substantially the same except for its large magnetic drum of 4,096 words. The average selling price was up to £45,000. First installed in 1959. Maximum number ever installed - 86.

ICT 1300

Basically a scaled down version of the ICT 1301, with a price of around £45,000. Magnetic tape units use $\frac{1}{4}$" tape. First installation was in 1963. Maximum number ever installed - 93.

* ICT 1301

This computer is manufactured by ICT. It is one of the 1300 series and uses paper tape and puched cards input/output and has a high speed printer. Price is from £65,000 to £280,000, it was first installed in 1961. Maximum number ever installed - 149.

ICT 1302

This computer can process any normal programs written for the 1300 series, and employs the same magnetic tape facilities. The first installation is due in 1966 and the price will be from £150,000. Maximum number ever installed - 0.

ICT 1400

This computer was a development by ICT and later abandoned. Maximum number ever installed = 0.

ICT 1500

This computer sold by ICT is in fact the RCA 301 built by R.C.A. It has a selling price of from £72,000 and was first installed by ICT in 1962. Maximum number ever installed -149.

ICT 1600

This computer is a specialist in real time work for communications. The first installation was in 1964, present availability 18 months, the selling price is from £250,000. Maximum number ever installed - not known.

ICT 1900

This is a medium sized electronic data processing system with a broad span of capabilities. It was first installed in 1964 and present avilability is 18 months. Selling price is from £200,000, to £400,000. Formerly the FP/6000. Maximum number ever installed - not known.

ICT 2400

This machine was originally built by E.M.I. Electronics Ltd., under contract with the National Research Development Corporation and is now sold by ICT Ltd. The price of a system is from £200,000 to £700,000. First installation took place in 1961. Maximum number ever installed - 4.

ICT APOLLO

This is an operation control computer and was first installed in 1961. It was originally built by Ferranti Ltd, and the cost of an average system is £35,000. The machine uses normal input/output equipment. It is now sold by I.C.T. Maximum number ever installed - 1.

ICT ARGUS 100

This machine was originally built by Ferranti Ltd and is one of a series of computers which have been tested to be incorporated into on line control data logging systems. They can also be used for off-line calculations. The price of an average system is £20,000, the first installation was in 1961. Maximum number ever installed -28, with Argus 200.

ICT ARGUS 200

This is a process control computer built originally by Ferranti Limited and is intended for direct control of industrial plants and processors. The cost of a typical system is of the order of £20,000 and the first installation was made in 1960. Maximum number ever installed - 28, with Argus 100.

* ICT ATLAS

A complete Atlas system costs approximately 1½ to 3 million pounds and the first installation was made in 1962. The computer is very fast, bringing speeds of the order of one million completed instructions per second. Originally built by Ferranti Limited, now sold by I.C.T. Maximum number ever installed = 11.

ICT ATLAS 2

This computer, which will be available in 1965 or 1966, is a faster version of the original Atlas developed by Ferranti Limited and Manchester University, with improved input/output facilities. Atlas 2 was developed in conjuction with the Maths Laboratory at Cambridge University and Ferranti Ltd. Selling at something like the same price, £900,000 upwards. Maximum number ever installed = 1.

ICT/FP 6000

This computer originally built in Canada by the Ferranti Corporation in conjunction with Packard Bell is marketed in Europe by I.C.T., and the first installation was in 1964. It is a fast, medium sized computer system and makes use of normal equipment as well as of special devices. The estimated cost of a system will be of the order of £250,000. Now sold as I.C.T. 1900. Maximum number ever installed = 1.

ICT HERMES

This is a special purpose computer built by Ferranti Ltd., and now sold by I.C.T. Cost £35,000. Maximum number ever installed = 1.

* ICT MADAM MARK I

This computer was built at Manchester University in conjunction with Ferranti Limited. The cost of the complete system was approximately £40,000. One was installed abroad in 1951. Maximum number ever installed = 3.

ICT MADAM MARK II

This computer, based on the Mark I, was built by Ferranti Ltd, Seven were built, of these, 2 were installed abroad. The approximate cost of the system was £45,000. First installed in 1953.

* ICT MERCURY

This computer was manufactured by Ferranti Limited, and the selling price was £120,000. It is suitable for scientific and technical work, industrial mathematics and data processing. It was first installed in 1957. Maximum number ever installed = 20.

* ICT ORION

The Orion computer was also originally manufactured by Ferranti Ltd., the selling price is £300,000. It was first installed in 1963. Maximum number ever installed - 19.

ICT ORION II

This computer is an advanced version of the ICT Orion. First installed in September 1963, by and large it has the same facilities, with a slightly higher speed than the earlier machine. Selling price £500,000. Maximum number ever installed - 1.

* ICT PEGASUS 1

The Pegasus computer was manufactured by Ferranti Ltd, and has a selling price of about £50,000. First installed in 1955. Maximum number ever installed - 29.

ICT PEGASUS 2

This was also manufactured by Ferranti Limited, the selling price is about £62,000. First installed in 1960, it is a more powerful version of the original Pegasus. Maximum number ever installed - 15.

ICT PERSEUS

This computer was manufactured by Ferranti Limited. The price is about £250,000. It is designed for large scale commercial data processing with magnetic tape external storage. First installed 1958. Maximum number ever installed - 2.

ICT PLUTO

This was a development jointly by Ferranti Limited and ICT of a Pegasus computer. An installation was made in 1959 but was not a great success. Maximum number ever installed - 1.

* ICT SIRIUS

This computer manufactured by Ferranti Limited is a small transistorised machine for commercial, scientific and technical use. It was first installed in 1960 and has a selling price of £17,000. Maximum number ever installed - 22.

* ILLIAC II

This is a computer built by the University of Illinois for their own use. Illiac is a member of a family of machines originally designed and constructed by the Institute for Advanced Study. It has a selling price of £200,000. First installed 1958. Maximum number ever installed - 4.

IME 84

This is a transistor computer weighing 30 lbs and using no more current than a 40W bulb. It was developed by Massimo Rinaldi and manufactured by Industria Macchine Elettrotecniche, a subsidiary of the Edison Group, Italy. Costs about £625. Maximum number ever installed - 80.

INTELEX AIRLINE RESERVATION COMPUTER

This computer is manufactured by the Intelex System Incorporated. The system is designed for the solution of seat reservation and associated problems and also to solve the problems of data re-arrangement and retrieval. First installed in 1960. Maximum number ever installed - 1.

ITT 025

This is a special purpose computer built by the Federal Laboratories of I.T.T. in 1959. Price is £334,000. Maximum number ever installed - 1.

ITT 525 VADE

This is a special purpose computer using paper tape input and output and on-line character a time printer. Built in 1963 by the Federal Laboratories of I.T.T. Maximum number ever installed - 1.

ITT BANK LN PROC

This computer is manufactured by the I.T.T. Laboratories, New Jersey, U.S.A. It is used for construction and daily maintenance of magnetic tape file for personal loan operation of the third largest U.S. Bank, processing of daily input and answering of enquiries to this file, printout of all customer mailings and of numerous internal reports. Cost of basic system £75,000. First installed in 1961. Maximum number ever installed - 1.

* JUKE BOX

This computer is manufactured by the Autonetics Division, North American Aviation Incorporated. It is a general purpose computer, but has now been replaced by the FADAC computer. Cost of a basic system £100,000. First installed in 1958. Maximum number ever installed - 10.

KIEV

This computer is manufactured by Computing Centre of the Academy of Science of the Ukranian Soviet Republic in Kiev. It was first installed in 1959. Maximum number ever installed - 1.

KL 901

The KL 901 is built by the Societe Nouvelle d'Electronique, and the first installation was made in 1962. Maximum number ever installed - 1.

LC 820

This computer is built by the Litton Industries, there is little known about it. Maximum number ever installed - not known.

LEEDS NORTHRUP 3000

This computer is manufactured by Leeds and Northrup Company. The system is used for industrial process control, it uses paper tape input. First installed in 1960. The cost of an average system is £500,000. Maximum number ever installed - 5.

* LEPRECHAUN

This computer is manufactured by the Bell Telephone Laboratories Inc. The system was built under a U.S. Airforce contract for programming and logical designs research on digital computers for military, real time control application. Only one has been installed and that was in 1956. Cost of an average system £50,000. Maximum number ever installed - 1.

LIBRATROL 500

This computer is manufactured by General Precision Equipment Corporation. It is a general purpose computer where computing equipment must communicate directly with equipment external to the computer via digital inputs or voltage inputs. The cost of an average system is £30,000. First installed 1963. See GP/Libratrol 500. Maximum number ever installed - 420.

LINCOLN CG 24

This computer is built by the Massachusetts Inst. of Technology, Lincolns Laboratory. It is a general purpose computer attached to a long range radar both for receiving detected echoes and for directing the antenna, but not freestanding. The cost of a system is approximately £335,000. First installed 1961. Maximum number ever installed - 1.

* LINCOLN TXO

This computer is manufactured by the Massachuesetts Inst. of Technology, Lincoln Laboratory. It is an experimental digital computer used to test advanced design techniques, including very large core storage and transistor circuitry. First installed 1957. Maximum number ever installed - 1.

* LINCOLN TX 2

This computer is also built by the Lincoln Laboratory, it is used for scientific research and for the simulation, analysis and control of real time systems. First installed in 1958. Maximum number ever installed - 1.

LINCOLN MEMORY TEST

This machine was manufactured at the Lincoln Laboratory, Massachusetts Institute of Technology. One was produced and remained in the Lincoln Laboratory. Maximum number ever installed - 1.

LITTON C 7000

Manufactured by Litton Industries, Electronic Equipment Division. This system is designed for real time control systems applications requiring very high computing rates. First installed 1962. Maximum number ever installed - 1.

LITTON DATA ASSESSOR

This computer is manufactured by the Electronic Equipment Division, Litton Industries. It is designed forgeneral purpose computing and for special purpose problems, which take advantage of the internal information transfer in the computer Maximum number ever installed - 1.

LOGISTICS

This computer is manufactured by the Engineering Research Associates Inc. This system is used directly as a research instrument in the development of concepts bearing upon data processing operations by the military. First installed in 1953. Price £120,000. Maximum number ever installed - 1

M 1

This is a Russian computer. First installed in 1952. Maximum number ever installed - 1.

M 2

This is a Russian computer. First installed in 1953. Maximum number ever installed - 1.

M 3

This is a Russian computer. First installed in 1955. Maximum number ever installed - 1.

M 20

This is also a Russian computer and the first installation of this machine took place in 1960. It is a very large system using magnetic core as memory. Maximum number ever installed - 1.

M 50

This is a computer built in Russia by the Laboratories for Switching and Control Systems. Although once under development, it might well now have been discontinued. Maximum number ever installed - 1.

MADIC I

This is a small computer built by Matsushita Company of Japan. It was installed originally in 1959. Maximum number ever installed - not known

MELLON INSTITUTE

The computer was built by the Mellon Institute of the University of Pittsburgh for research and development problems. One was produced.

MADIC IIA

This is a computer built by Matsushita Company of Japan. It was built in 1961 and sells for about £15,000. Maximum number ever installed - not known.

MADIC IIIB

This computer was installed in 1963 and costs about £100,000. It uses fairly advanced techniques of core storage and was built by Matsushita of Japan. Maximum number ever installed - not known.

MAGLOC I

This machine was manufactured by Sperry Gyroscope Co. Ltd. Maximum number ever installed - 1.

* MANIAC I

This computer was manufactured by the Univ. of California, Los Alamos Scientific Laboratories. The system is used for general purpose scientific computations. Basic logic developed by Institute for Advanced Study. Cost of an average system was £65,000. First installed in 1952. Maximum number ever installed - 1.

* MANIAC II

This computer was manufactured by the Univ. of California, Institute of Computer Research. It is used by all interested departments at the University. It uses paper tape input. First installed in 1957. Cost of an average system £80,000. Maximum number ever installed - 1.

MANIAC III

This computer was manufactured by the University of Chicago for their own use. This is a larger version of the Maniac II. First installed in 1960 and sold for about £100,000. Maximum number ever installed - 1.

MELCOM 1101

This computer built by the Mitsubishi Electric Co. of Japan was first installed in 1959. Maximum number ever installed - 12.

MELCOM 1101 F

This computer built by the Mitsubishi Electric Co. of Japan was first installed in 1960. It has drum storage and paper tape input and output, and has a selling price in the order of £40,000. Maximum number ever installed - 2.

MELCOM 1102 T

This is an advanced transistorised version of the Melcom 1101 F built by the Mitsubishi Electric Co. of Japan. Price is about £40,000. Maximum number ever installed - 4.

MERLIN

This computer is manufactured by [illegible] Laboratory for the U.S. Government and was first installed in 1962. Costs £200,000. Maximum number ever installed - 1.

MESM

This machine was first installed in 1950 and is manufactured by Mathematical Inst. of the Ukranian Academy of Science in Kiev. It is a small computer. Maximum number ever installed - 1.

MICRO

This computer manufactured by the American Bosch Arma Corporation was first installed in 1962. Maximum number ever installed - 1.

MINIAC

This computer manufactured by Marchant Calculators Inc., was first installed in 1954. The price of a system was £28,400. Maximum number ever installed - 1.

MINIAC II

This computer was also manufactured by the Marchant Calculators Inc. Now known as Smith-Corona Marchant Inc. Cost £27,000. First installed 1958. Maximum number ever installed - 1.

MINSK I

This is a Russian built computer, developed at Minsk Academy of Sciences and first installed in 1960. It is a small universal digital computer based upon valve circuitry and designed to tackle a wide range of engineering and scientific problems. Maximum number ever installed - 1.

MINSK 2 (RAZDAN)

This is a Russian computer and was first installed in 1962. Evaluated by British Engineers. Maximum number ever installed - 1.

MISTIC

This computer is built by the Michigan State University. It is used for instructional purposes in several programming and numerical analysis courses. Basic logic developed by the Institute for Advanced Study. First installed in 1960. Maximum number ever installed - 1.

* MODAC 404

This computer is manufactured by Mountain Systems Inc., and was first installed in 1954. Costs £[illegible],000. Maximum number ever installed - 1.

MICHIGAN STATE UNIVERSITY

Built as suggested by the Michigan State University of Agriculture and Applied Science in the College of Engineering Computer Laboratory. The computer will utilize the logical system developed by the Institute for Advanced Study. Consequently, it will be similar to the machines in the I.A.S. family of computers. One was produced and installed in the computer laboratory, Michigan State University.

MODAC 410

This computer is manufactured by Mountain Systems Inc , and was used for business data processing. Price £40,000. First installed in 1955, but is no longer being manufactured. Maximum number ever installed - 1.

MODAC 414

This computer was manufactured by the Airborne Instruments Laboratory of Mountain Systems Inc., cost £50,000. No longer in production. First installed 1956. Maximum number ever installed - 1.

MODAC 5014

This is another computer which was manufactured by Mountain Systems Inc., but is no longer in production. Cost of a basic system was £28,000. First installed in 1957. Maximum number ever installed - 1.

* MONROBOT III

This computer manufactured by Monroe Calculating Machine Co., is no longer in production. First installed in 1954. Maximum number ever installed - 1.

* MONROBOT V

This is another machine manufactured by Monroe Calculating Machine Co., but no longer in production. Cost of basic system £27,000, and first installed in 1954. Maximum number ever installed - 1.

MONROBOT V1

This computer which wasmanufactured by Monroe Caclulating Machine Co., has an average selling price of £33,700. The first installation was made in 1955. No longer in production. Maximum number ever installed - 9.

* MONROBOT 1X

This computer manufactured by the Monroe Calculating Machine Co. had an average selling price of £5,000. First installation was in 1958, now obsolete. Maximum number ever installed - 158.

MONROBOT X

This computer which is also built by the Monroe Calculating Machine Co. of Litton Industries, has an average selling price of £14,000 . First installed 1959. Maximum number ever installed - 6.

* MONROBOT X1

This is a stored-program, general purpose computer, operating with a wide variety of input/output equipment. First installation 1960. Manufactured by Monroe Calculating Machine Co., selling price £9,000. Maximum number ever installed - 695.

MIDAC

This machine was manufactured by the University of Michigan Engineering Research Institute. It was produced and installed there.

MONROBOT MU

This computer system which was manufactured by the Monroe Calculating Machine Co., was first installed in 1955. The price of an average system was £250,000. It is no longer in production. Maximum number ever installed - 2.

NAREC

The Narec computer is manufactured by the U.S. Naval Research Laboratories, and was first installed in 1956. The cost of an average system is £500,000. Maximum number ever installed - 1.

NCR 102

This computer was built by the National Cash Register Co., U.S.A. It was first installed in 1955. Now obsolete. The cost of an average system was £20,000. Maximum number ever installed - 24.

* NCR 102 A

This computer manufactured by the National Cash Register Co., formerly Computer Research Co, is a general purpose scientific computer. The cost of a basic system is £24,000. First installed in 1953. Maximum number ever installed - 16.

* NCR 102 D

Manufactured by the National Cash Register Co, formerly Computer Research Co., this computer is also a general purpose scientific processor. It uses paper tape and punch card input/output and has a high speed printer. The cost of a basic system is £22,000. First installed in 1954. Maximum number ever installed - 5.

NCR 107

This machine is built by the National Cash Register Co., the first installation was in 1956. The cost of an average system is £30,000. Maximum number ever installed - 1.

NCR 303

This machine manufactured by the National Cash Register Co., was first installed in 1955. The price of an average system is £50,000. Maximum number ever installed - 1.

NCR 304

The average price of this machine sold by the National Cash Register Co., and manufactured by G.E. of America, was £285,000. The first installation was in 1960. No longer in production. Maximum number ever installed - 29.

NCR 310

This machine which is also manufactured by the National Cash Register Co., has an average selling price of £24,500. First installed 1961. Central Processor is CDC 160. Maximum number ever installed - 68.

NCR 395

This is a desk size computer and has a magnetic disc memory of 120 - 14 digit words any of which can be randomly accessed in approximately 35 m.secs. Price range is from £6,000 to £9,000. Maximum number ever installed - 83.

* NATIONAL ELLIOTT 405

This machine is built by Elliott Bros Ltd., and sold by the National Cash Register Co. The average cost of an installation is £120,000. Fist installation made in 1956. Maximum number ever installed - 38.

NATIONAL ELLIOTT 405 M

This computer which is built by Elliott Bros Ltd., and sold by the National Cash Register Co., is designed for commercial work. It was first installed in 1960 and is a later version of the 405. The selling price is approximately £130,000. Maximum number ever installed - 1.

NEAC 1103

This computer is manufactured by the Nippon Electric Co. Ltd., of Japan. Very little information is available about this computer.

NEAC 1201

This computer is manufactured by the Nippon Electric Co. Ltd., of Japan. Very little is known about it.

NEAC 2101

This is another computer manufactured by the Nippon Electric Co. Ltd., of Japan. It was first installed in 1961. Average price is £10,000. Maximum number ever installed - not known.

NEAC 2200

This is another computer manufactured by the Nippon Electric Co. Ltd., of Japan. It was first installed in 1961. Average price is £10,000. Maximum number ever installed - 1.

NEAC 2203

This computer built by the Nippon Electric Co. Ltd., of Japan uses paper tape punch card input and has a 300 lines per minute printer. It has drum and core storage and sells for the order of £80,000, without magnetic tape units, and for £120,000 with magnetic tape units. First installed in 1959. Maximum number ever installed - not known.

NEAC 2204

This computer, which is a faster version of the original machine but with a slower peripheral equipment operation has a selling price of £50,000. First installed in 1961. Maximum number ever installed - not known.

NEAC 2205

This machine which is built by the Nippon Electic Co., of Japan, is a cheaper version of the 2204. First installed in 1961. Costs £25,000. Maximum number ever installed - not known.

NEAC 2206

This is a faster version of the earlier machine and sells for the order of £200,000. First installed in 1962. Maximum number ever installed - not known.

NEAC 2230

This machine is the most powerful one yet developed by this Company, it makes use of drum and core storage. It has a selling price of about £220,000 , and was first installed in 1962. Maximum number ever installed - not known.

NORDEN VOTE TALLY

This computer is built by the United Aircraft Corporation, and costs £200,000. First installed in 1960. Maximum number ever installed - 1.

NV/ANOC 231 R

This computer is manufactured by N.V. Electrologica, There is only one known installation and that was in 1960.

ODRA 1003

This is a Polish computer built by Elwro Works. Maximum number ever installed - 5.

OKI

This computer is built by the Oki Electric Industry Co. Ltd., of Japan and the first installation took place in 1958. Maximum number ever installed - not known.

OKI/OKITAC 5090 D

This computer uses traditional input/output equipment and has core storage. The typical system price is of the order of £150,000. First installed in 1961. Maximum number ever installed - not known.

OKLAHOMA UNIV

This computer was built by the University of Oklahoma. The system is used for general purpose scientific and engineering computation, it is a copy of the Rice University computer. First installed in 1961. Maximum number ever installed - 1.

OLIVETTI ELEA 2001

Built by Olivetti in 1957, this machine was for teleprocessing primarily. It is no longer in production. Maximum number ever installed - 1.

* OLIVETTI ELEA 6001

This computer built by Ing.C. Olivetti S.p.A. is transistorised. The price of a system is from £40,000 to £120,000. First installed 1961. Maximum number ever installed - 82.

OLIVETTI ELEA 9001

This is the tube computer which was the forerunner of the Olivetti 9000 series computers. It was originally installed in 1957. Maximum number ever installed - 1.

OLIVETTI ELEA 9002

Three of these machines were built by Olivetti as computer development in 1958. They were tube and transistor machines. It is no longer in production. Maximum number ever installed - 27.

* OLIVETTI ELEA 9003

This computer built by Olivetti is a transistorised machine. First installed in 1961, the price of an average system is £236,000. Maximum number ever installed - 36.

OMEGA 203

This is a German made machine manufactured by Olympia Werke A.G., and has an average selling price of £44,500. Installed 1962. Maximum number ever installed - 1.

* ORACLE

This computer was manufactured by Oak Ridge and Argonne Universities was first installed in 1960 for the U.S. Government. The basic logic was developed by the Institute for Advanced Study. Maximum number ever installed - 1.

ORDVAC

The University of Illinois manufactured this computer. Basic logic developed by the Institute for Advanced Study. It was installed in 1962. Maximum number ever installed - 1.

PACKARD BELL 250

This computer which was manufactured by Packard Bell Electronics, has a selling price of from £12,000 to £100,000. Now built under licence in France by S.E.T.I. First installed in 1960. Maximum number ever installed - 178.

PACKARD BELL TRICE

This computer is manufactured by Packard Bell Electronics and the selling price of an average system is £250,000, but special systems go as low as £40,000. First installed in 1962. Maximum number ever installed - 8.

PASCAL/STEVIN

This is a computer built by the Phillips Organisation in Holland. It was originally produced by Data Communications and has developed therefrom. First installed 1960. Maximum number ever installed - 1.

* PDP 1

This computer is manufactured by Digital Equipment Corporation and has an average selling price of £60,000. First installed in 1960. Maximum number ever installed - 55.

PDP 3

This computer is also manufactured by Digital Equipment Corp., and has an average selling price of £58,700. First installed 1962. Maximum number ever installed - 11.

* PENNSTAC

This computer is manufactured by the Pennsylvania State Univ. It is used primarily for the education of digital computer engineers and the performance of research in digital computer design. Approximate cost of a basic system is £34,000. First installed in 1955. Maximum number ever installed - 1.

PERM

This computer was manufactured for the internal use of Technische Hochschule, Munich, Germany. Installed in 1961. Maximum number ever installed - 1.

PHILCO 1000

This computer is manufactured by Philco Corporation. The price of an average system is £83,000, the first installation took place in 1963. American installation 1956. Initially being marketed as a satellite system to the Philco 2000. Maximum number ever installed - 15.

PHILCO 2000/Model 210

Otherwise named TRANSAC S - 2000. This is built by Philco Corporation. The selling price of an average system is £140,000. First installed in 1958. Maximum number ever installed - 14.

PHILCO 2400/Model 410

This computer manufactured by the Philco Corporation was to be installed in 1962, but was possibly abandoned. The selling price of an average system was £120,000. Maximum number ever installed - 1.

PHILCO 3000

This computer manufactured by Philco Corporation is a solid state general purpose digital computer for programmed control and computation application. It uses paper tape input/output. First installed in 1960. The price of an average system is £100,000. Maximum number ever installed - 2.

PHILCO 4000

This was a new computer announced by Philco, but it is now reported that the project is cancelled.

PHILCO 4100

This computer announced by Philco with 2,000 cards per minute input was to be installed in 1963. It is not clear whether this project is now cancelled along with the Philco 4000 project, no installations appear to have been made. It would have been in the million pound price range.

PHILCO AN/TYK-4V

This is a small paper tape input/output computer built by Philco for Government use, but also making use of 8 magnetic tape units. It has fast operation time. No indication of price. First installed in 1963. Maximum number ever installed - not known

PHILCO BASICPAC

This is a lightweight mobile computer built by Philco and installed in 1962. For Government use. Cost £340,000. Maximum number ever installed - 7.

PHILCO CPS

This is another computer built by Philco. First installed 1964. Maximum number ever installed - 1.

PHILCO CXPQ

This computer is built by Philco International Corporation, U.S.A., and was first installed in 1962. Price £540,000. Maximum number ever installed - 1.

PHILCO TRANSAC S1000

This computer was manufactured by the Philco Corporation primarily for scientific applications and for some commerical or industrial applications. It is of magnetic core storage and has a cycle time of 12 microseconds. One was installed by the Philco Corporation at their Government and Industrial Division, Philadelphia 44, Pennsylvania. Maximum number ever installed - 1.

PHILCO TRANSAC S 2000

This machine, also manufactured by the Philco Corporation has many advantages. It is as movable as any office appliance and it has a low power consumption. Built for electronic data processing and computing, the system has an average selling price of £400,000. Two systems were produced and installed by the Philco Corporation at their Government and Industrial Division, 4700 Wissahickon Ave, Philadelphia 44, Pennsylvania.

POSEIDON

This was manufactured by Ferranti in 1962. It is a military computer and the price is about £90,000. Maximum number ever installed - 10.

PRODAC 50

This computer was manufactured by the Westinghouse Electric Corporation. Maximum number ever installed - 1.

QUAC

This machine was manufactured by Northrup Aircraft Inc. Two were produced for a United States Air Force application. Maximum number ever installed - 2.

RAYCOM

This computer, manufactured by Datamatic Corporation at a selling price of £85,000., was a joint venture of Raytheon and Honeywell. First installed in 1956. Could be described as the grandparent of Honeywell 800. Maximum number ever installed - 1.

RAYDAC

The average price of this machine which was manufactured by the Raytheon Manufacturing Company, is £1,000,000. Only one machine was produced and installed at the U.S. Naval Air Missile Test Center, Point Mugu, California.

RCA 110

This is a special purpose computer built by the Radio Corp. of America in 1961, using low speed paper tape input and output, and a very large number of magnetic tape units. No price is available. Maximum number ever installed - 1.

RCA 300

This computer is manufactured by the Radio Corporation of America. It is a real time control, airborne and shipboard, sensor signal data processing computer. Price is £65,000. First installed in 1960. Maximum number ever installed - 1.

* RCA 301

This computer manufactured by the Radio Corporation of America, has a selling price of £65,000. The first installation took place in 1961. It is sold in Europe as the Gamma 30 and the ICT 1500. Maximum number ever installed - 636.

RCA 501

This computer manufactured by the Radio Corporation of America, was first installed in 1959. The price of an average system is £239,000. Built as the KDP 10 in Britain by English Electric Leo Computers Ltd. Maximum number ever installed - 100.

RCA 601

This computer manufactured by the Radio Corporation of America, has an average selling price of £800,000. The first installation took place in 1962. It is a faster version of the 501. Maximum number ever installed - 6.

RCA 604

This was a development of the Radio Corporation of America and was described also as "Project Lightening". Maximum number ever installed - not known.

RCA/AM 3100

This is a government computer built by the Radio Corporation of America in 1961. No further information is available.

RCA/AM 3220

This is another government computer built by the Radio Corporation of America. First installed in 1963. No further information is available.

RCA 4101 (CP 685/GPQ)

This is a government computer built by the Radio Corporation of America in 1961. No further information is available.

RCA 4102

This is a special government computer built by the Radio Corporation of America in 1962. It has a high speed printer. Maximum number ever installed - not known.

* RCA BISMAC 1

This computer was built in 1950 at a cost of about £1,500,000 by the Radio Corporation of America. It uses magnetic tape, but is now regarded as obsolete. First installed in 1956. Maximum number ever installed - 3.

* RCA BISMAC 11

This was first installed in 1952 and like the Bismac I was built by the Radio Corporation of America. It uses magnetic tape and the cost of an average system was £500,000. Altogether three installations were made. Now obsolete.

RCA MICROPAC

This is a pound weight micromodule computer built by the Radio Corporation of America. Installed in 1963 for government work in extreme temperatures. Maximum number ever installed - not known.

*READIX

This computer was manufactured by J.B. Rea and Company, Santa Monica, California, and is now obsolete. It was first installed in 1956. Price £25,000. Maximum number ever installed - 6.

*RECOMP II

This computer was built by the North American Aviation Corp., and was first installed in 1958. The cost of the system was £30,000, but is no longer in production. Maximum number ever installed - 66.

RECOMP III

This computer was also built by the North American Aviation Corporation and was first installed in 1961. No longer in production. Maximum number ever installed - 21.

REPAC

This computer manufactured by the North American Aviation Corporation is designed for general purpose computing. It is a government computer first installed in 1960. Maximum number ever installed - 1.

RICE UNIVERSITY

This computer is manufactured by the Rice University, America. It is used for general purpose computing, and primarily scientific application. The cost of a basic system is £135,000. First installed in 1961. Maximum number ever installed = 1.

RPC 4000

This computer was manufactured by the Librascope Division of General Precision and is marketed by Royal McBee Corporation. This system is used for flight simulation, thermal distribution, motor fuel blending and water net work calculations. The cost of a basic system, including one typewriter, is £30,000. First installed in 1960. See GP/RPC 4000. Maximum number ever installed = 139.

RPC 9000

This computer is manufactured by Royal McBee Corporation The system is designed for all typical business type data processing and engineering type activities. The cost of a basic system is £40,000. First installed in 1959. See GP/RPC 9000. Maximum number ever installed = 27.

SCRIBE

This computer is manufactured by the United Aircraft Corp. The system is used for special purpose data processing and off-line scoring and transcription, with general applications to topologically equivalent systems. First installed in 1960. Maximum number ever installed = 1.

* SEAC

This computer wasmanufactured by the U.S. Department of Commerce, National Bureau of Standards. It was a general purpose computer using paper tape and card input. First installed in 1950, now obsolete. Maximum number ever installed = 1.

SEA/CAB CUBA ET SABA

Basically developed from the SEA/CAB 500 this is a special purpose computer by S.E.A First installed in 1961. Maximum number ever installed = 2.

SEA/CAB DOROTHY

A special purpose computer developed by S.E.A. of France from SEA/CAB 500. First installed in 1963 Maximum number ever installed = 2.

SEA/CAB DOROTHY II

This is another special purpose computer developed by S.E.A. of France from the SEA/CAB 500. First installed in 1964. Maximum number ever installed = 1.

* SEA/CAB 500

This computer is built by Societe d'Electronique et d'Automatisne of France. It uses an electric typewriter, tape reader and perforator. The selling price is £24,000. First installation was in 1962, now sold by Bull as the Gamma 500. Maximum number ever installed = 125.

SEA/CAB 502 B

This computer is built by S.E.A. of France. It is a slightly different version of the SEA/CAB 500. Price is £25,000. First installation was in 1963. Maximum number ever installed - 1.

SEA/CAB 600

This computer built by S.E.A. of France is a CAB 500 with a magnetic tape. The price of an average installation is about £30,000and the first installation was made in 1962. Maximum number ever installed - 1.

SEA/CAB 1000

This is a special purpose computer developed by S.E.A. and is basically built from the SEA/CAB 500. First installation was in 1961. Maximum number ever installed - 1.

SEA/CAB 2000

This is a special purpose computer developed by S.E.A. of France. It is basically built from the SEA/CAB 500. First installed in 1962. Maximum number ever installed - 3.

SEA/CAB 2022

This computer was built by S.E.A. of France. Maximum number ever installed - 1.

SEA/CAB 2124

This computer was built by S.E.A. of France. Maximum number ever installed - 1.

SEA/CAB 3000/018/118

These are special purpose computers developed from the SEA/CAB 500 by S.E.A. of France. First installed in 1962. Maximum number ever installed - 3.

SEA/CAB 3030

This computer was built by S.E.A. of France. Maximum number ever installed - 1.

SEL/DB 10

This machine is built by Standard Elektrik Lorenz AG (Germany), and was first installed in 1958 at Frankfurt for telex network control of space on ferryboats. Maximum number ever installed - 1.

SEL/DB 40

This special computer for Flight Reservation is also built by Standard Elektrik Lorenz AG.(Germany), and was first installed in 1958. The price of an average system is £70,000. Maximum number ever installed - 2.

SEL/DB 40 SPECIAL

This computer built by Standard Elektrik Lorenz AG., is as the name implies a special version of the SEL/DB 40. First installed in 1960. Maximum number ever installed - 2.

SEL/DB 70

This computer was to be built by Standard Elektrik Lorenz AG. (Germany) and to be installed in 1961, but did not materialise. Maximum number ever installed - 0.

* SEL/ER 56

This computer built by Standard Elektrik Lorenz AG (Germany), was first installed in 1957. It cost about £50,000, but is no longer in production. Maximum number ever installed - 11.

SEL/ES 92

This computer also made by Standard Elektrik Lorenz AG. (Germany) was first installed in 1957. One was built for stock control and order handling for a mail order house. Maximum number ever installed - 1.

SEL/KA 21

The KA 21 computer is manufactured by Standard Elektrik Lorenz AG. (Germany) and the first installation took place in 1960. The computer is basically the Stantec Zebra or the SEL/ER 56 and a typical system costs £40,000. Used for airport counter service before aircraft take-off. Maximum number ever installed - 2.

SEMAC

This computer is built by HRB-Singer Inc. The cost ranges between £16,000 - £26,000. First installed in 1962. Maximum number ever installed - 1.

SEREL 1001

This is a computer installed in 1961 by the Societe D'Exploitation et de Recherche Electronique. It has a high processing speed and the cost is of the order of £50,000 Maximum number ever installed - 6.

SETUN

This is a Russian computer and was originally installed at Moscow University in 1959. Maximum number ever installed - 1.

* SIEMENS 2002

This computer is manufactured by Siemens & Halske Akt., and was originally installed in 1959. The selling price of an average system is £100,000. Maximum number ever installed - 42.

SOLARTRON

This digital computer built by Solartron is used for controlling guided missiles, and sells for about £100,000. This Company, well known for its analogue computers, does not normally build digital machines. Maximum number ever installed - 2.

STANTEC SPECIAL STORES

This is a special development of the Stantec Zebra Computer in its transistorised form for store record keeping. A typical system sells for £40,000. First installed in 1964. Maximum number ever installed - 1.

* STANTEC ZEBRA

This machine which is manufactured by Standard Telephones and Cables Limited, was designed fundamentally for scientific work, but is adaptable to a range of commercial applications. The selling price is between £28,000 and £30,000. It was first installed in 1958. Maximum number ever installed - 54.

STANTEC ZEBRA MARK 2

This computer was first installed in 1962 and is a transistorised version of the original Stantec Zebra. It costs of the order of £30,000. Maximum number ever installed - 11.

STOREKEEPER

This computer is manufactured by Electronic Machine Control Ltd. It is a small machine priced at £4,750. First installed in 1962. Maximum number ever installed - 2.

STRELA

This is a large Russian computer and is manufactured by the Laboratory of the Construction Bureau of the Ministry for Machine Building and Automatization of the Soviet Union. The first installation took place in 1953. Maximum number ever installed - 1.

* SWAC

The computer is manufactured by the National Bureau of Standards. It is used for general purpose scientific computation, and research in numerical analysis computing methods. Approximate cost of a basic system is £135,000. First installed in 1951. Maximum number ever installed - 1.

SYLVANIA 9400

This computer which was manufactured by Sylvania Electronic Products Inc., has an average system price of £900,000. It is used for government work and the first installation was made in 1960. Maximum number ever installed - 2.

SYLVANIA AN/MYK - 1 MOBIDIC

The Mobidic computer is a project started by Sylvania Electric Products, Massachusetts in 1959 for government work. It is thought that the project may have been terminated as so little is known. Maximum number ever installed - 1.

SYLVANIA MOBIDIC 64 (AN/MYK)

This is a special government computer installed by Sylvania in 1961. It uses normal peripheral equipment and the estimated cost of a system would be of the order of £120,000. Maximum number ever installed - 4.

SYLVANIA MOBIDIC A (AN/MYK)

This is a high speed mobile computer designed for military use and was designed for extremely high reliability under battlefield conditions. It is completely mobile and was adaptable for military field use. It was built by Sylvania Electric Products Inc and installed 1962. One was produced and located at the Electronic Systems Division, Sylvania Electric Products Inc., Waltham, Massachusetts.

SYLVANIA MOBIDIC B (AN/MYK)

This is a duplexed general purpose military computer built by Sylvania. Installed in 1962. Maximum number ever installed - 1.

SYLVANIA MOBIDIC C & D & 7A (AN/MYK)

These are completely mobile large scale general purpose systems, and are members of the Army FIELDATA family of computers. Maximum number ever installed - 3.

SYLVANIA UDOFTT

This is a joint Navy and Air Force project manufactured by Sylvania Electric Products Inc, Massachusetts. First installed in 1963. Maximum number ever installed - 1.

TAC (MARCONI)

This computer is manufactured by The Marconi Company Limited, for on-line production control applications. Estimated price is £10,000. First installed in 1962 Maximum number ever installed - 6.

TECHNITROL 180

This computer was manufactured by Technitrol Engineering Co. of U.S.A. Installed in 1962. Maximum number ever installed - 1.

TELEREGISTER MAGNETRONIC

Manufactured by the Teleregister Corp. at a cost of £120,000 in 1952. Ten of these were made.

TELEREGISTER TELEFILE

This computer built by the Teleregister Co., was first installed in 1961. Maximum number ever installed - 14.

TITAN

This is an off-shoot of the ATLAS computer, and is being built at Cambridge University, England. It makes use of the usual Atlas packages and much of the central organisation, omitting drum storage and replacing with additional core storage. Maximum number ever installed - 1.

TOSBAC 1100

This is a Japanese computer manufactured by Tokyo Shibaura Electric Co. Ltd. Maximum number ever installed - not known.

TOSBAC 2100

This computer, which is a plug board system, was built by Tokyo Shibaura of Japan. It was first installed in 1959. Maximum number ever installed - not known.

TOSBAC 3100

This computer manufactured by Tokyo Shibaura Electric Co. Ltd., is a medium sized digital computer developed from the 2100 plug board electronic system. Price is £68,000, the first installation took place in 1961. Maximum number ever installed - not known.

TOSBAC 3200

This computer built by Tokyo Shibaura of Japan uses paper tape input and output, the rate of output being very slow. The price of an average system is £30,000. First installed in 1961. Maximum number ever installed - not known.

TOSBAC 3225 A

This is a Japanese computer manufactured by Tokyo Shibaura Electric Co. Ltd. Maximum number ever installed - not known.

TOSBAC 3300

This computer manufactured by Tokyo Shibaura Electric Co. Ltd., uses paper tape for input and output. It was first installed in 1963, and costs £28,000. Maximum number ever installed - not known.

TOSBAC 4100

This is a Japanese computer manufactured by Tokyo Shibaura Electric Co. Ltd. Maximum number ever installed - not known.

TOSBAC 4200

This computer which is manufactured by Tokyo Shibaura Electric Co. Ltd., is large and powerful. Cost £68,000. First installed 1963. Maximum number ever installed - not known.

* TR 4

This computer is built by Telefunken GmbH. The selling price of an average system is £300,000. First installed in 1962. Maximum number ever installed - 21.

UDEC (II) III

This computer was manufactured by the Burroughs Corporation in their Electronic Instruments Division. The Udec III is a general modification of Udec II and consists of the Burroughs pulse control equipment used in Udec II. The Udec II basically costs approximately £67,000, and the Udec (II) III was installed by Burroughs in their Electronic Instruments Division, 1209 Vine St., Philadelphia, Pennsylvania. The Udec I was a calculator, manufactured by Burroughs and installed at the Wayne University Computational Laboratory, Detroit I, Michigan. Maximum number ever installed - 2.

UMC I

This computer is intended for design calculations and is claimed to be the only oneworking on the Minus 2 system. It is a Polish computer and was first installed in 1963. Maximum number ever installed - 6.

UMSLN

This is a Russian computer and it appears to have the same read-only technology which was previously in the Kiev machine. Maximum number ever installed - 1.

UNDERWOOD ELECOM 50

This was an Underwood Corporation computer but has not been produced since 1957. Only three were installed. Price £10,000.

* UNDERWOOD ELECOM 100

This computer is owned by the U.S. Navy Bureau of Aeronautics, but is no longer being manufactured by the Underwood Corporation. Cost of a system was £20,000. First installed in 1958. Maximum number ever installed - 3.

* UNDERWOOD ELECOM 120

This computer was built by the Underwood Corporation and was first installed in 1952. Onlyfive were built and they are now obsolete.

* UNDERWOOD ELECOM 125

This computer was built by the Underwood Corporation and was first installed in 1953. The price of an average system was £100,000. Maximum number ever installed - 6.

UNDERWOOD ELECOM 200

This machine was built by the Electronic Computer Division of the Underwood Corporation. One was produced and installed at the Major Item Supply Management Agency(MISMA), Chambersburg, Pennsylvania, but was transferred to Picatinny, Arsenal, Dover, New Jersey. Also known as the Ordfiac computer. Maximum number ever installed - 1.

* UNIVAC I

This computer manufactured by Remington Rand was a direct development of ENIAC. The price of an average system is £250,000, and although it is still available it is no longer in production. It was first installed in 1951. Maximum number ever installed - 46.

UNIVAC II

This computer was made by Remington Rand in the U.S.A., but is now obsolete. It was first installed in 1957 and the price of an average system was £280,000. Maximum number ever installed - 32.

UNIVAC 60

This computer is manufactured by Remington Rand Univac Div. It is a business and scientific data processing computer. Approximate cost of a basic system is £75,000. First installed in 1955. Maximum number ever installed - 400.

UNIVAC 120

This computer was manufactured by Remington Rand in the U.S.A., and the price of an average system is £32,700. It was first installed in 1954. Maximum number ever installed - 400.

UNIVAC 422

This computer manufactured by Remington Rand Univac is designed for schools and technical institutes where size is not essential. The cost of a basic Univac 422 is £16,500. First installed in 1961. Maximum number ever installed - 10.

* UNIVAC 1101

This computer was manufactured by Remington Rand Univac Div., and had an average selling price of £500,000. One was housed in the Georgia Institute of Technology and was given to N.A.T.O. to be installed at La Spezia, Italy. However, on the advice of Computer Consultants Ltd., it was taken out and dumped in the Mediterranean in 1964 and replacedby an Elliott 503. First installed in 1950 but is no longer in production.

* UNIVAC 1102

This computer was manufactured by Remington Rand, Univac Div., and had an average selling price of £500,000. First installed in 1951 but is no longer in production. Maximum number ever installed = 3.

* UNIVAC 1103

This computer was manufactured by Remington Rand, Univac Div., and had an average selling price of £500,000. First installed in 1954 but is no longer in production. Maximum number ever installed = 4.

UNIVAC 1103 A

This computer was manufactured by Remington Rand, Univac Div., and had an average selling price of £500,000. First installed in 1956 but is no longer in production. Maximum number ever installed = 15.

UNIVAC 1104

This computer was manufactured by Remington Rand, Univac Div., and had an average selling price of £500,000. First installed in 1957 but is no longer in production. Maximum number ever installed = 1.

* UNIVAC 1105

This computer was manufactured by Remington Rand, Univac Div., and had an average selling price of £500,000. First installed in 1958 but is no longer in production. Maximum number ever installed = 45.

UNIVAC 1206

This is a government computer developed by Remington Rand in 1958. It has a flying head drum and an average system costs from £120,000. Maximum number ever installed = 110.

* UNIVAC 1218

This Remington medium sized digital computer costs £120,000. Since the first installation in 1963 this system has been adapted for the government, Univac 418. Maximum number ever installed = not known.

UNIVAC 1824

This has been designed for aerospace applications, it weighs less than 17 lbs. and measures 6" square and 7" high. First installed in 1964. Maximum number ever installed = not known.

UNIVAC AN/USQ 20

This computer which is also built by Remington Rand was installed in 1961 in America and there is one on order in Britain. Maximum number ever installed = 1.

UNIVAC ATHENA

This computer is manufactured by Remington Rand Univac. Its primary application is as a missile guidance computer. It is a special purpose on-line machine that runs synchronized with the guidance system. Maximum number ever installed - not known.

UNIVAC CP 642 B

This is a large scale general purpose military computer with a magnetic thin-film memory which permits the computer to repeat a set of operations in 667 nano seconds. First installed in 1963. Maximum number ever installed - not known.

UNIVAC CP 667

This was developed under contract to the U.S. Navy Bureau of Ships. It is made by Remington Rand. There have only been two installations, the first was in 1964.

* UNIVAC FILE COMPUTER 0

This computerwas manufactured by Remington Rand Univac Division of Sperry Rand Corp. The first installation took place in 1957. The selling price of an average system was£100,000 and it is still available but no longer in production. Maximum number ever installed - 6.

* UNIVAC FILE COMPUTER 1

This computer manufactured by Remington Rand, was first installed in 1958. The selling price of an average system is £100,000 and it is still available but no longer in production. Maximum number ever installed - 40.

UNIVAC FILE COMPUTER II

This is a transistorised new version of the original File computer, and was first installed in 1962. The cost of this system is of the order of £200,000. Maximum number ever installed - 81.

* UNIVAC/RAND JOHNNIAC

This is manufactured by Remington Rand Univac for the U.S. Government. First installed in 1954. Maximum number ever installed - 1.

UNIVAC LARC

This computer is manufactured by Remington Rand Univac Div., the selling price of an average system is £1,800,000. The first installation was in 1960. It was Remington's answer to STRETCH. Maximum number ever installed - 1.

UNIVAC LARC 11

This computer is manufactured by Remington Rand Univac Div., and is a better version of the original LARC. Selling price of an average system is £2,000,000. First installed in 1961. Maximum number ever installed - 1.

* UNIVAC SS 80/90

This machine which is manufactured by Remington Rand Univac Div., was first installed in 1958 but became more popular in 1960. It was known as the UCT when it was first installed. The prototype of this machine was the Cambridge Air Force computer which Remington Rand installed in 1956 for the armed forces. It has a selling price of from £50,000 to £180,000. Maximum number ever installed - 506.

UNIVAC SS 11

This is built by Remington Rand and is a medium sized general purpose data processing system, it was developed from the USS 80/90. The selling price of a typical system ranges from £130,000 to £220,000. First installed in 1962. Maximum number ever installed - 45.

USSC STEP

This computer manufactured by Remington Rand Univac Division was a scaled down version of the USS 80/90. It has an average selling price of £80,000 First delivery was in 1960. Installed 1958. Maximum number ever installed - 200.

UNIVAC TARGET INTERCEPT

This is a government computer built by Remington Rand in 1960 and presumably used for the purpose which the name implies. Very little is known about this computer. Maximum number ever installed - not known.

URAL 1

This is a Russian computer built by Scientific Research Inst. of the Ministry of Precise Mechanics. It is a small computer. First installed in 1954. Maximum number ever installed - 1.

URAL 2

This is a Russian computer built by Scientific Research Inst. of the Industry of Precise Mechanics. It is a medium sized computer and was first installed in 1960. Maximum number ever installed - 1.

URAL 4

This is a Russian computer built by the Scientific Research Inst. of the Ministry of Precise Mechanics. It is a fast computer and was produced in 1962. Maximum number ever installed - 1.

* VERDAN

This computer is manufactured by North American Aviation Inc. and was first installed in 1957. Maximum number ever installed - 180.

WEGEMATIC 1000

This computer was manufactured by Svenska Relafabriken Abm, Ab. and sold by AB Addo Malmo. It was based on ALWAC 111E. The first installation took place in 1960. Now withdrawn. Maximum number ever installed - 7.

* WHIRL WIND II

This was a private computer built by the Massachusetts Inst. of Technology. It used paper tape input/output and was used for scientific and engineering computation. First installed in 1950. Now retired. Maximum number ever installed - 1.

* WISC

This is a private computer built by the University of Wisconsin. It is used for general purpose scientific and engineering computation, engineering experimentation and training. First installed 1954. Maximum number ever installed - 1.

* X1

This computer is manufactured by N.V. Electrologica and was originally installed in 1958. The selling price of an average system is £110,000. Maximum number ever installed - 35.

ZRA 1

This computer is manufactured by Zeisswerke GmbH., and the first installation took place in 1960. Veb Carl Zeiss designed a new computer and a simplified model of this was the ZRA 1. Estimated cost £40,000. Maximum number ever installed - 5.

ZUSE 11

This computer was manufactured by Zuse KG., and the selling price of an average system was £10,000. Now taken over by Brown Boveri, Switzerland. First installed in 1961. Maximum number ever installed - 38.

* ZUSE 22

This was manufactured by Zuse KG. Now taken over by Brown Boveri, Switzerland. First installed in 1959. Maximum number ever installed - 56.

ZUSE 23

This was manufactured by Zuse KG and was first installed in 1960. Now taken over by Brown Boveri, Switzerland. The price of an average system was £40,000. Maximum number ever installed - 83.

ZUSE 31

This was manufactured by Zuse KG and the first installation took place in 1962. Now taken over by Brown Boveri, Switzerland. Price of a system was from about £40,000. Maximum number ever installed - 7.

* IAS

This computer was manufactured by the Institute for Advanced Study. It had many applications in medical research in ballistics, aeronautics, [illegible] statistics, physics and chemistry. Some applications in management engineering. A high speed [illegible], best suited for problems requiring moderate input-output. It served as the parentand forerunner of many similar operating systems, e.g. Avidac(Lemont), George (Lemont), Illiac (Urbana), Johniac (Santa Monica), Maniac (Los Alamos), Oracle (Oak Ridge), Ordvac (Aberdeen)Transac 1000 & 2000 (Philadelphia), Michigan and Iowa State University planned computers. The basic system cost approximately £167,000. One only was produced and installed at the place of manufacture - I.A.S., Princeton, New Jersey.

1947/ENIAC

First all-electric computer. Developed for Army Ordnance work (Eckert and Mauchly).

1949/BINAC

First computer to use the principle of complete internal self-checking.

1951/UNIVAC

The United States Bureau of Census installed the first UNIVAC.1. data processing system.
First computer to efficiently handle both numbers and descriptive material. For the first time UNIVAC divorced input and output problems from actual computational facility.

1954/UNIVAC.1.

First UNIVAC computer delivered to a business concern.

1958/UNIVAC SOLID-STATE

First solid-state computer system.

1959/LARC

Large-scale solid-state system. Capable of processing a single problem, or two or more separate problems simultaneously.

1960/UNIVAC 1107

First commercial computer to employ thin film memory.

1960/UNIVAC 490

First Real-Time commercial data-processing and communications system which supplied facts and results virtually instantaneously.

1964/UNIVAC 1108

This computer system, which employs integrated circuits in its control memory, is more than five times faster than the UNIVAC 1107.

UNIVAC

THE FIRST NAME IN ELECTRONIC COMPUTERS

UNIVAC Division, Remington Rand Ltd., 65 Holborn Viaduct, London, E.C.1.
Tel: CENtral 1010

COMPUTER: ACE

Manufacturer: National Physical Laboratory,
Teddington, Middlesex.

Typical Rental of System in £'s - Not rented.

Typical Purchase Price: £400,000 Year first installed anywhere: 1955.

Number installed in - Britain: 1 U.S.A. and the rest: 0

PROCESSOR SPEED: Complete Add time in Microseconds: 32 Storage Cycle time in Microseconds: 2000 or 32

INTERNAL STORAGE: Type of Memory: Mercury delay lines + Drum
Capacity in Words: 803 words + 32,768
No. of bits per word: 48 binary bits.

Magnetic Tape Unit; 15,000 ch/sec. Maximum number of units attachable: 4

Cards per minute: In: 450 Out: 300 Type: ICT Reader
Solartron Punch

Paper Tape characters per second: In: 300 Out: 100 Type: Ferranti Rdr.
Teletype punch.

Printer: Lines per minute: Creed Telepointer Type: Creed ?

Software: ALGOL, ACE, AUTOCODE.

Physical Characteristics: Area - 300 sq.ft.
Cooling - air and water cooling.
Power - 75 kw
Weight - 12 tons approx.

Notes: The original pilot 'ACE' development is in the South Kensington Science Museum, and is a much smaller model than the ACE installed in 1958.
The machines provided the basis for the EEL/DEUCE I, II, & III.

COMPUTER: AEI 1010

Manufacturer: Associated Electrical Industries Limited,
Trafford Park,
Manchester 17, Lancs.

Typical Rental of System in £'s – £3,260 monthly.

Typical Purchase Price: £200,000 | Year first installed anywhere: 1961.

Number installed in – Britain: 10 | U.S.A. and the rest: 0

PROCESSOR SPEED: Complete Add time in Microseconds: 18 | Storage Cycle time in Microseconds: 6.5

INTERNAL STORAGE:
Type of Memory: Core + Drum
Capacity in Words: 4k + 8k
No. of bits per word: 44 binary + 4 bits parity.

Magnetic Tape Unit: 45k | Maximum number of units attachable: 16

Cards per minute: In: 400 Out: 100 Type: Elliott 8 46 / ICT 582

Paper Tape characters per second: In: 250/1000 Out: 33/300 Type: see below

Printer: Lines per minute: 300/3000 Type: Samastronic Printer / Xeronic Printer

Software: CLHF.)

Physical Characteristics:
Floor area of system – 500 sq.ft.
Weight – 700 lbs.
Cooling – built in heat exchanges.
Power supply – 400-440v 50 cps kva.

Notes: 7 index registers. Floating point arithmetic.
A development of original work done by Metropolitan Vickers on the Metrovick 950.

Paper Tape characters per second: Type: AEI type 960. AEI type CR.1 T.
Creed 25. Creed 300.

COMPUTER: ALWAC II

Manufacturer: Alwac Computer Division,
El-Tronics, Inc.,
13040 S. Cerise Ave., Hawthorne, California, U.S.A.

Typical Rental of System in £'s - Not rented.

Typical Purchase Price: £35,000 Year first installed anywhere: 1953

Number installed in - Britain: 0 U.S.A. and the rest: 2

PROCESSOR SPEED: Complete Add time in Microseconds: 1,000 Storage Cycle time in Microseconds: 8,000

INTERNAL STORAGE: Type of Memory: Magnetic Drum.
Capacity in Words: 2,048 + 64 words (fast).
No. of bits per word: 32 bits + sign. Binary.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 10 Out: 10 Type: Flexowriter.

Printer: Lines per minute: 10 ch. sec. Type: Flexowriter Keyboard.

Software:

Physical Characteristics: Area - 50 sq. ft.
Weight - 2,100 lbs.
Cooling - air conditioning.
Power - 10 kw.

Notes:

Fixed point arithmetic.
1 address type.

No longer in production.

COMPUTER: ALWAC III E.

Manufacturer: Alwac Computer Division,
El-Tronics Inc.,
13040, S. Cerise Ave., Hawthorne, California, U.S.A.

Typical Rental of System in £'s - Monthly £1,200

Typical Purchase Price: £16,000 - £40,000 **Year first installed anywhere:** 1954

Number installed in - Britain: 0 **U.S.A. and the rest:** 41

PROCESSOR SPEED: **Complete Add time in Microseconds:** 1,000 milli/sec. **Storage Cycle time in Microseconds:** 4000 milli/secs.

INTERNAL STORAGE:
Type of Memory: Drum
Capacity in Words: 4 - 8K
No. of bits per word: 33 binary

Magnetic Tape Unit: 10 K **Maximum number of units attachable:** 16

Cards per minute: **In:** 100 **Out:** 100 **Type:** Card converter

Paper Tape characters per second: **In:** 10/200 **Out:** 10/60 **Type:** Flexowriter Photo electric reader

Printer: 10 chs. per sec. **Type:** Flexowriter

Software:

Physical Characteristics:
Area: 28 sq.ft.
Power: 6.5 - 8 Kw.
Weight: 2200 lbs.

Notes:
1 - Index register
Fixed point arithmetic + floating point by sub-routine.
1 - Address system
Not now in production.

COMPUTER: BENDIX D - 12

Manufacturer: Computer Division,
Bendix Aviation, 5630 Arbor Vitae St., Los Angeles, 45,
California, U.S.A.

Typical Rental of System in £'s - £500 monthly.

Typical Purchase Price: £20,000 **Year first installed anywhere:** 1955

Number installed in - Britain: 0 **U.S.A. and the rest:** 375

PROCESSOR SPEED: Complete Add time in Microseconds: 43 Storage Cycle time in Microseconds:

INTERNAL STORAGE:
Type of Memory: Drum.
Capacity in Words: 650 words.
No. of bits per word: 8 binary coded decimal.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: 100 Out: 100 Type: Control Data.

Paper Tape characters per second: In: 6/400 Out: 10 Type:

Printer: Lines per minute: 10 dig/sec. Type: Typewriter IBM

Software: Pogo, Intercom 1000

Physical Characteristics:
Area of computer - 42.5 sq.ft.
Area of system - 400 sq.ft.
Weight of computer - 2,000 lbs.
Cooling - Air conditioner.
Power - 7.5 KW.

Notes: Formerly manufactured by Bendix Aviation Corporation - International Division. Graph plotter used - 20 dig/sec.

Now taken over by Control Data Corporation.

COMPUTER: BENDIX G 15.

Manufacturer: Bendix Corporation,
[illegible] Arbor Vital St.,
Los Angeles 45, California, U.S.A.

Typical Rental of System in £'s - £715 monthly

Typical Purchase Price: £27,000 **Year first installed anywhere** 1958

Number installed in - Britain: 0 **U.S.A. and the rest:** 328

PROCESSOR SPEED: **Complete Add time in Microseconds:** 540 **Storage Cycle time in Microseconds:** 16.500 Milli/sec.

INTERNAL STORAGE: **Type of Memory:** Drum.
Capacity in Words: 2160.
No. of bits per word: 29 (binary).

Magnetic Tape Unit: 430 chs/sec. **Maximum number of units attachable:** 4

Cards per minute: In [illegible] **Out:** [illegible] **Type:** IBM 026

Paper Tape characters per second: **In:** 250/300 **Out:** 100 or 60/17. **Type:** Photo - [illegible]

Printer: [illegible] **Type:** Typewriter

Software: Algol

Physical Characteristics:
Area: 6 sq.ft
Power: 5 Kva.
Weight: 850 lbs.
[illegible]ing: Air conditioning

Notes: Fixed point arithmetic and floating point by sub-routine.
1 + 1 address system.
Bendix have now been taken over by Control Data Corporation.

COMPUTER: BULL GAMMA 60

Manufacturer: La Compagnie des Machines Bull,
94 Avenue Gambetta,
Paris 20, France.

Typical Rental of System in £'s - £11,000 monthly.

Typical Purchase Price: £500,000 Year first installed anywhere: 1960

Number installed in - Britain: 0 U.S.A. and the rest: 11

PROCESSOR SPEED: Complete Add time in Microseconds: 100 Storage Cycle time in Microseconds: 10

INTERNAL STORAGE: Type of Memory: Core
Capacity in Words: 8-32k
No. of bits per word: 24 (binary)

Magnetic Tape Unit: 21k Maximum number of units attachable: 48

Cards per minute: In: 300 Out: 300 Type: BULL Card/Reader Punch.

Paper Tape characters per second: In: 800 Out: 25 Type: BULL

Printer: Lines per minute: 300 Type: BULL

Software: ALGOL & COBOL.

Physical Characteristics: Floor area of system - 1800 sq.ft.

Notes: Floating point arithmetic.

COMPUTER:	BULL GAMMA 150 Series.
Manufacturer:	La Compagnie des Machines Bull, Siege Social et Usine, 94 Avenue Gambetta, Paris 20, France.
Typical Rental of System in £'s -	£1,750 monthly.
Typical Purchase Price:	£68-85,000 **Year first installed anywhere:** 1961.
Number installed in - Britain:	4 **U.S.A. and the rest:** 137.
PROCESSOR SPEED:	**Complete Add time in Microseconds:** 2000 **Storage Cycle time in Microseconds:** 11-22.
INTERNAL STORAGE:	**Type of Memory:** Fast memory + Drum. **Capacity in Words:** 64 words + 196k. **No. of bits per word:** 12 decimal.
Magnetic Tape Unit:	**Maximum number of units attachable:**
Cards per minute:	**In:** 120 **Out:** 150 **Type:** Card Reader/ Punch.
Paper Tape characters per second:	**In:** **Out:** **Type:**
Printer:	**Lines per minute:** 150 **Type:** Tabulator.
Software:	
Physical Characteristics:	Floor area of system - 220 sq.ft. Cooling - none. Power supply - 220v three phase plus 48v D.C.
Notes:	Gamma 3 electronic calculator (part of 150 series) - Magnetic Drum becomes the Gamma M.D.E.

COMPUTER: BURROUGHS B 205

Manufacturer: Burroughs Corporation, Inc.,
460 Sierra Madre Villa,
Pasadena, California, U.S.A.

Typical Rental of System in £'s - 2,413 monthly.

Typical Purchase Price: £50-180,000 **Year first installed anywhere:** 1954.

Number installed in - Britain: **U.S.A. and the rest:** 99

PROCESSOR SPEED: **Complete Add time in Microseconds:** 1700 **Storage Cycle time in Microseconds:** 8,500. milli/sec.

INTERNAL STORAGE: **Type of Memory:** Drum.
Capacity in Words: 4k
No. of bits per word: 10 - binary coded decimal.

Magnetic Tape Unit: 6,000 char/sec. Burroughs type 554. **Maximum number of units attachable:** 10

Cards per minute: **In:** 300 **Out:** 100 **Type:** IBM or Hollerith.

Paper Tape characters per second: **In:** 540 **Out:** 60 **Type:** Burroughs 205 Tape Units.

Printer: **Lines per minute:** 150 **Type:** Burroughs 205.

Software: Algebraic Compiler. ALGOL 58.

Physical Characteristics:
Floor area of system - 900 sq. ft.
Weight - 3175 lbs.
Cooling - air.
Power - 15 kw.60 cycle. 208-230 v 3 phase.
20 kva.

Notes:
1 address system.
1 index register.
Floating point arithmetic.
4 registers.

No longer in production but still available.

COMPUTER: BURROUGHS/DATATRON

Manufacturer: Electro Data Corporation,
717 North Lake Avenue,
Pasadena, California, U.S.A.

Typical Rental of System in £'s - Not quoted.

Typical Purchase Price: £39,800-45,000 **Year first installed anywhere:** 1954.

Number installed in - Britain: 0 **U.S.A. and the rest:** 3

PROCESSOR SPEED: Complete Add time in Microseconds: 360/365 Storage Cycle time in Microseconds: 8,500. Milli/ sec.

INTERNAL STORAGE: Type of Memory: Drum
Capacity in Words: 4080
No. of bits per word: 11 decimal, binary coded.

Magnetic Tape Unit: 64 Maximum number of units attachable: 30

Cards per minute: In: 364 Out: 90 Type:

Paper Tape characters per second: In: 500 Out: 60 Type: Burroughs 204 tape units.

Printer: Lines per minute: 150 Type: IBM 407.

Software: Assembler, compilers.

Physical Characteristics: Area - 750 sq.ft.
Weight - 5,175 lbs.
Power - 16.5 Kva.

Notes: This computer was originally built by the Electro Data Corp.
6 index registers. Fixed point arithmetic with floating point possible. One drum system.
Burroughs have now taken over Electro Data Corporation.

COMPUTER: BURROUGHS E101

Manufacturer: Electro Data Division,
460 Sierre Madre Villa,
Pasadena, California, U.S.A.

Typical Rental of System in £'s - 290 monthly.

Typical Purchase Price: £9,000-16,400 Year first installed anywhere: 1955.

Number installed in - Britain: 3 U.S.A. and the rest: 124

PROCESSOR SPEED: Complete Add time in Microseconds: 50,000 Storage Cycle time in Microseconds: 8,500.

INTERNAL STORAGE: Type of Memory: Magnetic Drum.
Capacity in Words: 220 words.
No. of bits per word: 13 binary coded decimal.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 20 Out: 10 Type: see below.

Printer: 24 ch/sec. Type: Sensimatic Printer.

Software:

Physical Characteristics: Floor area = 25-144 sq.ft.
Weight = 1800 lbs.
Cooling = fans.
Power = 3 Kw.

Notes: Renamed E103. Desk sized scientific computer operating in numerics only. External pinboard serves as instruction unit. One address type. 2 index registers. Fixed point aritnmetic. Still available but no longer in production.

COMPUTER: CLARY DE 60

Manufacturer: Clary Corporation Inc.,
408 Junipero Street,
San Gabriel, California, U.S.A.

Typical Rental of System in £'s - £180 monthly.

Typical Purchase Price: £8,000 Year first installed anywhere: 1960.

Number installed in - Britain: 0 U.S.A. and the rest: 217

PROCESSOR SPEED: Complete Add time in Microseconds: 60,000 Storage Cycle time in Microseconds: 7,500

INTERNAL STORAGE: Type of Memory: Drum + Fast Memory.
Capacity in Words: 32 + 128.
No. of bits per word: 18 + sign decimal.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 20 Out: 20 Type: Typewriter.

Printer: 10-15 ch/sec. Type: Typewriter.

Software:

Physical Characteristics: Area - 20 sq.ft.
Weight - 300 lbs.
Cooling - none.
Power - 0.15 kw.

Notes: Input by keyboard control.

COMPUTER: CONTROL DATA 16

Manufacturer: Control Data Corporation,
501 Park Avenue,
Minneapolis, Minnesota, U.S.A.

Typical Rental of System in £'s - £11,000 monthly.

Typical Purchase Price: £385,000 **Year first installed anywhere:** 1960.

Number installed in - Britain: 0 **U.S.A. and the rest:** 58.

PROCESSOR SPEED: **Complete Add time in Microseconds:** 5 **Storage Cycle time in Microseconds:** 4.8

INTERNAL STORAGE: **Type of Memory:** Core
Capacity in Words: 8-32k
No. of bits per word: 48 binary.

Magnetic Tape Unit: 30 K **Maximum number of units attachable:** 96.

Cards per minute: **In:** 150 **Out:** 100 **Type:** IBM 714, IBM 722

Paper Tape characters per second: **In:** 350 **Out:** 60 **Type:** Ferranti.

Printer: **Lines per minute:** 150-1000 **Type:** IBM 717 or 407.

Software: FORTRAN, COBOL 61.

Physical Characteristics:
Area - 47 sq.ft.
Weight - 3450 lbs.
Power - 20 kva.
Cooling - air conditioner.

Notes:
6 index registers.
Floating point arithmetic.
Off line equipment - 160A computer.

Result of a breakaway development by Former Remington engineers.

COMPUTER: CP 266

Manufacturer: Autonetic Division,
North American Aviation, Inc.,
9150 E East Imperial Highway, Dawney California. U.S.A.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £20,000 Year first installed anywhere: 1957.

Number installed in - Britain: 0 U.S.A. and the rest: 1

PROCESSOR SPEED: Complete Add time in Microseconds: 1,000 Storage Cycle time in Microseconds: 1,000 / 32,500.

INTERNAL STORAGE: Type of Memory: Magnetic Disk.
Capacity in Words: 2048 + 16.
No. of bits per word: 40 binary.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 37 Out: 10 Type:

Printer: Lines per minute: Type:

Software:

Physical Characteristics: Volume - 5.7 cu.ft.
Cooling - none.
Weight - 200 lbs.
Power - 0.3 kw, 0.3 kva. (computer).

Notes: Fixed point arithmetic, one address system.
Also called Recomp I. Has a manual typewriter output.
System developed by Reconnaissance Charting Branch, Intelligence Laboratory, Rome Air development Centre under contract with Autonetics Division.

COMPUTER: CYCLONE

Manufacturer: Iowa State University.
Ames, Iowa, U.S.A.

Typical Rental of System in £'s -

Typical Purchase Price: Year first installed anywhere: 1960.

Number installed in - Britain: 0 U.S.A. and the rest: 3

PROCESSOR SPEED: Complete Add time in Microseconds: 300 Storage Cycle time in Microseconds: 30

INTERNAL STORAGE: Type of Memory: Williams tube Electrostatic.
Capacity in Words: 1024
No. of bits per word: 40 binary.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 300 Out: 60 Type:

Printer: 10 ch/sec. Type: Model 28 Teleprinter.

Software:

Physical Characteristics: Area - 62 sq.ft.
Weight - 5,000 lbs.
Cooling - air conditioning.
Power - 19kw.

Notes: Fixed point arithmetic. Not manufactured for sale.
Utilized for general purpose computing to support research work on campus.

COMPUTER: DEC PDP 1

Manufacturer: Digital Equipment Corporation.
Main Street.
Maynard, Massachusetts, U.S.A.

Typical Rental of System in £'s - 730 monthly.

Typical Purchase Price: £60,000 Year first installed anywhere: 1960.

Number installed in - Britain: 0 U.S.A. and the rest: 53.

PROCESSOR SPEED: Complete Add time in Microseconds: 10 Storage Cycle time in Microseconds: 5

INTERNAL STORAGE: Type of Memory: Core
Capacity in Words: 1-4k
No. of bits per word: 18 binary.

Magnetic Tape Unit: 15k Maximum number of units attachable: 64.

Cards per minute: In: 200 Out: 100 Type: 41

Paper Tape characters per second: In: 400 Out: 60 Type:

Printer: Lines per minute: 300/1000 Type: Type 62 Line Printer.

Software: DECAL (Algol-Type).

Physical Characteristics:

Notes: No index registers.

COMPUTER: DISADEC.

Manufacturer: Disa Elektronik A/S.
17 Herlev Horedgade, Herlev,
Denmark.

Typical Rental of System in £'s - £1,077 monthly.

Typical Purchase Price: £43,090. **Year first installed anywhere:** 1960-61.

Number installed in - Britain: 0 **U.S.A. and the rest:** 21

PROCESSOR SPEED: **Complete Add time in Microseconds:** 22 **Storage Cycle time in Microseconds:** 9 Core.

INTERNAL STORAGE:
Type of Memory: Drum + Core.
Capacity in Words: 12k + 1k.
No. of bits per word: 40 + 2 binary.

Magnetic Tape Unit: 200 ch/inch. **Maximum number of units attachable:**

Cards per minute: **In:** 700 **Out:** 700 **Type:** Card Reader/Punch.

Paper Tape characters per second: **In:** 500 **Out:** 150 **Type:** Facit ETR 500
Facit PE 1500

Printer: **Lines per minute:** 1000 **Type:** Anelex.

Software: Assembler SLIP. Algol 60 compiler.

Physical Characteristics: Weight - 1100 lbs.
Power - 1 kw 380 v 3 phases.

Notes: A team of mathematicians and engineers from the Royal Danish Institute for Computing Machinery designed and built the fully transistorized digital computer DISADEC. Disa Elektroniks now build and market it. Now redeveloped as GIER - DISADEC.

COMPUTER: DYSEAC

Manufacturer: U.S. Dept. of Commerce, National Bureau of Standards
Data Processing Systems Division, Connecticut & Van Ness Aves
Washington 25, D.C., U.S.A.

Typical Rental of System in £'s - not quoted.

Typical Purchase Price: £100,000 Year first installed anywhere: 1954.

Number installed in - Britain: 0 U.S.A. and the rest: 1

PROCESSOR SPEED: Complete Add time in Microseconds: 192-1,536 Storage Cycle time in Microseconds: 384

INTERNAL STORAGE: Type of Memory: Mercury Delay Line.
Capacity in Words: 512-4096.
No. of bits per word: 45. binary.

Magnetic Tape Unit: Magnetic Wire 3,500 dig/sec. Maximum number of units attachable: many.

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 10 Out: 60 Type: Flexowriter Punch.

Printer: Lines per minute: 10 char/sec. Type: Flexowriter.

Software:

Physical Characteristics: Floor area = 270 sq.ft.
Weight = 20 tons.
Cooling = air conditioning.
Power = 12 kw 35 kva (with conditioner).

Notes: Fixed point arithmetic.
Three address instructions.
System on packet rate 2 trailer vans. No. 1 and the main part of computer system, [illegible] ps in May 1954. A general purpose simultaneous, real time computer.

COMPUTER: EDSAC

Manufacturer: Cambridge University, England.

Typical Rental of System in £'s - never sold.

Typical Purchase Price: Year first installed anywhere: 1949

Number installed in - Britain: 2 U.S.A. and the rest: 0

PROCESSOR SPEED: Complete Add time in Microseconds: 1,500 Storage Cycle time in Microseconds:

INTERNAL STORAGE: Type of Memory: Mercury Delay Line
Capacity in Words: 1024 words.
No. of bits per word: 18 bits - binary. Double length.

Magnetic Tape Unit: Experimentally. Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 50 Out: 30 Type:

Printer: 7 cps. Type: Teletypewriter.

Software:

Physical Characteristics: Computer - 600 sq. ft.
Cooling - blower fan.
Power -

Notes: From this Computer, the Leo I was developed.
First stored computer. 3,800 valves.
Peripheral equipment made by computer manufacturer.

COMPUTER: EDVAC

Manufacturer: University of Pennsylvania,
Moore School of Electrical Engineering,
Philadelphia, Pennsylvania, U.S.A.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £158,000 Year first installed anywhere: 1950

Number installed in - Britain: 0 U.S.A. and the rest: 1

PROCESSOR SPEED: Complete Add time in Microseconds: 864 Storage Cycle time in Microseconds: 17,000

INTERNAL STORAGE: Type of Memory: Magnetic Drum + Mercury A.D.L.
Capacity in Words: 4,608 + 1024 words.
No. of bits per word: 44 bits. binary.

Magnetic Tape Unit: Maximum number of units attachable: 7

Cards per minute: In: [illegible] Out: 100 Type: IBM

Paper Tape characters per second: In: 78 wds/sec Out: 30 wds/min Type:

Printer: Lines per minute: 30 words/min. Type: Teletypewriter.

Software:

Physical Characteristics: Area of Computer = 490 sq. ft.
Weight = 17,300 lbs.
Cooling = air conditioner.
Power = 52 Kw + 25 Kw for air conditioner.

Notes: Floating and fixed point arithmetic. Four address instruction code. Built for Ballistic Research Laboratories, Aberdeen Proving Ground, Maryland.

COMPUTER: EEL/DEUCE 1

Manufacturer: English Electric Co. Limited.
Kidsgrove.
Stoke-on-Trent. Staffs.

Typical Rental of System in £'s - 950 monthly.

Typical Purchase Price: £80,000 Year first installed anywhere: 1958

Number installed in - Britain: 22 U.S.A. and the rest: 1

PROCESSOR SPEED: Complete Add time in Microseconds: 64 Storage Cycle time in Microseconds: 10

INTERNAL STORAGE: Type of Memory: Magnetic Drum & Mercury Delay lines
Capacity in Words: 8k & 40? words
No. of bits per word: 32 binary

Magnetic Tape Unit: 100 inch/sec. Decca Type 3000 Maximum number of units attachable: 8

Cards per minute: In: 300 Out: 100 Type: ICT 581 Card Rdr. ICT 582 Punch

Paper Tape characters per second: In: 300 Out: 33 Type:

Printer: Lines per minute: 10 ch.p.s. Type: Creed Teleprinter

Software:

Physical Characteristics: Floor area for systems 20' x 30'.
Weight - 7 tons.
Cooling - air ventilation.
Power - 440 volts. 3 phase 50 c.p.s. A.C. approx 9 kw.

Notes: Paper tape equipment includes - Ferranti TR 5 Tape Reader
- Creed Paper Tape Punch No. 25.

COMPUTER: EEL/KDP 10

Manufacturer: The english Electric Co. Limited,
Queens House,
Kingsway, London. W.C.2.

Typical Rental of System in £'s - 2,500 monthly.

Typical Purchase Price: £180-500,000 **Year first installed anywhere:** 962.

Number installed in - Britain: 8 **U.S.A. and the rest:** 3

PROCESSOR SPEED: Complete Add time in Microseconds: 360 Storage Cycle time in Microseconds: 15

INTERNAL STORAGE: Type of Memory: Core.
Capacity in Words: 16-262K.
No. of bits per word: Variable.

Magnetic Tape Unit: 33-66k **Maximum number of units attachable:** 62

Cards per minute: In: 400 Out: 150 Type: Card reader 1020
Card Punch 1030

Paper Tape characters per second: In: 1000 Out: 110 Type: Punch model 1013

Printer: Lines per minute: 600 Type: Model 1035.

Software: COBOL '60

Physical Characteristics: Floor loading - 5000 lbs.
Floor area - 485 sq.ft. (central computer)
Cooling - satisfactory working between 50° F & 85° F.
Power supply - 230v 50 c/s single phase 4.5 KVA.

Notes: 7 index registers. System based on the design of the RCA 501.
suitable for European users. Built under licence for RCA.
RCA 501 installed in 1959 in the U.S.A.

COMPUTER: ELLIOTT 401

Manufacturer: Elliott Bros. (London) Ltd.,
Elstree Way,
Borehamwood, Herts.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £18,000 **Year first installed anywhere:** 1954

Number installed in - Britain: 1 **U.S.A. and the rest:** 0

PROCESSOR SPEED: Complete Add time in Microseconds: Storage Cycle time in Microseconds: 13,000

INTERNAL STORAGE: Type of Memory: Nickel Delay Lines, Magnetic Disk
Capacity in Words: 3 registers + 1024
No. of bits per word: 32 bits binary.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: Out: 18 Type: Ferranti Creed

Printer: Lines per minute: Type:

Software:

Physical Characteristics: Area -
Weight -
Cooling -
Power -

Notes: This was the first computer developed by Elliott Bros.

Disk replaced by Drum.

COMPUTER: ELLIOTT 402

Manufacturer: Elliott Bros. (London) Ltd.,
Eastree Way,
Borehamwood, Herts.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £28,000 **Year first installed anywhere:** 1955

Number installed in - Britain: 6 **U.S.A. and the rest:** 1

PROCESSOR SPEED: Complete Add time in Microseconds: 200 Storage Cycle time in Microseconds: 1000

INTERNAL STORAGE:
Type of Memory: Magnetic Drum & Nickel Delay Lines
Capacity in Words: 4,976 & 40
No. of bits per word: 32 digits

Magnetic Tape Unit: 400 words/sec. **Maximum number of units attachable:** None

Cards per minute: In: 400 Out: Type: Elliott card reader

Paper Tape characters per second: In: 200 Out: 25 or 33 Type: Elliott

Printer: Lines per minute: Type:

Software:

Physical Characteristics:
Floor area - 30 sq.ft.
Cooling - internal fans
Power supply - 9 KVA

Notes: Now obsolete.

Paper tape equipment includes - Ferranti Tape Reader TR 3
- Creed Tape Punch No. 75

COMPUTER: NATIONAL-ELLIOTT 405

Manufacturer: Elliott Bros. (London) Limited,
Elstree Way,
Borehamwood, Herts.

Typical Rental of System in £'s - £4,000 monthly.

Typical Purchase Price: £120,000 **Year first installed anywhere:** 1956.

Number installed in - Britain: 34 **U.S.A. and the rest:** 4

PROCESSOR SPEED: **Complete Add time in Microseconds:** 1031 **Storage Cycle time in Microseconds:** see below.

INTERNAL STORAGE: **Type of Memory:** Magnetic Drum/Disk/Nickel Delay lines.
Capacity in Words: 4096 + 16,384 + 512 words.
No. of bits per word: 32 bits - binary.

Magnetic Tape Unit: 30 ins/sec. **Maximum number of units attachable:** 16.

Cards per minute: **In:** 400-500 **Out:** 120 **Type:** Elliott Card Reader.

Paper Tape characters per second: **In:** 180 **Out:** 33 **Type:** see below.

Printer: **Lines per minute:** 300
10 c.p.s.
600-900 l.p.m. **Type:** Samastronic/Printer.
Creed Teleprinter.
National Printer NCR.

Software:

Physical Characteristics: Floor area - 800 sq. ft.
Cooling - fans.
Power supply - 415v 3 phase 50 cycle - 40 kva.

Notes: Storage Cycle time in Microseconds: Drum: 26 milli/sec.
Disk: 32.5 milli/sec. Delay: 0.816 milli/sec.
Paper tape equipment includes - Ferranti TR2. Elliott Tape Reader.
Creed 24 Mark IV Tape Punch.

4 index registers. Fixed point arithmetic and floating point by sub-routine. One address system.

Sold by National Cash Register Company.

COMPUTER: ELLIOTT 502

Manufacturer: Elliott Brothers (London) Limited,
Elstree Way,
Borehamwood, Herts.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £100,000 **Year first installed anywhere:** 1961.

Number installed in - Britain: 2 **U.S.A. and the rest:** 0

PROCESSOR SPEED: **Complete Add time in Microseconds:** 2 **Storage Cycle time in Microseconds:** 1-3.5

INTERNAL STORAGE: **Type of Memory:** Core + Fast Memory.
Capacity in Words: 8-131k + 1024.
No. of bits per word: 20 (binary).

Magnetic Tape Unit: 90k **Maximum number of units attachable:** 3

Cards per minute: **In:** **Out:** **Type:**

Paper Tape characters per second: **In:** 1000 **Out:** 110 **Type:** Elliott Reader
Teletype Punch.

Printer: **Lines per minute:** **Type:**

Software:

Physical Characteristics:
Floor area - 55 sq.ft.
Weight - 7000 lbs.
Cooling - Closed circuit cold air from separate refrigerator unit.
Power - 9-13 kva.

Notes:
3 index registers.

COMPUTER: ELLIOTT 803

Manufacturer: Elliott Brothers (London) Limited,
Elstree Way,
Borehamwood, Herts.

Typical Rental of System in £'s - £1,250 monthly.

Typical Purchase Price: £28,000-60,000. **Year first installed anywhere:** 1960.

Number installed in - Britain: 140 **U.S.A. and the rest:** 101

PROCESSOR SPEED: **Complete Add time in Microseconds:** 576 **Storage Cycle time in Microseconds:** 24

INTERNAL STORAGE: **Type of Memory:** Core
Capacity in Words: 4-8k
No. of bits per word: 39 binary.

Magnetic Tape Unit: 4.3 **Maximum number of units attachable:** 4

Cards per minute: **In:** 400 **Out:** 100 **Type:** Reader - Elliott
Punch - IBM

Paper Tape characters per second: **In:** 140 **Out:** 25/60/100 **Type:** Elliott.

Printer: **Lines per minute:** 600 **Type:** National Elliott.

Software: ALGOL '60.

Physical Characteristics:
Floor area - 9 sq.ft.
Weight - from 6 cwt.
Power supply - approx. ½ kva.
Cooling - internal fans.

Notes: Floating point arithmetic.

A development of the 802 computer.
Now marketed by the National Cash Register Company.

COMPUTER: EL XI

Manufacturer: N.V. Electrologica,
The Hague,
The Netherlands.

Typical Rental of System in £'s - £2,700 monthly.

Typical Purchase Price: £110,000 Year first installed anywhere: 1958.

Number installed in - Britain: 0 U.S.A. and the rest: 35

PROCESSOR SPEED: Complete Add time in Microseconds: 64 Storage Cycle time in Microseconds: 16

INTERNAL STORAGE: Type of Memory: Core.
Capacity in Words: 0.5 - 32.0k.
No. of bits per word: 27 binary.

Magnetic Tape Unit: 30k Maximum number of units attachable: 16

Cards per minute: In: 700 Out: 120 Type: Electrologica.

Paper Tape characters per second: In: 1000 Out: 25 Type: Electrologica

Printer: Lines per minute: 600 Type: Electrologica.

Software: ZEBRA, ALGOL '60.

Physical Characteristics:

Notes: 1 index register. Floating point arithmetic.

COMPUTER: EMIDEC

Manufacturer: E.M.I. Electronics Limited,
Blyth Road,
Hayes, Middlesex.

Typical Rental of System in £'s - £4,500 monthly.

Typical Purchase Price: £180,000 Year first installed anywhere: 1960.

Number installed in - Britain: 14 U.S.A. and the rest: 0

PROCESSOR SPEED: Complete Add time in Microseconds: 125. Storage Cycle time in Microseconds:

INTERNAL STORAGE: Type of Memory: Drum + Core.
Capacity in Words: 8-16k + 1024.
No. of bits per word: 36 binary.

Magnetic Tape Unit: 20k. Maximum number of units attachable: 16.

Cards per minute: In: 400 Out: Type: Elliott Reader.

Paper Tape characters per second: In: 350 Out: 25 Type: Ferranti Rdr. Creed Punch.

Printer: Lines per minute: 150 Type: Bull Line Printer.

Software: Business Compiler.

Physical Characteristics: Area - 15 sq.ft.

Cooling - fans.

Notes: 2 address instruction.
Now sold by I.C.T.

COMPUTER: EMIDEC 2400

Manufacturer: EMI Electronics Limited,
Blyth Road,
Hayes, Middlesex.

Typical Rental of System in £'s - £12,500 monthly.

Typical Purchase Price: £500,000 Year first installed anywhere: 1961.

Number installed in - Britain: 4 U.S.A. and the rest: 0

PROCESSOR SPEED: Complete Add time in Microseconds: 20-40. Storage Cycle time in Microseconds: 10

INTERNAL STORAGE: Type of Memory: Core + Diode Capacitor.
Capacity in Words: 4k + 64 words.
No. of bits per word: 36 binary.

Magnetic Tape Unit: 20k Maximum number of units attachable: 25.

Cards per minute: In: 400 Out: 100 Type: Elliott Reader.

Paper Tape characters per second: In:350 Out: 30 Type: Ferranti Reader Creed Punch.

Printer: Lines per minute: 300 Type: Samastronic.

Software:

Physical Characteristics:

Notes: Two address type instruction.
Now sold by I.C.T.

COMPUTER: FERRANTI ATLAS

Manufacturer: Ferranti Limited,
The London Computer Centre,
68/73 Newman Street, London, W.1.

Typical Rental of System in £'s - By arrangement.

Typical Purchase Price: £1,500,000 - £5,000,000. Year first installed anywhere: 1962.

Number installed in - Britain: 2 U.S.A. and the rest: 0

PROCESSOR SPEED: Complete Add time in Microseconds: 1.7 Storage Cycle time in Microseconds: 0.3 - 2.0

INTERNAL STORAGE: Type of Memory: Drum + Core + Rod.
Capacity in Words: 25-100k + 16-262 + 8-262k.
No. of bits per word: 48 binary.

Magnetic Tape Unit: 90k. Maximum number of units attachable: 32.

Cards per minute: In: 600 Out: 100 Type: ICT.

Paper Tape characters per second: In: 1000 Out: 300 Type: TR 7.

Printer: Lines per minute: 5000 Type: Xeronic Printer.

Software: Algebraic & Business Compilers.

Physical Characteristics: Area - 2,000 sq.ft.

Cooling - air conditioning.

Notes: 91 index registers. Floating point arithmetic.
Now sold by I.C.T.

COMPUTER: FERRANTI MERCURY

Manufacturer: Ferranti Limited,
Thomas Street, West Gorton,
Manchester.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £120,000. **Year first installed anywhere:** 1957.

Number installed in - Britain: 14 **U.S.A. and the rest:** 6

PROCESSOR SPEED: **Complete Add time in Microseconds:** 180 **Storage Cycle time in Microseconds:** 8,000.

INTERNAL STORAGE: **Type of Memory:** Drum + Core.
Capacity in Words: 32k + 1k.
No. of bits per word: 40 binary.

Magnetic Tape Unit: **Maximum number of units attachable:**

Cards per minute: **In:** 200 **Out:** 100 **Type:**

Paper Tape characters per second: **In:** 200 **Out:** 25 **Type:** Ferranti Reader
Teletype Punch.

Printer: 6.7 ch/sec. **Type:** Teleprinter.

Software: Autocode.

Physical Characteristics:
Floor area - 36 sq.ft.
Cooling - build in refrigeration.
Power - 40 kva 380-415 volts. 3 phase 50 cycles.
Weight - 2,500 lbs.

Notes:
Ferranti paper tape reader.
Teletype or Creed paper tape punch.
Floating point arithmetic.
Used for scientific and technical work, industrial mathematics and data processing.

Sold by I.C.T.

COMPUTER: ICT MADAM MK. I

Manufacturer: Ferranti Limited,
The London Computer Centre,
68/71 Newman Street, London, W.1.

Typical Rental of System in £'s - £1,000

Typical Purchase Price: £40,000 **Year first installed anywhere:** 1951.

Number installed in - Britain: 1 **U.S.A. and the rest:** 2

PROCESSOR SPEED: **Complete Add time in Microseconds:** 1,200 **Storage Cycle time in Microseconds:** see below.

INTERNAL STORAGE:
Type of Memory: Cathode Ray Tube, Drum.
Capacity in Words: 500 words 32k drum.
No. of bits per word: 20 binary or 40 double length.

Magnetic Tape Unit: **Maximum number of units attachable:**

Cards per minute: **In:** **Out:** **Type:**

Paper Tape characters per second: **In:** 200 **Out:** 200 **Type:** Creed Teleprinter.

Printer: 6 ch/sec. **Type:**

Software:

Physical Characteristics:
Area - 64 sq.ft.
Cooling - a re-calculating air system with heat exchanger connected to a cooking unit.
Power - 27 kw.

Notes: Built at Manchester University in conjunction with Ferrant **Ltd.**
The Cathcode Ray tube access time was almost immediate.

COMPUTER: FERRANTI ORION

Manufacturer: Ferranti Limited,
Hollinwood,
Lancashire.

Typical Rental of System in £'s - £7,500 monthly.

Typical Purchase Price: £300,000 **Year first installed anywhere:** 1963.

Number installed in - Britain: 14 **U.S.A. and the rest:** 5

PROCESSOR SPEED: **Complete Add time in Microseconds:** 64 **Storage Cycle time in Microseconds:** 12

INTERNAL STORAGE:
Type of Memory: Core.
Capacity in Words: 1-16k.
No. of bits per word: 48 binary.

Magnetic Tape Unit: 90k. **Maximum number of units attachable:** 64.

Cards per minute: **In:** 200/600 **Out:** 100 **Type** ICT 581, 591 -Reader ICT 582 - Punch.

Paper Tape characters per second: **In:** 300/1000 **Out:** 60/300 **Type:** see below.

Printer: **Lines per minute:** 400/1000 **Type:** ICT 661 Line Printer. Rank Xeronic Printer.

Software: Nebula, Fortran, Extended Mercury Autocode.

Physical Characteristics:
Floor area of system - 500-1000 sq.ft.
Max. floor loading - 150 lbs. sq.ft.
Cooling - none.
Power - 45 kva.

Notes: 64 index registers. Floating point arithmetic. Now sold by I.C.T.

Paper Tape characters per second: Type: Ferranti TR 7,

COMPUTER: FERRANTI PEGASUS

Manufacturer: Ferranti Limited,
Thomas Street,
West Gorton, Manchester.

Typical Rental of System in £'s - £1,045, monthly.

Typical Purchase Price: £50,000 **Year first installed anywhere:** 1955

Number installed in - Britain: 25 **U.S.A. and the rest:** 4

PROCESSOR SPEED: **Complete Add time in Microseconds:** 3.5 **Storage Cycle time in Microseconds:** see below.

INTERNAL STORAGE: **Type of Memory:** Magnetic Drum & Nickel Delay lines.
Capacity in Words: 4608 words & 55 words.
No. of bits per word: 39 bits - binary.

Magnetic Tape Unit: 100 inches/sec.
Decca Type 3000
& Burroughs type 342I **Maximum number of units attachable:** 8

Cards per minute: **In:** 200 **Out:** 100 **Type:** ICT

Paper Tape characters per second: **In:** 200 **Out:** 33 **Type:** see below.

Printer: 10 chs.p.s. = off line teleprinter.
150 l.p.m. = ICT Printer 662.
100 l.p.m. = ICT Printer 902. Tab.

Software:

Physical Characteristics:
Floor area for system - 20' x 22'.
Weight - 2,521 lbs.
Cooling - Fans.
Power - 18.3 kva. 240/415v. 3 phase 50 cycles per/sec.

Notes: Fixed point arithmetic (floating point by sub-routine.)
7 index registers. One address instruction type.
Storage Cycle time: Drum - 8 milliseconds
0.12 " " delay lines.
Paper tape equipment includes: Ferranti TR2 Tape Reader
Creed Paper Tape Punch No. 25.

COMPUTER: FERRANTI SIRIUS

Manufacturer: Ferranti Limited,
Thomas Street,
West Gorton, Manchester, 12.

Typical Rental of System in £'s - £425 monthly.

Typical Purchase Price: £17,120. Year first installed anywhere: 1960.

Number installed in - Britain: 14 U.S.A. and the rest: 8

PROCESSOR SPEED: Complete Add time in Microseconds: 250 Storage Cycle time in Microseconds: 4000.

INTERNAL STORAGE: Type of Memory: Delay.
Capacity in Words: 1-10k.
No. of bits per word: 10 (decimal).

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: 200 Out: 100 Type: Hollerith 581, 582.

Paper Tape characters per second: In: 250 Out: 60 Type: Ferranti TR 5 Teletype Punch.

Printer: 10 ch/sec. Type: Creed Teleprinter Model 75.

Software: Autocode.

Physical Characteristics: Floor area - 81½" x 44".
Weight - 11 cwt.
Power - 230 v 5 amp.
Cooling - none.

Notes: Used for commercial, scientific and technical work.
Now sold by I.C.T.

COMPUTER: GE 100 ERMA.

Manufacturer: General Electric Company,
Computer Department,
Phoenix, Arizona, U.S.A.

Typical Rental of System in £'s - £17,500 monthly.

Typical Purchase Price: £700,000 Year first installed anywhere: 1958.

Number installed in - Britain: 0 U.S.A. and the rest: 30

PROCESSOR SPEED: Complete Add time in Microseconds: Storage Cycle time in Microseconds: 32

INTERNAL STORAGE: Type of Memory: Core.
Capacity in Words: 4k.
No. of bits per word: 7 decimal.

Magnetic Tape Unit: 30k. Maximum number of units attachable:

Cards per minute: In Out: Type:

Paper Tape characters per second: In: 200 Out: Type:

Printer: 10 ch/sec. Type: Flexowriter.
600-900 l.p.m.

Software:

Physical Characteristics: Area = 2000 sq.ft.
Cooling = air conditioning.
Weight = 23,000 lbs.
Power = 150 kw.

Notes: Used for commercial deposit accounting.

COMPUTER: GE/OARAC

Manufacturer: General Electric Company,
Computer Department,
13430 N. Black Canyon Highway, Phoenix, Arizona, U.S.A.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £62,000 Year first installed anywhere: 1953.

Number installed in - Britain: 0 U.S.A. and the rest: 1

PROCESSOR SPEED: Complete Add time in Microseconds: 400-17,000 Storage Cycle time in Microseconds: 1000-17,000.

INTERNAL STORAGE: Type of Memory: MagneticDrum.
Capacity in Words: 10k
No. of bits per word: 10 bits + sign. binary coded decimal

Magnetic Tape Unit: 1000 words/min. Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: Out: Type:

Printer: Lines per minute: Type:

Software:

Physical Characteristics: Area of Computer - 80 sq. ft.
Weight - 6,000 lbs.
Cooling - air conditioner.
Power of Computer - 23 kva.

Notes: Two address instruction type. This computer was made in 1947/48. Still in use by Bureau of Standards. Manually enter information through the keyboard.
Used for scientific computation and analysis.

COMPUTER: LGP 30

Manufacturer: Royal McBee Corporation,
Westchester Avenue,
Portchester, New York, U.S.A.

Typical Rental of System in £'s - £310 monthly.

Typical Purchase Price: £16,500. Year first installed anywhere: 1956.

Number installed in - Britain: 1 U.S.A. and the rest: 504

PROCESSOR SPEED: Complete Add time in Microseconds: 500 Storage Cycle time in Microseconds: 8,500.

INTERNAL STORAGE: Type of Memory: Magnetic Drum.
Capacity in Words: 4k.
No. of bits per word: 31 bits binary.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: Type: Ferranti 341 Ferranti 342

Paper Tape characters per second: In: 7/200 Out: 7/20/150 Type: Friden.

Printer: 10 ch/sec. Type: Telewriter IBM.

Software: Algebraic Compiler - Act 1.

Physical Characteristics: Area of computer - 15 sq. ft.
Weight - 800 lbs.
Cooling - fans.
Power - 230v 50 cycles.

Notes: Small computer.
General Precision took over Royal McBee and were in turn taken over by Litton Industries. Still available but no longer in production.
Made in Europe by Schoppe and F eser.
Fixed point arithmetic. Floating point by S/R. One address system.

COMPUTER: IAS

Manufacturer: Institute for Advanced Study,
Princeton, New Jersey, U.S.A.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £166,000 **Year first installed anywhere:**

Number installed in - Britain: 0 **U.S.A. and the rest:** 1

PROCESSOR SPEED: **Complete Add time in Microseconds:** 70 **Storage Cycle time in Microseconds:** 30

INTERNAL STORAGE:
Type of Memory: Drum + CRT.
Capacity in Words: 16k + 1024.
No. of bits per word: 40 binary.

Magnetic Tape Unit: **Maximum number of units attachable:**

Cards per minute: **In:** 1,200 **Out:** 1,200 **Type:** Card Reader/Punch.

Paper Tape characters per second: **In:** **Out:** **Type:**

Printer: **Lines per minute:** **Type:**

Software:

Physical Characteristics:
Area - 22 sq.ft.
Cooling - air conditioning.
Weight - 1,000 lbs.
Power - 20 kw. + 8 kw. Air conditioner.

Notes: Fixed point arithmetic. One addresstype system.
Served as a parent and foreunner of many similar systems e.g. Aridac, George, Illiac, Maniac, MSUDC, Oracle, Silliac, Transac 1000-2000. Michigan and Iowa State University planned computers. On[illegible] at Princeton, New Jersey.

COMPUTER: IBM 305 I

Manufacturer: IBM Corporation,
590 Madison Avenue,
New York, N.Y., U.S.A.

Typical Rental of System in £'s - £1,300 monthly.

Typical Purchase Price: £65,000 **Year first installed anywhere:** 1957.

Number installed in - Britain: 7 **U.S.A. and the rest:** 943

PROCESSOR SPEED: **Complete Add time in Microseconds:** 30,000 **Storage Cycle time in Microseconds:** 10,000

INTERNAL STORAGE: **Type of Memory:** Drum + Core.
Capacity in Words: 3k + 100.
No. of bits per word: Variable.

Magnetic Tape Unit: 15k **Maximum number of units attachable:** 4

Cards per minute: **In:** 125 **Out:** 100 **Type:** IBM 380 Reader. IBM 323 Punch.

Paper Tape characters per second: **In:** **Out:** **Type:** IBM 382 Reader.

Printer: **Lines per minute:** 80 **Type:** IBM 370 Printer.

Software:

Physical Characteristics:
Area - 360 sq.ft.
Max. floor loading - 75 lbs per sq.ft.
Cooling - blowers.
Power - 20 kva.

Notes: No index registers.

COMPUTER: IBM 650

Manufacturer: International Business Machine Corporation,
590 Madison Avenue,
New York 22, N.Y., U.S.A.

Typical Rental of System in £'s - £3,000 monthly.

Typical Purchase Price: £130,000 Year first installed anywhere: 1954.

Number installed in - Britain: 18 U.S.A. and the rest: 1132

PROCESSOR SPEED: Complete Add time in Microseconds: [illegible] Storage Cycle time see in Microseconds: below

INTERNAL STORAGE: Type of Memory: Drum + Core.
Capacity in Words: 1,000 to 4,000, + 60 words.
No. of bits per word: 10 + sign bits - binary coded.

Magnetic Tape Unit: 15,000 char/sec. Maximum number of units attachable: 6

Cards per minute: In: 200/250 Out: 100/250 Type: IBM 533 C.R.P.

Paper Tape characters per second: In: 60 Out: Type: IBM

Printer: Lines per minute: 150-1000 Type: IBM

Software: Algebraic Compiler. Fortransit.

Physical Characteristics: Area - 1503 sq. ft.
Weight - 5,656 lbs.
Cooling - fans using room air.
Power - 380, 400 or 415v. From 60 to 100 kva, 50 c.p.s.

Notes: Storage Cycle time in Microseconds: Drum - 2,448 microseconds.
Core - 96 microseconds.

IBM 355 RAMAC Magnetic Disc - 600,000 words.
2 address system. 3 index registers.
Floating point arithmetic.
It is no longer in production.

COMPUTER: IBM 701

Manufacturer: International Business Machines Corporation,
590 Madison Avenue,
New York 22, N.Y., U.S.A.

Typical Rental of System in £'s - 1,666

Typical Purchase Price: £500,000 **Year first installed anywhere:** 1953.

Number installed in - Britain: 0 **U.S.A. and the rest:** 1

PROCESSOR SPEED: **Complete Add time in Microseconds:** 60 or 36 **Storage Cycle time see in Microseconds:** below.

INTERNAL STORAGE:
Type of Memory: Drum + Core + Tube.
Capacity in Words: 8 or 16k, 4,096. 2k - 4k.
No. of bits per word 18/36 bits - binary.

Magnetic Tape Unit: 15k **Maximum number of units attachable:** 10

Cards per minute: **In:** 150 **Out:** 100 **Type:** IBM.

Paper Tape characters per second: **In:** **Out:** **Type:**

Printer: **Lines per minute:** 150 **Type:** IBM

Software: PACT - 1 - Compiler.

Physical Characteristics:
Area - 1,200-3,000 sq. ft.
Weight - 20,516 lbs.
Cooling -
Power - 84.0 kva.

Notes:
1 address system.

Now obsolete.

Storage Cyle time in Microseconds: Drum - 50,000 microseconds.
Core - 12 microseconds.

COMPUTER: IBM 704

Manufacturer: International Business Machines Corporation,
590 Madison Avenue,
New York 22, New York, U.S.A.

Typical Rental of System in £'s - £10,600 - £14,600 monthly.

Typical Purchase Price: £630,000 **Year first installed anywhere:** 1955.

Number installed in - Britain: 1 **U.S.A. and the rest:** 93

PROCESSOR SPEED: **Complete Add time in Microseconds:** 24 **Storage Cycle time in Microseconds:** 12

INTERNAL STORAGE:
Type of Memory: Drum + Core.
Capacity in Words: 4-15k + 4-32k.
No. of bits per word: 36(binary.)

Magnetic Tape Unit: 15k. **Maximum number of units attachable:** 10.

Cards per minute: **In:** 150/250 **Out:** 100 **Type:** IBM

Paper Tape characters per second: **In:** **Out:** **Type:**

Printer: **Lines per minute:** 150 **Type:** IBM

Software: FORTRAN.

Physical Characteristics:
Area - 2000 sq.ft.
Weight - 2,850 lbs.
Power - 125 kva.

Notes:
3 index registers.
A 1401 computer can be used off line with this computer.
Floating point arithmetic.
Still available but no longer in production.

COMPUTER: IBM 705 I

Manufacturer: International Business Machines Corporation,
590 Madison Avenue,
New York 22, New York, U.S.A.

Typical Rental of System in £'s £12,300 per month.

Typical Purchase Price: £700,000 **Year first installed anywhere:** 1956.

Number installed in - Britain: 3 **U.S.A. and the rest:** 60.

PROCESSOR SPEED: **Complete Add time in Microseconds:** 86-119 **Storage Cycle time in Microseconds** Core - 9-17.

INTERNAL STORAGE:
Type of Memory: Core and Drum.
Capacity in Words: 40,000 + 60,000 characters.
No. of bits per word: Binary coded decimal.

Magnetic Tape Unit: 15k **Maximum number of units attachable:** 60

Cards per minute: **In:** 250 **Out:** 100 **Type:** IBM

Paper Tape characters per second: **In:** **Out:** **Type:**

Printer: **Lines per minute:** 150/500/1000 **Type:** IBM Type 717/720A/730A.

Software: Fortran, Cobol, Autocoder.

Physical Characteristics:
Area of Computer - 2,000-3,000 sq. ft.
Weight - 32,844 lbs.
Cooling - air conditioner.
Power - 100 kva.

Notes: Still available, but no longer in production. One address type.
This Computer was used for the British National Census in 1961.
Binary coded. Fixed point arithmetic.
IBM 1401 can be used off line.

COMPUTER: IBM 709

Manufacturer: IBM Corporation,
590 Madison Avenue,
New York, N.Y., U.S.A.

Typical Rental of System in £'s - £13,300 - £18,000 monthly.

Typical Purchase Price: £860,000 **Year first installed anywhere:** 1958.

Number installed in - Britain: 1 **U.S.A. and the rest:** 49

PROCESSOR SPEED: **Complete Add time in Microseconds:** 24 **Storage Cycle time in Microseconds:** 12

INTERNAL STORAGE: **Type of Memory:** Drum + Core.
Capacity in Words: 4-16k + 4-32k.
No. of bits per word: 36 binary coded decimal.

Magnetic Tape Unit: 15k **Maximum number of units attachable:** 48

Cards per minute: **In:** 250 **Out:** 100 **Type:** IBM 711 (Mod 2) IBM 721

Paper Tape characters per second: **In:** **Out:** **Type:**

Printer: **Lines per minute:** 150 **Type:** IBM 716.

Software: FORTRAN, COBOL, COMMTRAN.

Physical Characteristics: Area - 3000 sq.ft.

Power - 160 kva.

Notes: 3 index registers. One address instruction type.
Floating point arithmetic.
A 1401 computer can be used off line with this computer.
Still available but no longer in production.
Intended for scientific work.

COMPUTER: IBM 1410

Manufacturer: IBM Corporation,
590 Madison Avenue,
New York, N.Y.U.S.A.

Typical Rental of System in £'s - £2,300 monthly.

Typical Purchase Price: £109,300-350,000 Year first installed anywhere: 1961.

Number installed in - Britain: 18 U.S.A. and the rest: 642.

PROCESSOR SPEED: Complete Add time in Microseconds: 110 Storage Cycle time in Microseconds: 4.5

INTERNAL STORAGE: Type of Memory: Core.
Capacity in Words: 10-40k.
No. of bits per word: Variable.

Magnetic Tape Unit: 20k. Maximum number of units attachable: 20.

Cards per minute: In: 800 Out: 250 Type: IBM 1402

Paper Tape characters per second: In: 500 Out: Type: IBM 1101

Printer: Lines per minute: 600 Type: IBM 1403 Mod. 1,11.

Software: FORTRAN, COBOL 61.

Physical Characteristics: Area - 400 sq.ft.
Cooling - air conditioning.
Power - 25 kva.

Notes: 15 index registers.

COMPUTER: IBM 7030 STRETCH

Manufacturer: IBM Corporation,
590 Madison Avenue,
New York, N.Y., U.S.A.

Typical Rental of System in £'s - £53,300 - £66,000 monthly.

Typical Purchase Price: £1,500,000 Year first installed anywhere: 1961.

Number installed in - Britain: 1 U.S.A. and the rest: 5

PROCESSOR SPEED: Complete Add time in Microseconds: 2 Storage Cycle time in Microseconds: 1

INTERNAL STORAGE: Type of Memory: Core
Capacity in Words: 16-262k.
No. of bits per word: 64 binary.

Magnetic Tape Unit: 62k Maximum number of units attachable: 256.

Cards per minute: In: 1000 Out: 250 Type: IBM

Paper Tape characters per second: In: Out: Type:

Printer: Lines per minute: 600 Type: IBM

Software:

Physical Characteristics: Floor Area - 5,000 sq. ft.
Max. Floor Loading - 150 lb. sq. ft.
Cooling - Air Conditioning

Notes: IBM 1401 can be used off line.
16 index registers.
Floating point arithmetic.
Did not come up to expectations, and therefore only a few were built.

COMPUTER: IBM 7070

Manufacturer: IBM Corporation,
590 Madison Avenue,
New York, N.Y., U.S.A.

Typical Rental of System in £'s - £8,000 monthly.

Typical Purchase Price: £350,000 **Year first installed anywhere:** 1960.

Number installed in - Britain: 1 **U.S.A. and the rest:** 469

PROCESSOR SPEED: **Complete Add time in Microseconds:** 60 **Storage Cycle time in Microseconds:** 6

INTERNAL STORAGE:
Type of Memory: Core.
Capacity in Words: 5-10k.
No. of bits per word: 10 (decimal).

Magnetic Tape Unit: 15-62k. **Maximum number of units attachable:** 40.

Cards per minute: **In:** 500 **Out:** 250 **Type:** IBM 7500 Reader. IBM 7550 Punch.

Paper Tape characters per second: **In:** **Out:** **Type:**

Printer: **Lines per minute:** 150 **Type:** IBM 7400 Printer.

Software: FORTRAN, COBOL '61. COMMTRAN.

Physical Characteristics:
Floor area for system - 900 sq.ft.
Max. floor loading - 100 lbs per sq.ft.
Cooling - fans & air conditioned room.
Power - 32 kva.

Notes:
IBM 1401 can be used off line with this system.
99 index registers. Floating point arithmetic.
The basis of their '700 series' on decimal machines.

COMPUTER: IBM 7090

Manufacturer: IBM Corporation,
590 Madison Avenue,
New York, N.Y., U.S.A.

Typical Rental of System in £'s - £21,000 monthly.

Typical Purchase Price: £960,000 **Year first installed anywhere:** 1959.

Number installed in - Britain: 12 **U.S.A. and the rest:** 56

PROCESSOR SPEED: **Complete Add time in Microseconds:** 4.4 **Storage Cycle time in Microseconds:** 2.2

INTERNAL STORAGE:
Type of Memory: Core.
Capacity in Words: 32k.
No. of bits per word: 36 binary.

Magnetic Tape Unit: 15-62k. **Maximum number of units attachable:** 80.

Cards per minute: **In:** 250 **Out:** 100 **Type:** IBM 7500
IBM 7550

Paper Tape characters per second: **In:** **Out:** **Type:**

Printer: **Lines per minute:** 150 **Type:** IBM 7400

Software: FORTRAN, COBOL '61, COMMTRAN.

Physical Characteristics: Area - 1100 sq.ft.

Cooling - air conditioning.
Power - 35 kva.

Notes: IBM 1401 can be used off line.
3 index registers. Floating point arithmetic.
Scientific version of 709/7000 series.

COMPUTER: ICT 1200

Manufacturer: International Computers & Tabulators Ltd.,
Putney Bridge House,
London, S.W.6.

Typical Rental of System in £'s - £625 monthly.

Typical Purchase Price: £25,000 **Year first installed anywhere:** 1955

Number installed in - Britain: 6 **U.S.A. and the rest:** 0

PROCESSOR SPEED: **Complete Add time in Microseconds:** **Storage Cycle time in Microseconds:**

INTERNAL STORAGE: **Type of Memory:** Magnetic Drum & Nickel Delay lines
Capacity in Words: 1024
No. of bits per word:

Magnetic Tape Unit: **Maximum number of units attachable:**

Cards per minute: **In:** 200 **Out:** 100 **Type:** ICT 581 C.R.
ICT 582 C.P.

Paper Tape characters per second: **In:** **Out:** **Type:**

Printer: **Lines per minute:** 100 **Type:** ICT Printer 902 Tab.

Software:

Physical Characteristics: Floor Area: Varies
Cooling: Air Conditioning

Notes:

Built orignally by Hollerith.
This computer was also known as the HEC.

COMPUTER:	ICT 1301
Manufacturer:	International Computers & Tabulators Ltd., Putney Bridge House, London, S.W.6.
Typical Rental of System in £'s	£1,355 (excluding magnetic tape).
Typical Purchase Price:	£65,000 — **Year first installed anywhere:** 1961
Number installed in - Britain:	88 — **U.S.A. and the rest:** 61
PROCESSOR SPEED:	**Complete Add time in Microseconds:** 21 — **Storage Cycle time in Microseconds:** 4.0 - 5.8
INTERNAL STORAGE:	**Type of Memory:** Core **Capacity in Words:** 2k **No. of bits per word:** 12 (decimal)
Magnetic Tape Unit:	**Maximum number of units attachable:**
Cards per minute:	**In:** 600 — **Out:** 100 — **Type:** ICT 590 Card Reader, ICT 600 Card Punch
Paper Tape characters per second:	**In:** — **Out:** — **Type:**
Printer:	**Lines per minute:** 600 — **Type:** ICT 660 Printer
Software:	
Physical Characteristics:	Floor area - 600-1,000 sq. ft. Power - 5kva-24 kva. 360-440 v.3. phase. Cooling - None.
Notes:	

COMPUTER:	ILLIAC II
Manufacturer:	Digital Computer Laboratory, University of Illinois, Urbana, Illinois, U.S.A.
Typical Rental of System in £'s -	
Typical Purchase Price: £160,000	Year first installed anywhere: 1958
Number installed in - Britain: 0	U.S.A. and the rest: 4
PROCESSOR SPEED:	Complete Add time in Microseconds: 93 Storage Cycle time in Microseconds: 1,280 - 16,900
INTERNAL STORAGE:	Type of Memory: Drum + CRT Capacity in Words: 12k + 1024 No. of bits per word: 40 binary
Magnetic Tape Unit:	Maximum number of units attachable:
Cards per minute: In:	Out: Type:
Paper Tape characters per second: In: 300	Out: 60 Type: Teletype Punch
Printer: 5 ch/sec	Type: Page Printer
Software:	
Physical Characteristics:	Area - 100 sq. ft. Weight - 4000 lbs. Cooling - air conditioning. Power - 27.2 kw + 7 kw.
Notes:	Fixed point arithmetic, one address system. Built by University of Illinois for their own use. Member of a family originally designed and constructed by Institute of Advanced Study.

COMPUTER: JUKE BOX

Manufacturer: Autonetics Division,
North American Aviation, Inc.,
9150 E Imperial Highway, Downey, California, U.S.A.

Typical Rental of System in £'s - £2,500 monthly.

Typical Purchase Price: £100,000 Year first installed anywhere: 1958.

Number installed in - Britain: 0 U.S.A. and the rest: 10

PROCESSOR SPEED: Complete Add time in Microseconds: 9,500 Storage Cycle time in Microseconds: 9050

INTERNAL STORAGE: Type of Memory: Magnetic Disk.
Capacity in Words: 4k.
No. of bits per word: 39 binary.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 200 Out: Type: Typewriter.

Printer: 11 ch/sec. Type: Typewriter.

Software:

Physical Characteristics: Area - 2 sq.ft.

Weight - 275 lbs.
Power - 0.5 kw.

Notes: Fixed point arithmetic. 2 address instruction type.
Output by Nixie Display Tubes. 16 Ch/17,280 msecs. (b.c.d. or octal)
General purpose computer. Now replaced by the FADAC computer.

COMPUTER: LEO I

Manufacturer: Leo Computers Limited,
Hartree House,
Queensway, London, W.2.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £95,000 Year first installed anywhere 1951

Number installed in - Britain: 1 U.S.A. and the rest: 0

PROCESSOR SPEED: Complete Add time in Microseconds: Storage Cycle time in Microseconds:

INTERNAL STORAGE: Type of Memory: Mercury delay lines
Capacity in Words: 2048 words - Aux.store 65,536wds.
No. of bits per word:

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: 200 Out: 100 Type: ICT 581 Card
ICT 582 Punch

Paper Tape characters per second: In: 200 Out: Type: Ferranti mk II Reader.

Printer: Lines per minute: 300
600/850 Type: Power Samas Printer.
Anelex.

Software:

Physical Characteristics: Floor area - 65' x 28'.
Cooling - fans.
Power supply - 50-90 kw. 3 phase 4 wire 50 cps.
based on EDSAC.

Notes: Paper tape equipment includes - Ferranti TR2 Tape Reader
This computer is now in the London Science Museum. The pioneer of British data processing machines, built privately by the then J. Lyons organisation.
English Electric Co. Ltd., have now joined up with Leo Computers Limited and Marconi.

COMPUTER: LEPRECHAUN

Manufacturer: Bell Telephone Laboratories, Inc,
Whippany, New Jersey, U. S. A.

Typical Rental of System in £'s - None

Typical Purchase Price: £50,000 Year first installed anywhere: 1956

Number installed in - Britain: 0 U.S.A. and the rest: 1

PROCESSOR SPEED: Complete Add time in Microseconds: 40 Storage Cycle time in Microseconds: 8

INTERNAL STORAGE: Type of Memory: Core
Capacity in Words: 1024
No. of bits per word: 17-binary

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 200 Out: 60 Type:

Printer: 10 ch/sec Type: Typewriter

Software:

Physical Characteristics: Volume - 16 cu.ft.
Power - 0.160 k.w.
Weight - 450 lbs.

Notes: Fixed point arithmetic, one address instruction type
System built under U.S. Airforce Contract. Only 1 installed.

COMPUTER: LINCOLN T X 0

Manufacturer: Lincoln Laboratory,
Massachusetts Institute of Technology,
Lexington 73, Massachusetts.

Typical Rental of System in £'s - None.

Typical Purchase Price: Year first installed anywhere: 1957

Number installed in - Britain: 0 U.S.A. and the rest: 1

PROCESSOR SPEED: Complete Add time in Microseconds: 6 Storage Cycle time in Microseconds: 3

INTERNAL STORAGE: Type of Memory: Core.
Capacity in Words: 65k
No. of bits per word: 18 binary.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 250 Out: Type: Photoreader

Printer: 10 ch/sec. Type: Flexowriter.

Software:

Physical Characteristics: Area - 200 sq. ft.
Cooling - air conditioning.
Weight - 4,000 lbs.
Power - 10 kw.

Notes: 1 address type instruction.
An experimental digital computer, used to test advanced design techniques, including very large core storage and transistor circuitry.

COMPUTER: LINCOLN T X 2

Manufacturer: Lincoln Laboratory,
Massachusetts Institute of Technology,
Lexington 73, Massachusetts.

Typical Rental of System in £'s - None.

Typical Purchase Price: Year first installed anywhere: 1958

Number installed in - Britain: 0 U.S.A. and the rest: 1

PROCESSOR SPEED: Complete Add time in Microseconds: 4.8 Storage Cycle time in Microseconds: 3

INTERNAL STORAGE: Type of Memory: Core
Capacity in Words: 65k + 4k
No. of bits per word: 36 binary.

Magnetic Tape Unit: 37 Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 250 Out: Type:

Printer: Lines per minute: 10 Type: Flexowriter.

Software:

Physical Characteristics: Area - 200 sq. ft.
Cooling - Air conditioning for core memory.
Weight - 4,000 lbs.
Power - 14 kw.

Notes: Fixed point, one address system.
Used for scientific research.

COMPUTER: MANIAC I

Manufacturer: University of California,
Los Alamos Scientific Laboratory,
P.O. Box 1663, Los Alamos, New Mexico.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £65,000 Year first installed anywhere: 1952

Number installed in - Britain: 0 U.S.A. and the rest: 1

PROCESSOR SPEED: Complete Add time in Microseconds: 80 Storage Cycle time in Microseconds: 83,000 50 wds.

INTERNAL STORAGE: Type of Memory: Magnetic Drum and Cathode Ray Tube.
Capacity in Words: 10,000 words + 1024 words.
No. of bits per word: 40 binary.

Magnetic Tape Unit: 1,024 words in 45 secs. Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 20 Out: 81 Type:

Printer: Lines per minute: 3,600 wds. per min. Type: Anelex/
36 wds. per min. Teletype.

Software:

Physical Characteristics: Area of Computer - 20 sq. ft.
Weight -
Cooling - air conditioner.
Power - 35 kw.

Notes: Fixed point arithmetic, one address system - binary.
Used for general purpose scientific computations.

COMPUTER: MANIAC II

Manufacturer: University of California,
Los Alamos, Scientific Laboratory,
Los Alamos, New Mexico.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £75,000 Year first installed anywhere: 1957.

Number installed in - Britain: 0 U.S.A. and the rest: 1

PROCESSOR SPEED: Complete Add time in Microseconds: 16 Storage Cycle time in Microseconds: 2.4

INTERNAL STORAGE: Type of Memory: Magnetic Cores + Cathode Ray Tube.
Capacity in Words: 4096 + 12k.
No. of bits per word: 48 binary.

Magnetic Tape Unit: 18,000 Maximum number of units attachable: 3

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 18 Out: 4.28 Type: Photoelectric Teletype.

Printer: 8.55 words/sec. Type: Flexowriter.

Software:

Physical Characteristics: Area - 98 sq.ft.
Cooling - air conditioning.
Power - 25 kw.

Notes: Floating point arithmetic. One address instruction type.
Installed and manufactured at University.

COMPUTER: MODAC 404

Manufacturer: Mountain Systems Inc.,
Airborne Instruments Laboratory,
Deer Park, Long Island, New York.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £33,000 Year first installed anywhere: 1954

Number installed in - Britain: 0 U.S.A. and the rest: 1

PROCESSOR SPEED: Complete Add time in Microseconds: 25,000 Storage Cycle time in Microseconds: 25,000.

INTERNAL STORAGE: Type of Memory: Magnetic Drum
Capacity in Words: 20,000 words
No. of bits per word: 6 bits - binary coded decimal.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: 240 Out: 240 Type: Remington Rand.

Paper Tape characters per second: In: 200 Out: 200 Type:

Printer: Lines per minute: Type:

Software:

Physical Characteristics: Area of Computer - 20 sq. ft.
Weight - 1,500 lbs.
Cooling - none.
Power - 3 Kw.

Notes: Fixed point, one address system.

COMPUTER: MONROBOT III

Manufacturer: Monroe Calculating Machine Co.,
555 Mitchell Street,
Orange, New Jersey, U.S.A.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £10,000 **Year first installed anywhere:** 1954.

Number installed in - Britain: 0 **U.S.A. and the rest:** 1

PROCESSOR SPEED: **Complete Add time in Microseconds:** 120,000 **Storage Cycle time in Microseconds:** 15,000

INTERNAL STORAGE:
Type of Memory: Magnetic Drum.
Capacity in Words: 2k.
No. of bits per word: 20. binary coded decimal.

Magnetic Tape Unit: **Maximum number of units attachable:**

Cards per minute: **In:** **Out:** **Type:**

Paper Tape characters per second: **In:** 10 **Out:** 10 **Type:** Flexowriter.

Printer: **Lines per minute:** 10 c.p.s. **Type:** Flexowriter.

Software:

Physical Characteristics:
Space of Computer - desk size.
Weight - 1,000 lbs.
Cooling - none.
Power - 2.5 kw.

Notes: No longer in production.

Fixed point arithmetic.
4 address instruction type.

COMPUTER: MONROBOT V

Manufacturer: Monroe Calculating Machine Company,
555 Mitchell Street,
Orange, New Jersey, U.S.A.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £27,000 Year first installed anywhere: 1954.

Number installed in - Britain: U.S.A. and the rest: 1

PROCESSOR SPEED: Complete Add time in Microseconds: 120 Storage Cycle time in Microseconds: 18,000

INTERNAL STORAGE: Type of Memory: Magnetic Drum.
Capacity in Words: 300 words.
No. of bits per word: 20. binary coded decimal.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 570 Out: 570 Type:

Printer: Lines per minute: 400 char/min. Type: Flexowriter.

Software:

Physical Characteristics: Area of Computer - 44½" x 72"x31" Desk.
Weight - 1686 lbs. including Flexowriter.
Cooling - none.
Power - 5 kw

Notes: No longer in production.

Fixed point arithmetic.
4 address instruction type.

COMPUTER: MONROBOT IX

Manufacturer: Monroe Calculating Machine Company,
60 Main Street, San Fransisco 3,
U.S.A.

Typical Rental of System in £'s - sold only.

Typical Purchase Price: £5,000 Year first installed anywhere: 1958.

Number installed in - Britain: 0 U.S.A. and the rest: 158

PROCESSOR SPEED: Complete Add time in Microseconds: 5-12,000 Storage Cycle time in Microseconds: 12,500.

INTERNAL STORAGE: Type of Memory: Drum.
Capacity in Words: 14 wds.
No. of bits per word: 18.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: 10 ch/sec. Type: IBM 024 Punch.

Paper Tape characters per second: In: 10 Out: Type: Flexowriter

Printer: 10 ch/sec. Type: Flexowriter.

Software:

Physical Characteristics: Area - 15 sq.ft.
Weight - 450 lbs.
Power - .8 kva.

Notes: Prepare program by plugboard. Fixed point, one address.

COMPUTER: MONROBOT XI

Manufacturer: Monroe Calculating Machine Company,
555 Mitchell Street,
Orange, New Jersey, U.S.A.

Typical Rental of System in £'s - £230 monthly.

Typical Purchase Price: £8,000 **Year first installed anywhere:** 1960.

Number installed in - Britain: 10 **U.S.A. and the rest:** 685

PROCESSOR SPEED: **Complete Add time in Microseconds:** 9000 **Storage Cycle time in Microseconds:** 6000

INTERNAL STORAGE: **Type of Memory:** Drum.
Capacity in Words: 1k.
No. of bits per word: 32 (binary.)

Magnetic Tape Unit: **Maximum number of units attachable:**

Cards per minute: **In:** 15 **Out:** 15 **Type:**

Paper Tape characters per second: **In:** 20 **Out:** 20 **Type:** Typewriter.

Printer: 10 ~~d.pes~~ **per minute** **Type:** Flexowriter.

Software:

Physical Characteristics: Area - 20 sq.ft.

Cooling - none.
Power - 1 kva.

Notes: No indec registers.
A stored program, general purpose computer.

COMPUTER: N.C.R. 102A

Manufacturer: National Cash Register Co. Inc.,
Dayton 9,
Ohio, U.S.A.

Typical Rental of System in £'s - £600

Typical Purchase Price: £24,000 **Year first installed anywhere:** 1953.

Number installed in - Britain: 0 **U.S.A. and the rest:** 16.

PROCESSOR SPEED: **Complete Add time in Microseconds:** 19,900 **Storage Cycle time in Microseconds:** 12,500.

INTERNAL STORAGE: **Type of Memory:** Magnetic Drum.
Capacity in Words: 1024.
No. of bits per word: 42 binary.

Magnetic Tape Unit: 600 ch/sec. **Maximum number of units attachable:** 7

Cards per minute: **In:** 50 **Out:** 50 **Type:** IBM 523 (Modified)

Paper Tape characters per second: **In:** 10 **Out:** 10 **Type:** Flexowriter.

Printer: **Lines per minute:** **Type:**

Software:

Physical Characteristics:
System - 135 cu.ft.
Cooling - air conditioning.
Weight - 2,700 lbs.
Power - 7.7 kw.

Notes: Now obsolete.

Fixed poin arithmetic 3 address.

COMPUTER: NCR 102 D.

Manufacturer: National Cash Register Co. Inc.,
Dayton 9,
Ohio, U.S.A.

Typical Rental of System in £'s - £800. monthly.

Typical Purchase Price: £22,000 Year first installed anywhere: 1954.

Number installed in - Britain: 0 U.S.A. and the rest: 5

PROCESSOR SPEED: Complete Add time in Microseconds: 7,800 Storage Cycle time in Microseconds: 12,500.

INTERNAL STORAGE: Type of Memory: Magnetic Drum.
Capacity in Words: 1024.
No. of bits per word: .9 plus 6 binary dig/word b.c.d.

Magnetic Tape Unit: 600 chsr/sec. Maximum number of units attachable:

Cards per minute: In: 100 Out: 100 Type: IBM Card Reader.

Paper Tape characters per second: In: 10/200 Out: 10/60 Mod 160 Reader Type: 170 Punch.

Printer: Lines per minute: Type:

Software:

Physical Characteristics: Area of Computer - 250 sq. ft.
Weight - 2,700 lbs.
Cooling -
Power - 8.2 kw, 73.1 kva, 0.71 pf.

Notes: Fixed point. 3 address instruction.
A general purpose scientific processor.

COMPUTER: OLIVETTI ELEA 6001

Manufacturer: C. Olivetti & Co.,
Via Pirelli 32,
Milano, Italy.

Typical Rental of System in £'s - £1,930 monthly.

Typical Purchase Price: £40,500 Year first installed anywhere: 1961.

Number installed in - Britain: 0 U.S.A. and the rest: 82

PROCESSOR SPEED: Complete Add time in Microseconds: 421 Storage Cycle time in Microseconds: 5

INTERNAL STORAGE: Type of Memory: Core.
Capacity in Words: 10-100k.
No. of bits per word: Variable.

Magnetic Tape Unit: 11-32.5k. Maximum number of units attachable:

Cards per minute: In: 1500 Out: 300 Type:

Paper Tape characters per second: In: 800 Out: 50 Type:

Printer: Lines per minute: 650 - 1070 Type:

Software: FORTRAN, APS, PALGO, PSICO & PAC.

Physical Characteristics:

Notes: Olivetti 4001 can be used off line.

COMPUTER: OLIVETTI ELEA 9003

Manufacturer: Ing. C. Olivetti & Co.,
Via Pirelli 32,
Milano, Italy.

Typical Rental of System in £'s - £2,800 monthly.

Typical Purchase Price: £236,000 Year first installed anywhere: 1960.

Number installed in - Britain: 0 U.S.A. and the rest: 36

PROCESSOR SPEED: Complete Add time in Microseconds: 200 Storage Cycle time in Microseconds: 5

INTERNAL STORAGE: Type of Memory: Core.
Capacity in Words: 20-160k.
No. of bits per word: Variable.

Magnetic Tape Unit: 45k. Maximum number of units attachable: 20.

Cards per minute: In: 500-700 Out: 150-300 Type:

Paper Tape characters per second: In: 800 Out: 50 Type:

Printer: 42 ch/sec/650-1070. Type:

Software: APS, PALGO, FORTRAN, PSICO & PAC.

Physical Characteristics:

Notes: Olivetti 4001 can be used off line.
40 index registers.

COMPUTER: ORACLE

Manufacturer: Oak Ridge National Laboratory and
Argonne National Laboratory,
U.S.A.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £230,000 - £300,000 Year first installed anywhere: 1953

Number installed in - Britain: 0 U.S.A. and the rest: 1

PROCESSOR SPEED: Complete Add time in Microseconds: 50. Storage Cycle time in Microseconds: 18 CRT

INTERNAL STORAGE: Type of Memory: Tube
Capacity in Words: 4000.
No. of bits per word: 39 (40) binary.

Magnetic Tape Unit: 1,000 ch. sec. Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 200 Out: 60 Type: Photoelectric Teletype.

Printer: Lines per minute: Type:

Software:

Physical Characteristics:
Space - 1600 sq.ft.
Cooling - air conditioning.
Power - 60 kw. 0.9 p.f.

Notes:
4 index registers
Output by C.R.T.
Fixed point arithmetic.
1 address system.
Installed for US Government.

COMPUTER: PACKARD BELL 250

Manufacturer: Packard Bell Electronics,
1905 Armacost Avenue,
Los Angeles 25, California.

Typical Rental of System in £'s - £400 monthly(excluding magnetic tapes).
Not rented outside U.S.A.

Typical Purchase Price: £13,000 Year first installed anywhere: 1960

Number installed in - Britain: 2 U.S.A. and the rest: 176

PROCESSOR SPEED: Complete Add time in Microseconds: 24 Storage Cycle time in Microseconds: 1500 - 900

INTERNAL STORAGE: Type of Memory: Delay lines.
Capacity in Words: 1.8 - 16k
No. of bits per word: 22 binary.

Magnetic Tape Unit: 2k Maximum number of units attachable: 6

Cards per minute: In: 400 Out: Type: Model CR2
HSR - 1 Reader
HSP - 1 Punch

Paper Tape characters per second: In: 10/300 Out: 15/110 Type:

Printer: 10 ch/sec Type: Model FX-1 Flexowriter

Software: Algebraic Compiler

Physical Characteristics: Floor area - 8 sq. ft.
Cooling - None.
Power - 115 volts, 110 watts.

Notes: Lindex veg.
Now built under licence by S.E.T.I of France.

COMPUTER: PENNSTAC

Manufacturer: Pennsylvania State University,
Electrical Engineering Department,
University Park, Pennsylvanis, U.S.A.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £34,000 **Year first installed anywhere:** 1955.

Number installed in - Britain: 0 **U.S.A. and the rest:** 1

PROCESSOR SPEED: **Complete Add time in Microseconds:** 3445 **Storage Cycle time in Microseconds:** 2,350.

INTERNAL STORAGE: **Type of Memory:** Magnetic Drum.
Capacity in Words: 2,500.
No. of bits per word: 11 binary coded decimal.

Magnetic Tape Unit: **Maximum number of units attachable:**

Cards per minute: **In:** **Out:** **Type:**

Paper Tape characters per second: **In:** 440 **Out:** 60 **Type:** Ferranti Reader. Teletype Punch.

Printer: 10 ch/sec. **Type:** Flexowriter.

Software:

Physical Characteristics: Area - 80 sq.ft.
Weight - 3,500 lbs.
Cooling - air conditioning.
Power - 10 kw., 11.5 kva.

Notes: Fixed point arithmetic, 2 address instruction type.
Used primarily for the education of digital computer engineers, and the performance of research in digital computer design.

COMPUTER: PHILCO 2000 Model 210

Manufacturer: Philco Corporation,
A Subsidiary of Ford Motor Co.,
3900 Welsh Rd. Willow Grove. Pennsylvania, U. S. A.

Typical Rental of System in £'s - £10,000 monthly.

Typical Purchase Price: £140,000 - £530,000 Year first installed anywhere: 1958

Number installed in - Britain: 0 U.S.A. and the rest: 14

PROCESSOR SPEED: Complete Add time in Microseconds: 11.7 Storage Cycle time in Microseconds: 10,000

INTERNAL STORAGE: Type of Memory: Core and drum.
Capacity in Words: 4-32 k.
No. of bits per word: 48 binary.

Magnetic Tape Unit: 90 k Maximum number of units attachable: 256.

Cards per minute: In: 2,000 Out: 100 Type: Philco Reader. Philco Model 265 Punch.

Paper Tape characters per second: In: 1,000 Out: 60 Type: Philco.

Printer: Lines per minute: 900 Type: Philco Model 256-1

Software: ALTAC, COBOL 61.

Physical Characteristics: Area - 300 sq. ft.
Weight - 2100 lbs.
Power - 24 kva.
Cooling - Air conditioning.

Notes: Philco 1000 can be used off line.
32 index registers. Floating pt. arithmetic.

COMPUTER: R C A 301

Manufacturer: Radio Corporation of America,
Camden 2, New Jersey, U. S. A.

Typical Rental of System in £'s - £1,730 monthly.

Typical Purchase Price: £65,000 - £90,300 **Year first installed anywhere:** 1961

Number installed in - Britain: 0 **U.S.A. and the rest:** 636

PROCESSOR SPEED: **Complete Add time in Microseconds:** 189,000 **Storage Cycle time in Microseconds:** 7,000

INTERNAL STORAGE:
Type of Memory: Core.
Capacity in Words: 10-20k.
No. of bits per word: Variable - binary coded decimal.

Magnetic Tape Unit: 7.5 k. **Maximum number of units attachable:** 12.

Cards per minute: **In:** 600 **Out:** 100 **Type:** RCA 623 - Reader, 634 - Punch

Paper Tape characters per second: **In:** 100 **Out:** 100 **Type:** RCA 321 Reader/Punch.

Printer: **Lines per minute:** 600 **Type:** RCA 632. On-line Printer

Software: UMAC(University of Miami Algebraic Compiler), Cobol'61.

Physical Characteristics:
Area - 400 sq. ft.
Cooling - air conditioning.
Power - 10 kva.

Notes: 1 index register.
Sold in Europe as Gamma 30, and the ICT 1500.

COMPUTER: R C A BISMAC I

Manufacturer: RADIO CORPORATION OF AMERICA,
Electronic Data Processing Systems Division,
Camden 2, New Jersey, U. S. A.

Typical Rental of System in £'s - £10,000 - £37,500 monthly.

Typical Purchase Price: £400,000-1,500,000 **Year first installed anywhere:** 1956

Number installed in - Britain: 0 **U.S.A. and the rest:** 3

PROCESSOR SPEED:
Complete Add time in Microseconds: 2777
Storage Cycle time in Microseconds: Drum - 5,120 Core - 20

INTERNAL STORAGE:
Type of Memory: Magnetic drum and core.
Capacity in Words: 18k + 4k
No. of bits per word: Variable - binary coded.

Magnetic Tape Unit: 10k **Maximum number of units attachable:**

Cards per minute: In: 400 **Out:** **Type:** RCA Reader

Paper Tape characters per second: In: 200/400 **Out:** **Type:** RCA Reader

Printer: Lines per minute: 600 **Type:** RCA Printer

Software:

Physical Characteristics:
Area of computer system - 20,000 sq. ft.
Weight of computer - 26,500 lbs.
Cooling - air conditioner.
Power of system - 246 kw, 274kva 0.9 pf.

Notes: This computer was built in 1950. Fixed point arithmetic, with a 3 address instruction type. No longer in production.

COMPUTER: R.C.A. BISMAC II

Manufacturer: Radio Corporation of America,
Camden 2,
New Jersey, U.S.A.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £500,000 Year first installed anywhere: 1952

Number installed in - Britain: 0 U.S.A. and the rest: 3

PROCESSOR SPEED: Complete Add time in Microseconds: 120 + 40c* Storage Cycle time in Microseconds: 5,120

INTERNAL STORAGE: Type of Memory: Magnetic Drum + Core
Capacity in Words: 32k + 8k
No. of bits per word: 7 bits.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: 400 Out: 150 Type: RCA

Paper Tape characters per second: In: 200 Out: Type:

Printer: 9 ~~ch~~/sec. Type: RCA Printer.

Software:

Physical Characteristics: Area of Computer - 325 sq. ft.
Weight - 26,500 lbs.
Cooling - air conditioning.
Power - 37.2 Kw 50.9 kva.

Notes: Now obsolete. Fixed point arithmetic, 3 address instruction type. Altogether 6 installations were made.

* No. of characters in longest operand.

COMPUTER: READIX

Manufacturer: J.B. Rea Co. Inc.,
2202 Broadway,
Santa Monica, California, U.S.A.

Typical Rental of System in £'s - £908.

Typical Purchase Price: £33,000-36,000. Year first installed anywhere: 1956.

Number installed in - Britain: 0 U.S.A. and the rest: 6

PROCESSOR SPEED: Complete Add time in Microseconds: 850-9,350. Storage Cycle time in Microseconds: 425 9350.

INTERNAL STORAGE: Type of Memory: Drum.
Capacity in Words: 4,000
No. of bits per word: 10 (11) binary coded decimal.

Magnetic Tape Unit: 700 Maximum number of units attachable:

Cards per minute: In: 100 Out: 100 Type: IBM Card Read Punch.

Paper Tape characters per second: In: Out: Type:

Printer: Lines per minute: Type:

Software:

Physical Characteristics:
Area of computer: 7'6" x 6'6"

Power - 5kw. 110v. 60 cycle simple phase.

Notes: Binary coded.
Fixed point arithmetic with possible floating point. 1 address system.
Taken over by Idaho - Maryland Mines Corporation, Magnetics Division.

COMPUTER: RECOMP II

Manufacturer: Autonetics, A Division of North American Aviation Co.,
3584 Wilshire Boulevard, Los Angeles 5,
California, U.S.A.

Typical Rental of System in £'s - £1,000 monthly.

Typical Purchase Price: £30,000 Year first installed anywhere: 1958.

Number installed in - Britain: 0 U.S.A. and the rest: 66

PROCESSOR SPEED: Complete Add time in Microseconds: 9,500-1,490. Storage Cycle time in Microseconds: 9000 950.

INTERNAL STORAGE: Type of Memory: Disk.
Capacity in Words: 4080.
No. of bits per word: 40 (binary).

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: 60 Type:

Paper Tape characters per second: In: 600 Out: 150 Type:

Printer: Lines per minute: Type:

Software: SALT, SCOPAC (Fortran type).

Physical Characteristics:

Notes: No index registers.
Fixed and floating point arithmetic.
1 address system.
No longer in production.

COMPUTER: SEA/CAB 500

Manufacturer: Societe d'electronique et d'Automatisme, (S.E.A.),
138 Boulevard de Verdue,
Courbevoie, (Seine), France.

Typical Rental of System in £'s - £625.

Typical Purchase Price: £23,675-25,000. Year first installed anywhere: 1962.

Number installed in - Britain: 0 U.S.A. and the rest: 125

PROCESSOR SPEED: Complete Add time in Microseconds: 312 Storage Cycle time in Microseconds: 10

INTERNAL STORAGE: Type of Memory: Drum.
Capacity in Words: 16k.
No. of bits per word: 33 binary.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 50 Out: 45 S.E.A. Seriei type: 1080 Reader SEA Punch.

Printer: 10 ch/sec. Type: Typewriter.

Software:

Physical Characteristics: Area - 6' 8" x 3' 0".
Cooling - none.
Weight - 1400 lbs.
Power - 3 phase 1.7 kw.

Notes: General purpose digital computer for scientific problems.
Distributors are Societe pour L'Exploitation des Procedes S.E.A.
Production undertaken by Le Materiel Electronique S-M (Schneider Group)

Fixed point arithmetic. Now sold by Bull as Gamma 500.

COMPUTER: SEAC

Manufacturer: U.S. Department of Commerce,
National Bureau of Standards,
Connecticut & Van Ness Avenues, Washington 25 D.C., U.S.A.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: none. **Year first installed anywhere:** 1950

Number installed in - Britain: **U.S.A. and the rest:** 1

PROCESSOR SPEED: **Complete Add time in Microseconds:** 1155 **Storage Cycle time in Microseconds:** Delay 216,000

INTERNAL STORAGE: **Type of Memory**
Capacity in Words: 1024 words.
No. of bits per word: 44 + sign (binary).

Magnetic Tape Unit: 4 **Maximum number of units attachable:**

Cards per minute: **In:** 330 **Out:** **Type:**

Paper Tape characters per second: **In:** 10, 150 or 600 **Out:** 10, 58 or 240 **Type:** Flexowriter.

Printer: **Lines per minute:** 10 char/sec. **Type:** Flexowriter.

Software: Compiler.

Physical Characteristics:
Floor area - 1,386 sq. ft.
Weight - 3,000 lbs.
Cooling - blowers.
Power - 5.7 kw. 32.2 kva. 0.80 pf.

Notes: Magnetic Wire-used at 65 w.p.s. Faster Tape equipment is used at 600/240 char/sec. Type - Potter and Soroban Tape Units.
3/4 address instruction system.
3 index registers. Fixed point arithmetic.

SEAC retired last May 1964, and recently was put in the Smithsonian Institute.

COMPUTER: SEL/ER 56

Manufacturer: Standard Electrik Lorenz Ag.,
Informatikwerk Stuttgart,
Hellmuth-Hirth Strasse 42, Germany.

Typical Rental of System in £'s - £1,250 monthly.

Typical Purchase Price: £50,000 Year first installed anywhere: 1956.

Number installed in - Britain: 0 U.S.A. and the rest: 11

PROCESSOR SPEED: Complete Add time in Microseconds: 200 Storage Cycle time in Microseconds: 10

INTERNAL STORAGE: Type of Memory: Magnetic Drum + Core.
Capacity in Words: 12,000 words + 1000-9000 words.
No. of bits per word: 7 bits - decimal.

Magnetic Tape Unit: FR 300
7500 words/sec. Maximum number of units attachable:

Cards per minute: In: 400 Out: 100 Type: Elliott Card Rdr. ICT 600 C/Punch.

Paper Tape characters per second: In: 300 Out: 50/300 Type: see below.

Printer: Lines per minute: 900 l.p.m.
100 cps. Type: National Printer - NCR. Creed Model 1000

Software:

Physical Characteristics: Floor area of Computer = 700-1000 sq. ft.
Weight - 2,380 lbs.
Cooling - minimum requirements.
Power - 5-35 kw.

Notes: Paper Tape equipment includes - Ferranti TR5 Tape Reader, SL 614 Tape Punch, CR 3000 Punch.

No longer in poduction. First computer in Europe.Excluding (G.B.)
One address instructions. Fixed and floating point arithmetic.

COMPUTER: SIEMENS 2002

Manufacturer: Siemens & Halske Akt.,
Hofmannstrasse 51,
8 Munchen 25, Germany.

Typical Rental of System in £'s - £4,600 monthly.

Typical Purchase Price: £100,000 **Year first installed anywhere:** 1959.

Number installed in - Britain: 0 **U.S.A. and the rest:** 42

PROCESSOR SPEED: **Complete Add time in Microseconds:** 180 **Storage Cycle time in Microseconds:** 90-23,000

INTERNAL STORAGE:
Type of Memory: Core + Drum.
Capacity in Words: 1-100k + 10k.
No. of bits per word: 12 (decimal).

Magnetic Tape Unit: 30-46k. **Maximum number of units attachable:** 60.

Cards per minute: **In:** 650 **Out:** 100 **Type:**

Paper Tape characters per second: **In:** 200 **Out:** 60 **Type:**

Printer: **Lines per minute:** 1500 **Type:**

Software: ALGOL.

Physical Characteristics:

Notes: 3 index registers. Floating point arithmetic.

COMPUTER: STANTEC ZEBRA

Manufacturer: Standard Telephones & Cables Limited,
Connaught House,
63 Aldwych, London, W.C.2.

Typical Rental of System in £'s - £700.

Typical Purchase Price: £28,000. **Year first installed anywhere:** 1957.

Number installed in - Britain: 22 **U.S.A. and the rest:** 32

PROCESSOR SPEED: **Complete Add time in Microseconds:** 312 **Storage Cycle time in Microseconds:** 312 - 10,000

INTERNAL STORAGE: **Type of Memory:** Drum.
Capacity in Words: 8k.
No. of bits per word: 33 binary.

Magnetic Tape Unit: 15k. **Maximum number of units attachable:** 8

Cards per minute: **In:** **Out:** **Type:**

Paper Tape characters per second: **In:** 200 **Out:** 10/50 **Type:** Ferranti Rdr. Teletype punch.

Printer: 10 ch/sec. **Type:** Teleprinter.

Software: ALGOL.

Physical Characteristics:
Floor area - 9' x 2'.
Max. floor loading - 242 lbs. per sq.ft.
Cooling - air fans.
Power supply - 2.5 kva. simple phase.
0.7 kva 3 phase 230v 50 cycles.

Notes:
12 index registers.
2 address instruction type.
Designed fundamentally for scientific work but is adaptable to a range of commercial applications.

COMPUTER: SWAC

Manufacturer: U.S. Department of Commerce,
National Bureau of Standards,
Connecticut & Van Ness Avenues,
Washington 25 D.C.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £135,000 **Year first installed anywhere:** 1951

Number installed in - Britain: 0 **U.S.A. and the rest:** 1

PROCESSOR SPEED: **Complete Add time in Microseconds:** 64 **Storage Cycle time in Microseconds:** 8 or 1700

INTERNAL STORAGE:
Type of Memory: Magnetic Drum & C.R.T.
Capacity in Words: 8K & 256 words
No. of bits per word: 37 bits including sign bit. binary.

Magnetic Tape Unit: **Maximum number of units attachable:**

Cards per minute: **In:** 240 **Out:** 100 **Type:** IBM

Paper Tape characters per second: **In:** **Out:** **Type:**

Printer: **Lines per minute:** 80 **Type:** IBM 402 Tabulator.

Software:

Physical Characteristics:
Cooling - air conditioner
Power - 30 - 35 kw
Space - 17 x 31 ft.

Notes: Fixed point arithmetic. Four address instruction type.
Uses tabulator IBM 402 80 lines/min.
3 index registers.

Used for general purpose scientific computation and research in numerical analysis computing methods.

COMPUTER: TR 4

Manufacturer: Telefunken G.m.b.H.,
Bucklestrasse 3,
Konstantz, Germany.

Typical Rental of System in £'s - £7,000 monthly.

Typical Purchase Price: £300,000. Year first installed anywhere: 1962.

Number installed in - Britain: 0 U.S.A. and the rest: 21

PROCESSOR SPEED: Complete Add time in Microseconds: 11 Storage Cycle time in Microseconds: 6

INTERNAL STORAGE: Type of Memory: Core.
Capacity in Words: 4-32k.
No. of bits per word: 48 binary.

Magnetic Tape Unit: 37.5k/55k. Maximum number of units attachable: 64

Cards per minute: In: 800 Out: 250 Type: Card/Read/Punch.

Paper Tape characters per second: In: 500-1000 Out: 150-300 Type:

Printer: Lines per minute: 960 Type: Anelex.

Software: ALGOL '60.

Physical Characteristics: Floor area - 250 sq ft

Cooling - air conditioning.
Power - 50 kva.

Notes: 256 index registers. Floating point arithmetic.

COMPUTER: TRW 300

Manufacturer: RW Division,
Thomson Ramo Wooldridge, Inc.,
8433 Fallbrook Avenue, Canoga Park, California, U.S.A.

Typical Rental of System in £'s - £1,250.

Typical Purchase Price: £50,000 Year first installed anywhere: 1959.

Number installed in - Britain: 0 U.S.A. and the rest: 40

PROCESSOR SPEED: Complete Add time in Microseconds: 780 Storage Cycle time in Microseconds: 8,300.

INTERNAL STORAGE: Type of Memory: Drum.
Capacity in Words: 8-15k.
No. of bits per word: 18 binary.

Magnetic Tape Unit: 7.5k. Maximum number of units attachable: 8

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 10/60 Out: 10 Type: Flexowriter.

Printer: 10 ch/sec. Type: Flexowriter.

Software:

Physical Characteristics: Size - 14 sq. ft.
Cooling - none.
Weight - 600 lbs.
Power - 500 v. 120v. 60 cps.

Notes: An analogue input-output unit is completely integrated into the design.
Primarily a control computer for Government use.
BR 300 is manufactured also by International Systems Control Ltd., of Wembley, England.

COMPUTER: UNDERWOOD ELECOM 100

Manufacturer: Underwood Corporation,
Electronic Computer Division,
1 Park Avenue, New York 16, U.S.A.

Typical Rental of System in £'s - £500 monthly.

Typical Purchase Price: £20,000 **Year first installed anywhere:** 1958.

Number installed in - Britain: 0 **U.S.A. and the rest:** 3

PROCESSOR SPEED: **Complete Add time in Microseconds:** **Storage Cycle time in Microseconds:** 20,000.

INTERNAL STORAGE:
Type of Memory: Drum.
Capacity in Words: 512 words.
No. of bits per word: 30 binary.

Magnetic Tape Unit: **Maximum number of units attachable:**

Cards per minute: **In:** **Out:** **Type:**

Paper Tape characters per second: **In:** 7.5 **Out:** **Type:** Flexowriter.

Printer: **Lines per minute:** **Type:**

Software:

Physical Characteristics:
Area - 120 sq.ft.
Cooling - air conditioning.
Power - 3.5 kw.

Notes: Fixed point arithmetic, 3 address system.
Owned by U.S. Navy Bureau of Aeronautics.

COMPUTER: UNDERWOOD/ELECOM 120

Manufacturer: Underwood Corporation,
Electronic Computer Division,
1 Park Avenue, New York 16, U.S.A.

Typical Rental of System in £'s - £1,166 monthly.

Typical Purchase Price: £90,000 **Year first installed anywhere:** 1952.

Number installed in - Britain: 0 **U.S.A. and the rest:** 5

PROCESSOR SPEED: **Complete Add time in Microseconds:** 330 **Storage Cycle time in Microseconds:** 8,300.

INTERNAL STORAGE:
Type of Memory: Magnetic Drum.
Capacity in Words: 1-10k +(10-100) extra.
No. of bits per word: 8 plus sign bit. binary coded decimal.

Magnetic Tape Unit: 400 char/sec. **Maximum number of units attachable:** 1

Cards per minute: **In:** **Out:** **Type:**

Paper Tape characters per second: **In:** 8/400 **Out:** 8/60 **Type:** Flexowriter Ferranti.

Printer: **Lines per minute:** 8 char/sec. **Type:** Flexowriter.

Software:

Physical Characteristics:
Area of Computer - 90 sq. ft.
Weight - 3,500 lbs.
Cooling - air.
Power - 7.5 kva or 0.9 pf.

Notes:
System no longer in production.
Fixed and floating point arithmetic.
2 address systems.
Only two built which are now obsolete.

COMPUTER: UNDERWOOD/ELECOM 125

Manufacturer: Underwood Corporation,
Electronic Computer Division,
1 Park Avenue, New York 16, U.S.A.

Typical Rental of System in £'s - £1,396 per month.

Typical Purchase Price: £100,000 **Year first installed anywhere:** 1953

Number installed in - Britain: **U.S.A. and the rest:** 6

PROCESSOR SPEED: **Complete Add time in Microseconds:** 3,500 **Storage Cycle time in Microseconds:** 8,300

INTERNAL STORAGE:
Type of Memory: Magnetic Drum.
Capacity in Words: 4-10k + 50-100 words additional.
No. of bits per word: 10 bits + sign. decimal.

Magnetic Tape Unit: 6,000 char/sec. **Maximum number of units attachable:** 10

Cards per minute: **In:** **Out:** **Type:**

Paper Tape characters per second: **In:** 8/400 **Out:** 8/60 **Type:** Flexowriter

Printer: **Lines per minute:** 8 char/sec. **Type:** Flexowriter.

Software:

Physical Characteristics:
Area of Computer - 50 sq. ft.
Weight - 4,000 lbs.
Cooling - air conditioner.
Power - 5-7 kw.

Notes:
Floating and fixed arithmetic.
2 address instruction type.

No longer in production.

COMPUTER: UNIVAC 1

Manufacturer: Remington Rand Univac Division,
Sperry Rand Corporation,
315 Park Avenue, New York, U.S.A.

Typical Rental of System in £'s - £4,460-8,000

Typical Purchase Price: £ [illegible],000 **Year first installed anywhere:** 1951

Number installed in - Britain: **U.S.A. and the rest:** 46

PROCESSOR SPEED: **Complete Add time in Microseconds:** 525 **Storage Cycle time see in Microseconds:** below

INTERNAL STORAGE: **Type of Memory:** Mercury Delay Memory.
Capacity in Words: 1000
No. of bits per word: 12 - binary coded decimal.

Magnetic Tape Unit: 12,800 char/sec. UNISERVO 1 **Maximum number of units attachable:** 10

Cards per minute: **In:** 240/300 **Out:** 120 **Type:** Remington Rand.

Paper Tape characters per second: **In:** 200 **Out:** 50 **Type:** Remington Rand.

Printer: **Lines per minute:** 600 **Type:** Remington Rand.

Software: Business Compilers. Flow-Matic/Math-Matic.

Physical Characteristics: Floor area [illegible]
Weight - 16,686 lbs.
Cooling - Chilled water system.
Power - 81 kw.120 kva. 0.98 pf.

Notes: Storage Cycle time in Microseconds: Delay lines - 222 microseconds.
Arithmetic Unit consists of 5,000 vacuum tubes.
Fixed point arithmetic. Floating point by sub-routine.
One address system. 4 index registers.
Now in the Smithsonian Institute in Washington D.C.
A direct development of ENIAC.
No index registers.

COMPUTER: UNIVAC 1101

Manufacturer: Remington Rand Univac Division,
Sperry Rand Corporation,
Univac Division, 315 Park Avenue South,
New York 10, New York, U.S.A.

Typical Rental of System in £'s -

Typical Purchase Price: £160,000-500,000 **Year first installed anywhere:** 1950

Number installed in - Britain: 0 **U.S.A. and the rest:** 1

PROCESSOR SPEED: **Complete Add time in Microseconds:** 5 **Storage Cycle time in Microseconds:** 32

INTERNAL STORAGE:
Type of Memory: Drum.
Capacity in Words: 16,384.
No. of bits per word: 24 (binary).

Magnetic Tape Unit: **Maximum number of units attachable:**

Cards per minute: **In:** **Out:** **Type:**

Paper Tape characters per second: **In:** 35 **Out:** 60 c.p.s **Type:** Photoelectric Teletype.

Printer: 10 ch/sec. **Lines per minute:** **Type:** Flexowriter.

Software:

Physical Characteristics:
Area - 3000 sq. ft.
Weight - 16,000 lbs.
Cooling - air conditioner. (Gas operated).
Power - 17.2 kva. 0.95 pf. 12 kw.

Notes:
No longer in production.
Fixed point arithmetic only.
1 address instruction type.

COMPUTER: UNIVAC 1102

Manufacturer: Remington Rand Univac Division,
Sperry Rand Corporation,
Univac Division,
315 Park Avenue South, New York 10, New York, U.S.A.

Typical Rental of System in £'s - £7,500 monthly.

Typical Purchase Price: £150,000-500,000 Year first installed anywhere: 1951

Number installed in - Britain: 0 U.S.A. and the rest: 3

PROCESSOR SPEED: Complete Add time in Microseconds: 17 Storage Cycle time in Microseconds: 8500

INTERNAL STORAGE: Type of Memory: Magnetic Drum.
Capacity in Words: 8,192 words.
No. of bits per word: 24 binary.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 200 Out: Type:

Printer: Lines per minute: 10 char/sec. Type: Typewriter.

Software:

Physical Characteristics: Area - 122 sq. ft.
Weight - 14,000 lbs.
Cooling - air conditioner.
Power - 22 kw total.

Notes: No longer in production.

COMPUTER: UNIVAC 1103

Manufacturer: Remington Rand Univac Division,
Sperry Rand Corporation,
Univac Division, 315 Park Avenue South,
New York 10, N.Y., U.S.A.

Typical Rental of System in £'s - £11,700 monthly.

Typical Purchase Price: £500,000 **Year first installed anywhere:** 1954.

Number installed in - Britain: 0 **U.S.A. and the rest:** 4

PROCESSOR SPEED: **Complete Add time in Microseconds:** 44 **Storage Cycle time in Microseconds:** see below.

INTERNAL STORAGE:
Type of Memory: Drum + Core.
Capacity in Words: 4k - 32k addition
No. of bits per word: 36 bits - binary.

Magnetic Tape Unit: 13 words/sec. Uniservo. **Maximum number of units attachable:** 10

Cards per minute: **In:** 120/240 **Out:** 120 **Type:** UNIVAC

Paper Tape characters per second: **In:** 100 **Out:** 60 **Type:** UNIVAC

Printer: **Lines per minute:** 600 **Type:** UNIVAC

Software:

Physical Characteristics:
Area of Computer - 950 sq. ft.
Weight - 38,543 lbs.
Cooling - air conditioner - blower.
Power of system - 82 kva 0.9 pf.
220 volt 3 phase. 120 kva Min.

Notes: This computer is now obsolete.

Fixed and floating point arithmetic.
Two address instruction type.
Storage Cycle time in Microseconds: Core - 8
Drum - 17,500.

COMPUTER: UNIVAC 1105

Manufacturer: Remington Rand Univac Division,
Sperry Rand Corporation,
315 Park Avenue South, New York 10, New York.

Typical Rental of System in £'s - £14,000 monthly.

Typical Purchase Price: £500,000 **Year first installed anywhere:** 1958.

Number installed in - Britain: 0 **U.S.A. and the rest:** 45.

PROCESSOR SPEED: **Complete Add time in Microseconds:** 44 **Storage Cycle time in Microseconds:** 8 - 17.000

INTERNAL STORAGE: **Type of Memory:** Drum and Core.
Capacity in Words: 16 - 32 k + 8 - 12 k.
No. of bits per word: 36 binary.

Magnetic Tape Unit: 25 k. **Maximum number of units attachable:** 20.

Cards per minute: **In:** 120/300 **Out:** 120 **Type:** Univac Reader/Punch.

Paper Tape characters per second: **In:** 200 **Out:** 60 **Type:** Univac.

Printer: **Lines per minute:** 600 **Type:** Univac.

Software:

Physical Characteristics: Area - 3,000 sq. ft.
Cooling - air conditioning.
Weight - 35 tons.
Power - 120 kva.

Notes: No index registers. Floating pt. arithmetic.
No longer in production.

COMPUTER: UNIVAC 1218

Manufacturer: Remington Rand Univac Division,
Sperry Rand Corporation,
315 Park Avenue South, New York 10, New York.

Typical Rental of System in £'s - £3,000 monthly.

Typical Purchase Price: £120,000 **Year first installed anywhere:** 1963.

Number installed in - Britain: 0 **U.S.A. and the rest:** NK.

PROCESSOR SPEED: **Complete Add time in Microseconds:** 8 **Storage Cycle time in Microseconds:** 4

INTERNAL STORAGE:
Type of Memory: Core.
Capacity in Words: 4 - 32 k.
No. of bits per word: 18 - binary.

Magnetic Tape Unit: 62 k. **Maximum number of units attachable:** 128

Cards per minute: **In:** 600 **Out:** 150 **Type:** Univac.

Paper Tape characters per second: **In:** 300 **Out:** 110 **Type:** Univac.

Printer: **Lines per minute:** 1,000 **Type:** Univac.

Software:

Physical Characteristics: Area - 23" x 24" x 72"

Notes: 8 index registers. A military Computer.
System directly compatible with Univac 1206.
Also adapted for the Government as the Univac 418.

COMPUTER: UNIVAC FILE COMPUTER 0

Manufacturer: Remington Rand Univac Division,
Sperry Rand Corporation,
315 Park Avenue South, New York,USA.

Typical Rental of System in £'s - £1,500 monthly.

Typical Purchase Price: £100,000 **Year first installed anywhere:** 1957.

Number installed in - Britain: 0 **U.S.A. and the rest:** 6

PROCESSOR SPEED: **Complete Add time in Microseconds:** 2,000 **Storage Cycle time in Microseconds:** 4,000

INTERNAL STORAGE: **Type of Memory:** Core & Drum.
Capacity in Words: 240 + 12 k.
No. of bits per word: binary excess 3 code.

Magnetic Tape Unit: 10 k. **Maximum number of units attachable:** 10

Cards per minute: **In:** 300 **Out:** 150 **Type:** Univac.

Paper Tape characters per second: **In:** 200 **Out:** 60 **Type:** Univac.

Printer: **Lines per minute:** 600 **Type:** Univac.

Software:

Physical Characteristics: of Computer:
Area - 1,000 sq. ft.
Weight - 19,430 lbs.
Cooling - air conditioner.
Power - 20 kva.

Notes: 3 address instruction type.
Still available but no longer in production.

COMPUTER: UNIVAC FILE COMPUTER I

Manufacturer: Remington Rand Corporation.,
315 Park Avenue South, New York 10.,
New York, U. S. A.

Typical Rental of System in £'s - £2,000 monthly.

Typical Purchase Price: £83,000 **Year first installed anywhere:** 1958

Number installed in - Britain: 0 **U.S.A. and the rest:** 40

PROCESSOR SPEED: **Complete Add time in Microseconds:** 8,600 **Storage Cycle time in Microseconds:** 3,100 or 900

INTERNAL STORAGE: **Type of Memory:** Core and Drum.
Capacity in Words: 20 + 1 k
No. of bits per word: 12 bits - variable. b.c.d. (excess 3)

Magnetic Tape Unit: 10.4 k **Maximum number of units attachable:** 31

Cards per minute: **In:** 150/240 **Out:** 150/120 **Type:** Univac Card Read Punch

Paper Tape characters per second: **In:** 200 **Out:** 60 **Type:** Univac

Printer: Lines per minute 600 **Type:** Univac

Software:

Physical Characteristics: Area - 1,000 sq. ft.
Weight - 8,000-10,000 lbs.
Cooling - air conditioning.
Power - 20 kva.

Notes: No index registers.
Still available but no longer in production.

COMPUTER: UNIVAC/RAND JOHNNIAC

Manufacturer: Remington Rand Univac Division,
Sperry Rand Corporation,
Univac Division,
315 Park Avenue South, New York 10, N.Y., U.S.A.

Typical Rental of System in £'s -

Typical Purchase Price: **Year first installed anywhere:** 1954

Number installed in - Britain: 0 **U.S.A. and the rest:** 1

PROCESSOR SPEED: **Complete Add time in Microseconds:** 25 **Storage Cycle time in Microseconds:** see below.

INTERNAL STORAGE:
Type of Memory: Magnetic Drum + Core.
Capacity in Words: 12,288 words + 4,096 words.
No. of bits per word: 40 bits - binary.

Magnetic Tape Unit: **Maximum number of units attachable:**

Cards per minute: **In:** 240 **Out:** 100 **Type:** Univac

Paper Tape characters per second: **In:** **Out:** **Type:**

Printer: **Lines per minute:** 1,200 **Type:** Anelex

Software:

Physical Characteristics:
Area of system - 86 sq. ft.
Weight of Computer - 5,000 lbs.
Cooling - air conditioning.
Power of system - 83 kw. 63 kva. 0.88 pf.

Notes: Manufactured for the U.S. Government. Due for retirement 1965.
Fixed point arithmetic.
One address instruction type.
4 index registers.
Storage Cycle time in Microseconds: Drum 17,000
Core 15 Microseconds.

COMPUTER: UNIVAC SS 80/90.

Manufacturer: Remington Rand Univac Division,
Sperry Rand Corporation,
315 Park Avenue South, New York 10, N.Y.

Typical Rental of System in £'s - £1,160 - £2,316 monthly.

Typical Purchase Price: £62 - £115,000 **Year first installed anywhere:** 1958.

Number installed in - Britain: 5 **U.S.A. and the rest:** 501

PROCESSOR SPEED: **Complete Add time in Microseconds:** 85 **Storage Cycle time in Microseconds:** 1700 or 425

INTERNAL STORAGE: **Type of Memory:** Drum.
Capacity in Words: 4 k.
No. of bits per word: 10 (decimal) + sign bit.

Magnetic Tape Unit: 25 k. **Maximum number of units attachable:** 10

Cards per minute: **In:** 450 **Out:** 150 **Type:** USSC Reader / USSC Punch

Paper Tape characters per second: **In:** **Out:** **Type:**

Printer: **Lines per minute:** 600 **Type:** USSC Printer.

Software: COBOL '60. Compiled on Univac II

Physical Characteristics: Floor area - 24 - 300 sq. ft.
Max. floor loading - 160 lbs.
Cooling - blowers.
Power - 15 kva 200 v 60 cps.

Notes: 3 index registers.
Known as the UCT Computer when first installed.
The prototype of this machine was the Cambridge Air-force Computer which Remington Rand installed in 1956 for the armed forces.

COMPUTER: VERDAN

Manufacturer: Autonetics
Division of North American Aviation,
9150 E, Imperial Highway, Downey, California.

Typical Rental of System in £'s -

Typical Purchase Price:

Year first installed anywhere: 1957

Number installed in - Britain: 0 U.S.A. and the rest: 180

PROCESSOR SPEED: Complete Add time in Microseconds: 160 Storage Cycle time in Microseconds: 5,000

INTERNAL STORAGE: Type of Memory: Rotating Disk Memory.
Capacity in Words: 1664.
No. of bits per word: 24 binary.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: Out: Type:

Printer: Lines per minute: Type:

Software:-

Physical Characteristics: Volume - 1.4 cu. ft.
Cooling- none.
Weight- 82 lbs.
Power- 0.320 kw. 0.8 pf. 400 cycle 3 phase.

Notes: Fixed pt. arithmetic.
A very small Military Computer consisting of 3 interconnected computational centres.
(1) An incremental or DA Section
(2) A whole valve or GP Section
(3) An imput - output Section
Simultaneous operation of all three centres is possible.

COMPUTER: WHIRLWIND II

Manufacturer: Massachusetts Institute of Technology,
Digital Computer Laboratory,
Cambridge 39, Massachusetts, U.S.A.

Typical Rental of System in £'s - not rented.

Typical Purchase Price: £50,000 Year first installed anywhere: 1950

Number installed in - Britain: 0 U.S.A. and the rest: 1

PROCESSOR SPEED: Complete Add time in Microseconds: 22 Storage Cycle time in Microseconds: 7

INTERNAL STORAGE: Type of Memory: Two Magnetic Drums + Core
Capacity in Words: 36k + 6k addition.
No. of bits per word: 16 binary.

Magnetic Tape Unit: 188 char/sec. Maximum number of units attachable: 4

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: 200/14 ch.p.sec. Out: 10 Type: Ferranti/ Flexowriter.

Printer: Lines per minute: 60 wds/min. Type: Teletype Printer.

Software:

Physical Characteristics: Area of Computer - 450 sq. ft.
Weight - 37,000 lbs.
Cooling - air conditioner.
Power of system - 350 kva.

Notes: Fixed point arithmetic, one address system.
An Oscilloscope Camera was also used as output - 200 ch.sec.
Used for scientific and engineering computations.
Now retired.

COMPUTER: WISC

Manufacturer: Wisconsin University,
Department of Electrical Engineering,
Madison 6, Wisconsin, U.S.A..

Typical Rental of System in £'s - not rented.

Typical Purchase Price: Year first installed anywhere: 1954

Number installed in - Britain: 0 U.S.A. and the rest: 1

PROCESSOR SPEED: Complete Add time in Microseconds: 16,700 Storage Cycle time in Microseconds: 0 - 16,700

INTERNAL STORAGE: Type of Memory: Magnetic Drum.
Capacity in Words: 1024 + 7 words.
No. of bits per word: 50 bits - binary.

Magnetic Tape Unit: Maximum number of units attachable:

Cards per minute: In: Out: Type:

Paper Tape characters per second: In: ~~10~~ Sexadec ch/sec. Out: 10 Sexadec ch/sec. Type: Flexowriter

Printer: Lines per minute: 10 Sexadec ch./sec Type: Flexowriter.

Software:

Physical Characteristics: Area of Computer - 32 sq. ft.
Cooling - air conditioner.
Power - 10 kw.

Notes: Computer built for Wisconsin University.
Floating point, three address instruction.

COMPUTER: ZUSE 22

Manufacturer: Zuse K. G.,
Bad Hersfeld, Wehneberger Strasse 4.,
Germany.

Typical Rental of System in £'s -

Typical Purchase Price: **Year first installed anywhere:** 1959

Number installed in - Britain: 0 **U.S.A. and the rest:** 56

PROCESSOR SPEED: **Complete Add time in Microseconds:** 600 **Storage Cycle time in Microseconds:** 5,000

INTERNAL STORAGE: **Type of Memory:** Magnetic Drum and Core.
Capacity in Words: 8192 14 wds.
No. of bits per word: 38 binary.

Magnetic Tape Unit: **Maximum number of units attachable:**

Cards per minute: **In:** **Out:** **Type:**

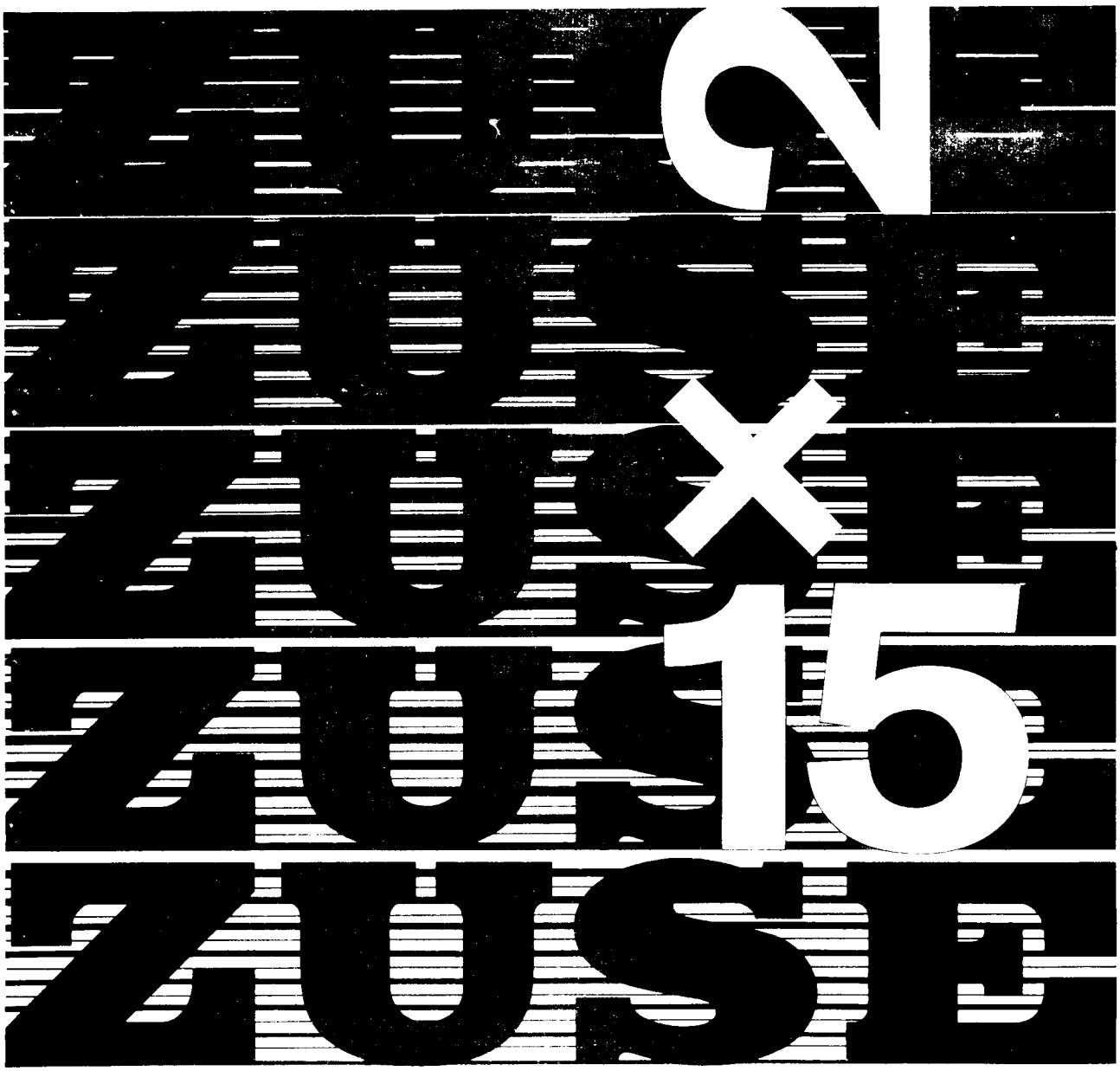
Paper Tape characters per second: **In:** 15/200 **Out:** **Type:**

Printer: 10 ch/sec **Type:** Teletyper.

Software:

Physical Characteristics: Weight 1,120 lb.
Power - 3.5 kw. Three phase.

Notes: A program controlled electronic Computer.
Now taken over by Brown Boveri of Switzerland.



In 1941, Dr. Konrad Zuse made the world's
first program-controlled computer
Today, the ZUSE systems, electronic-controlled
plotting-tables and equipments,
realize the rational data processing.
They allow exact calculations within a very
short time, enable the saving of time
and expenses, and give best results in economy,
science and administration.

ZUSE KG
BAD HERSFELD

West-Germany

Data Processing Equipments

SECTION 4

NAMES AND ADDRESSES AND INDICATIONS OF ASSOCIATIONS WITH PARTICULAR COMPUTERS, OF ALL THOSE ORGANISATIONS AND COMPANIES RESPONSIBLE FOR THEIR DEVELOPMENT, MANUFACTURE AND SALES.

AB ATVIDABERGS INDUSTRIER, Kungstredgardsgatan 20, Fack, Stockholm, Sweden.	FACIT EDB FACIT DS 9000
ABN-BOLAGEN. Tyreso, Sweden.	WEGEMATIC 1000
ACADEMY OF SCIENCE OF THE SOVIET UNION, U.S.S.R.	BESM I BESM II
ADDO MALMO, Sweden.	WEGEMATIC 1000
ADDO (U.K.) LIMITED, 47/51 Worship Street, London, E.C.2.	WEGEMATIC 1000
ADDRESSOGRAPH-MULTIGRAPH LIMITED, Maylands Avenue, Hemel Hempstead, Herts, England. (Branch Office) City Wall House, Chiswell House, London E.C.2.)	AMDEC 943 AMDEC 960 EDP 900
ADDRESSOGRAPH-MULTIGRAPH CORPORATION, 1200 Babbitt Road, Cleveland, U.S.A.	
ADDRESSOGRAPH-MULTIGRAPH LIMITED, Suite C, Alleyn House, Carlton Crescent, Southampton.	
ADDRESSOGRAPH-MULTIGRAPH LIMITED, 5 Princes Street, Norwich.	
ADVANCED SCIENTIFIC INSTR. INC., 5249 Hanson Court, Minneapolis, Minnesota, 29, U.S.A.	ASI 11 ASI 210 ASI 420 ASI 2100

AKTIEBOLAGET ADDO, Fack, Malmo 3, Sweden.	WEGEMATIC 1000
ALWAC COMPUTER DIVISION, El-Tronics Inc., 13040 S. Cerise Ave., Hawthorne, California, U.S.A. (Formerly Logistics Research Inc.)	ALWAC 1 ALWAC 11 ALWAC 111 ALWAC 111E ALWAC IV ALWAC 800
AMERICAN BOSCH ARMA CORP., Roosevelt Field, Garden City, New York, U.S.A. (Afflicated company S.G. Brown Ltd., Watford England.)	MICRO
ARGONNE NATIONAL LABORATORY, 9700 South Cass Ave., Argonne, Illinois, U.S.A.	AVIDAC GEORGE
ASSOCIATED ELECTRICAL INDUSTRIES AUTOMATION LTD., Electronic Apparatus Div., Trafford Park, Manchester 17, Lanes, England. 33 Grosvenor Place, London, S.W.1. Western Road, Leicester.	AEI 1010 AEI METROVICK 950
ASSOCIATED AUTOMATION LIMITED, 70 Dudden Hill Lane, London, N.W.10.	
AUSTRALIAN COMPUTERS PTY. LTD., A.D.C. House, 77 Pacific Highway, N. Sydney, N.S.W. (Subsidiary of English Electric.)	
AUTONETICS, A Div. of North American Aviation Inc., 3584 Wilshire Boulevard, Los Angeles 5, California, U.S.A.	AV 41 AV RECOMP 11 AV RECOMP 111 CP 266 D26J-1 MONICA FADAC JUKE BOX RECOMP 11 RECOMP 111 REPAC VERDAN

9150 East Imperial Highway, Downey, California, U.S.A.	
3400 East 70th Street, Long Beach, California, U.S.A	
BELL TELEPHONE LABORATORIES INC., Whippany, New Jersey, U.S.A.	LEPRECHAUN
BENDIX AVIATION CORPORATION, 5630 Arbor Vitae Street, Los Angeles 45, California, U.S.A. (Now taken over by C.D.C.)	BENDIX G 15
BENDIX INTERNATIONAL, New York, U.S.A.	G 15 D 12 G 20 G 22
BROOKHAVEN NATIONATIONAL LABORATORIES, Upton, New York, U.S.A.	MERLIN
BROWN BOVERI LIMITED, Baden Aargau, Switzerland.	ZUSE 11 ZUSE 22 ZUSE 23
Glen House, Stag Place, London, S.E.1.	ZUSE 31
BUDD ELECTRONICS INC., 2450 Hunting Park Avenue, Philadelphia 32, Pennsylvania, U.S.A.	BUDD STRADAP S 5001 BUDD STRADAP S 5002 BUDD STRADAP S 5003
BUNKER RAMO CORPORATION, Computer Div., 8433 Fallbrook Ave., Canoga Park, California, U.S.A. (Shares held by G.E.C. of England and Thomson Ramo Wooldridge.)	TRW 33 TRW 130 TRW 300 TRW 330 TRW 530
BURROUGHS CORPORATION INC., 6071 Second Avenue, Detroit, Michigan, U.S.A.	B204 B205 B220
707 W. Milwaukee, Detroit, Michigan, U.S.A.	D104 & D105 D107
Winston - Salem, N.C.	D201 & D202

Electrodata Div.,
460 Sierre Madre Villa,
Pasadena, California, U.S.A.

International Division,
Milwaukee at Third Avenue, Box 299,
Detroit, Michigan, U.S.A.

Burroughs Rechenmaschinen GmbH.,
Vienna 1, Karntnerstrasse 5, Austria.

Burroughs International SA,
18 Rue Pierre,
Fribourg, Switzerland.

Burroughs Regnemaskiner AS,
Nygade 3, Copenhagen, Denmark.

Burroughs SA,
60 Rue Ravenstein, Brussels, Belgium.

Burroughs SA,
230-242 Avenue Laurent Cely, Gennevilliers, Seine, France.

Deutsche Burroughs Rechenmaschinen GmbH.,
Grosse Gallustrasse,
1-7 Frankfurt /Main, Germany.

Burroughs NV Leidseplein,
Amsterdam, Holland.

Burroughs Italiana S.p.A.,
Via Cernaia 2, Milan, Italy.

Burroughs As - Drammensveien, 213,
P.O. Box 67, Bestum, Oslo, Norway.

Burroughs Machines Limited,
P.O. Box 3996, Johannesburg, South Africa.

Burroughs A.B.
Banergatan 10, Stockholm, Sweden.

Burroughs Rechenmaschinen AG, Sihlipotte 3, Zurich 23, Switzerland.

Burroughs, Electronic Instruments Div., 1209 Vine St., Philadelphia, Pa. U.S.A.

D204
E101
E102
E103
DATATRON
MADDAM or D 209
RAYCOM
UDEC 11
UDEC 111

ELECTRODATA CORPORATION, 717 North Lake Avenue, Pasadena 6, California, U.S.A.	B204 B205 B220 D104 & D105 D107 D201 & D202 D204 E101 E102 E103 DATATRON MADDAM or D 209 RAYCOM UDEC 11 UDEC III
CALIFORNIA UNIVERSITY, Los Alamos Scientific Laboratory, P.O. Box 1663, Los Alamos, New Mexico. Berkeley 4, California, U.S.A.	MANIAC I MANIAC II MANIAC III CALDIC
CAMBRIDGE UNIVERSITY, Cambridge, England.	EDSAC EDSAC II TITAN
CENTRE NATIONAL D'ETUDES DES TELECOMMUNICATIONS, 3 Ave de la Republique, Issy-les-Moulineaux, Seine, France.	CNET ANTINEA CNET RAMSES
CENTRO STUDI CALCULATRICI ELETTRONICHE, Piazza Toricelli 2, Pisa Italy. (Subsidiary of C.A.E.)	CITAC 210B
CLARY CORPORATION INC., 408 Junipero Street, San Gabriel, California, U.S.A. Deutsche Clary GmbH., Rastatt, Germany.	CLARY DE 60 CLARY DE 60M
COLLINS RADIO CORPORATION, Communications and Data Systems Division, Dallas, Texas, U.S.A.	COLLINS C 8200

COLLINS RADIO (U.K.) LIMITED, 242 London Road, Staines, Middlesex.	COLLINS C 8200
COMPAGNIE BULL GENERAL ELECTRIC, Siege Social et Usine, 94 Avenue Gambetta, Paris 20, France.	BULL GAMMA 30 BULL GAMMA 30S BULL GAMMA 60 BULL GAMMA 150 BULL GAMMA 300 BULL GAMMA 500 GE COMPATIBLES
BULL DATENVERARBEITUNGSMASCHINEN AG, Vienna 111, Gigergasse 1, Austria.	
BULL DEUTSCHLAND GmbH., Wiener Platz 2, Koln Mulleim, Germany.	BULL CORPORATION OF JAPAN, 911 Kino Buildings, 22, 2-Chome, Uchisaiwai-Cho, Chiyoda-Ku, Tokyo, Japan.
BULL DE ARGENTINE U.S.A., Cerrito, 264.40 Piso, Buenos Aires.	COMPAGNIE DES MACHINES BULL, Beyrouth.
BULL DATEN VERARBEITUNGS MASCHINEN AG, Opernringhof, Vienna 1.	BULL DE MEXICO SA - Mexico 70F, Celima 366.
BULL BELIGQUE S.A., 28 Avenue Marnix, Brussels.	BULL NORSK AS - Oslo, Roald Amundsersgate 2.
MARQUINAS BULL DO BRASIL S.A., Praca Dom Jesa Gaspar, 30.30 Sao Paulo Zone, Postale No. 2.	BULL NEDERLAND - Amsterdam 26, Vliegtuigstraat.
SOCIEDAD ANONIMA BULL DE ESPANA, Avenida der Generalisimo 76, Madrid.	SOCIEDADE PORTUGUESA DE MAQUINAS BULL, de Autubro No. 77, Lisbonne Av 5.
BULL CORPORATION OF AMERICA, Wilmington, 100 West 10th Street.	SVENSKA BULL MASKIN AB, C. Sveavagen 15, Stockholm, Sweden.
COMPAGNIE DES MACHINES BULL, (Succursale) - Athenes, 178 Boulevard Syngron.	BULL LOCHKARTEN MASCHINEN AG, Lagerstrasse 47, Zurich 4.
	BULL DEL URUGUAY S.A., Paysandu No. 1034, Montevideo.
	STE MOROCAINE DES MACHINES BULL, 642-646 Bld. Mohammed, Casablanca.
	DANSK HULLKAT KONTOR, Denmark.
	MISTUBISHI SHOP KARSHA LTD., Tokyo, Japan.

COMPAGNIE EUROPEENNE D'AUTOMATISME ELECTRONIQUE, (C.A.E.) Rue Jean Jaures - Les Clayes - Sous - Bois, Seine - et - Oise, France.	CITAC 210B
COMPAGNIE EUROPEENNE DE CALCULATEURS INDUSTRIELLES et SCIENTIFIQUE, 14 Rue de la Baume, Paris 8e, France.	C.A.E., 27 Rue de Marignan, Paris 8e, France.

C.A.E., 60 Avenue Marceau,
Courbevoie, Seine, France.

C.A.E., 17-19 Rue de Moulin des Bruyères, Courbevoie,
Seine, France.

Compagnie Française Thomson Houston,
173 Boulevard Haussman,
Paris 8, France.

KL 901

COMPAGNIE INDUSTRIELLE DES TELECOMMUNICATIONS,
Subsidiary of Compagnie de Telegraphie Sans Fil (CSF)
33 Rue Emeriau, Paris 15, France.

CITAC 210B

COMPUTER CONTROL CORPORATION,
2251 Barry Avenue, Los Angeles 64,
California, U.S.A.

DDP 19

Old Connecticut Path, Framingham, Massachusetts.

COMPUTER ENGINEERING LIMITED,
Lime Kiln Offices, Cadwell Lane,
Hitchin, Herts, England.

CE 55
CE 102

87 Bancroft, Hitchin, Herts.

Stranraer House, Stoneyroad, Bracknell, Berks.

CONTROL DATA CORPORATION,
International Operations,
8100 34th Avenue South,
Minneapolis 20, Minnesota, U.S.A.

501 Park Avenue, Minneapolis 15, Minnesota, U.S.A.

7801 Computer Avenue, Minneapolis 24, U.S.A.

Control Data GmbH., Niddastrasse 40,
6 Frankfurt/Main, Germany.

CONTROL DATA
D 12
DAYSTROM 46
DAYSTROM 136
DAYSTROM 636
G 15
G 20
G 25
140
1604
1604A
CUBIC TRACKER

Control Data AG, Hirschengraben 43, Lucerne, Switzerland.

Control Data France S.A., 80 Avenue de la Grande
Armee, Paris 17e, France.

Control Data Holland N.V. Balistraat 97,
The Hague, Holland.

Control Data England Limited,
28 Bruton Street, London, W.1.

Control Data Norway A.B.,
Nils Juelsgt 11. Oslo, Norway.

Control Data Sweden A.B.,
Vastmannagatan 40, Stockholm Va. Sweden.

Control Data Holding A.G.,
Zürichstrasse 68, Lucerne, Switzerland.

Control Data A.G.,
Bleicherweg 33, Zurich 2, Switzerland.

CORBIN CORPORATION,
5419 56th Place,
Riverdale, Maryland, U.S.A.

CORBIN

CALCULATORI SCIENTIFICI E INDUSTRIALI, S.p.A.,
(C.S.I.) Via dei Cignoli 9, Milan, Italy.
(Subsidiary of C.A.E.)

CUBIC CORPORATION,
9233 Balboa Boulevard,
San Diego 92123, California, U.S.A.

CUBIC AIR TRAFFIC
CUBIC TRACKER

5575 Kearny Villa Road,
San Diego 11, California, U.S.A.
Later: Bendix Corporation.
Then: Control Data Inc.

CZECHOSLOVAKIA STATE STATISTICAL DEPARTMENT.

EPOS

DANISH INSTITUTE OF COMPUTING MACHINERY (REGNECENTRALEN),
Rialto, Smallegade 2B,
Copenhagen F, Denmark.

DASK
GIER DISADEC

DATAMIC CORPORATION,
Waltham 54, Massachusetts, U.S.A.

BURROUGHS RAYCOM
DATAMATIC 1000

151 Needham Street, Newton Highlands 61,
Massachusetts, U.S.A.

DATA SYSTEMS INC.,
20535 Mack Avenue, Grosse Pointe Woods,
Michigan, U.S.A.

DSI

DAYSTROM INC.,
Control Systems Division,
4455 Miramar Road, La Jolla, California, U.S.A.
(Taken over by C.D.C.)

DAYSTROM 636
DAYSTROM 136
DAYSTROM 46

DE LA RUE BULL MACHINES LIMITED, 114/118 Southampton Row, London, W.C.1.	BULL GAMMA 300 BULL GAMMA 60 BULL GAMMA 150
DIGITAL EQUIPMENT CORPORATION, 146 Main Street, Maynard, Massachusetts, U.S.A.	PDP 1 PDP 3
Los Angeles 45, U.S.A.	
Digital Equipment GmbH., 8 Munchen 22, Theresienstraze 29, Germany.	
Digital Equipment Corporation (U.K.) Limited, 11 Castle Street, Reading, Berks.	
DISA ELEKTRONIK A/S, 17 Herlev Hove Garde, Herlev Denmark. (Taken over by Regnecentralen.)	DISADEC
ELECTRONIC ASSOCIATES INC., Long Branch, New Jersey, U.S.A.	EAI
EAI-Electronic Associates Pty. Limited, 87 Alexander Street, Crow's Nest, New South Wales, Australia.	
EAI-Electronic Associates GmbH., Martinstrasse 14, Aachen, Germany.	
EAI-Electronic Associates, 11 Faubourg Poissonière, Paris 9, France.	
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PHILCO G.m.b.H., Baron Strasse 6, West Germany.	
PHILCO CORPORATION, Government & Industrial Division, 4700 Wissahickon Ave, Philadelphia 44, Pennsylvania, U.S.A.	
PHILIPS GLOEILAMPEN/FABRIEKEN N.V., Eindhoven, Netherlands. (Originally Data Communications) (Philips N.V. have shares in N.V. Electrologica.)	PASCAL/STEVIN
PISA UNIVERSITY, Pisa, Toscana, Italy.	CEP
RADIO CORPORATION OF AMERICA, Electronic Data Processing Systems Division, Cherry Hill, Camden 2, New Jersey, U.S.A.	RCA 110 RCA 300 RCA 301 RCA 501
RADIO CORPORATION OF AMERICA, 30 Rockefeller Plaza, New York City, N.Y., U.S.A.	RCA 601 RCA 604

	RCA/AM 3100 RCA/AM 3200 RCA 4101 (CP 685/GPQ) RCA 4102 RCA BISMAC I RCA BISMAC II RCA MICROPAC FLAC I (Flac manufactured by Air Force FLAC II Civil Service.) RCA 200
RAYTHEON CORPORATION, Space & Information Systems Division, 1905 Armacost Avenue, Los Angeles 25, California, U.S.A.	PACKARD BELL 250 PACKARD BELL TRICE RAYCOM RAYDAC
RAYTHEON CORPORATION, 2700 S. Fairview St. Santa Ana, U.S.A.	
REGNECENTRALEN, 2 Smallegade, Copenhagen, Denmark.	DASK DISADEC
A/S REGNECENTRALEN, Falkoner Alle 1, Copenhagen F, Denmark. (Taken over Disa/Elektronik.)	
REGNECENTRALEN, G.L. Carlsbergvej 2 Valby.	
RESEARCH INSTITUTE OF MATHEMATICAL MACHINES, Prague, Czechoslovakia.	EPOS
RICE UNIVERSITY, Houston 1, Texas, U.S.A.	RICE
ROYAL McBEE CORPORATION, Westchester Avenue, Porchester, N.Y., U.S.A.	RPC 4000 RPC 9000 LGP/30

ROYAL McBEE (U.K.) LIMITED,
36 Worship Street,
London, E.C.2.

SCHOPPE AND FRAESER G.m.b.H.,
Ulmenstrasse 12, 495 Minden/west, Germany.

SCHLUMBERGER LIMITED,
1900 South West Power, Houston,
Texas, 77002, U.S.A.

SOLARTRON

SCIENTIFIC DATA SYSTEMS INC.,
1542 Fifteenth Street,
Santa Monica, California, U.S.A.

SCIENTIFIC DATA SYSTEMS INC.,
1649 17th Street,
Santa Monica, California, U.S.A.

SCIENTIFIC FURNISHINGS LIMITED,
189 London Road South, Poynton, Cheshire.

SCIENTIFIC RESEARCH INSTITUTE OF MINISTRY OF
PRECISE MECHANICS,
U.S.S.R.

URAL 1
URAL 2
URAL 4

SIEMENS & HALSKE AKTIENGESELLSCHAFT,
Wernerwek fur Telegrafen - und Signaltechnik,
Hofmannstrasse 51, Munich, Germany.
(Sole U.K. Agents - R.H. Cole Electronics Limited,
7-15 Lansdowne Road, Croydon, Surrey.)

SIEMENS 2002

S.I.N.T.R.A.,
26 Rue Malakoff, Ashnières (Seine), France.

SMITH CORONA LIMITED,
248/250 Tottenham Court Road,
London, W.1.

MINIAC
MINIAC II

S.N.E.R.I.,
45 Avenue Kleber, Paris 16e, France.

SOCIETE ALSACIENNE DE CONSTRUCTIONS MECANIQUES,
69 Rue de Monceau, Paris 8e, France.

SOCIETE D'EXPLOITATION ET DE RECHERCHES ELECTRONIQUES, Aubergenville, France.	SEREL 1001
SOCIETE EUROPEENNE POUR LE TRAITEMENT DE L'INFORMATION, 100 Route de Paris, Massy, France.	SETI PB 250
SOCIETE D'ELECTRONIQUE ET D'AUTOMATISME, 138 Boulevard de Verdun, Courbevoie, Seine, France.	
SOCIETE LE MATERIAL ELECTRONIQUE, (Undertook quantity production of SEA/CAB 500.)	SEA/CAB 500
SOCIETE NOUVELLE D'ELECTRONIQUE, 45 Avenue Kleber, Paris 16e, France. (Subsidiary of Compagnie Francaise Thomson Houston.)	KL 901
SOCIETE POUR L'EXPLOITATION DES PROCEDES, S.E.A., 36 Quai National, Puteaux, (Seine) France.	SEA/CAB 500 (sold by Bull as Gamma 500) SEA/CAB 502B SEA/CAB 600 SEA/CAB 1000 SEA/CAB 2000 SEA/CAB 2022 SEA/CAB 2124 SEA/CAB 3000/3018/3118 SEA/CAB 3030 SEA/CAB CUBA ET SABA SEA/CAB DOROTHY SEA/CAB DOROTHY II
THE SOLARTRON ELECTRONIC GROUP LIMITED, Farnborough, Hampshire, England.	SOLARTRON
SPERRY GYROSCOPE COMPANY LIMITED, Great West Road, Brentford, Middlesex, England.	MAGLOC 1
SPERRY RAND CORPORATION, Univac Division, 315 Park Avenue South, New York 10, New York, U.S.A.	UNIVAC I BOGART UNIVAC II UNIVAC 60 UNIVAC 120 UNIVAC 422 UNIVAC 1101 UNIVAC 1102

UNIVAC DIVISION OF SPERRY RAND INTERNATIONAL CORP., 1-3 Avenue des Jordils, Lausanne 6, Switzerland.	UNIVAC 1103 UNIVAC 1103A UNIVAC 1104 UNIVAC 1105 UNIVAC 1206 UNIVAC 1218 UNIVAC 1824 AF GR3 AN/USQ 20 UNIVAC ATHENA UNIVAC CP 642B UNIVAC CP 667 UNIVAC FILE COMPUTER 0 UNIVAC FILE COMPUTER I UNIVAC FILE COMPUTER II UNIVAC RAND JOHNIAC UNIVAC LARC UNIVAC LARC II UNIVAC SS 80/90 UNIVAC SS II USSC STEP UNIVAC TARGET INTERCEPT
THE RAND CORPORATION, 1700 Main Street, Santa Monica, California, U.S.A.	
REMINGTON RAND A.G., Barengasse 29, Zurich, Switzerland.	
UNIVAC DIVISION OF SPERRY RAND CORPORATION, 2121 Wisconsin Avenue, NW, Washington DC 20007, U.S.A.	
REMINGTON RAND, Vienna 1, Kärntnerring 5, Austria.	
UNIVAC COMPUTER DIVISION OF REMINGTON RAND, Remington House, 65 Holborn Viaduct, London, E.C.1.	
DIVISION OF SPERRY RAND CORPORATION, FORD INSTRUMENT COMPANY, Long Island City, New York, U.S.A.	DATAKEEPER 1000
STANDARD ELECTRIK LORENZ AG., 42 Hellmuth-Hirth-Strasse, Stuttgart-Zuffenhausen, Germany.	SEL/DB 10 SEL/DB 40 SEL/DB 40 SPECIAL SEL/ER 56 SEL/ES 92 SEL/KA 21 SEL/DB 70
STANDARD TELEPHONES & CABLES LIMITED, Burleigh House, 101-145 Great Cambridge Road, Enfield, Middlesex, England.	STANTEC SPECIAL STORES STANTEC ZEBRA STANTEC ZEBRA MARK II
STANDARD TELEPHONES & CABLES LIMITED, Corporation Road, Newport, Monmouth.	
STANDARD TELEPHONES & CABLES LIMITED, Oakleigh Road, New Southgate, London, N.11.	
STANDARD TELEPHONES & CABLES, LIMITED, Connaught House, 63, Aldwych, London, W.C.2.	also STANDARD TELEPHONES & CABLES LTD., Basildon, Essex.

SVENSKA AEROPLAN AKTIEBOLAGET, Linkoping, Sweden	SAAB
SVENSKA DATA REGISTER A.B., P.O. Box 364, Sundbyberg 3, Sweden. (Taken over by Litton Industries.)	
SVENSKA RELAFABRIKEN ABN, Bolagen, Tyreso, Sweden.	WEGEMATIC 1000
SWEDA LIMITED, 5 Lower Belgrave Street, London, S.W.1. (Now under Monroe International U.K.) Limited.)	
SWEDA REGISTRIER KASSEN A.G., Bahnhojstrasse 48, Zurich, Switzerland.	
SYLVANIA ELECTRIC PRODUCTS INC., Electronic Systems Division, 189 B Street, Needham 94, Massachusetts, U.S.A.	SYLVANIA 9400 SYLVANIA AN/MYK 1 MOBIDIC SYLVANIA M 64 (AN/MYK)
SYLVANIA ELECTRIC PRODUCTS INC., Camillus, Syracuse, New York, U.S.A.	SYLVANIA MOBIDIC A (AN/MYK) SYLVANIA MOBIDIC B (AN/MYK) SYLVANIA MOBIDIC C, D & 7A SYLVANIA UDOFTT
SYNDICATE NATIONAL DES FABRICANTS DE MACHINES DE BUREAU, 10 Avenue Hoche, Paris 8 France.	
SYSTEMS ENGINEERING LABORATORIES INC., Fort Lauderdale, Florida, U.S.A.	SEL
TECHNICAL MEASUREMENT CORPORATION, Mnemotion Division, White Plains, New York, U.S.A.	CAT 400B
TECHNISCHE HOCHSCHULE, Munich, Germany.	PERM
TECHNITROL ENGINEERING CORPORATION, 2751 North Fourth Street, Philadelphia 33, Pennsylvania, U.S.A.	TECHNITROL 180

TELEFUNKEN GmbH., Bucklestrasse 3, Konstanz, Germany.	TR 4
THE TELEREGISTER CORPORATION, 445 Fairfield Avenue, Stamford, Connecticut, U.S.A.	TELEREGISTER MAGNETRONIC TELEREGISTER TELEFILE
THOMPSON RAMO WOOLDRDGE COMPUTERS CO., Mitsubishi, Tokyo Building, Tokyo, Japan.	TRW 33 TRW 130 TRW 300 TRW 330 TRW 530
TOKYO SHIBAURA ELECTRIC CO. LIMITED, 3 Ginza Nishi 4-Chome, Chu-Ku, Tokyo, Japan.	CC 1 TOSBAC 1100 TOSBAC 2100 TOSBAC 3100 TOSBAC 3200 TOSBAC 3225A TOSBAC 3300 TOSBAC 4100 TOSBAC 4200
TOKYO SHIBAURA ELECTRIC CO. LIMITED, 1 Uchisaiwaicho 1-Chome, Chiyoda-Ku, Tokyo, Japan.	
UNDERWOOD MACHINE CO. INC., Electronic Computer Division, Long Island, New York, U.S.A.	UNDERWOOD ELECOM 50 UNDERWOOD ELECOM 100 UNDERWOOD ELECOM 120 UNDERWOOD ELECOM 125 UNDERWOOD ELECOM 200 (ORDFIAC)
UNDERWOOD CORPORATION, One Park Avenue, New York 16, New York, U.S.A. (Now Olivetti Underwood Corporation.)	
UNIVERSAL ANZIEGON - UND WERBEDIENST G.m.b.H., 2000 Itanburg 36, Never Wall 41, Germany.	
U.S. ARMY ORDNANCE CORPS, Ballistic Research Laboratories, Aberdeen Proving Ground, Maryland, U.S.A.	BRLESC ORDVAC
U.S. DEPARTMENT OF COMMERCE, National Bureau of Standards, Data Processing Systems Division, Connecticut and Van Ness Avenues, Washington 25, D.C. U.S.A.	AMOS IV DYSEAC SEAC SWAC
U.S. NAVY, Naval Research Laboratory, Washington 25, D.C. U.S.A.	NAREC

WESTINGHOUSE & UNIVAC DIVISION OF SPERRY RAND CORPORATION, Westinghouse Electric Corp., Research and Development Center, Pittsburgh 35, Pennsylvania, U.S.A.	UNIVAC PRODAC 50
WISCONSIN UNIVERSITY, Department of Electrical Engineering, Madison 6, Wisconsin, U.S.A.	WISC
ZEISSWERKE G.m.b.H., Jena, Germany.	ZRA I
ZUSE K.G., Wehnebergerstrasse 4, Bad Hersfeld, Germany.	ZUSE II ZUSE 22 ZUSE 23 ZUSE 31
ZUSE G.m.b.H., Vienna 11, Mexikoplatz 25. (Now taken over by Brown Boveri.)	

SECTION 5

LIST GIVING USERS NAME, OF ALL VINTAGE COMPUTERS INSTALLED IN BRITAIN

Computer	User
ACE - Original	South Kensington Science Museum
ACE	National Physical Laboratory, Teddington
AEI 1010	A.E.I. Trafford Park, Manchester. A.E.I. Rugby, Warwickshire. A.E.I. Data Processing Centre, Manchester. Central Electricity Generating Board, Oldbury. London Service Centre, S.W.1. Ministry of Aviation, Hendon, N.W. National Coal Board, N.W. Division., Lancashire. National Coal Board, Scottish Division, Edinburgh. R.A.F. Supply Control Centre, Hendon. R.A.F. Supply Control Centre, Hendon.
BULL GAMMA 30	Chloride Batteries Ltd., Swindon. De La Rue Bull Machines Ltd., London, W.C.1. Express Dairy Co.Ltd., Ruislip. Imperial Tobacco Co.Ltd. London, E.15. The Michelin Tyre Co.Ltd., Stoke-on-Trent 1 - Undisclosed customer.
BULL GAMMA 150	W. Breedon Ltd., Birmingham. De La Rue Bull Machines, London, W.C.1. Imperial Tobacco Co.Ltd., London, E.15. Dorothy Perkins, Bracknell, Berks.
BULL GAMMA 300	Formica Ltd., London, W.1. Radyne, Wokingham. Royal Exchange Assurance, Welwyn Garden City, Herts. Royal Insurance Group, Cheltenham Royal Insurance Group, Liverpool. Royal Insurance Group, London.

Section 5. (Contd.)

Computer	User
BURROUGHS E 101	British Petroleum Co.Ltd., Exploration Div., Sunbury-on-Thames. Burroughs Adding Machine Ltd., London, W.1. Gloster Aircraft Co.Ltd., Whitley, Coventry.
BURROUGHS E 102	Whitworth Gloster Aircraft Ltd. Whitley.
CE 55	Computer Engineering Ltd., Woking, Surrey. R.A.F. Radio School, Somerset. 1 - Name of user unconfirmed by manufacturer.
CE 102	College of Technology, Letchworth, Herts.
CLARY DE 60	Block & Anderson Ltd., London, W.6.
EEL/DEUCE 1	Atomic Weapons Research Establishment, Aldermaston. British Aircraft Corporation Ltd., Bristol. British Aircraft Corporation, Mathematical Services, Bristol. British Aircraft Corporation Ltd., The Airport, Luton. British Aircraft Corporation Ltd., Nr. Preston. British Aircraft Corporation Ltd., Nr. Preston. British Aircraft Corporation Ltd., Nr. Preston. British Petroleum Co. Ltd., London, E.1. Bristol Siddeley Engines, Bristol. Central Electricity Generating Board, London, S.W.1. D.S.I.R. National Engineering Lab. E. Kilbride, Glasgow. English Electric Co., London Computing Service, W.C.2. English Electric Co., Mechnical Engineering Lab.Nr. Leicester English Electric-Leo Computers Ltd., Kidsgrove, Staffs. National Engineering Lab. E.Kilbride, Glasgow. National Physical Lab., Mathematics Div., Teddington. Queens University, Belfast, N. Ireland. Royal Aircraft Establishment, Farnborough, Hants. Royal Aircraft Establishment, Farnborough, Hants. Short Brothers & Harland Ltd., Belfast 3. University of Glasgow, Glasgow, W.2. University of Liverpool, Liverpool 3.
EEL/DEUCE 11	Bristol Siddeley Engines Ltd., Bristol. English Electric Co.Ltd., Atomic Power Div., Nr. Leicester. English Electric Co.Ltd., (Nelson Research Labs.) Stafford.

Computer	User
EEL/DEUCE 11 (Contd.)	Marconi's Wireless Telegraph Co.Ltd., Chelmsford, Essex. Royal Aircraft Establishment, Bedford. United Kingdom Atomic Energy Authority, Computer Section, Capenhurst, Cheshire. University of Liverpool, Computer Lab., Liverpool 2.
EEL/DEUCE 11A	English Electric Co.Ltd., Stafford. English Electric Co.Ltd., Computing Lab. Kidsgrove, Staffs. Ministry of Agriculture Fisheries & Food, Data Processing Division, Guildford. Ministry of Agriculture Fisheries & Food. Data Processing Division, Guildford. Ministry of Agriculture Fisheries & Food, Guildford.
EEL/KDP 10	Bank of London & S. America, London Bank of London & S. America, London. Commercial Union Assurance, Exeter. English Electric Commercial Bureau, Kidsgrove, Staffs. Midland Bank, London, E.C.2. Midland Bank, London, Schweppes Ltd., London, W.2. Yorkshire Electricity Board, Leeds.
EEL/LEO 1	J. Lyons & Co. - Leo Computers Ltd., London, W.14.
EEL/LEO 11	English Electric - Leo Computers Ltd. London, W.2. English Electric - Leo Computers Ltd. Ford Motor Co.Ltd., Romford, Essex. Ford Motor Co.Ltd., Dagenham, Essex. Ilford Ltd., Ilford, Essex. J. Lyons & Co. - Leo Computers Ltd. London, W.2. W.D. & H.O.Wills Branch of Imperial Tobacco Co. Ltd.Bristol. W.D. & H.O.Wills Branch of Imperial Tobacco Co.Ltd.Bristol. Ministry of Pensions & National Ins. Newcastle-on-Tyne. Standard Motor Co.Ltd., Coventry. Stewart & Lloyds Ltd., Corby, Northants.
EEL/LEO 111	Allied Suppliers Ltd., London. Board of Inland Revenue, Durrington, Wiltshire. Board of Trade, Census Office, Pinner. British Oxygen Gases Ltd., Walkden. Manchester. C.A.V. Ltd., (Acton) London, W.3. Cerebos, London, N.W.10.

Computer	User
EEL/LEO 111 (Contd.)	Comm. Inland Revenue Computer Centre, John Humphries House, Greenwich Coventry Corporation, Warwickshire. Dunlop Rubber Co.Ltd., Birmingham 24. Dunlop Ltd., Fort Dunlop. English Electric Leo Computers Ltd., Birmingham. English Electric Leo Computers Ltd., London. G.P.O. London. G.P.O. Lytham St. Annes. H.M. Customs & Excise, Southend. H.J.Heinz & Co. Ltd., Harlesden, Middx. Kayser Bondor Ltd., Baldock, Herts. London Boroughs' Joint Computer Committee of 6 Local Authorities, Camberwell. J. Lyons & Co.Ltd., London. Manchester Corporation, Manchester. Ministry of Public Buildings & Works, Eascote, Middx. Renold Chains, Manchester. Shell Mex & B.P. Ltd., Hemel Hempstead. Shell Mex & B.P. Ltd., Hemel Hempstead. Shell Mex & B.P. Ltd., Manchester. Smith & Nephew Group, Birmingham. Southall (Holdings) Ltd., Birmingham. Tote Investors Ltd., London.
ELLIOTT 401	Rothamsted Experimental Station, Harpenden.
ELLIOTT 402	Army Operational Research Group, West Byfleet. Bomber Command R.A.F. High Wycombe. Imperial Chemical Industries Ltd.Billingham,Co. Durham. Rank, Taylor & Hobson Ltd., Leicester. Rank, Taylor & Hobson Ltd., Leicester. Rothamstead Experimental Station, Harpenden.
ELLIOTT 402E	Rotol Ltd., Gloucester.
ELLIOTT 402F	British Transport Commission, Derby.
ELLIOTT 502	Air Traffic Control Experimental Unit. Elliott Division, Ministry of Aviation (Air Traffic Control Exp. Unit) RRE. Malvern, Kent.

Computer	User
ELLIOTT 802	The British Aluminium Co.Ltd., Operational Research Dept. Gerrards Cross, Bucks.
	Elliott Bros. Elstree Way, Borehamwood.
	Serck Radiators, Birmingham 11.
ELLIOTT 803	Albright & Wilson, Birmingham.
	An Foras Taluntais, Dublin (Agriculture Inst.)
	Associated Automation, London, N.W.10.
	Associated Octel Ltd., Ellesmere Port, Cheshire.
	Bath City Council.
	Bedford Computer Service Ltd. Bedford.
	Birmingham College of Advanced Technology, Birmingham.
	Bondworth Ltd., Yorks.
	Bradford & Sons, West Bromwich.
	Bristol Collegr of Science & Technology, Dept. of Mathematics, Bristol.
	British Broadcasting Corporation, London, W.1.
	British Petroleum Co.Ltd., Sunbury-on-Thames, Middx.
	Brook Green Laundry Ltd..
	Brown Brothers Ltd., London, W.3.
	Brunel College of Technology, London, W.3.
	Brush Electrical Co.Ltd., Loughborough.
	Buxted Chicken Co.
	Cater Brothers (Provisions)Ltd., London, E.3.
	Chelsea Polytechnic, London.
	Chesterfield U.D.C.
	Coats J.& P. Ltd., Paisley, Scotland.
	Corah N. (St. Margaret) Ltd., Leicester.
	County Borough of Dewsbury, Yorks.
	C.W.S. Desborough, Northants.
	Crittall Maufacturing Co.Ltd., Braintree.
	De Havilland Aircraft Co.Ltd., London, E.C.1.
	Distillers Co.Ltd., Research & Development, Epsom, Surrey.
	Draughtsmen's & Allied Technicians Ass., Richmond, Surrey.
	Ellerman Lines Ltd., London, E.C.3.
	Elliott Bros. (London) Ltd., Borehamwood, Herts.
	Elliott-Automation & N.C.R. Borehamwood, Herts.
	Elliott Bros. (London) Ltd., Computing Services Div. Borehamwood, Herts.
	Elliott Bros. (London)Ltd., Process Computing Div. Borehamwood, Herts.
	Elliott Bros. (London) Ltd., Telecommunications Div. Borehamwood, Herts.

Computer	User
ELLIOTT 803 (Contd.)	Elliott Bros. (London) Ltd.,Telecommunications Div., (Gov.Dept.) Borehamwood,Herts.
	Elliott Bros. (London) Ltd., Military Aircraft Controls Division, Borehamwood,Herts.
	Elliott Bros. (London) Ltd., Borehamwood.
	Elliott Bros. (London) Ltd., Radar Control, Frimley, Surrey.
	Elliott Bros. (London) Ltd., Radar Division, Rochester Kent.
	Elliott Bros. (London) Ltd., Air Space Control Division, Rochester, Kent.
	Elliott Bros. (London) Ltd., Aircraft Direction Division, Rochester, Kent
	Elliott Bros. (London) Ltd., Computing Services Division, Southwark.
	E.M.I. Electronics Ltd., Wells, Somerset.
	Evening Post, Reading.
	Fairey Aviation Div.,Westland Aircraft Co. Hayes, Middx.
	Financial Computing Centre, London, E.C.2.
	Godfrey Davis Ltd., London, S.W.1.
	Godfrey Phillips Ltd., London, E.1.
	G.P.O. Research Station, London.
	G.P.O. Research Station, Goonhilly Down, Cornwall.
	G.A.Harvey & Co.Ltd., London, S.E.7.
	Hatfield College of Technology, Hatfield.
	Hawker Siddeley Dynamics Ltd., London, E.C.1.
	Hepworth Ltd., Leeds 2.
	H.M.Government Est., Admiralty (U.D.E.)Portland, Dorset.
	H.M.Government Establishment.
	Humphreys & Glasgow Ltd., London, S.W.1.
	Hunting Engineering Ltd., Ampthill.
	Ilford Borough Council, Ilford.
	I.C.I. Billingham, Co. Durham.
	I.C.I. Ltd., Systems Division, Blackley.
	Imperial College of Science & Technology, London, S.W.7.
	Independent Computer Services Ltd., Edinburgh.
	Kitcat & Aitken Ltd., E.C.2.
	Kings College, Strand, London, W.C.2.
	Lanchester College of Technology, Coventry.
	London Hospital, Whitechapel, London.
	London & Hull Insurance Co.Ltd., London.
	Lucas Ltd., Birmingham.
	Lucas Ltd., Birmingham.
	The Lummus Co.Ltd., London, E.C.1.

Computer	User
ELLIOTT 803 (Contd.)	Medical Research Council, Davy Faraday Research Lab., Royal Inst. London.
	Mills Associates (Wales) Ltd., Monmouth.
	Ministry of Ag. and Fisheries, Guildford.
	Ministry of Aviation, Joint Air Reconnasissance Intelligence Centre, Brampton.
	Ministry of Defence, London.
	Monk & Dunstone Ltd., London.
	Mullard Research Laboratories, Salfords.
	Mullard Ltd., Southampton.
	National Cash Register Co.Ltd., Financial Computing Centre, London, E.C.2.
	N.C.R. City Computing Centre, London, E.C.2.
	N.C.R. Financial Computing Centre, London, E.C.2.
	N.C.R. Elliott Computing Centre, Newcastle-on-Tyne.
	N.C.R. Co.Ltd., London, E.C.2.
	National Elliott Engineering Training School, London.
	National Gas Turbine Est., Farnborough.
	Newport & Monmouth Technical College.
	Northamptonshire County Council, Treasurer's Dept.
	Ordnance Board, Applied Ballistics Dept, London, W.14.
	Oxford University, Oxford.
	Ove Arrup & Partners, London, W.1.
	Parkinson F. & A. Ltd., Guiseley, Yorks.
	Portsmouth Technical College, Portsmouth.
	Potato Marketing Board, Oxford.
	R.A.F.
	Richard Sharrock Ltd., Stockport, Cheshire.
	Richard Thomas Baldwins Ltd., Newport.
	Richard Thomas Baldwins Ltd., Process Computing Div. Newport.
	Richard Thomas Baldwins Ltd., Process Computing Div., Newport.
	Richard Thomas Baldwins Ltd., Llangwern.
	Royal Corps of Signals, Catterick, Yorks.
	Royal Inst. of Great Britain.
	Royal Military College of Science, Wilts.
	Royal Radar Establishment, Malvern.
	Royal Radar Establishment, Malvern
	Royal Radar Establishment.
	Rugby College of Engineering Technology, Warwicks.
	Samuel Fox Ltd., Sheffield.
	Scottish Stock Exchange, Glasgow.
	Sharpe W.N.

Computer	User
ELLIOTT 803 (Contd.)	School of Signals, Catterick, Yorks. Short Bros. & Harland, Belfast 3. Signals Research & Development Est. Christchurch. Smith & Sons. (England) Ltd. Bishops Cleve, Gloucestershire. Southern Electricity Board, Southall, Middx. Southern Electricity Board, Newbury, Berks. Sunderland Technical College, Sunderland. Swiss Bank Corporation, London, E.C.2. Thomson Newspapers, London. Thornber Brothers Ltd., Halifax. United Kingdom Atomic Energy Authority, Dounreay Exp. Reactor Est.,Nr.Thurso, Caithness, Scotland. U.K.A.E.A. Scotland. U.K.A.E.A. Riseley. United Steel Co.Ltd., Swinden Labs. Rotherham, Yorks. University of Aberdeen. University College Hospital. University College of N. Wales, Bangor. University of Durham, Durham Colleges, Durham. University of Exeter. University of Hull Computing Laboratory. Hull. University of Leicester. University of Reading, Computer Unit. Valentine & Sons Ltd., Dundee. Vickers da Costa & Co. London, E.C.4. Westland Aircraft Ltd., Fairey Aviation Div. Hayes. Westland Aircraft Ltd., Saunders-Roc Div. Isle of Wight. 4 - Undisclosed customers
GP/LGP 30	Visible Writing Machine Co.Ltd., London, W.1.
IBM 305	A.E.I. Hotpoint Ltd., Peterborough. Caterpillar Tractor Co.Ltd., Desford. Clark C. & J. Ltd., Street, Somerset. Lloyds & Scottish Finance Ltd., (Scottish Midland Gtee.Trust) Edinburgh. Russell & Bromley Ltd., Bromley. The Book Centre, London, N.W.10. Yeoman Credit Ltd., London.
IBM 650	British Overseas Airways Corp. London Airport,Hounslow. Cheshire County Council, Chester. Data Processing Centre, Newman St., London, W.1. Esso Petroleum Co.Ltd., Fawley, Hants. IBM Greenock, Scotland.

Computer	User
IBM 650 (Contd.)	Joseph Lucas Electrical Ltd., Birmingham 19. London County Council, London, S.E.1. (County Hall) National Coal Board National Coal Board National Coal Board, Cannock, Staffs. National Coal Board, Chatterley, Whitfield. Nielsen A.C. Co.Ltd., Headington, Oxford. Prudential Assurance, London, E.C.1. Roe A.V. Ltd., Bramhill, Stockport. Rolls-Royce Ltd., Derby. Rolls-Royce Ltd., Derby Steel Company of Wales, Glamorgan. T.I. (Group Services) Ltd., Airport, Walsall, Staffs.
IBM 704	United Kingdom Atomic Energy Authority, London,S.W.1.
IBM 705	General Register Office Royal Army Pay Corps, Winchester, Hants. Royal Army Pay Corps, Winchester, Hants.
IBM 709	Central Electricity Generating Board, London.
IBM 1410	British Railways, Darlington. B.O.A.C. Hounslow. Clarks Ltd. (Shoe Mnf.) Street, Somerset. Ford Motor Co.Ltd., Romford, Essex. Goodyear Tyre & Rubber Co., Wolverhampton. G.K. & N., Smethwick 40 G.K. & N. Group Management Advisory Service G.K. & N. Screws & Fasteners Division, Birmingham IBM Customer Test Centre, London. Legal & General Ass. Soc. Ltd., Tadworth, Surrey. Lucas J. (Elec.) Ltd., Birmingham. Nielsen A.C. Co.Ltd., Headington, Oxford. Readers Digest, London. Shell International Petroleum Co.Ltd. London. Steel Co. Of Wales, Port Talbot. Stewarts & Lloyds Ltd., Corby. Vauxhall Motors Ltd., Luton. Beds. Vauxhall Motors Ltd., Luton, Beds.

Computer	User
IBM 1460	Bank of Scotland, Edinburgh. Orbit House Services Ltd., London, E.C.4. Rolls Royce Ltd., Derby. Rolls Royce Ltd., (Aero Engine Division), Glasgow. South Western Electricity Board Unilever Ltd., London, E.C.4. West End Company
IBM 7030 (Stretch)	United Kingdom A.E.A., A.W.R.E., Aldermaston.
IBM 7070	T.I.Group Services, Computer Unit, Walsall, Staffs.
IBM 7074	Esso Petroleum Co.Ltd., London, S.W.1. Esso Petroleum Co.Ltd. Rolls Royce Ltd., Derby.
IBM 7090	British Iron & Steel Research Assoc., London, S.W.1. British Laboratories, Wichester, Hants. Central Electricity Generating Board, Computing Centre, London, S.W.1. C.E.I.R. (U.K.) Ltd., Brentford, Middx. I.B.M. Data Centre, London, W.1. I.B.M. World Trade Labs. (G.B.) Ltd., Hursley, Hants. Imperial College of Science & Technology, London, S.W.7. R.A.F. Station, Fylingdales, Yorks. R.A.F. Station, Fylingdales, Yorks. U.K.A.E.A. Risley, Lancs. U.K.A.E.A. Harwell. U.K.A.E.A. Winfrith Heath, Dorset.
IBM 7094	British Overseas Airways Corp., Operational Research St., London. Central Electricity Generating Board, London. C.E.G.B. Operational Research, Merrion Centre, Leeds 2. C.E.I.R. (U.K.) Ltd., I.B.M. Data Centre, London. Scott & Wilson, Kirkpatrick & Partners, London, S.W.1.

Section 5. (Contd.)

Computer	User
ICT 1100	Air Ministry Central Civilian Pay & Record Office, Nr. Stockport. Austin Motor Co., Birmingham 31. Barclays Bank, London, E.C.3. Barclays Bank, London, E.C.3. B.E.A. (Ruislip), Middx. Boots Pure Drug Co.Ltd., Nottingham E.M.I. Computer Centre, Hayes. E.M.I. Computer Centre, London. Glaxo Laboratories, Greenford. I.C.I. (Plastics), Welwyn Garden City, Herts. Kodak Ltd., Ruislip, Middx. Ministry of Labour, Watford. R.N. Stores Dept., Copenacre, Wilts. Sainsbury Ltd., London, S.E.1.
ICT 1101	Boots Pure Drug Co.Ltd., Nottingham. Domestic Electric Rentals Ltd. E.M.I. Computer Centre, London. London Transport Executivr, London, N.W.1. National Coal Board Headquarters, Doncaster. National Coal Board, Northumberland. S. Smith & Sons (England) Ltd. S. Smith & Sons (England) Ltd., Cricklewood. Thorn Electrical Industries Ltd., Enfield.
ICT 1200	Esso Petroleum Co.Ltd., Fawley, Hants. General Electric Co.Ltd., Wembley, Middx. Ministry of Supply, Boscombe Down Project, London. Ministry of Supply, R.D. Project, London. R.A.F. Henlow, Bedfordshire. R.A.F. Henlow, Bedfordshire.
ICT 1201	B.I.C.C. Kirby, Lancs. Birmingham City Treasurer's Dept., Birmingham. County Borough of Brighton, Brighton. British Extracting Co.Ltd., Birkenhead. British Railways, Bristol British Railways, Paddington, London. British Railways, Darlington, Durham. Chance Technical College, Smethwick. Charterhouse Credit Ltd., London. General Electric Co.Ltd., Witton.

Computer	User
ICT 1201 (Contd.)	General Post Office Headquarters, London. I.C.T. Factory, Southport Imperial Chemical Industries, Northwich. Irish Sugar Corporation, Dublin, Eire. Middlesex County Council, London, S.W.1. Middlesex County Council, London, S.W.1. Ministry ofAgriculture, Fisheries & Food, Guildford. Ministry of Agriculture, Fisheries & Food, Guildford. Ministry of Finance, Central A.D.P. Unit, Belfast 15. Ministry of Supply, Accountants General's Dept., Leatherhead. Monsanto Chemical Co.Ltd., London, S.W.1. Morganite Carbon Ltd., (Morgan Crucible Dept.) London, S.W.11. Morgan Crucible Ltd., London. H.M.Nautical Almanac Office, Herstmonceux, Sussex. Noble Lowndes & Partners, London, S.W.1. Northampton College of Technology. Nottingham County Council, West Bridgford. Shell Oil Refining Co.Ltd., Stanlow. Shell Oil Refining Co.Ltd., Shellhaven. S.W. Regional Hospital Board, Bristol. H.M. Stationery Office, London, E.C.1. West Riding C. Council, Wakefield, Yorks.
ICT 1202	Anderson Boyes & Co., Motherwell, Lancs. Asquith Wm. Ltd., Halifax, Yorks. Ayrshire Metal Products Ltd., Irvine, Scotland. Barnes Textiles Ltd., Altringham, Cheshire. Bowring C.T. Ltd., London, E.C.3. British Insulated Callender (Construction) Ltd., Kirkby, Manchester. Burman & Sons Ltd., Birmingham. Cambridge Language Reserach Unit, Cambridge. Cardiff Corporation, Cardiff. Carreras Ltd., Basildon, Essex. Cavaghan & Cray Ltd., Carlisle. Charles Carnell & Co., Glasgow, Scotland. Cranes Ltd., London, E.C.4. Crossfields & Calthorp Ltd., Liverpool, 5. Dept. of Agriculture & Fisheries for Scotland. Edinburgh. Electro-Hydraulics Ltd., (Owen Organisation) Warrington, Lancs. Hull Corporation, Hull. Hunting Aviation Management Ltd., Luton.

Computer	User
ICT 1202 (Contd.)	I.C.T. Computer Centre, London, S.W.6. I.C.T. Croydon Factory Surrey. I.C.T. Dartford Factory, Kent. I.C.T. Letchworth Factory, Herts. I.C.T. Letchworth Factory, Herts. I.C.T. Factory, Castlereagh, N. Ireland. I.C.T. Castlereagh, N. Ireland. Manchester Corporation, Manchester. Midland Data Processing Bureau, Birmingham. Montague Burton Ltd., Leeds. Montague Burton Ltd., Leeds. Nicholas G.A. Ltd., Salford 3, Lancs. Owen Organisation, Electro-Hydraulics Ltd., Wrexham, Denbighshire. Pilkington Bros., St. Helens. Ruston Bucyrus Ltd., Lincoln. Scottish Amicable Life Ass.Ltd., Stirling, Scotland. Scottish Dept. of Agriculture & Fisheries, Edinburgh. Shand Kydd Ltd., Christchurch, Hants. Simon H. (Engineering) Ltd., Cheadle Heath, Cheshire. United Steel Co.Ltd., Sheffield 10. Wellcome Foundation Ltd., Dartford. West Riding of Yorks C. Council, Wakefield, Yorks. Wiggins, H. Co. Ltd., Hereford.
ICT 1300	Aberdeen County Council, Scotland. Annan Impey Morrish, London, E.C.4. Asquith, Wm. Ltd., Halifax. Babcock & Wilcox Ltd., Renfrew, Scotland. B.E.A. Ruislip, Middlesex. Belfast Corporation, N. Ireland. British Cellophane Ltd., Bridgwater, Somerset. British Railways, Scottish Region. Britton, G.B. & Sons Ltd., Bristol. Calico Printers Assoc. Ltd., Manchester. Carpet Manufacturing Co.Ltd., Kidderminster, Worcs. Carroll, P.J. & Co.Ltd., Dublin, Eire. Clark, Son & Morland Ltd., Glastonbury. Coventry Gauge & Tool Co., Coventry, Warwickshire. Cumberland C. Council, Carlisle, Cumberland. Cussens, Sons & Co.Ltd., Manchester Cyanamid of Gt. Britain, London, W.C.2. Cyanamid of Gt. Britain, Gosport, Hants. Donal McPherson Group, (Paint Manufacturer).

Computer	User
ICT 1300 (Contd.)	Dowty Group Services Ltd., Cheltenham. English Sewing Cotton Co. Ltd., Manchester. Fife County Council, Cupar, Scotland. Firestone Tyre & Rubber Co.Ltd., Brentford, Middx. Fodens Ltd., Nantwich, Cheshire. G.E.C. Management Services. Greater London Borough of Newham. Greater London Borough of Newham. Home Telerentals Ltd., Preston, Lancs. Howden, J. & Co. Ltd., Glasgow, Scotland. (2) I.C.T. I.C.T. London. I.C.T. Stevenage, Herts. International Chemicals Co.Ltd., Irish Sugar Co., Thurles, Eire. Jute Industries Ltd., Glasgow, Scotland. Kimberley-Clark Ltd., Maidstone, Kent. Klinger Manufacturing Co.Ltd., London, W.18. Lawson & Sons (Dyce) Ltd., Aberdeen, Scotland. Lister, R.A. & Co.Ltd., Dursley, Gloucester. Mardon Son & Hall Ltd., Bristol. New Day Furnishers, Manchester. North Riding C. Council, North Allerton, Yorks. Pyrene & Co.Ltd., Brentford, Middx. Sandoy Products Ltd., Leeds. Scottish Amicable Life Ass.Ltd., Stirling, Scotland. S.E. Regional Hosp. Board, Edinburgh, Scotland. Shelton Iron & Steel Ltd., Stoke-on-Trent, Staffs. Short Bros. & Harland Ltd., Belfast, N. Ireland. Standard Telephones & Cables Ltd., Steventon, J. & Sons, Middlewich, Cheshire. Sussex (East) County Council, Lewes, Sussex. Swansea County Borough. Sykes, F. & G., Sutton Veny, Warminster, Wilts. Telehire Ltd., Lancashire. Tescos. Timothy Whites & Taylors Ltd., Burley Hill, Leeds. U.K.A.E.A. Harwell, Berks. United Steel Co., Broomhill, Sheffield. Westland Aircraft Co.Ltd., Yeovil, Somerset. Wilkinson & Riddell Ltd., Birmingham 3. Woods of Colchester Ltd., Colchester. Workington Iron & Steel Co.Ltd., Workington. Yorkshire Imperial Metals, Stourton, Leeds 10. 1 - Undisclosed customer.

Section 5. (Contd.)

Computer	User
ICT 1301	Alfred Bird & Sons Ltd., Birmingham 12.
	Appleby Frodingham Steel Co., (United Steel Co.Ltd.) Lancs.
	Appleby Frodingham Steel Co., Scunthorpe, Lancs.
	Bank of England, London, E.C.4.
	Bank of England, London, E.C.4.
	Blackburn & General Aircraft Co.
	Brighton College of Technology, Brighton.
	Bristol Siddeley Engines Ltd., Bristol
	Bristol Siddeley Engines Ltd., Bristol
	Bristol Siddeley Engines Ltd., Coventry
	British Petroleum, London, E.C.2.
	British Petroleum (Llandarcy) Ltd., Neath.
	British Railways, Eastern Region, London.
	British Railways, Peterborough.
	British Railways, Scottish Region, Glasgow.
	British Shoe Corporation, Leicester.
	Carreras Ltd., Basildon, Essex.
	College & University of Sussex.
	Dorset C. Council, Dorchester.
	Elkes Biscuits Ltd., Uttoxeter.
	Fine Fare Ltd., Welwyn Garden City, Herts.
	Foreign Office Government Communications H.Q.
	Freeman Hardy & Willis Ltd., Leicester.
	Freeman Hardy & Willis Ltd. Leicester.
	G.E.C. (Telecommunications) Ltd., Coventry.
	Gloucestershire C. Council, Gloucester.
	Government Communications H.Q. Cheltenham, Glos.
	Gratton Warehouses Ltd., Bradford, Yorks.
	Gratton Warehouses Ltd., Bradford, Yorks.
	Hawker Siddeley Aviation Ltd., (Avro Whitworth Div.) Coventry.
	Hawker Siddeley Engines, Loughborough.
	Hawker Siddeley Engines, Loughborough.
	Home Office, London, S.E.1.
	Hull Corporation
	I.C.T. Ltd., London, S.W.6.
	I.C.T. Ltd., London, S.W.6.
	Joseph Sankey & Son Ltd., Bilston, Staffs.
	Lancashire County Council, Preston, Lancs.
	Lancashire County Council, Preston, Lancs.
	Lancashire County Council, Preston, Lancs.
	Lewis Investment Trust, London.
	Liverpool Victoria Friendly Soc., Liverpool 3.
	London Electricity Board, London.

Computer	User
ICT 1301 (Contd.)	London Electricity Board, London.
	London Electricity Board, London
	London Electricity Board, London
	London Trustee Savings Bank, London, E.C.4.
	London Trustee Savings Bank, London, E.C.4.
	London & Manchester Ass.Co.Ltd., London.
	London University (G.C.E.) London, W.C.1.
	Mersey & N. Wales Elec. Board.
	Midland Data Processing Bureau, Birmingham.
	Midland Data Processing Bureau, Birmingham.
	Milk Marketing Board, Thames Ditton
	Milk Marketing Board, Thames Ditton
	Milk Marketing Board, Thames Ditton
	Ministry of Education A.D.P. Unit, London.
	Ministry of Public Buildings & Works, London.
	Montague Burton Ltd., Leeds, Yorks.
	National Coal Board, Durham Division. Gateshead.
	National Coal Board (N.E.Div.) Gateshead
	National Coal Board (N.E.Div.) Gateshead
	North Eastern Electricity Board, Southern Area, York
	North Eastern Electricity Board, Sunderland.
	North Eastern Electricity Board, Sunderland.
	Nottingham Corporation, Nottingham.
	Office of Revenue Commissioners, Dublin, Eire.
	Owen Organisation, Wednesbury, Staffs.
	Pilkington Bros. Ltd., St. Helens, Lancs.
	Pyrene Co. Ltd., Brentford, Middx.
	Ransomes & Marles Bearing Co., Newark.
	Rootes Apex, Glasgow, Scotland.
	Rubery Owen, Darlaston.
	Ruston & Kimsley Ltd., Lincoln.
	Scaffolding (Gt. Britain) Ltd., Mitcham.
	Selfridges Ltd., London, W.1.
	Southern Gas Board, Southampton.
	S.W. Region Hospital Board, Bristol 2.
	United Friendly Ins. Co. London, S.E.1.
	United Glass Ltd., London, W.C.2.
	Vickers Armstrong (Engineers) Ltd., Newcastle.
	Welwyn Electrical Ltd., Bedlington.
	Welwyn Electrical Ltd., Bedlington.
	West Cumberland Farmers Trading Soc.Ltd., Whitehaven, Cumberland.
	West Midlands Gas Board, Solihull, Warwaickshire.
	Wigfall H. & Son Ltd.,
	Wolsley Ltd., Leicester
	1 - Undisclosed County Council

Computer	User
ICT 1500	Air Products Ltd., New Malden, Surrey.
	Ansells Brewery Ltd., Birmingham 6.
	Arthur Sanderson & Sons Ltd., Perivale.
	Bibby, J. & Sons Ltd.,
	Birmingham Regional Hosp. Board.
	B.B.C. London, W.1.
	B.B.C. London, W.1.
	B.M.C. Service Ltd., Oxford.
	Bristol Corporation, Bristol 1.
	British Aircraft Corporation, Weybridge, Surrey.
	C.E.G.B. Birmingham Regional Office.
	C.E.G.B. Birmingham Regional Office.
	C.E.G.B. Central Computing Lab., London, S.W.1.
	C.E.G.B. Leeds Regional Office., Leeds 7.
	C.E.G.B. London Regional Office, London, S.E.1.
	C.E.G.B. Manchester Regional Office.
	Coats J. & P. Ltd., Glasgow, C.2.
	Cornhill Ins. Co., Guildford, Surrey.
	Corey Wm. & Son Ltd., London, E.C.3.
	Corey Wm. & Son Ltd.
	County Borough of Brighton, Sussex.
	Courage Barclay & Simonds Ltd., London, S.E.1.
	Cow & Gate Ltd.
	David Greig Ltd., (Prov.Merchants) London, S.E.1.
	English Steel Corporation, Sheffield.
	Glamorgan County Council, Wales.
	Hall J. & E. & Co.Ltd., Dartford, Kent.
	Harrods Ltd., London, S.W.1.
	Hoffman Manufacturing Co.Ltd.,Chelmsford, Essex.
	Hoffmann Manufacturing Co.Ltd., Chelmsford, Essex.
	I.C.T. Ltd., London, S.W.6.
	I.C.T. Ltd., London.
	Institute of Underwriters, London.
	Institute of Underwriters, London.
	International Combustions Ltd., Derby.
	International Shipping Information Services Ltd.
	Janeen Services, London.
	Jansen Ltd.
	Johnson Matthey & Co.Ltd., London, E.C.1.
	Johnson Matthey & Co.Ltd., London, E.C.1.
	London Assurance Co.
	London Electricity Board. London, W.1.
	Marley Tile Co. Ltd., Riverhead, Kent.
	Massey-Ferguson (U.K.) Ltd., Urmston, Manchester.
	National Employers Mutual Gen.Ass. Ascot.

Computer	User
ICT 1500 (Contd.)	North West Farmers Ltd., Nantwich, Cheshire.
	North West Farmers Ltd., Nantwich, Cheshire.
	Oxford University Press, London, N.W.10.
	Pfizer Ltd., Sandwich, Kent.
	Pinchin Ferguson Clark, London.
	Port of London Authority, London, E.C.3.
	Rocappi Inc. Co., London.
	Rootes Motors Ltd., (Parts) Birmingham.
	Rootes Group, Birmingham.
	S.A. Railways Administration, East London.
	Scottish Equitable Life Ass. Soc., Edinburgh.
	Scottish Gas Board, Edinburgh.
	Scottish Gas Board, Edinburgh.
	Scottish & Newcastle Breweries Ltd., Edinburgh 8.
	Scottish Provident Institution.
	Skefko, Luton.
	Smith, W. H. & Son Ltd., London, S.E.1.
	South of Scotland Elec. Board, Glasgow.
	South of Scotland Elec. Board, Edinburgh.
	Stone, J. & F. Lighting & Radio Ltd.,
	Unicorn Securities Ltd., Forest Gate, London.
	Unigate Ltd., Trowbridge, Wilts.
	Vickers Armstrong (Aircraft) Ltd., Weybridge, Surrey.
	Vickers Armstrong (Aircraft) Ltd., Weybridge, Surrey.
	T. Wall & Sons (Ice Cream) Ltd., Barnwood, Glos.
	Welsh Hospital Board, Wales.
	William Hill (Park Lane) Ltd. London.
	Wilts United Dairies Ltd., Trowbridge, Wilts.
	Wimpey Geo. & Co., London, W.6.
	Zurich Ins. Co., London, W.C.2.
	1 - Undisclosed company in West Middlesex.
ICT 2400	Ministry of National Ins., Newcastle-on-Tyne.
	Ministry of Pensions, Lytham St. Annes.
	Royal Army Ord. Corp., Donnington, Shropshire.
	Royal Army Ord. Corp., Nottingham.
ICT APOLLO	Oceanic Air Traffic Control Centre, Ministry of Aviation.
ICT ARGUS	Babcock & Wilcox Ltd., West Thurrock, Essex.
	British Government
	C.E.G.B. (Research & Development Dept)Leatherhead, Surrey.
	C.E.G.B. (Research & Development Dept)Leatherhead, Surrey.
	C.E.G.B. (Research & Development Dept)Leatherhead, Surrey.

Section 5. (Contd.)

Computer	User
ICT ARGUS (Contd.)	C.E.G.B. West Thurrock C.E.G.B. Bristol I.C.I., Fleetwood, Lancs. I.C.I., Fleetwood, Lancs. I.C.I., Wilton, Lancs. I.C.I., Central Instrument Laboratory. Middlesborough I.C.I., Central Instrument Laboratory. Middlesborough I.C.I., Mond Division, Buston. I.C.I., Mond Division, Widnes, Lancs. I.C.I. Jodrell Bank Radio Telescope, Cheshire. Loughborough College of Technology, Leicester. Medical Research Council, Cambridge. Richard Thomas & Baldwins, Scotland. Steel, Peech & Tozer Ltd., Sheffield. Steel, Peech & Tozer Ltd., Sheffield.
ICT ATLAS	Atomic Weapons Research Est. Aldermaston, Berks. British Iron & Steel Research Assoc. London, S.W.1. C.E.I.R., London, W.1. London University, London, W.C.1. Manchester University, Manchester 13. National Inst. for Research in Nuclear Science, Harwell. Rutherford High Energy Lab., Chilton Didcot, Berks. Scott & Wilson, Kirkpatrick & Partners, London, S.W.1. U.K.A.E.A. Harwell, Berks. U.K.A.E.A. Aldermaston, Berks. University of Cambridge, Cavendish Laboratory.
ICT EMI SPECIAL	British Motor Corporation, Longbridge.
ICT MADAM Mk.I	Manchester University, Manchester 13.
ICT MADAM Mk.II	Armstrong Siddeley Motors Ltd., Coventry. Atomic Weapons Research Est., Aldermaston. Ministry of Supply, Fort Halstead. Ministry of Supply, Fort Halstead. Roe A.V. & Co.Ltd., (Hawker Siddeley Aviation)Manchester.

Section 5. (Contd.)

Computer	User
ICT MERCURY	A.E.I. Ltd., Manchester
	British Petroleum Co., London, E.C.2.
	General Electric Co., Erith, Kent.
	I.C.I. Ltd., Wilton, Yorks.
	London University, London, W.C.1.
	Metropolitan Vickers Elec. Co.,Ltd., London.
	Oxford University, Computing Lab., Oxford.
	R.A.F. Meteorological Office, Bracknell.
	R.A.F. Est., Farnborough, Hants.
	Sheffield University, Sheffield.
	Shell Petroleum Co. London, E.C.3.
	U.K.A.E.A. Harwell.
	U.K.A.E.A. Winfrith Heath, Dorchester
	U.K.A.E.A. Riseley, Lancs.
ICT ORION	Agricultural Research Council, Rothamsted.
	Beechams Research Labs. Brentford, Middx.
	Cadbury Bros.Ltd., Bournville.
	Ferranti Ltd., London, W.1.
	Ferranti Ltd., Manchester 12.
	I.C.T. Bureau, London, W.1.
	Metal Box Co.Ltd., Worcester.
	National Inst. for Research in Nuclear Science,Harwell,Berks.
	National Provincial Bank Ltd., London, E.C.2.
	Norwich Union Life Ins.Soc., Norwich.
	Prudential Ass., London, W.C.1.
	Rothamsted Experimental Station, Harpenden, Herts.
	Rutherford High Energy Lab., Chilton Didcot, Berks.
	Vickers Armstrong (Engineers) Ltd., Barrow-in-Furness, Lancs.
ICT PEGASUS I	Admiralty Research Lab., Teddington.
	A.E.I. Ltd., Rugby.
	Aircraft & Armament Experimental Est., Boscombe Down,Wilts.
	Babcox & Wilcox Ltd., London, N.W.1.
	Blackburn Aircraft Ltd., Brough, E. Yorks.
	British Aircraft Corp. Warton, Nr. Preston, Lancs.
	British Iron & Steel Research Ass., London.
	College of Aeronautics, Cranfield.
	De Havilland Aircraft Co.Ltd., Hatfield.
	Ferranti Ltd., London, W.1.
	Ferranti Ltd., Hollinwood, Lancs.

Computer	User
ICT PEGASUS I (Contd.)	Hawker Aircraft Co.Ltd., Kingston-on-Thames. Hawker Siddeley Dynamics Ltd., Whitley. I.C.I. Dyestuffs Div., Blackley, Manchester. M.O.S. Military Survey, Feltham. Northampton College of Advanced Technology, London, E.C.1. Parsons C.A. & Co.Ltd., Newcastle-on-Tyne. Royal Aircraft Est. Farnborough. Steel Company of Wales Ltd., Port Talbot. United Steel Companies Ltd., Sheffield. University of Durham, Newcastle-on-Tyne. University of Leeds, Leeds 2. University of Newcastle-on-Tyne. University of Southampton, Southampton. Vickers Armstrong (Aircraft) Ltd., Weybridge.
ICT PEGASUS II	British Railways (Gt.Northern Line, E. Region)London,N.W.1. Bruce Peebles Ltd., Edinburgh 5. De Havilland Aircraft Co.Ltd., Hatfield. D.S.I.R. Road Research Labs. Harmondsworth. Edinburgh Computers Ltd., Edinburgh 2. Ferranti Ltd., London Computer Centre, W.1. Hawker Siddeley Dynamics Ltd., Hatfield, Herts. I.C.I. Manchester. I.C.T. Bureau, London, W.1. London & Manchester Assurance Co., London, E.C.2. Martins Bank Ltd., Liverpool 2. National Provincial Bank Ltd., London. Shell Refining Co.Ltd., Stanlow, Cheshire. Shell Research Ltd., Thornton, Cheshire. Vickers Armstrong Aircraft Ltd., Weybridge.
ICT SIRIUS	Admiralty Research Station (Ship Depot.)Foxhill,Bath. Battersea Tech. College, Mathematics Dept., London,S.W.11. Battersea Tech. College, London, S.W.11. British Railways - Midland Region,Civil Engineering Dept., London, N.W.1. Builders Copper Tube Co.Ltd., London. Cement & Concrete Assn., Slough, Bucks. Davy & United Engineering Co.Ltd., Sheffield. Ferranti Ltd., Computer Centre, London, W.1. Forestry Commission (Research Branch) Franham, Surrey. Heriot-Watt College, Edinburgh 1. I.C.T., London Computer Centre, London, W.1.

Computer	User
ICT SIRIUS (Contd.)	Pilkington Bros. Ltd., Ormskirk, Lancs.
	Royal College of Science & Technology, Glasgow.
	Yarrow & Co.Ltd., Glasgow, W.4.
METROVICK 950	A.E.I. (Manchester) Ltd., Manchester.
	A.E.I. (Manchester) Ltd., Manchester.
	A.E.I. (Manchester) Ltd., Manchester.
MONROBOT Mk.XI	B.O.A.C. Brentford, Middlesex.
	Fenn & Crosthwaite, London, E.C.2.
	Hambros Bank Ltd., London, E.C.2.
	Monroe Calculating Machine Co.Ltd., London.
	Monroe Calculating Machine Co.Ltd., London.
	Monroe International Ltd., London.
	Oxfordshire County Council, Oxford.
	Oxygenaire Ltd., Basingstoke. Hants.
	Stevenage Development Corp., Stevenage.
	Tyndall Computers Ltd., Bristol.
NATIONAL ELLIOTT 405	A.E.I. (Woolwich) Ltd., London, S.E.18.
	Albert E. Reed & Co.Ltd., Maidstone, Kent.
	Assoc. British Picture Corp., London.
	Board of Trade, Pinner, Middlesex.
	B.I.C.C. Ltd., London, W.C.2.
	British Transport Commission, Wolverton.
	Cambridge University, Dept. of Engineering.
	City Treasurer, Norwich.
	City Treasurer, Norwich.
	Courtalds Ltd., Coventry.
	Crosse & Blackwell Ltd., London, W.1.
	G.P.O. Add/Leaps, London, E.C.1.
	G.P.O. Add/Leaps, London, E.C.1.
	Joseph Lucas (Sales & Service) Ltd., Birmingham 18.
	Legal & General Ass. Soc. Ltd., Tadworth, Surrey.
	Littlewoods Mail Order Stores Ltd., Liverpool 23.
	National Cash Register Co.Ltd., London, N.W.1.
	National Elliott Computing Service, Borehamwood, Herts.
	National Elliott Computing Service, Borehamwood, Herts.
	National Elliott Computing Service, Borehamwood, Herts.
	National Elliott Computing Service, Borehamwood, Herts.
	National Elliott Computing Service, London, N.W.1.

Computer	User
NATIONAL ELLIOTT 405	National Elliott Computing Service, London, N.W.1. National Elliott Computing Service, Neasden, London. National Elliott Computing Service, Neasden, London. National Elliott Computing Service, Neasden, London. National Gas Turbine Est., Farnborough, Hants. Newton Chambers & Co.Ltd., Sheffield. Newton Chambers & Co.Ltd., Sheffield. North Western Gas Board, Altrincham, Cheshire. North Western Gas Board, Altrincham, Cheshire. Reckitt & Sons Ltd., Computer Service, Hull. Siemen Edison & Swan Ltd., London, S.W.1. Unilever Ltd., London, E.C.4.
PACKARD BELL 250	Benson-Lehner, Southampton, Hants. Royal Aircraft Est., Farnborough, Hants.
SOLARTRON	Addressograph Multigraph.
SOLARTRON (SPECIAL)	Royal Aircraft Est., Aberporth.
STANTEC ZEBRA	Aircraft Research Ass. Ltd., Bedford. Bibby J. & Sons Ltd., Liverpool 3. Borough of Hornsey, London, N.8. Bradford Inst. of Technology, Bradford. College of Technology & Commerce, Leicester. College of Technology, Bedford. Hornsey Brough Council, London . Imperial Tobacco Co., Bristol 3. Newall Engineering Co., Peterborough. S.T.C. Ltd., Accounts Dept., London, N.11. S.T.C. Ltd., Accounts Dept., London, N.11. S.T.C. Ltd., Building 23, London, N.11. S.T.C. Ltd., London, W.C.2. S.T.C. Ltd., Stantec Faculty, Newport. Standard Telecommunications Lab.Ltd., London Rd.,Harlow. University of Dundee, Scotland. University College S. Wales, Cardiff. Woolwich Polytechnic, Mathematics Dept.,London, S.E.18. Woolwich Polytechnic, London, S.E.18. 3 - Names of users unconfirmed by manufacturer.

Computer	User
SEL DB 40	B.O.A.C., London Airport, Hounslow.
TRW 130 (AN/UYK)	International Systems Control
TRW 330	British Petroleum, Belfast. I.C.I. Billingham, County Durham. I.C.I. Billingham, County Durham. I.C.I. Heavy Organic Chemicals Div.,Wilton, Yorks. International Systems Control Ltd., Wembley Laboratories. Kellogg International Corp., Wilton, Yorks. Steel Company of Wales, Port Talbot.
UNIVAC SS 80/90.	Computer Services (Birmingham), Birmingham. C.A.Coutts & Co., London, W.C.2. Manchester Computer Centre Ltd., Manchester. Remington Rand Ltd., London, E.C.1. W. Timpson Ltd., Manchester 3.

SECTION 6

LIST GIVING USERS NAME, OF VINTAGE COMPUTERS INSTALLED IN AUSTRIA.

Computer	User
BULL GAMMA 30	Bull - Datenverarbeitungsmaschinen Landstrasse, Haupstrasse 1A, Wien 3. 1 - Name of user unconfirmed by Manufacturer.
BURROUGHS 205	Vienna University, Vienna.
G/P/LGP 21	Ing. Buro Kratzenbauer, Wien. Austria.
IBM 650	Mathematisches Labor de Technischen Hochschule. Wien IV.
IBM 1410	2- Names of Users unconfirmed by manufacturer.
IBM 1460	2 - Names of users unconfirmed by manufacturer.
IBM 7040	1 - Name of user unconfirmed by manufacturer.
IBM 7090/4	1 - Name of user unconfirmed by manufacturer.

Section 6. (Contd) - AUSTRIA

Computer	User
PB 250	Danubia, Vienna.
SIEMENS 2002	Siemens & Halske GmbH, Wiener, Schevachstromwerke.
STANTEC ZEBRA	J. Drescel (Spar), Dornbirn, Austria.
USS 80	Ministry of Pensions Government Installation, Ministry of Insurance, V.O.B., Vienna.
ZUSE II	Amt Der Tiroler Landesregierung Innesbruk. Firma C. Reichert, Optische Werke, Wien. Flurbereinigungsamt, Saarbrucken. Niederosterreichische Landesregierung, Wien. Osterreichische Donaukraftwerke AG., Wien. Steiermarkische Landesregierung, Graz. Technologisches Gewerbemuseum, Wien IX.
ZUSE 22	Osterreichische Stickstoffwerke A.G., Linz/Donau.
ZUSE 23	Baugesellschaft H. Rella & Co., Wien. Elin-Union, Wiez Bei Graz, Osterreich. Ministerium F. Land-Und Forstwirtschaft, Wien. Rechenzentrum, Wien. Universitat Innsbruck, Institut Fur Theoretische Physik, Innsbruck. Vereinigte Osterr, Stahlwerke Linz (Voest). 4 - Names of users unconfirmed by manufacturer.

SECTION 6

LIST GIVING USERS NAME, OF VINTAGE COMPUTERS INSTALLED IN BELGIUM.

Computer	User
BULL GAMMA 30	9 - Number & Grouping confirmed by manufacturer. 7 - Names of users unconfirmed by manufacturer.
BULL GAMMA 60	1 - Number & Grouping Category confirmed by manufacturer.
BULL GAMMA 150	10 - Number & Grouping Category confirmed by manufacturer.
BULL GAMMA 300	9 - Number & Grouping Category confirmed by manufacturer. 6 - Names of users unconfirmed by manufacturer.
BULL GAMMA 500	5 - Number & Grouping Category confirmed by manufacturer.
BURROUGHS E 101	Centre de Recherches numériques, 61, Rue De Namur, Louvain. Centre national de Calcul Mécanique, 44, Rue De Louvain, Brussels. 2 - Names of users unconfirmed by manufacturer.
ELLIOTT 802	Ministry of Public Works, Brussels. N.C.R. Brussels.
ELLIOTT 803	Girec, Belgium. Ministry of Public Works, Brussels. N.C.R. (Belgium) 15/16, Place Surlet de Chokier, Brussels. Phensic Belge Insurance Co., Antwerp.

Section 6. (Contd) - BELGIUM

Computer	User
IBM 305	5 - Names of users unconfirmed by manufacturer.
IBM 650	Euratom (Cetis) Brussels. IBM of Brussels, Belgium. 4 - Names of users unconfirmed by manufacturer.
IBM 1410	The Belgian Railway Company. 8 - Names of users unconfirmed by manufacturer.
IBM 1460	6 - Names of users unconfirmed by manufacturer.
IBM 7040	3 - Names of users unconfirmed by manufacturer.
IBM 7070/2/4	Institute Royal Météorologique de Belgique, 3, Avenue Circulaire, Brussels. 2 - Names of users unconfirmed by manufacturer.
IBM 7090/4	Euratom (C.E.T.I.S.). 2 - Names of users unconfirmed by manufacturer.
ICT ARGUS	Electrozel. Société Intercommumicate Électricité, Monceau Power Station Nr. Charleroi, Belgium.
ICT MERCURY	Belgian Atomic Energy Authority, ,Moll. Centre d'Etude de L'Énergie Nucleaire Administration Centrale Brussels 4.

Computer	User
SEA/CAB 500	Inst. Géographique, Brussels. Inst. Polytechnique, Gand. Inst. Polytechnique, Mons. Laboratoires Solvay à Brussels.
SEL ER 56	Bell Telephone Manufacturing Co., Antwerp.
STANTEC ZEBRA	Bell Telephone Manufacturing Co., Automation System Division, Berkenrodelei, 33 Hoboken, Antwerp. C.E.C.E. Service Bureau, 57, De La Croix de Fer. Brussels. C.E.C.E. Service Bureau, 57, De La Croix de Fer. Brussels. Régie Des Voies Aérienne (R.V.A.) Antwerp.
TRW 330	1 - Name of user unconfirmed by manufacturer.
UNIVAC SS 80/90	7 - Names of users unconfirmed by manufacturer.

SECTION 6

LIST GIVING USERS NAME. OF VINTAGE COMPUTERS INSTALLED IN DENMARK.

Computer	User
BULL GAMMA 30	4 - Number & Grouping Category confirmed by manufacturer.
BULL GAMMA 300	6 - Number & Grouping Category confirmed by manufacturer.
CONTROL DATA 1604-A	Regnecentralen Danish Institute Computing Machinery, Copenhagen.
DASK	Regnecentralen Danish Institute of Computing Machinery, Carlsbergvej 2, Copenhagen, Valby.
GIER DISADEC	A/S Regnecentralen, Smallegade 2, Copenhagen, F. A/S Regnecentralen, Kastetvej 4. Aalborg. A/S Regnecentralen, Guldsmedegade 3, Arhus C. A/S Regnecentralen, Falkoneralle 1, Copenhagen. Burmeister & Wain A/S Shipyard, Strandgate 4, Copenhagen K. Danish Atomic Energy Research Establishment, R ISØ. Haldor Topsøe, Baunegaardsvej 73, Hellerup. Hydro - & Aerodynamic Laboratory, Hjortekaersvej 99, Kgs. Lyngby. Royal Danish Geodetic Institute, N. Farimagsgade 3, Copenhagen K. University of Copenhagen Mathematical Inst. Blegdamsvej 15, Copenhagen.Ø University of Copenhagen the Observatory, Osterveldgade 3, Copenhagen K. University of Copenhagen H.C. Ørdsteds Inst. Universitetsparket 5. Copenhagen Ø.

Section 6. (Contd) - DENMARK

Computer	User
IBM 305 RAMAC	Dansk Chrysanthemum Kulter.
IBM 650	8 - Names of users unconfirmed by manufacturer.
IBM 1410	3 - Names of users unconfirmed by manufacturer.
IBM 1460	1 - Name of user unconfirmed by manufacturer.
IBM 7040	I/S Datacentralen of 1959. Ved Stadsgraven 15, Copenhagen S.
IBM 7090	Northern European Computing Centre.
IBM 7094	Technical University of Denmark, Danish Ministry of Education.
ICT 1500	A/S Forsikringsselskabet Codan, Denmark. Codan Insurance Co., Copenhagen. I.C.T. Ltd., Denmark, Copenhagen.
SEL/DB 40	Scandinavian Airlines System (SAS) Copenhagen.
SEL/KA 21	Scandinavian Airlines System (SAS) Copenhagen.
SIEMENS 2002	Danische Staatsbahnen, Copenhagen.
STANTEC ZEBRA	Scandinavian Airlines System, Copenhagen.

SECTION 6

LIST GIVING USERS NAME, OF VINTAGE COMPUTERS INSTALLED IN FINLAND.

Computer	User
BULL GAMMA 30	1 - Name of user unconfirmed by manufacturer.
BULL GAMMA 300	2 - Number & Grouping Category confirmed by manufacturer.
ELLIOTT 803	Finnish Cable Works, Helsinki. Technical University of Helsinki, Finland.
IBM 1410	2 - Names of users unconfirmed by manufacturer.
IBM 1460	3 - Names of users unconfirmed by manufacturer.
ICT 1301	KESKO, Finland.
ICT 1500	KESKO (Importers) Finland. KESKO, Finland. KESKO, OY, Helsinki, Finland. KESKO, OY, Helsinki, Finland.
SIEMENS 2002	Finska Kabelfabriken, Helsinki. Kansallis-Osake-Pankki, Helsinki.
WEGEMATIC 1000	Turun Laskukeskus, Turun, Yliopisto, Turku. 2 - Names of users unconfirmed by manufacturer.

SECTION 6

LIST GIVING USERS NAME, OF VINTAGE COMPUTERS INSTALLED IN FRANCE.

Computer	User
BULL GAMMA 30	L'Air Liquide, Paris 7, ème.
	Alsthom, Saint-Ouen (Seine).
	Banque Dupont, Paris 8. ème.
	Banque Hervet, Bourges.
	Banque de L'Indochine, Paris 8 ème
	Banque de Paris et de Pays-Bas, Paris 2. ème.
	Banque Industrielle et Commerciale de Montrouge.
	B.N.C.I. Dinant.
	B.N.C.I. Dinant.
	B.R.G.M. 74, Rue de la Federation, Paris 15. ème.
	Bureau de Recherches de Petrole.
	Caisse d'Allocations Vieillesse pour les cadres de l'Industrie et du Commerce, 8 Bd. Vauban, Lille (Nord)
	Caisse d'Epargne de Bouches du Rhône Marseille.
	Caisse des Congés Payés du Bâtiment, Paris.
	Caisse Industrielle d'Assurances Mutuelles, Paris 8. ème.
	Caisse Régionale de Credit Agricole Mutuelle, 14, Bd. des Arènes, Nîmes (Gard).
	Concava, 28, Rue Bayard, Paris 8. ème.
	Commissariat a l'Energie Atomique, 8, Avenue Kleber, Paris 16. eme.
	Centre d'Etudes Nucléaires de Grenoble, Bp 269, Grenoble (Isère).
	Charbonnages de France, Blanzy.
	Cie d'Assurances L'Union.
	Cie d'Assurances Urbaines.
	Commissariat à l'Energie Atomique Etablissements U.BP61. (Seine) Montrouge.
	Commissariat à l'Energie Atomique Etablissements T.BP7. Sevran (S & O).
	Commissariat à l'Energie Atomique Pierrelatte (Drôme).

Section 6. (Contd) - FRANCE

Computer	User
BULL GAMMA 30	Comptabilité Publique Amiens.
	Comptabilité Publique, 192, Rue Saint Honoré, Paris.
	Le Continent, Paris 2. ème.
	Coranord, 113, Rue B. Delespaul a, Lille (Nord).
	Cotelle & Foucher, Issy-Les-Moulineaux (Seine).
	Crédit Agricole Mutuelle d'Angoulême.
	Crédit Agricole Mutuelle du Gard.
	Crédit Commercial de France, Paris 8 eme.
	Crédit Industriel d'Alsace et de Lorraine, Strasbourg.
	Crédit Lyonnais, Paris.
	C.S.F. Copena, Levallois - Perret (Seine).
	Et Econ Casino, Paris.
	E.D.F. Sce Central de Mécanographie, 68, Rue du Fauborg, St. Honoré, Paris 8 ème.
	Ferodo, 64, Ave., Grande, Paris.
	Fr. Masurel Textil, Tourcoing, Nr. Lille.
	France Soir, 100, Rue Reamur, Paris.
	Gaz de France, Service des Ensembles Electroniques, 23, Rue Philibert, Delorne, Paris, 17 ème.
	Gestion et Comptabilité 51, Bld. des Danes, Marseille (2 ème.)
	Gros & Cie, Lyon (Rhône).
	Hospices Civils.
	Hutchinson, 124, Av., Champs Elysee, Paris 17 ème.
	IMSAC, 15, Rue de L'Atlas, Paris, 19 ème.
	Joulet Turpin, 42, Bd. L. Roederer, Reims.
	Laboratoire de Balistique (Direction des Poudres) Sevran (S et O).
	La Bonne Presse, Paris.
	L'Urbaine et la Seine, 39, Rue Peletier, Paris, 9 eme.
	L.R.B.A. Vernon (Eure).
	Le Matérial Téléphonique, Boulogne-Billancourt.
	Météorologie Nationale Francaise 1, Quai, Branly.
	Michelin, 97, Bd, Pereire, Paris.
	Ministère de la Construction, 2, Bis, av du Parc de Passy, Paris 16.
	Ministère des P et T 20, Avenue de Seque, Paris. 7.
	La Moadiale, Lille (Nord).
	La Nationale, Rue Drouot, Paris, 9 ème.
	Nord Aviation Chatillon S/Bagneux.

Section 6. (Contd) - FRANCE

Computer	User
BULL GAMMA 30	Pechiney, Paris. Pechiney - Progil, Lyon-St-Rambert (L'Île Barbe). Peugeot & Cie, Levallois-Perret (Seine). La Radio-Technique, Suresnes (Seine). S.A.M.D.A. Paris 8 ème. Sécurité Sociale D'Aquitaine Bordeaux. S.E.I.T.A. 53, Quai d'Orsay, Paris 7 ème. S.I.A. 45, Bd. Brune, Paris, 14 ème. SIMCA, 14, Rue d'Athens, Paris. Société Co-op Mécanograph, Moderne, Paris. Société Marseillaise de Crédit, 4, Rue Auber, Paris 9 ème. Le Soleil - Vie, Paris 9 ème. La Télémécanique Electrique, Chaton (S & O). Trésore Générale D'Amiens. Union Co-op Picardes. 13 - Number & Grouping Category confirmed by Manufacturer.
BULL GAMMA 60	C.N.R.S. Institut Blaise Pascal, Nancy. Commissariat à l'Energie Atomique, Centre de Calcul, 69, Rue de Rarenne, Paris. Commissariat à l'Energie Atomique, Vaujours. Crédit Nationale, Comptoir Nationale d'Escompte de Paris, 20, Rue Bergère, Paris, 9. Garantie Mutuelle des Fonctionnaires, 16, Rue De Prony, Paris, 17. S.N.C.F. 105, Bd. Souchet, Paris. French Railways. French Railways.
BULL GAMMA 150	91 - Number & Grouping Category confirmed by manufacturer.
BULL GAMMA 300	Comtabilité Publique, Rue de Rivoli, Grenoble. Crédit Lyonnais, 19, Bd. des Italiens, Paris. Office Central des Organisations, Agricolesdu Finistère et des Côtes du Nord, Landerneau. P et T Cheques postaux Limoges. P et T Cheques postaux Nantes. Trésorerie Générale de Grenoble. 15 - Names of users unconfirmed by manufacturer.

Section 6. (Contd) - FRANCE

Computer	User
BULL GAMMA 500	55 - Number & Grouping Category confirmed by manufacturer.
BURROUGHS E 101	5 - Names of users unconfirmed by manufacturer.
CITAC 210 B	Centre de Transit Télégraphique Automatique. Centrale EDF2, Chinon. Météorologie Nationale Française.
ELLIOTT 402	Inst. Blaise Pascal, Paris.
ELLIOTT 803	Inst. Blaise Pascal, Paris. N.C.R. Paris.
GIER	Bassin D'Essais Des Carenes, 6, Boulevard Victor, Paris.15°.
GP/LGP 21	St. Gobain "Uvex Chemische Werke" Chalon.
GP/LGP 30	SHAPE -Headquarters, Marly Le-Roi.
GP/RPC 4000	St. Gobain Chemische Werke, Paris.
IBM 305	20 - Names of users unconfirmed by manufacturer.
IBM 650	Caisse des Dépôts et Consignations, 56, Rue de Lille Paris 7°. Centre de Calcul Statistique et Econométrie Faculté des Sciences Université de Caen. Centre d'Etudes pour la Traduction Automatique, Arcueil (Seine). Centre Universitaire de Calcul Automatique, Nancy. Commissariat à l'Energie Atomique, Centre de Calcul, 69, Rue de Varenne, Paris.

Section 6. (Contd) - FRANCE

Computer	User
IBM 650	Commissariat à l'Energie Atomique, Saclay-Fontenay-Caradache. Commissariat à l'Energie Atomique, Ecole Nationale Supérieure de Mécanique, 3, Rue du Maréchal, Joffre. IBM France, Paris. Institut Blaise Pascal. Institut de Calcul Numérique, Faculté des Sciences, Toulouse. Institut Universitaire de Calcul Economique, Nancy. Laboratoire de Physique d'Orsay, Orsay. Nancy Université. Observatoire de Meudon, Meudon. Orsay Université. S.N.C.F. 105, bd Souchet, Paris, 16e. Toulouse Université. 40 - Names of users unconfirmed by manufacturer.
IBM 704	Commissariat à l'Energie Atomique, Paris 8e. Commissariat à l'Energie Atomique, Saclay-Fontenay-Caradache. Commissariat à l'Energie Atomique, Institut Blaise Pascal, Paris. Institut Géographique Nationale, 2, Ave., Pasteur, St.-Mand. Office National d'Etudes et de Recherche Aerospatiales. av de la Division Leclere, Chatillon sous Bagneux.
IBM 705	B.N.C.I. 8-10, rue de la Nation, Paris. Compagnie de Saint - Gobain Paris. 19e. Compagnie Générals d'Assurance, Paris. Crédit Industriel et Commerciel, 66, rue de la Victoire, Paris. Groupe Drouot le Patrimoine Aird, 24, rue Drouot, Paris 9e. 3 - Names of users unconfirmed by manufacturer.
IBM 1410	Assurances Générales Accidents, 87, rue Richelieu, Paris. 2e. Assurances Générales Vie, 87, rue Richelieu, Paris. 2e. Caisse des depôts et Consignations, 56, rue de Lille, Paris 7e. Caisse Nationale des Retraites Ouvrières, 36, rue Voiulle, Paris 15e. Institut Blaise Pascal. CN RS.

Section 6. (Contd) - FRANCE

Computer	User
IBM 1410	Ministère des Armées, 26, Boulevard Victor, Paris. 15e. SIMCA, Poissy. 48 - Names of users unconfirmed by manufacturer.
IBM 1460	Drouot Insurance Group.. 19 - Names of users unconfirmed by manufacturer.
IBM 7030 (Stretch)	Commissariat à l'Energie Atomique, Saclay - Fontenay - Caradache.
IBM 7040	1 - Name of user unconfirmed by manufacturer.
IBM 7044	Grenoble Université. 3 - Names of users unconfirmed by manufacturer.
IBM 7070/2/4	Assurances Générales Accidents, Paris. Assurances Générales Vie, Paris. Caisse Nationale d'Epargne. Commissariat à l'Energie Atomique, Centre de Calcul, Paris. Crédit Foncier de France, Paris. Crédit Lyonnais, Paris. E.D.F. Paris. Gaz de France, Clichy. I.N.S.E.E. Paris. L'Abeille, Paris. Les Nouvelles Messageries de la Parisienne, Paris. Mutuelle Générale Francaise, Le Mans. Observatoire de Meudon, Meudon. Régie Nationale des Usines Renault. Société Grenobloise d'Etudes et d'Applications Hydrauliques. (SOGREAH), Grenoble. Toulouse Université. 21 - Names of users unconfirmed by manufacturer.

Section 6. (Contd) - FRANCE

Computer	User
IBM 7080	2 - Names of users unconfirmed by manufacturer.
IBM 7090	Centre d'Etudes Nucléaires de Saclay, Service de Documentation. Gif-sur-Yvette. (S et O). Centre d'Etudes pour la Traduction Automatique Arcueil (Seine). Centre d'Etudes pour la Traduction Automatique Grenoble. Centre Français de Recherche Opérationelle - Paris. Centre Nationale de la Recherche Scientifique Section. d'Automatique Documentaire - Paris. Commissariat à l'Energie Atomique, Paris. Commissariat à l'Energie Atomique, Saclay-Fontenay-Caradache. Commissariat à l'Energie Atomique, Paris. Commissariat à l'Energie Atomique, Paris. 1 - Name of user unconfirmed by manufacturer.
IBM 7094	Compagnie IBM France, Institut de Calcul Scientifique, Paris. Électricité de France, Direction des Etudes et Recherches, Paris. Société Nationale d'Etudes de Construction de Moteurs d'Avion, Suresnes.
ICT 1202	Assurances Alsaciennes Strasbourg. Astral Celluco, Paris. Caisse Interprofessionelle de Prevoyance des Cadres, France. Contrôle Technique & Co-ordination, CTC. Aix en Provence, BduR. France. Docks Ardennais, (Multiple Branch Grocery), Charleville, Ardennes. Docks de l'Union Franceise, Troyes, Aube. Diffusion Textile, Tourcoing. Credit Agricole, Avignon, Paris.

Section 6. (Contd) - FRANCE

Computer	User
ICT 1202	Economic Bretonne, Brest. Etablissement Thibaud Gibbs Fragim et Cie, Paris. Ets. Marrel Frères (Steel), Lyons. Ets. Milliat Frères, Nanterne, Seine, France. Ets. Milliat Frères, Nauterne, Seine, France. Fabrique de Fer (Steel Rolling)Mauberge, France. La Cite Vie, Strasbourg. Mutualité Societe Agricole, (Social Insurance), Perigueux. Pernelle, Tourcoing. Saurier Duval, France. Urbain Incendie, Paris. 8 - Names of users unconfirmed by manufacturer.
ICT 1300	Credit Caisse Regionale de Mutuel, Agricole du Vancluse, Avignon, France.
ICT 1301	L'Association Générale Des Retraites Par Répartition, Paris. Caisse Interprofessionelle de Prévoyance des Cadres (Insurance Co) Paris. Caisse Regionale de Credit, Agricole, Avignon. Chantiers Ateliers & Forges de la Loire, Firminy. Cie d'Assurance Le Monde, Paris. Docks Du Nord. Eky (Mail Order) Paris. Gibbs, Société Thibaud, Paris. Group des Compagnies d'Assurance 'Le Monde', Paris, France. Société Economique d'alimentation, France (Lyon). Société Lait Moderne, "Le Bon Leit", Lyons, France. Caisse Regionale d'Assurance, France. Coronan (paint & cattle food manufacturers,)Valenciennes, Nord, France. Distropher, Paris, France. Viellesse des Travailleurs, Salaries de Paris, France. 2 - Names of users unconfirmed by manufacturer.

Section 6. (Contd) - FRANCE

Computer	User
ICT 1500	Aeroport de Paris, Paris. Caisse d'Epargne, Nantes. Caisse d'Epargne, et de Prévoyance, Nantes, France. Huiles, Renault, Issy - Les - Mouleneaux. (Seine) Socedam, Paris. 2 - Names of users unconfirmed by manufacturer.
ICT MERCURY	French Atomic Energy Authority, Saclay.
KL. 901	Société Nouvelle d'Electronique et de la Radio-Industrie, Paris.
MONROBOT XI	Bata Shoe Company, Paris. Marseilles.
P.B. 250	Commissariat à l'Energie Atomique - Laboratoire de Mesures des Radioéléments, Saclay. Centre d'Etudes Nucléaires (C.E.N.) Cadarache. Centre National d'Etudes Sjatiules, Paris. Centre National d'Etudes Sjatiules, Paris. Centre National d'Etudes Sjatiules, Paris. Centre National d'Etudes des Télécommunications, Lannion. Centre National de la Recherche Scientifique, Strasbourg. Clermont Ferrand Université. Ecole de l'Air de Salon. Ecole Polytechnique, Paris. Ecole Supérieure des Télécommunications, Paris. Établissements áeronautiques de Toulouse. Faculté des Sciences. Institut Blaise Pascal, Paris. Institut Industriel Du Nord, Lille. Laboratoire d'Electroencephalographie et de Neurophysiologie Appliquée, Paris. Laboratoire de Recherches Balistiques et Aérodynamiques, Vernon.

Computer	User
P.B. 250	Météorologie Nationale Centre d'Etudes Météorologiques Spatiales Lannion. Nord-Aviation Centre D'Essais en Vol, Chatillon Sous Bagneux (Seine) Régie Autonome des Pétroles, Paris. S.E.R.E.B. Cannes. Service Mathématique du Gaz de France, Paris. 17e. Établissements Voyer & Cie Rue Parmentière-La Riche. 10 - Names of users unconfirmed by manufacturer.
PDP I	American Embassy, Paris.
SEA/CAB 500	Alsacienne de Constructions, Mécaniques, Paris. Ateliers Mécaniques et Électriques de Jeumont, Jeumont. Besançon Université. BRUSC (NAVY). Centres d'Études Automiques, Arpajon. Centres d'Études Automiques, Vaujours. Centres d'Études Automiques, Grenoble. Centres d'Études Automiques, Bruyères Lechatel. Centres d'Études Automiques, Gramat. Centres d'Études Automiques, Strasbourg. Centre d'Études Télécommunications, Issy. Centre d'Études Télécommunications, Lanion. Centre d'Études de Télécommunications, Issy. Centre d'Études de Télécommunications, Lanion. Centre National de la Recherche Scientifique, Bellevue. Centre National de la Recherche Scientifique, Institut, Blaise Pascal. Centre National de la Recherche Scientifique, Institut, Optique Pascal. Centre National de la Recherche Scientifique, Strasbourg. Centre d'Etudes et Recherches du Bâtiment, Paris. Centre National De La Recherche, Scientifique, Centre De Recherche, Bellevue.

Section 6. (Contd)-FRANCE

Computer	User
SEA/CAB 500	Centre National De La Recherche, Scientifique, Institut Blaise Pascal (Calculs) Paris.
	Centre National De La Recherche, Scientifique, C.R.I.S.M. Marseille.
	Centre National De La Recherche, Scientifique, Observatoire Marseille.
	Centre National De La Recherche, Scientifique, Muséum d'Histoire Naturelle, Paris.
	Ceram, Aubervilliers (Armé).
	Cie Electro-Mécanique, Paris.
	Conservatoire National des Arts et Métiers.
	Conservatoire des Arts et Metiers, Paris.
	Le Creusot.
	DCAN, Indret (Marine).
	DCAN, Le Brusc. (Marine).
	DCAN, Ruelle, (Marine).
	DEFA PUTEAUX (Army).
	DEFA, PUTEAUX (Army).
	DRME Paris (Army).
	DRME Paris (Army).
	Ecole - Conservatoire A/Metiers.
	Ecole - Enica Toulouse.
	Ecole - Supérieure Aéro.
	Ecole - Supérieure Électricité
	Ecole National Supérieure d'Aéronautique, Paris.
	Ecole - Supérieure d'Électricité, Paris.
	Ecole - Nationale Supérieure Des, Ingenieurs De Constructions, Aéronautique, Toulouse.
	Electricité de France, Retn. 1, Clamart.
	Electricité de France, Retn. 1, Chinon.
	Electricité de France, Retn.11, Paris.
	Electricité de France, Retn. 11, Paris.
	Electricité de France, Retn. 111, Marseille.
	Electricité de France, Etudes, Paris.
	Electricité de France, Recherches, Châtou.
	Electricité de France, Retn, Clamart.
	Electricité de France, Etudes, et, Recherches, Paris.
	Electricité de France, Etudes et Recherches.
	Electricité de France, Ret II, Paris.
	Electricité de France, Ret II, Paris.
	Electricité de France, Ret III, Alpes, Marseille.
	Electricité de France, Retn I, Chinon.
	Electricité de France, Recherches, Châtou.
	Electricité de France, E.D.F. Ren II, Tours.

Section 6. (Contd) - FRANCE

Computer	User
SEA/CAB 500	Cie Electro-Mecanique.
	Facultés des Sciences, Besancon.
	Facultés des Sciences, Orsay.
	Facultés des Sciences, Orsay.
	Facultés des Sciences, Toulouse.
	Facultés des Sciences, De Besanson.
	Facultés des Sciences, D'Orsay.
	Facultés des Sciences, (Labo Physique Theorique) D'Orsay.
	Facultés des Sciences, D'Orsay.
	Facultés des Sciences. De Toulouse.
	Fives/Lille -Cail.
	Fives/Lille -Cail.
	Fives/Lille -Cail.
	Français du Pétrole (Institut).
	Géographique Institut de Paris.
	Grenoble University.
	Indret (Navy).
	Institut Aéronautique St. Cyr.
	Institut d'Optique. Paris.
	Institut Polytechnique, Grenoble.
	Institut d'Aeronautique, Saint - Cyr.
	Institut du Pétrole, Rueil.
	Le Matèriel Electrique Schneider Westinghouse.
	Le Matèriel Electrique Schneider, Westinghouse, Champagne, Seine.
	Office National Météorologique, Magny-les-Hameaux.
	Orsay University.
	Pétroles Aquitaine.
	Pétroles d'Aquitaine.
	Poudrerie Sevran (Army).
	Poudrerie, Sevran-Livry (Army).
	Présidence du Conseil, Paris.
	Prime Minister S.D.C.E.
	Service Hydrographique (Navy).
	Service Hydrographique, (Marine) Paris.
	Service Technique - Air, Paris.
	Shell Berre, Paris.
	Shell Berre.
	SFAC Le Creusot.

Section 6. (Contd)-FRANCE

Computer	User
SEA/CAB 500	Société Nationale Des Chemins De Fer (S.N.C.F Etudes) 105, bd Suchet, Paris. 16.
	STA Aubervilliers (Army).
	STCAN (Navy).
	STCAN (Navy).
	STCAN Marine, Paris.
	STCAN Marine, Paris.
	STE National des Chemins de Fer.
	STE des Transports Pétroliers par pipelines, P Abrio.
	STE Industrielle d'Herseranges, Herseranges.
	Toulouse University.
	Usinor Dunkerque.
	Usinor Dunkerque.
	10 - Names of users unconfirmed by manufacturer.
SEA/CAB 1000	Présidence du Conseil, Paris.
SEA/CAB 2000	Armee Puteaux, Monsavon, Paris.
SEA/CAB 3000	Comptoir Sidérurgique, Paris.
	Nord-Aviation, Paris.
	Nord-Aviation, Paris.
SEA/CAB CUBA	National Defence.
ET SABA.	National Defence.
SEA/CAB	National Defence.
DOROTHEE	National Defence.
SEREL 1001	Commissariat Energie Atomique Cadarache Centre.
	Commissariat Energie Atomique Marcoule Centre.
	Commissariat Energie Atomique Marcoule Centre.

Section 6. (Contd) - FRANCE

Computer	User
SEREL 1001	Electricité de France, St. Denis Laboratory. Pezhiney - Salindres Factory. 1 - Name of user unconfirmed by manufacturer.
TELEREGISTER MAGNETRONIC	Air France, Paris.
TRW 300	C.A.E. Service Centre. EDF. I. EDF. I. EDF. 2. EDF. 2. S.N.P.A. St. Ouen. St. Ouen. Usinor. 8 - Names of users unconfirmed by manufacturer.
TRW 330	C.A.E. Service Centre. French Atomic Energy Authority.
TRW 530	EDF 3 Power Station. EDF 3 Power Station. EDF Power Despatching. French Atomic Energy Authority. 3 - Names of Users unconfirmed by manufacturer.

GERMANY

Computer	User
BULL GAMMA 30	Acieries Rockling, Völklingen. Deutsche Verkehrskreditbank, Frankfurt/Main. 24 - Number & Grouping category confirmed by manufacturer. 11 - Names of users unconfirmed by manufacturer.
BULL GAMMA 150	3 - Number & Grouping category confirmed by manufacturer.
BULL GAMMA 300	15 - Number & Grouping category confirmed by manufacturer.
CONTROL DATA 1604	Technische Hochschule, Hannover.
ELLIOTT 402F	Ernest Leitz GmbH., Wetslar.
ELLIOTT 803	Berlin Gas Works, Germany. Berlin Gas Works, Gasag. Glucklee Milchgesellschaft, Hamburg. Phillipp Holzmann A.G., Frankfurt/Main. Koch and Mazzuchi, Hannover. N.C.R. Computing Centre, Munich. N.C.R., Frankfurt/Main N.C.R., Germany. N.C.R., Germany. N.C.R., Germany. N.C.R., Germany. Prakla GmbH., Hannover. L. & C. Steinmuller, Gummersbach. Technische Hochschule, Darmstadt. 2 - Names of users unconfirmed by manufacturer.
FACIT EDB	Facit GmbH., EDB - Zentrale, Düsseldorf.

Computer	User
GIER DISADEC	Hamburger Sternwarte, Hamburg, Bergedorf. Max-Planck-Instut für Kernphysik, Saupfercheckswег (69) Heidelberg. 1 - Name of user unconfirmed.
GP/LGP 21	Aktiengesellshaft für Ing. Büro für Hoch-und Tiefbau, Niederlassung/Essen. Anton Brugger, Ingenieurboro für Baustatistik, Langenargen. Dipl. Ing Hans Günter Kuhlmann, Beratender Ingenieur VBI für Baustatik, Bremerhaven. Erdölverarbeitungswerk, Schwedt/Oder. Eugen Bauer GmbH., Fabrik für Kinematographer und Elektrotechnische Apparate, Stuttgart. Firma Emil Ehinger - Optische Anstalt, Freiburg/Breisgan. Firma Emil Ehinger - Optische Anstalt, Freiburg/Breisgan. Firma Gebrüder Giulini GmbH., Ingenieurbüro, Ludwigshafen. GEA Wärmeaustauscher gesellschaft Happel & Co., Berlin. Hans Still AG. Ingenieurbüro für Vermessungstechnik, Köln. Ingenieurbüro für Baustatistik, Koblenz-Pfaffendorf. G.Kuhlmann, Bremerhaven. Offentlich Besteller Vermessungs-Ingenieur Wilhelm Schaefer, Bremen. Paul Jerg, Organisations Berater Werksvertretung für Buromaschinen, Konstanz/Bodensee. Rüter & Aries, Ing. Büro für Bauwesen, Minden/Westfalen. Staatl, Ing. für Maschinenbau, Elektrotechnik und Verfahrenstechnik, Mannheim. Staatl, Ing. für Maschinenbau, Elektrotechnik und Verfahrenstechnik, Mannheim. Techn. Univ. Berlin, Lehrstuhl für Bergbaukunde 11, Berlin. Techn. Univ. Berlin, Lehrstuhl für Thermodynamik 11, Berlin. Univ. Erlangen 11. Physikalisches Institut Erlangen/Nürnberg. Univ. München Inst. für Holzforschung und Holztechnik, München.
GP/LGP 30	" " Büro für Elektronisches Rechnen, Braunschweig. Dieter Bruhm VSI., Hildesheim. Deutsche Forschungsanstalt fur Raum-und Luftfahrt E.V. Aussenstelle Trauen Uber„Soltau. Deutsche Forschungsanstalt fur Hubschrauber und Vertikaltechnik, Institut fur Flugmechanik der Vertikalflugzeuge. Stuttgart. Dipl.-ing. Walter Bergemann. Duren.

Computer	User
GP/LGP 30 (Contd.)	Dipl.-ing. Walter Bergemann Beratender Intenieur VBI für das Baunesen. Düren. Elektronisches Rechenbüro Saar, Rechenzentrum Düsseldorf. Firma Otto Kurowski - Eisenbau, Dieringshausen/Rhld. Freie Universität Berlin, Berlin, Dahlem. GEA Luftkuhlergesellschaft, Bochum Ingenieurbüro Beth, Minden. Ingenieurbüro Wolfgang Liebert Ulm. Ingenieurbüro für das Bauwesen, Tuttlingen. Landesvemessungsamt Baden - Württemberg, Stuttgart. Landesvermessungsamt Rheinland - Pfalz. Koblenz. Max-Planck Inst. für Eiweiss-und Lederforschung, München. Pathologisches Inst. der Univ., Frankfurt/Main. Staatliche Ing. Schule, Essingen. Staatliche Materialprüfungsanstalt, TH Stuttgart. Stahlbau B. Seibert GmbH., Saarbrücken. Technische Hochschule Braunschweig, Braunschweig. Technische Hochschule Hannover, Hannover. Technische Hochschule Stuttgart. Tech. Univ. Berlin, Berlin-Charlottenburg. Univ. Bonn. Verein Deutscher Eisenhüttenleute, Düsseldorf. Firma Henner Vogel, Ing, Büro für Bauwesen, Trier. Firma Theodor Zeise, Hamburg. 5 - Names of users unconfirmed by manufacturer.
GP/RPC 4000	Elektronisches Rechenbüro Saar, Rechenzentrum Düsseldorf. Freie Univ. Berlin, Berlin - Dahlem. Hansa Motorenfabrik. Hamburg - Bahrenfeld. Physikalisch - Technische Bundesanstalt, Berlin. Technische Univ. Berlin, Berlin-Charlottenburg. 1 - Name of user unconfirmed by manufacturer.
IBM 305	Farbwerke Hoechst. 50 - Names of users unconfirmed by manufacturer.
IBM 650	Inst. für Angewandte Mathematik der Univ. Hamburg. Inst. für Praktische Mathematik.Technische Hochschule Darmstadt. 68 - Names of users unconfirmed by manufacturer.

Section 6. - GERMANY (Contd.)

Computer	User
IBM 704	Badische Anilin & Soda Fabrik AG. Ludwigshafen/Rhein. Deutsches Rechenzentrum. Darmstadt.
IBM 705	Cassella Farbwerke. Frankfurt/Main. Hoechst Farbwerke AG. Hoechst/Main.
IBM 1410	AEG. Forschungszentrum. Frankfurt/Main. Chemische Werke Hüls. Marl. Hoechst Farbwerke. IBM Rechenzentrum. Böblingen. IBM Rechenzentrum. Sindelfingen/Wuertt. Univ. Bonn. Inst. für Angewandte Mathematik. Bonn. 44 - Names of users unconfirmed by manufacturer.
IBM 1460	39 - Names of users unconfirmed by manufacturer.
IBM 7040	Computer Centre, Technische Hochschule. Darmstadt. IBM. Deutschland. Sindelfingen/Wuertt. 2 - Names of users unconfirmed by manufacturer.
IBM 7044	IBM Deutschland. Sindelfingen/Wuertt.
IBM 7070	August Thyssen Hütte AG., Duisburg. Bayer Farbenfabriken. Leverkusen. R. Bosch GmbH., Stuttgart. Chemische Werke Hüls, Marl. Deutsche Bundesbahn. Frankfurt/Main. Firma Freudenberg, Weinheim a.d. Bergstrasse. Ford. Cologne. Heochst Farbwerke. Frankfurt/Main. IBM Deutschland. Sindelfingen/Wuertt. Kernforschungszentrum Karlsruhe. Inst.für Neutronenphysik und Reaktortechnik Karlsruhe. Neckermann Versand KG. Frankfurt/Main. Postscheckamt. Hamburg. Schwab. Hanau. Statisches Bundesamt, Wiesbaden. 11 - Names of users unconfirmed by manufacturer.

Section 6. - GERMANY (Contd.)

Computer	User
IBM 7072	IBM Deutschland. Sindelfingen/Wuertt.
IBM 7074	Bayer Farbenfabriken. Leverkusen. IBM Deutschland. Sindelfingen/Wuertt.
IBM 7090	BASF. Ludwigshafen. Bayer. Leverkusen. Henkell GmbH., Düsseldorf. IBM Deutschland. Sindelfingen/Wuertt. IBM Rechenzentrum. Düsseldorf. IBM - Labor. Böblingen. Inst. für Angewandte Mathematik der Univ. Bonn. Inst. für Plasmaphysik. Garching bei München. Klöckner Werke, Cologne. Neckermann KG a.A. Frankfurt/Main. Technische Hochschule, Darmstadt.
IBM 7094	IBM Deutschland. Sindelfingen/Wuertt. 2 - Names of users unconfirmed by manufacturer.
ICT 1202	Sunlicht Vertriebsgesellschaft, GmbH., Hamburg. Sunlicht Vertriebsgesellschaft, GmbH., Hamburg. Werner und Mertz. Mainz.
ICT 1300	Seidem Sticker. Bielefeld. 3 - Names of users unconfirmed by manufacturer.
ICT 1301	Hamburger Hafen und Langerhais. Ag. Süddeutsche Bremsen A.G. Munich. Werner und Mertz. GmbH. 4 - Names of users unconfirmed by manufacturer.
ICT 1500	Deutsche Buchgemeinschaft, Darmstadt. ICT Ltd., Düsseldorf. Werner Jantzen, Darmstadt. Veedol GmbH., Hamburg. Veedol GmbH., Hamburg. 2 - Names of users unconfirmed by manufacturer.

Section 6. - GERMANY(Contd.)

Computer	User
ICT ARGUS	German Iron & Steel Research Organisation. German Iron & Steel Research Organisation.
ICT PEGASUS	Technische Hochschule. Stuttgart.
LIBRATROL 500	Schoppe & Fraeser. Minden. Technische Hochschule Inst. für Verfahrenstechnik und Dampfkesselwesen Stuttgart.
NATIONAL ELLIOTT 405	Rechenzentrum Nat. Register Kassen GmbH., Frankfurt.
OMEGA 203	Olympia Werke AG. Wilhelmshaven.
PB 250	Deutsche Forschungsanstalt für Luft-und Raumfahrt, Cologne. Deutsche Forschungsanstalt für Luft-und Raumfahrt, Lampoldhausen. (Nr. Stuttgart) Elektronische Rechen-Anlage. Aachen.
PERM	Technische Hochschule. Munich.
SEA/CAB 500	1 - Name of user unconfirmed by manufacturer.
SEL/DB 10	Deutsche Bundesbahnen. Frankfurt/Main.
SEL/ER 56	Post Cheque Office. Nürnberg. Standard Elektrik Lorenz Ag., Stuttgart. Standard Elektrik Lorenz Ag., Stuttgart. Standard Elektrik Lorenz Ag., Stuttgart. Technical College. Karlsruhe. Technical College. Stuttgart. Univ. Bonn. Inst. für Angewandte Mathematik. University Cologne.

Computer	User
SEL/ES 92	Grossversandhaus "Quelle" Nürnberg.
SEL/KA 21	Standard Elektrik Lorenz Ag. Stuttgart.
SIEMENS 2002	Agfa Ag., Camera-Werk. München. Anlage im Beriech Cologne. Bochumer Verien für Gusstahlfabrikation AG. Bochum. Bölkow-Entwicklungen KG. Ottobrunn 6, München. Deutsche Babcock & Wilcox. Oberhausen/Rhein. Deutsche Bundespost, Fernmeldetechnisches Zentralamt. Darmstadt. Deutsche Forschungsanstalt für Luft - und Raumfahrt e.v. Braunschweig. Gutehoffunugshütte, Werk Sterkrade AG. Oberhausen-Sterkrade. Hahn-Meitner-Inst. für Kernforschung, Berlin. Hahn-Meitner-Inst. für Kernforschung, Berlin. Harpener Bergbau AG., Dortmund. Johannes-Gutenberg-Univ. Mainz. Inst. für angewandte Mathmeatik. Krupp Arbeitsgemeinschaft BBC. Manheim. Landesversicherungsanstalt. Münster Westfalen. Landesversicherungsanstalt. Oldenburg-Bremen. Phoenix Gummiwerke Ag. Hamburg. Phoenix-Rheinrohr Ag. Duisburg. Rechenzentrum der Deutschen., Forschungstalt für Luft und Raumfahrt e.V.(DFL) Flughafen Waggum. Rheinisch-Westfälische Technische Hochschule. Aachen. Saarbergwerke Ag. Saarbrücken. Siemens & Halske Ag., Zentrale Kaufmännische Abteilung Rechenzentrum. Berlin. Siemens & Halske Ag., Zentralstelle für die Technischen Büros, Rechen und Abwicklungszentrum. Fürth. Siemens & Halske Ag., Wernerwerk für Messtechnik. Karlsruhe. Siemens & Halske Ag., Nachrichtentechnische Entwicklung Zentrallaboratorium. München Siemens & Halske Ag., Wernerwerk für Telegrafen-und Signaltechnik, NV-Rechenzentrum II. München. Siemens & Halske Ag., Wernerwerk für Telegrafen-und Signaltechnik, Betrieb München M. Siemens & Halske Ag., Zentrale Kaufmännische Abteilung Rechenzentrum. München - Süd. Siemens-Schuckertwerke Ag., Technische Stammabteilung. Erlangen.

Computer	User
SIEMENS 2002 (Contd.)	Siemens-Schuckertwerke Ag., Zentrale Forschung und Entwicklung Erlangen.
	Siemens-Schuckertwerke Ag., Zentrale Werksverwaltung, Mathematisches Inst. Erlangen.
	Siemens-Schuckertwerke Ag., Mülheim/Ruhr, Mülheiner Werk.
	Stadtverwaltung Nürnberg. Nürnberg.
	Universität Freiburg.
	Universität Tübingen.
	Volkswohl-Krankenversicherung. Versicherungsverein auf Gegenseitigkeit. Dortmund.
	B. Vossen, Weberei. Gütersloh.
	1 - Name of user unconfirmed by manufacturer.
STANTEC ZEBRA	N.A.A.F.I. - Depot Krefeld.
	N.A.A.F.I. - Depot Krefeld.
	Standard Elektrik Lorenz. Stuttgart.
TR 4	Bayerische Akademie der Wissenschaften. Munich.
	Bundesflugsicherung. Frankfurt/Main.
	Finanzministerium Nordrhein-Westfalen. Düsseldorf.
	Kommission für Elektronisches Rechen der Bayrischen Akademie der Wissenschaften.
	Rechenzentrum der Universität. Hamburg.
	Technische Hochschule - Stuttgart.
	Telefunken. Konstanz.
	5 - Names of users unconfirmed by manufacturer.
TRW 300	BASF. Ludwigshafen/Rhein.
USS 80/90	Arbeitsgemeinschaft der kassenärztlichen Vereinigungen Freiburg/Br.
	Badische Gebäudeversicherungsanstalt. Karlsruhe.
	"Barmag", Barmer Maschinenbau Ag., Remscheid-Lennep.
	Bewag, Berliner Kraft-und Licht Ag., Berlin-Schöneberg.
	Braunschweigische Kohlen - Bergwerke. Helmstedt.
	D.B.V. Deutsche Beamten-Versicherung. Wiesbaden.
	Degussa. Frankfurt/Main.
	Deutsche Shell Ag., Frankfurt/Main.
	Deutsche Shell Ag., Frankfurt/Main.
	Deutsche Shell Ag., Frankfurt/Main.
	Deutsche Tafelgas Ag., Fürth Bay.

Computer	User
USS 80/90 (Contd.)	Dresdner Bank Ag., Hamburg.
	Dresdner Bank Ag., Hamburg.
	Felten & Guilleaume. Cologne - Mülheim.
	Gebr. Stollwewerk Ag., Cologne.
	Geg, Grosseinkaufsgesellschaft deutscher Konsumgenossenschaften mbH. Hamburg.
	Geg, Grosseinkaufsgesellschaft deutscher Konsumgenossenschaften mbH. Hamburg.
	Grossversandhaus Quelle Fürth/Bayern
	Grossversandhaus Quelle. Fürth/Bayern.
	Grossversandhaus Quelle. Fürth/Bayern.
	Hamburger Gaswerke GmbH., Hamburg.
	Hamburger Kaffee-Import-Gesellschaft. Mülheim/Ruhr.
	Helmut Horten GmbH., Düsseldorf.
	Helmut Horten GmbH., Düsseldorf.
	Hertie-Zentralverwaltung Karg'sche Familienstiftung. Frankfurt/Main.
	Kassenarzliche Vereinigung, Westfalen-Lippe. Dortmund.
	Kaufhalle GmbH., Cologne
	Kronprinz Ag., Solingen-Ohligs.
	Kurt Herbert & Co., Wuppertal-Barmen.
	Münchener Verein Versicherungen. München.
	Opal Strumpfwerke GmbH., Reinfield/Schleswig-Holstein.
	Otto-Versand GmbH., Hamburg.
	Otto-Versand GmbH., Hamburg.
	Rheinische Braunkohlenwerke Ag., Cologne.
	Rheinische Braunkohlenwerke Ag., Cologne.
	Rheinisch-Westfälische Elektrizitätswerke Ag., Essen.
	Stadtverwaltung. Cologne.
	Univac-Rechenzentrum. Frankfurt/Main.
	Univac-Rechenzentrum. Cologne.
	Vereinigte Glanzstoff-Fabriken Ag., Oberbruch bei Aachen.
	Vereinigte Glanzstoff-Fabriken Ag., Oberbruch bei Aachen.
	Volkshilfe, Lebensversicherung Ag., Berlin.
	6 - Names of users unconfirmed by manufacturer.
X I	Hoesch Bergwerks Ag., Dortmund.
	Industrie - Companie Kleinewefers Konstruktions und Handelsgesellschaft GmbH., Krefeld.
	Interatom (Internationale Atomreaktorbau GmbH.) Bensberg, Cologne.
	Mannesmann Ag., Huckingen bei Duisberg.
	Margarine - Union GmbH. Hamburg.

Computer	User
X I(Contd.)	Margarine Union GmbH., Hamburg.
	Mathematischer Beratungs - und Programmierungsdienst GmbH., Dortmund.
	Rheinelbe Bergbau A.G., Gelsenkirchen.
	Ruhrkohle Treuhand GmbH., Essen.
	Tchibo Frisch Röst Kaffee, Hamburg.
	Technische Hochschule, Braunschweig.
	Universität Kiel, Kiel.
	Universität des Saarlandes, Saarbrücken.
	Westfalen Hütte. Dortmund.
	Zentrale Datenverarbeitung Hoesch, Mannesmann-Huckingen, (Steelworks) Dortmund.
	Zentrale Datenverarbeitung Hoesch, Mannesmann-Huckingen, (Steelworks) Dortmund.
	2 - Names of users unconfirmed by manufacturer.
ZUSE II	Amt der Oberösterreichischen Landesregierung. Linz/Donau.
	Bayerisches Landesvermessungsamt. München.
	Firma Agfa-Camera-werk. München.
	Firma Carl Zeiss, Optische Werke. Oberkochen/Württ.
	Flurbereinigungsamt Ansbach. Ansbach/Bayern.
	Flurbereinigungsamt. Bamberg.
	Flurbereinigungsamt-Luftbildstelle. Bamberg.
	Flurbereinigungsamt Krumback. Krumback/Bayern.
	Flurbereinigungsamt Landau. Landau.
	Flurbereinigungsamt München.
	Flurbereinigungsamt Neuburg/Donau.
	Flurbereinigungsamt Würzburg.
	Jos. Schneider & Co., Optische Werke. Kreunznach.
	Landesamt Nordrhein für Flurbereinigung und Siedlung. Düsseldorf.
	Landesamt Westfalen für Flurbereinigung und Siedlung. Münster.
	Landesamt Westfalen für Flurbereinigung und Siedlung. Münster.
	Landesvermessungsamt Nordrhein-Westfalen. Bad Godesberg.
	Landesvermessungsamt. Kiel.
	Landesversicherungsanstalt Niederbayern-Oberpflaz. Landshut.
	Ministerium für Ernährung Landwirtschaft und Forsten des Landes Baden-Württemberg, Landeskulturamt Ludwigsburg.

Computer	User
ZUSE II (Contd.)	Ministerium für Landwirtschaft und Forsten des Landes Hessen, Landeskulturabteilung. Wiesbaden.
	Ministerium für Landwirtschaft, Weinbau und Forsten des Landes Rheinland-Pfalz, Landeskulturamt.Neustadt ad Weinstrasse.
	Niedersachsiches Ministerium für Ernahrung, Landwirtschaft und Forsten Landeskulturabteilung. Hannover.
	Stadtvermessungsamt Essen. Essen.
	Stadtvermessungsamt Cologne.
	Stadtvermessungs - und Katasteramt. Leverkusen.
	Technische Hochschule, Geodätisches Inst. München.
	Technische Univ. Berlin, Inst. für Technische Optik, Berlin.
	Vermessungsamt der Hansestadt Hamburg, Baubehörde, Hamburg.
	Vermessungsamt der Hansestadt Hamburg, Baubehörde, Hamburg.
ZUSE 22	Agfa Camera-Werk Ag., Optische Werke. München.
	Agfa Camera-Werk Ag., Optische Werke. München.
	Bergakademie. Clausthal-Zellerfeld.
	Carl Zeiss, Optische Werke. Oberkochen.
	Christian-Albrechts-Univ. Kiel, Mathematisches Seminar, Kiel.
	Deutscher Gewerkschaftsbund, Fachschule für Datenverarbeitung. Düsseldorf.
	Deutsche Versuchsanstalt für Luftfahrt. Aachen.
	Deutsche Versuchsanstalt für Luftfahrt. Oberpfaffebhofen.
	Deutsche Versuchsanstalt für Luftfahrt. Mülheim/Ruhr.
	Elektronisches Rechenzentrum GmbH., Bielefeld.
	Elektronisches Rechenbüro für Bautechnik, Willi Kahl,Freiburg.
	Erprobungsstelle der Bundeswehr, Meppen.
	Farbenfabriken Bayer Ag., Leverkusen.
	Gesellschaft für Kernenergieverwertung in Schiffbau und Schiffahrt mbH. Hamburg.
	Hamburgische Elektrizitatswerke. Hamburg.
	Hamburger Flugzeugbau GmbH., Hamburg-Finkenwerder.
	Intercont. Boegrad.
	Ingenieurbüro Kohlhaus. Hannover.
	Ingenieurbüro Müller. Hachenburg/Westerwald.
	Ingenieurbüro Thiemicke. Bruchsal.
	Johann-Gutenberg-Univ. Mainz.
	Jos. Schneider & Co., Optische Werke. Kreuznach
	Jos. Schneider & Co., Optische Werke. Kreuznach.
	Kernforschungszentrum Karlsruhe Inst. für Neutronenphysik und Reaktortechnik Karlsruhe.
	Kernreaktor Bau-und Betriebsgesellschaft. Karlsruhe.
	Landeskulturamt. Wiesbaden.

Computer	User
ZUSE 22 (Contd.)	Landesvermessungsamt. Wiesbaden. Landesversicherubgsanstalt. Würzburg. Niedersachsiches Ministerium für Ernährung, Landwirtschaft und Forsten. Hannover. Private Höhere Technische Lehranstalt. München. Rechenzentrum Süd. München. Rheinische Aktiengeselleschaft für Braunkohlenbergbau. Cologne. Rheinisch-Westfälische Technische Hochschule. Aachen. Siemens-Schuckert-Werke Ag., Erlangen. Siemens-Schuckert-Werke Ag., Erlangen. Siemens-Schuckert-Werke Ag., Erlangen. Siemens-Schuckert-Werke Mülheim/Ruhr. Staatstechnikum. Karlsrune. Technische Hochschule. Braunschweig Technische Hochschule, Inst. für Angewandte Mathematik. Karlsruhe. Technische Hochschule Hannover, Inst. für Massivbau. Hannover. Technische Hochschule, Stuttgart. Technische Univ. Berlin-Charlottenberg, Mathematisches Inst. Telefunken GmbH. Konstanz. Univ. Freiburg, Mathematisches Inst. Freiburg. Univ. Marburg, Mathematisches Inst. Marburg. Univ. Saarbrucken, Mathematisches Inst. Univ. Würzburg, Inst. für angewandte Mathematik. Vermessungsbüro Müller & Gade. Wolfsburg. Voigtländer Ag., Braunschweig. Westfälische Wilhemsuniversität Münster, Inst. für angewandte Physik. Münster.
ZUSE 23	AEG Inst. für Automation. Berlin August-Thyssen-Hütte Ag., Duisburg-Hamborn. Bayr. Landesgewerbeanstalt. Nürnberg. Bayerisches Landesvermessungsamt. München Bergakademie-Technische Hochschule, Inst. für angewandte Mathematik. Clausthal-Zellerfeld. Bundesanstalt für Material prüfung. Berlin. Deutscher Investment - Trust. Frankfurt/Main. Deutsche Versuchsanstalt für Luft-und Raumfahrt eV. Cologne - Wahn. Deutsche Versuchsanstalt für Luftfahrt. Inst. für Steuer und Regeltechnik. Oberpfaffenhofen. Elektronische Datenverarbeitung GmbH., Braunschweig. Elektronisches Rechenbüro Kahl. Freiburg. Elektronisches Rechenzentrum. Bielefeld. Erprobungsstelle der Bundeswehr, Eckernförde.

Computer	User
ZUSE 23 (Contd.)	**Erprobungs und Messstelle der Bundeswehr** für Magnetischen Schiffsschutz. Rendsburg.
	Fa. Züblin Ag., Bauunternehmung. Duisburg.
	Fernmeldtechnisches Zentralamt. Darmstadt.
	Freie Univ. Berlin. Inst. für Theoretische Physik.
	Hamburger Flugzeugbau GmbH., Hamburg.
	Hüttenwerke Oberhausen Ag.
	Hüttenwerke Oberhausen Ag.
	Ingenieurbüro Kohlhaas. Hannover.
	Ingenieurbüro Schülke. Dortmund-Gartenstadt.
	Inst. für angewandte Geodäsie. Frankfurt/Main.
	Landeskulturamt. Wiesbaden.
	Landesvermessungsamt. Wiesbaden.
	Mannesmann Ag., Hüttenwerke. Duisburg-Huckingen.
	Rechenzentrum. Bad Hersfeld.
	Rechenzentrum GmbH. Pott KG. Essen.
	Rechenzentrum Hamburg.
	Rheinische Braunkohlenwerke Ag. Cologne.
	Siemens- Schuckert. Erlangen.
	Siemens-Schuckert. Erlangen.
	Spar-Zentrale Fertsch & Co. Friedberg/Hessen.
	Spar-Zentrale Schaal-Kurtz KG. Reutlingen.
	Staatliche Ingenieurschule. Ulm.
	Stadtvermessungsamt. Duisburg.
	Technische Hochschule Karlsruhe, Lehrstuhl für angewandte Mathematik. Karlsruhe.
	Technische Hochschule Karlsruhe. Inst. für Theoretische Strömungslehre.
	Technische Hochschule München, Geodätisches Inst. München.
	Technischer Überwachungsverein. Düsseldorf.
	Technischer Überwachungsverein. München
	Technische Univ. Berlin. Fakiltät für Bauingenieuwesen. Berlin.
	Tech. Univ. Berlin, Inst. für Flugtechnik, Berlin.
	Tech. Univ. Berlin, Inst. für Luftfahrt. Berlin.
	Tech. Univ. Berlin, Lehrstuhl für Mathematik III Berlin.
	Tech. Univ. Berlin Inst. für Kraftwerkstechnik und Apparatebau. Berlin.
	Tech. Univ. Berlin Inst. furMechanik B. Berlin
	Univ. Erlangen.
	Univ. Frankfurt, Inst. für Physikalische Chemie, Frankfurt.
	Wagner & Co. Dortmund.
	Westfälische Wilhelmsuniversität Münster, Inst. für angewandte Physik. Münster.
	20 - Names of users unconfirmed by manufacturer.

Computer	User
ZUSE 31	E. Breuninger KG. Stuttgart. Hamburgische Schiffsbau-Versuchsanstalt. Hamburg. Kassenärztliche Vereinigung Schleswig-Holstein. Bad Segeberg. Landeskulturamt. Wiesbaden. Niedersächsisches Landeskulturamt. Hannover. Zuse KG. Bad Hersfeld. 1 - Name of user unconfirmed by manufacturer.

GREECE

Computer	User
IBM 650	Research & Computing Centre, Academy of Sciences, Athens.
IBM 1410	2 - Names of users unconfirmed by manufacturer.
IBM 1460	2 - Names of users unconfirmed by manufacturer.
UNIVAC SS 80/90	2 - Names of users unconfirmed by manufacturer.

HOLLAND

Computer	User
BULL GAMMA 30	Nederlandse Spoorwegen, Maliebaan I. Utrecht. Nederlandse Spoorwegen, Maliebaan I. Utrecht. N.V. Phillips Gloeilampenfab, Emmasingel 29, Eindhoven. N.V. Phillips Gloeilampenfab, Emmasingel 29, Eindhoven. 5 - Number & Grouping Category confirmed by manufacturer. 6 - Names of users unconfirmed by manufacturer.
BULL GAMMA 150	8 - Number & Grouping Category confirmed by manufacturer.
BULL GAMMA 300	Verwerkingsbureau, Amsterdam van Bull Nederland N.V. Vliegtuigstraest 26. Amsterdam. W. 3 - Number & Grouping Category confirmed by manufacturer. 3 - Names of users unconfirmed by manufacturer.
BULL GAMMA 500	1 - Name of user unconfirmed by manufacturer.
ELLIOTT 803	Ameskrdam Ballest Co. Netherlands. National Aeronautical Laboratory, Amsterdam. N.C.R. Amsterdam. N.C.R. Holland. N.C.R. Holland. Ophische Industrie, Delft, Holland. RVO/TNO Physical Laboratory, The Hague, Netherlands. TNO/IWECO Delft, Holland.
IBM 305	3 - Names of users unconfirmed by manufacturer.
IBM 650	I.B.M. Netherlands D.P. Centre, Johan Huigingalaan 257. Amsterdam W. "De Nationale" Insurance Corp. "NYS" Eendrachtsweg 58, Rotterdam. Philips Computing Centre, Eindhoven. Philips Computing Centre, Eindhoven. 10 - Names of users unconfirmed by manufacturer.

Section 6. (Contd) - HOLLAND

Computer	User
IBM 704	S.H.A.P.E. Technical Research Centre, The Hague. 1 - Name of user unconfirmed by manufacturer.
IBM 705	K.L.M. Royal Dutch Airlines, The Hague.
IBM 1410 -	Philips Computing Centre, Eindhoven. 10 - Names of users unconfirmed by manufacturer.
IBM 1460	4 - Names of users unconfirmed by manufacturer.
IBM 7070	Koninktijke/Shell-Laboratorium, Amsterdam, Badhuisweg 3, Amsterdam, Noord.
IBM 7070/2/4	3 - Names of users unconfirmed by manufacturer.
IBM 7090	Stichting Studiecentrum voor Administratieve, Automatisering, Amsterdam.
IBM 7090/4	1 - Name of user unconfirmed by manufacturer.
ICT 1301	De Gruyter En Zoon N.V. Hertogenbosth, Netherlands.
ICT MADAM MK.II	Royal Dutch Shell Labs. Amsterdam.

Computer	User
MONROBOT XI	Monroe Calculating Machine Co. Amsterdam. Monroe Calculating Machine Co. Amsterdam. Monroe Calculating Machine Co. Amsterdam.
PASCAL/STEVIN	Philips Gloeilampen Fabrieken, Eindhoven.
PB 250	Metal Fabrique, Dordrecht.
SEA/CAB 500	Ste Kramers, Rotterdam.
STANTEC ZEBRA	Delft University, Holland. Dr. Neher Laboratory PTT St. Paulushoeve 4. Leidschendam. Heemaf N.V. Hengelo. Inc. Training Centre for Aerial Survey, Delft. Nat. Aero & Aeronautical Research Inst. Amsterdam. Rekencentrum der Rijksuniversiteit, Groote Appelstraat 11. Groningen, Netherlands. Rijks Universiteit Utrecht, Catharijnesingel 51. Statistics Dept., T.H.O. 22. J.P. Coleistraat. The Hague. University of Groningen Math., Inst., of the State, Rentdiepskade. Groningen. A Dutch Government Department. 3 - Names of users unconfirmed by manufacturer.
TR 4	Rekencentrum der Rijksuniversiteit, Groote Appelstraat 11. Groningen, Netherlands. Technische Hochschule, Delft. 7 - Names of users unconfirmed by manufacturer.

Computer	User
UNIVAC SS 80/90	Gemeenschappelijk Administratie Kantoor, Amsterdam. Staats Mijnen, v.d. Maessenstraat 2, Heerlem. "Vesta" Insurance Comp. n.v. Arnhem. 9 - Names of users unconfirmed by manufacturer.
XI	Algemene Kunstzinde Unie N.V. Arnhem. Algemeen Reken Centrum N.V. Amsterdam. Automatiseringscentrum Amsterdam N.V. Amsterdam. Centraal Bureau Voor De Statistiek, The Hague. Computing Centre N.V. Electrologica, The Hague. Co-op Nederland, Rotterdam. Eerste Nederlandsche Verz. Mij. Op Het Leven En Tegen Invaliditeit N.V. The Hague. National Lucht - En Ruimtevaart Laboratorium, Emmelocrd. Nederlands Scheepsbouwkundig Proefstation, Wageningen. N.V. Levensverzekeringmaatschappij, Nillmij, The Hague. Rijksuniversiteit Leiden Leiden. Stichting Mathematisch Centrum se, Boerhaavestraat 49, Amsterdam. O. Werkspoor N.V. Amsterdam. 4 - Names of users unconfirmed by manufacturer.

IRISH REPUBLIC

Computer	User
ELLIOTT 804	Agriculture Institute, Dublin. 1 - Name of user unconfirmed by manufacturer.
IBM 650	Electricity Supply Board.
IBM 1410	Aer Lingus Teo. Aer Lingus Teo. 1 - Name of user unconfirmed by manufacturer.
IBM 1460	5 - Names of users unconfirmed by manufacturer.
ICT 1201	I.C.T. Service Bureau. Irish Sugar Co. Ltd., Thurles, Eire.
ICT 1300	Irish Sugar Co. Ltd., Irish Sugar Co. Ltd., Eire. P.J. Carroll & Co. Ltd., Dublin,
ICT 1301	Bord Na Mona, Eire. Eire Revenue Comm. Dublin, Eire. Esso Petroleum (Ireland) Ltd., Dublin. W. & R. Jacob Ltd., 1 - Name of user unconfirmed by manufacturer.

ITALY

Computer	User
BULL GAMMA 30	1 - Name of user unconfirmed by manufacturer.
BULL GAMMA 60	Banca naz Lavoro, Rome. Credit Italiano, Rome .
BULL GAMMA 150	A.E.M. Milan. Ansaldo, Genoa. Ansaldo S. Giogio, Genoa. Banco di Sicilia, Palermo. Centro Nazion, per il Calcolo Elettronico, Milan. Ferrero, Alba. F.S. Controllo Merci, Turin. F.S. Controllo Merci, Turin. S.A.E. Milan. Saint Gobain, Milan. Università di Bologna - Instituto di Statistica, Bologna Venchi Unica, Turin. 3 - Number & Grouping Category confirmed by manufacturer. 6 - Names of users unconfirmed by manufacturer.
BULL GAMMA 300	Banca naz Servizio Borsa. Banca naz Servizio Borsa. Borsa, Parma. Camm. Comm. Ind. e Agriculture, Turin. Cassa per il Mezzogiornio, Rome. Contributi Unificati Agriculture, Rome. ENI. Milan. Ferrero P & C. Alba. Fiat, sez. SPA. Turin. Generale Guardie, Rome. IMI, Rome. IMI, Rome. Instituto Bancario S. Paolo, Turin. Instituto Bancario S. Paolo, Turin. Michelin Italiana, Turin. Motta, Milan. Olivetti, Palermo, Olivetti, Ivrea.

Computer	User
BULL GAMMA 300	Olivetti, Ivrea. Olivetti Bull, Centro Servizi, Milan. Olivetti Bull, Centro Servizi, Milan. Petroli Aquila, Milan. Pirelli Sapsa, Milan, R.I.V. Torino. S.A.E. Milan. S.I.O. Milan. S.I.O. Milan. 10 - Names of users unconfirmed by manufacturer.
BURROUGHS E 101	1 - Name of user unconfirmed by manufacturer.
CDC BENDIX G 15	Ministero Aeronautica, Rome. Università di Rome - Facoltà Ingegneria Aeronautica, Rome.
CDC BENDIX G 20	Centro di Calcolo Elettronico della Facolta di Ingegneria dell Universita di Napoli, **Naples**.
CSCE/CEP	C.E.P. Centro Studi Calcolatrici Elettroniche, Università Pisa.
ELEA 2001	Olivetti, Via Pirelli 32, Milan.
ELEA 6001	Ansalda San Giorgio S.P.A. Genoa, Liguria. Banca Mutua Popolare, Verona. Banca Mutua Popolare, Verona. Bassetti S.P.A. Milan - Lombardia. Calce e Cementi di Segni, Rome. Centro di Calcolo Elettronico, Ing. C. Olivetti, Milan. C.I.S.E. - Centro Informazioni Studi ed Esperienze S.R.L. Milan - Lombardia. Centro Internationale di Calcolo, Rome.

Computer	User
ELEA 6001 (Contd)	Consiglio Nazionale delle Ricerche - Comitato per la Mineralogia. Rome.
	Consorzio Nazionale Obbligatorio Tra Gli Esattori delle Imposte Dirette in Carica per la Meccanizzazione dei Ruolo. Turin.
	Credito Commerciale. Milan.
	Esattoria Comunale del Monte dei Paschi di Siena. Rome.
	Esattoria Comunale del Monte dei Paschi di Siena. Rome.
	Fiat S.p.A. - Sezione SPA. Turin.
	Fiat S.p.A. - Sezione SPA. Turin.
	Fiat. Turin.
	Fiat Ferriere. Turin.
	Istituto Superiore delle Poste e delle Telecomunicazioni. Rome.
	Istituto Universitario de Venezia-Facoltà di Economia e Commercio-Laboratorio di Matematica Generale e attuariale. Venezia - Veneto.
	Lancia. Turin.
	Lanerossi. Schio.
	Lanerossi. Schio.
	Marzotto. Valdagno.
	Ministero Finanze I. Uff. I.G.E. - EUR.
	Montecatini - Società Generale per l'Industria Mineraria e Chimica. Milan.
	Motta. Milan.
	Nuovo Pignone S.p.A. - Industrie Meccaniche e Fonderia Firenze, Toscana.
	Ing. C. Olivetti & Cie, S.p.A. - Ufficio Tecnico Produzione. Borgolombardo. (2)
	Olivetti. Ivrea.
	Ing. C. Olivetti & Cie, S.p.A. - Loboratoria die Ricerche Elettroniche. Rho (Lombardia).
	Orenstein & Koppel S.p.A. Milan.
	Piaggio & C. S.p.A. Finale Ligure-Liguria.
	Pignone. Firenze.
	Pirelli S.p.A. - Sezione Cavi. Milan.
	Politecnico di Milano. Milan.
	Politecnico di Torino - Istituto Matematico. Turin.
	Sade. Mestre.
	S.A.E. S.p.A.-Società Anonima Elettrificazione. Milan.
	S.A.D.E. Società Adriatica di Elettricita. Venezia.

Computer	User
ELEA 6001 (Contd)	S.I.P.R.A. - Societa Italiana Publicita per Azioni. Turin. Snam Progetti S.p.A. Milan. Sorin S.p.A. - Centro Ricerche Nucleari. Saluggia. Stefer. Rome. Telve. Venezia. Universita degli Studi di Catania - Istituto de Fisica. Catania-Sicilia. Universita degli Studi di Padova - Istituto di Chimica Organica. Padova. Universita degli Studi di Palermo - Facolta di Ingegneria Palermo - Sicilia. Universita degli Studi di Parma - Istituto de Chimica. Parma. Universita degli Studi di Pavia, Istituto di Statistica. Pavia. Universita degli Studi di Roma - Istituto di Calcolo delle Probabilita. Rome. Universita Torino. Turin. Universita Venezia. Venezia. Venchi Unica. Turin. 15 - Number and Grouping Category confirmed by manufacturer. 13 - Names of users unconfirmed by manufacturer.
ELEA 9001	Olivetti, Via Pirelli 32, Milan.
ELEA 9003	A.C.I. - Automobile Club d'Italia. Rome. Agip Mineraria S.p.A. S. Donato, Milan. Agip S.p.A. Rome - Lazio. Credito Italianc. Milan. Ferrero P. & C. - Industria Dolciaria. Alba. Ferrero. Turin. Fiat S.p.A. - Sezione Ricambi. Turin. Istituto Bancario San Paola di Torino. Turin. I.N.A. - Istituto Nazionale delle Assiourazioni. Rome. I.N.P.S. - Istituto Nazionale di Previdenza Sociale. Rome. I.N.P.S. - Istituto Nazionale di Previdenza Sociale. Rome. Lancia. Turin. Manifattura Lane g. Marzotto & Figli. Valdagno-Veneto.

Computer	User
ELEA 9003 (Contd)	Ministero delle Finanze 1° Ufficio I.G.E. Rome
	Ministero di Grazia e Giustizia-Direzione Generale degli Affari Civili e delle Libere Professioni - Casellario Giudiziale di Rome, Rome.
	Ministero del Tesoro-Provveditorato Generale dello Stato. Roma-Lazio.
	Monte dei Paschi di Siena. Siena-Toscana.
	Motta S.p.A. - Societa per l'Industria Solciaria ed Alimentare. Milan.
	Nazionale Cogne S.p.A. Stabilimenti Siderurgici. Aosta.
	Ing. C. Olivetti & Cie, S.p.A. - Complesso Industriale di Ivrea. Ivrea.
	Ing. C. Olivetti & Cie, S.p.A. - Complesso Industrale div Ivrea. Ivrea.
	Ing. C. Olivetti & C., S.p.A. - Divisione Elettronica. Milan.
	Ing. C. Olivetti & Cie, S.p.A., Laboratoria di Ricerche Elettroniche.
	Ing. C. Olivetti & Cie, S.p.A. - S.T.E.E. Poasco.
	Olivetti, Via Pirelli 32, Milan.
	Petroli Aquila S.p.A., Milan.
	Società Adriatica di Elettricità. Venezia.
	Società Italiana per il Gas. Turin.
	Società Telefonica Tirrena p.Az. - Te.Ti. Rome.
	Università di Torino - Istituto di Fisica. Turin.
	6 - Name of user unconfirmed by manufacturer.
GP/LGP 21	Ingenieurburo Fur Bauweson, Dr. Ing. Arrigo Forassi, Prato.
IBM 305	Apuzzo Onello. Milan.
	L'Assicuratrice Italiana. Milan.
	Banca Agricola Mantovana. Verona.
	Cantieri Riuniti dell' Adriatico. Trieste.
	La Centrale Finanziaria. Milan.
	Ceramiche Pozzi. Milan.
	Costa Giacomo. Genoa.
	Credito Varesino. Varese.
	Esso. Genoa.
	Exportex. Milan.

Computer	User
IBM 305 (Contd)	Fincavi. Milan.
	Germani S.p.A. Milan.
	G.M.A. (Grandi Marche Associate). Milan.
	INPS - Ragioneria. Rome.
	Italsider. Piombino.
	Centro Gruppo Marelli. Milan.
	Ministero del Lavoro. Rome.
	O.M. Brescia.
	Saipo l'Oreal. Turin.
	Perugina. Firenze.
	Piaggio. Pontedera.
	Pirelli A.A.T. Milan.
	Radiomarelli. Milan.
	La Rinascente. Milan.
	Rivetti. Biella.
	Sicedison. Milan.
	SMI Firenze.
	SMI Firenze.
	Sogene. Rome.
	Magazzini Standa. Milan.
	Compagnia Tirrena. Rome.
	Ufficio Italiano Cambi. Rome.
	Università di Roma. Rome.
IBM 650	Acegat. Trieste.
	A.T.M. Torino.
	Banca d'Italia. Rome.
	Banco di Santo Spirito. Rome.
	Carlo Erba. Milan.
	Cassa di Risparmio delle PP.LL. Milan.
	Centro di Cibernetica E di Attivita Linguistiche.
	Centro di Calcolo Numerico dell'Univ. di Genoa.
	Dalmine. Milan.
	Fed. Italiana Cons. Agrari. Rome.
	Fiat S.p.A. Turin.
	Fiat S.p.A. Turin.
	F.S. Rome.
	IBM Italia. Milan.
	IBM Italia. Milan S.p.A.

Computer	User
IBM 650 (Contd)	IBM Centro Servizi. Milan. IBM Centro Servizi. Rome. Ilva. Genoa. Innocenti. Milan. Istat. Rome. Istat. Rome. Italsider. Genoa. Lever Gibbs. Milan. Ministero Poste-Azienda Telefonica di Stato. Rome. Ministero Poste - Azienda Telefonica di Stato. Rome. Ministero Trasporti. Rome. Selt Valdarno. Firenze. SET. Naples. Snia Viscosa. Milan. Società Romana Elettricita. Rome. Stanic. Livorno. Università Bologna - Fac. Ingegneria. Bologna. Università degli Studi di Milano. Centro di Cibernetica e di Attività Linguistiche. Milan.
IBM 704	Centro di Cibernetica e di Attività Linguistiche - Milan. Cnen, Centro di Calculo. Bologna. Università degli Studi di Milano. Centro di Cibernetica e di Attività Linguistiche. Milan.
IBM 705	Banca Commerciale Italiano, Parma. Banco di Roma. Banco di Roma.
IBM 1410	Alfa Romeo Ansaldo. Genoa. Esso Standard It. Genoa. Istat. Rome. Italsider. Genoa. Italsider. Piombino. Manifattura Ceramica Pozzi. Milan. Ministero Trasporti F.S. Rome. Monopoli di Stato. Rome. Montecatini. Milan.

Computer	User
IBM 1410 (Contd)	Perugina. Perugia. Piaggio. Genoa. La Rinascente - Upim. Milan. La Rinascente - Upim. Milan. Sicedison. Milan. Snia Viscosa. Milan. Ufficio Italiano Cambi, Rome. 33 - Names of users unconfirmed by manufacturer.
IBM 1460	8 - Names of users unconfirmed by manufacturer.
IBM 7040	4 - Names of users unconfirmed by manufacturer.
IBM 7070	Alitalia. Rome. Banca d'Italia. Rome. Banca di Napoli. Banca Popolare di Novara. Banca di Roma. Cassa Risparmio Provincie, Lombarde, Milan. Dalmine, Milan. Rai - TV. Turin. Rhodiatoce. Milan. SET. Naples.
IBM 7070/2/4	3 - Names of users unconfirmed by manufacturer.
IBM 7080	Banca Commerciale Italiana. Parma.
IBM 7090	Centro per L'Automazione Dell'Analisi Litteraria. Gallarate. Euratom CCC. Ispra.
IBM 7094	Centro di Calculo del CNEN. Bologna. 4 - names of users unconfirmed by manufacturer.

Section 6. (Contd) - ITALY

Computer	User
ICT 1202	A. G. Crippa. Milan.
ICT MADAM Mk. 1.	INAC. Rome.
ICT MADAM Mk. II.	National Institute for Application of Mathematics, Rome.
LGP/30	Royal McBee, Centro Servizi, Milan. Universitat Florenz. Florence. Universitat di Roma. Rome.
PB 250	Stabilimenti Elettrotecnici di Barlassina. Milan.
UNIVAC SS 80/90	Soc. Concess. Autostrade - Florence. Banca Commercio e Industria. Milan. Banca Nazionale dell Laudro. Rome. Soc. Bresciana. Brescia. Calculating Centre. Florence. Calculating Centre. Florence. Centro di Calculo dell'Univ, di Milano. Cieli, Genoa. Cirio, Naples. Comune di Milano. Comune di Milano. Comune di Roma, Rome. Dinamo, Novara. Edison, Milan. Edisonvolta, Milan. Emiliana, Parma. Fiat, Turin. Fiat, S.p.A., Turin. Germani, Milan. I.N.A. Rome. I.N.A. Rome.

Section 6. (Contd) - ITALY

Computer	User
UNIVAC SS 80/90 (Contd)	INPS. Rome.
	INPS. Rome.
	ISTAT, Rome.
	ISTAT, Rome.
	Italsider, Geneva.
	Lepetit, Milan.
	Orobia, Bergamo.
	Magnadyne, Milan.
	Magnadyne, Turin.
	Sava, Marghera.
	S.G.E.S. Palermo.
	S.M.E. Naples.
	SPICA, Naples.
	Star, Muggio.
	Subalpina, Como.
	10 - Unconfirmed by manufacturer.
UNIVAC 1101	Saclant, La Spezia.

NORWAY

Computer	User
BULL GAMMA 30	A/S Norsk Yernverk. Denofa og Lilleborg Fabrikker A/S. Folkebanken/Realbanken A/S. Wilh. Wilhelmsen. Skipsrederei.
EEL/DEUCE II	Central Bureau of Statistics, Oslo. Norsk Regnesentral, Radlusgaten 8, IV, etg., Oslo.
ELLIOTT 803B	N.C.R. Norwegian Govt. Geo-Survey Dept., Oslo.
FACIT EDB-3	Det Norske Meteorologiske Inst., Blindern.
GIER	Oecd Halden Reactor Project, Halden. A/S Scanips, Oslo. Technical University of Norway, Div. of Automatic Control, Trondheim. Technical University of Norway Sintef, Trondheim.
IBM 305	Norsk Medisinaldepot
IBM 650	Universitetet I. Bergen
IBM 1410	Forsvarisdepartementet Norske Folk A/S 1 - name of user unconfirmed by manufacturer.
IBM 1460	4 - Names of users unconfirmed by manufacturer.

Section 6. (Contd) - NORWAY

Computer	User
IBM 7070/2/4	1 - Name of user unconfirmed by manufacturer.
ICT 1301	A/S Margarincentralen, Oslo. Tiedemands Tobaksfabrik.
WEGEMATIC 1000	Universitet I. Oslo.

PORTUGAL

Computer	User
ELLIOTT 803	Banco Pinto De Magalhais, Oporto. Lab. of Civil Eng. Lisbon.
IBM 650	2 - Names of users unconfirmed by manufacturers.
IBM 1410	2 - Names of users unconfirmed by manufacturer.
IBM 1460	2 - Names of users unconfirmed by manufacturer.
STANTEC ZEBRA	Government Civil Engineering Laboratories, Lisbon.

SPAIN

Computer	User
BULL GAMMA 30	Spanish Railways, Madrid 2 - Names of users unconfirmed.
BULL GAMMA 300	2 - Names of users unconfirmed by manufacturer.
ELLIOTT 803	Instituto Edwardo Torrojo de la Construccion y del Cemento. N.C.R. Computing Centre, Spain. N.C.R. Spain.
IBM 650	Spanish Railways
IBM 1410	3 - Names of users unconfirmed by manufacturer.
IBM 1460	1 - Name of users unconfirmed by manufacturer.
IBM 7070	1 - Name of user unconfirmed by manufacturer.
ICT SIRIUS	Iberica de Racionalización Automación y Cálculo Genera Mola, 55, Madrid. Trumpy Y Sirvent. Madrid.
USS 80/90	Madrid Electric Utility Madrid Electric Utility Madrid Telephone Co. Spanish Atomic Energy Commission. Madrid. Universidad Comercial de Deusto, Bilbao.

SWEDEN

Computer	User
ALWAC III E	The Swedish Board of Computing Machinery Matematikmaskinnamnden, Stockholm 6.
BULL GAMMA 30	Le Dagens Nyheter 18 - Names of users unconfirmed by manufacturer.
BULL GAMMA 150	1 - Name of user unconfirmed by manufacturer.
BULL GAMMA 300	2 - Names of users unconfirmed by manufacturer.
ELLIOTT 803	A.B. Mateina. Stockholm. Johan Sande (Agents) Sweden. N.C.R. Stockholm.
FACIT DS 9000	Swedish Air Force
FACIT EDB 3	Allnänna Svenska Elektriska Aktiebolaget (ASEA) Västeras. Framtiden Life Insurance Co., Stockholm. AB Industridata. Gothenburg. AB Industridata. Stockholm. Swedish Government. Swedish Government.
GIER	Kungl. Lantmaeteristyrelsen. Stockholm.
GP/LGP 21	Luossavaara - Kiirunavaara Aktiebolaget (LKAB)Kiruna. "Medizinisches Labor". Stockholm.

Section 6. - SWEDEN (Contd.)

Computer	User
GP/LGP 30	Bolidens Gruvaktieboleg. Rönnskävsverken, Skellefte.
GP/RPC 4000	Habia Kommandit Bolag, Knivsta.
IBM 305	2 - Names of users unconfirmed by manufacturer.
IBM 650	IBM Svenska AB, Gauelegatan 20, Stockholm. 12 - Names of users unconfirmed by manufacturer.
IBM 1410	13 - Names of users unconfirmed by manufacturer.
IBM 1460	6 - Names of users unconfirmed by manufacturer.
IBM 7044	1 - Name of user unconfirmed by manufacturer.
IBM 7070/ 2/4	5 - Names of users unconfirmed by manufacturer.
IBM 7090/ 7094	Research Institute of National Defence Data Centre, Stockholm 80.
ICT 1301	Enskilda Bank. Stockholm. Enskilda Bank, Stockholm. L.M. Ericsson Service Bureau, Stockholm. Skandinavisken Banken, Stockholm. Skandinavisken Banken, Stockholm. Skandinavisken Banken, Gothenburg. Skanska Brand Bolagen, Lund. Sweden. Skanska Brand Bolagen, Lund. Sweden.
ICT 1500	Bankgirocentralen. Stockholm. Bankgirocentralen. Stockholm. L.M.Ericsson, Service Bureau. Stockholm. Holidenz Grav AB. Skellefra. Saxan & Lindstrom Forlage AB. Stockholm. Skellefta.

Section 6. - SWEDEN (Contd.)

Computer	User
ICT ARGUS	Swedish Government.
ICT MERCURY	Swedish Atomic Energy Authority. Stockholm.
ICT ORION	A.B. Turitz. Gothenburg. A.B. Datacentralen (Trygg & Fylgia Ins.Co.) Stockholm. L.M. Ericsson Telefon Ab., Stockholm. L.M. Ericsson Telefon Ab., Stockholm. Tyrgg-Fylgia Ins. Co., Stockholm.
ICT PEGASUS I	Svenska Flygmotor A/B.
ICT PERSEUS	A.B. Datacentralen. Stockholm
MONROBOT XI	Sweda. Stockholm.
RCA 501	R.C.A. Sweden AB. Sveagen 13-15. Stockholm C.
TAC	6 - Names of users unconfirmed by manufacturer.
WEGEMATIC 1000	ADB Institut Chelmers Tekniska Hogskola. Goteborg 5. ADB Institut Chelmers Tekniska Hogskola. Goteborg 5. The Telema Board, The Royal Inst. of Technology. Stockholm.

SWITZERLAND

Computer	User
BULL GAMMA 30	Bank Populaire Suisse, Christoffelgesse 6, Berne. Migros Genossenschafts - Bund, Limastrasse 152, Zurich 5. Schweiz - Kreditanstalt. Zurich. Schweiz - Volksbank. Zurich. University of Bern. Bern. 4 - Names of users unconfirmed by manufacturer.
BULL GAMMA 150	Institut Battelee. Geneva. Schweiz Kreditanstalt. Zurich. Universität Bern. Bern.
BULL GAMMA 300	Roamer Watch Co. SA, Solothurn. Schweiz. Lebensversicherungs - und Retenanstalt. Zurich. Schweiz. Volksbank. Bern. 1 - Name of user unconfirmed by manufacturer.
BURROUGHS E 101	2 - Names of users unconfirmed by manufacturer.
CONTROL DATA 1604 A	Eidgendssiche Technische Hochschule, Zurich.

Section 6 - SWITZERLAND (Contd).

Computer	User
ELLIOTT 803	Monsanto Research S.A., Zurich. N.C.R. Computing Centre, Geneva.
GP/LGP 30	Institut pour L Automation et la Recherche Operationelle Univ. de Fribourg. Paillard S.A. - Optische Fabrik. Yverdon.
IBM 305	Automation Centre. Wettingen. Omega. Bienne. Schild Sa. Grenchen.
IBM 650	IBM Centre. Zurich. Nielsen SA. Lucerne. Nielsen Sa. Lucerne. Schweiz. Rückversicherungsgesellschaft. Zurich.
IBM 709	Cern. Meyrin-Geneva.
IBM 1410	Automation Centre. Wettingen. Helvetia Unfall. Zurich. Lindt & Sprüngli. Kilchberg (Canton Zurich) Nielsen SA. Lucerne. Rückversicherungsgesellschaft. Zurich. Useg. Olten. C. Veillon. Lausanne. 3 - Names of users unconfirmed by manufacturer.
IBM 1460	1 - Name of user unconfirmed by manufacturer.
IBM 7070	Brown Boveri. Baden. Eidgenössisches Statistisches Amt. Bern. Federal Railway Authorities (SSB) Bern. Schweizerischer Bankverein. Basle. Swissair. Zurich. Swiss Postal Authorities, PTT. Zurich. 3 - names of users unconfirmed by manufacturer.

Section 6. - SWITZERLAND (Contd.)

Computer	User
IBM 7090	Cern. Meyrin - Geneva. 1 - Name of user unconfirmed by manufacturer.
ICT ARGUS	Swiss Government Swiss Government
ICT MERCURY	Council for European Nuclear Research. Geneva.
ICT 1300	Daten - Verarbeitungs - Dienst AB. Schaffhausen. A. Germann, Betriebgorganisation. Basle
ICT 1500	A. Germann, Betriebgorganisation. Basle.
SIEMENS 2002	Brown Boveri & Cie. Baden.
STANTEC ZEBRA	Federal Aircraft Factory. Emmen. Lausanne University. Lausanne.
USS 80/90	ALCOA International SA. Lausanne Aluminium - Industrie. Chippis. Assurance Mutuelle Vaudois Contre les Accidents. Burger Hospital. Basel. Ebauches. Grenchen. ETA Ag., Grenchen. Etat de Vaud. Lausanne. Geigy Ag., Basel. Hug & Co. Ag., Herzogenbuchsee. Jelmoli SA. Zurich. Maschinenfabrik Rieter Ag., Winterthur. Sandoz Ag. Basel. Sandoz Ag. Basel. Schweizerische Bankgesellschaft. Bern. Schweizerische Bankgesellschaft. Zurich Schweizerische Bankgesellschaft. Zurich Sperry Rand International Corp. Lausanne. Union de Banques Suisse. Geneva. Union de Banques Suisse. Geneva. Union de Banques Suisse. Lausanne. Zentrale Ausgleichstelle. Geneva. 16 - Names of users unconfirmed by manufacturer.

Computer	User
ZUSE 22	Eidgenossisches Inst. für Reaktorforschung, Würenlingen.
	Wild Heerbrugg Ag., Werke für Optik und Feinmechanik, Heerbrugg.
	Wild Heerbrugg Ag., Werke für Optik und Feinmechanik, Heerbrugg.
ZUSE 23	Eidgenossisches Inst. für Reaktorforschung, Würenlingen.

SECTION 7

LIST GIVING USERS NAME, OF VINTAGE COMPUTERS OF BRITISH MANUFACTURE, INSTALLED OUTSIDE EUROPE.

Computer	User
EEL/DEUCE I	University of New South Wales, Kensington, N.S.W. Australia.
EEL/KDP 10	Bank of London & South America, Buenos Ayres.
EEL/LEO III	Colonial Mutual Life Assurance, Melbourne, Australia. Consolidated Glass Works Ltd., Germinston, S. Africa. Leo Computer Services (Pty) Ltd., Johannesburg. Shell Petroleum, Melbourne, Australia. Tubemakers of Australia, Sydney, New South Wales.
ELLIOTT 402F	Ernst Leitz G.m.b.H., Wetzlar.
ELLIOTT 403	Weapons Research Est. Woomera, Australia.
ELLIOTT 405	Snowy Mountain Hydro Electric - Australia. Sumitano Bank, Osaka, Japan. N.C.R. Sydney, Australia.
ELLIOTT 802	(Natural) Gas Pipeline Co. of America, Illinois, U.S.A. V/O Technopromimport (agents) U.S.S.R.
ELLIOTT 803	Belgrade Electrical Centre, Belgrade, Yugoslavia. Boston Edison Corp. Mystic Power Station, Boston, Mass. U.S.A. C.B.K.O. Gdansk, Poland. Central Electricity & Water Ass. Sudan. Central Research Inst. of Complex Automation, U.S.S.R. Chemical Industry, Prague, Czechoslovakia. Chemical Plant, U.S.S.R.

Computer	User
ELLIOTT-803	Commonwealth Scientific & Industrial Research Organisation, Australia.
	E.I. Dupont De Nemours Inc. Beaumont, Texas. U.S.A.
	E.I. Dupont De Nemours Inc. Circleville, Ohio, U.S.A.
	E.I. Dupont De Nemours Inc. Florence, S. Carolina, U.S.A.
	Electrotechnical Inst. Warsaw, Poland.
	Energoproject, Belgrade, Yugoslavia.
	Gulf States Utilities Corp. Nelson Station, Westlake, Louisiana, U.S.A.
	Hindustan Aircraft Ltd., Bangalore, India.
	Hungarian Ministry of Heavy Industry.
	Hungarian Steel Industry.
	India Post & Telegraph Dept., New Delhi.
	Information Systems Inc. Los. Angeles, California, U.S.A.
	Information Systems Inc. Los. Angeles, California, U.S.A.
	Information Systems Inc. Los. Angeles, California, U.S.A.
	Institute of Technology, Haifa, Israel.
	Kaiser-Engineers AEC, Hanford, Washington, U.S.A.
	Kancelarske Stroje, Prague, Czechoslovakia.
	Kancelarske Stroje, Prague, Czechoslovakia.
	Lummus Company Inc., New York, U.S.A.
	Mathmatical Institute, Belgrade, Yugoslavia.
	Melbourne Technical College, Victoria.
	Moscow Sovnarhozes, U.S.S.R.
	Moscow Sovnarhozes, U.S.S.R.
	N.A.S.A. Plum Brook Reactor Facility, Sandusky, Ohio, U.S.A.
	National Cash Register Co. Ltd., Bulgaria.
	N.C.R. Johannesburg, South Africa,
	N.C.R. Service Centre, Beirut, Lebanon.
	N.C.R. Europe, Czechoslovakia.
	N.C.R. Europe, Eastern Europe - Hungary, Rumania, Czechoslovakia.
	N.C.R. South Africa.
	Northern Illinoise Gas Corp. U.S.A.
	Owens Corning Fibreglass Co., Aiken, S. Carolina, U.S.A.
	Process Computing Division for a customer in Rumania.
	P.U.T.C.O. Johannesburg, S. Africa.
	Royal Melbourne Inst. of Technology, (Melbourne Computing Centre)
	Shipbuilding Co. Gdansk, Poland.
	Skoda Works, Czechoslovakia.
	Kancelarskestroje (Skoda Works), Czechoslovakia.
	Skoda Works, Prague.
	Slovnaft Bratislava, Czechoslovakia.

Computer	User
ELLIOTT 803	Sun Oil Co. Marcus Hook, Pennsylvania, U.S.A. Technion Institute of Technology, Haifa, Israel. Tidewater Oil Co. Delaware City, Delaware, U.S.A. Tidewater Oil Co. Avon Refinery, San Francisco, U.S.A. United Fuel Gas Co., Charleston, W. Virginia, U.S.A. University of Wroclaw, Poland. U.S.S.R. Chemical Plant, U.S.S.R. Westinghouse Corp. Cheswick, Pennsylvania, U.S.A. Customer in Rumania. Undisclosed Customer in U.S.S.R.
ICT 1201	Computer Centre, Johannesburg. Commonwealth Bureau of Census of Statistics, West Block, Canberra Australia Consolidated Textile Mills, Durban, S. Africa. Dabur Private Ltd., Calcutta. Department of Education, Wellington, New Zealand. ICT Australia. General Motors S.A. Ltd., South Africa. Motor Specialities Ltd., Auckland, New Zealand. New Zealand Dept., Education, New Zealand. Provincial Administration of the Cape of Good Hope, South Africa. South African Railways, Johannesburg, South Africa.
ICT 1202	Department of the Treasury, Salisbury, S. Rhodesia, Africa. Durban City Council, Durban. East African Railways, & Harbours, Nairobi, Kenya. East African Railways & Harbours, Kenya. Hindustan, Machine Tools Ltd., Bangalore, India. Ministry of Railways, Government of India, Diesel Locomotive Works, Varanasi, India. Nugget Polish Co. Ltd., N'Dabeni, Cape Town, S. Africa. Reckitt & Coleman Ltd., S. Africa. S. African Iron & Steel Ind. Corp., South African Railways, East London, South Africa. South African Railways & Harbours, Johannesburg. South African Railways, Port Elizabeth, S. Africa. Tasman Pulp & Paper Co. Ltd., Kaweura, New Zealand. University of Ibadan, Nigeria.

Computer	User
ICT 1300	Bangalore Woollen Mills Ltd., Bangalore, India. Buckingham & Carnatic Co. Ltd., Madras. Consolidated Textile Mills, Durban South Africa. Co-Op Farmers & Graziers Direct Meat Supply Ltd., Brooklyn, Victoria, Australia. Delhi Cloth & General Mills Co. New Delhi, India. Dunedin City Council, New Zealand. Durban City Council, S. Africa. G.E. Crane (Holdings) Ltd., Sydney, Australia. Government Centre for Management Training, Warsaw, Poland. Grazcos Co-operative Ltd., Sydney, Australia. Local Authorities Superannuation Board, Melbourne, Australia. Ministry of National Economy, Libya. New Zealand Apples & Pears Marketing Board, Wellington, New Zealand. Rex Truform Clothing Co. Ltd., (S. Africa). Saxby & Farmer Ltd., Calcutta. Selected Products Ltd., Cape Town. S. Africa. Superannuation Board, Melbourne, Australia. Tasman Pulp & Paper Co. Ltd., (Reed Paper Group Ltd.,) Kaweran, New Zealand. Tooheys Ltd., Sydney, Australia.
ICT 1301	Cadbury Fry Hudson Ltd., New Zealand. Cadbury Fry Pascall Ltd., Tasmania. Colonial Sugar Refining Co. Australia. Department of Education, Wellington, New Zealand. Dunlop (South Africa) Ltd., Durban. Electronic Data Processing Limited., Wellington, New Zealand. Griffin & Sons, New Zealand. I.C.T. Computer Centre, Australia. (Sydney). Johannesburg City Council, Johannesburg. New Zealand Dept., of Education, Wellington. Pauls Ice Cream & Milk Ltd., Brisbane. Rothmans of Pall Mall (A'Lia) Ltd., Singapore City Council. South African Railways & Harbours, Cape Town. South African Railways & Harbours (Administration), Durban South Africa. South African Railways & Harbours, Johannesburg. Stewart & Lloyd, South Africa.

Section 7. (Contd.)

Computer	User
ICT 1301	Truworths Ltd., Cape Town, South Africa. Union of Burma Railways, Rangoon. University of Cape Town, South Africa. W.D. & H.O. Wills, Sydney, Australia.
ICT MADAM MK I	Toronto University, Toronto, Canada.
ICT MERCURY	Buenos Aires University, Buenos Aires, Argentina, S. America.
ICT ORION II	South African Mutual Life Insurance Company.
ICT PEGASUS I	Ferranti Packard Electric Ltd., Toronto, Canada. South African Mutual Life Assn. Soc., Cape Town, South Africa.
ICT SIRIUS	Caulfield Technical College, Melbourne, Australia. Ferranti Ltd., Melbourne, Australia. Ferranti Ltd., Melbourne, Australia. Imperial Chemical Industries (A.N.Z.) Melbourne, Australia. Monash University of Melbourne, Clayton, Victoria, Australia. Steel Research Institute, Prague, Czechoslovakia.
STANTEC ZEBRA	International Telephone & Telegraph Canada Ltd., Montreal. National Physical Research Laboratory S.A. Council for Scientific & Industrial Research, Scientia, Pretoria. Standard Telephones & Cables (S.T.C.) South Africa. Standard Telephones & Cables (S.T.C.) South Africa. Standard Telephones & Cables (Sydney) Sydney. Suffield Experimental Station, Ralston, Alberta.

SECTION 8.

TABLE, BY NUMBERS AND MONETARY VALUE, OF ALL VINTAGE COMPUTERS INSTALLED IN BRITAIN.

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
ACE ORIGINAL	1		40	40	
ACE	1		400	400	
AEI 1010	10		360	3600	
BULL GAMMA 30		6	120		720
BULL GAMMA 150		4	60		240
BULL GAMMA 300		6	22		132
BURROUGHS E101		3	17		51
BURROUGHS E102		1	10		10
CE 55	3		2	6	
CE 102	1		10	10	
CLARY DE 60		1	8		8
EDSAC	2		-	-	
EEL/DEUCE 1	22		45	990	
EEL/DEUCE II	7		50	350	
EEL/DEUCE IIa	5		55	275	
EEL/KDP 10	8		400	3200	
EEL/LEO I	1		95	95	
EEL/LEO II	11		95	1045	
EEL/LEO III	29		200	5800	
ELLIOTT 401	1		15	15	
ELLIOTT 402	6		22	132	
ELLIOT 402E	1		25	25	
ELLIOTT 402F	1		35	35	
ELLIOT 403 (WREDAC)	1		100	100	
C/Forward	111	21	-	16118	1161

SECTION 8. (Contd.)

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
B/Forward	111	21	-	16118	1161
ELLIOTT 502	2		100	200	
ELLIOTT 802	3		17	51	
ELLIOTT 803	140		35	4900	
GP/LGP 30		1	18		18
IBM 305		7	65		455
IBM 650	9	9	130	1170	1170
IBM 704		1	600		600
IBM 705		3	700		2100
IBM 709		1	1000		1000
IBM 1410		18	350		6300
IBM 1460		7	130		910
IBM 7030		1	1500		1500
IBM 7070		1	240		240
IBM 7074		3	260		780
IBM 7090		12	1000		12000
IBM 7094		6	1000		6000
ICT 1100	14		180	2520	
ICT 1101	9		180	1620	
ICT 1200	6		25	150	
ICT 1201	32		33	1056	
ICT 1202	41		45	1845	
ICT 1300	64		45	2880	
ICT 1301	88		120	10560	
ICT 1302	1		150	150	
ICT 1500		76	72		5472
ICT 1600	1		250	250	
ICT 2400	4		500	2000	
C/Forward	525	167	-	45470	39706

SECTION 8. (Contd.)

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
B/Forward	525	167	-	45470	39706
ICT APOLLO	1		35	35	
ICT ARGUS	21		20	420	
ICT ATLAS	11		2000	22000	
ICT EMI SPECIAL	1		100	100	
ICT MADAM MK I	1		40	40	
ICT MADAM MK II	5		45	225	
ICT MERCURY	14		120	1680	
ICT ORION	14		300	4200	
ICT PEGASUS I	25		50	1250	
ICT PEGASUS II	15		62	930	
ICT SIRIUS	14		17	238	
METROVICK 950	3		20	60	
MONROBOT MK XI		10	9		90
NATIONAL ELLIOTT 405	34		120	4080	
PACKARD BELL 250		2	20		40
POSEIDON	10		90	900	
SOLATRON	1		100	100	
SOLATRON (SPECIAL)	1		40	40	
STANTEC ZEBRA	22		28	616	
SEL DB 40		1	70		70
STOREKEEPER	2		5	10	
TAC	1		10	10	
TITAN	1		-	-	
TRW 130 (AN/UYK)	1		40	40	
TRW 330	7		75	525	
UNIVAC SS 80/90		5	100		500
TOTAL	730	185	-	82969	40406

SECTION 9.

TABLE, BY NUMBERS AND MONETARY VALUE, OF ALL VINTAGE COMPUTERS INSTALLED IN THE REST OF EUROPE

AUSTRIA

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
BULL GAMMA 30		2	120		240
BURROUGHS 205		1	68		68
GP/LGP 21		1	12		12
IBM 650		1	130		130
IBM 1410		2	350		700
IBM 1460		2	130		260
IBM 7040		1	330		330
IBM 7090/4		1	1000		1000
PB 250		1	20		20
SIEMENS 2002		1	100		100
STANTEC ZEBRA		1	28		28
USS 80		1	100		100
ZUSE II		7	10		70
ZUSE 22		1	15		15
ZUSE 23		10	40		400
TOTAL	-	33	-	-	3473

SECTION 9. (Contd.)

BELGIUM

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	TOTAL VALUE IN £1,000
	HOME BUILT	IMPORTED		
BULL GAMMA 30		16	120	1920
BULL GAMMA 60		1	700	700
BULL GAMMA 150		10	60	600
BULL GAMMA 300		15	22	330
BULL GAMMA 500		5	31	155
BURROUGHS E 101		4	17	68
ELLIOTT 802		2	17	34
ELLIOTT 803		4	35	140
IBM 305		5	65	325
IBM 650		6	130	780
IBM 1410		9	350	3150
IBM 1460		6	130	780
IBM 7040		3	330	990
IBM 7070/2/4		3	240	720
IBM 7090/4		3	1000	3000
ICT ARGUS		2	20	40
ICT MERCURY		2	120	240
SEA/CAB 500		4	24	96
SEL ER 56		1	50	50
STANTEC ZEBRA		4	28	112
TRW 330		1	75	75
UNIVAC SS 80/90		7	100	700
TOTAL		113	-	15005

DENMARK

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
BULL GAMMA 30		4	120		480
BULL GAMMA 300		6	22		132
CONTROL DATA 1604-A		1	460		460
DASK	1		13	13	
GALLO	1		-	-	
GIER DISADEC	12		41	492	
IBM 305		1	65		65
IBM 650		8	130		1040
IBM 1410		3	350		1050
IBM 1460		1	130		130
IBM 7074		1	260		260
IBM 7090		1	1000		1000
IBM 7094		1	1000		1000
ICT 1500		3	72		216
SEL/DB 40		1	70		70
SEL/KA 21		1	40		40
SIEMENS 2002		1	100		100
STANTEC ZEBRA		1	28		28
TOTAL	14	34	-	505	6071

SECTION 9. (Contd.)

FINLAND

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	TOTAL VALUE IN £1,000
	HOME BUILT	IMPORTED		
BULL GAMMA 30		1	120	120
BULL GAMMA 300		2	22	44
ELLIOTT 803		2	35	70
IBM 1410		2	350	700
IBM 1460		3	130	390
ICT 1500		5	72	360
SIEMENS 2002		2	100	200
WEGEMATIC 1000		3	35	105
TOTAL		20	-	1989

SECTION 9. (Contd.)

FRANCE

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
BULL GAMMA 30	22	66	120	2640	7920
BULL GAMMA 60	8		700	5600	
BULL GAMMA 150	91		60	5460	
BULL GAMMA 300	21		22	462	
BULL GAMMA 500	55		31	1705	
BURROUGHS E101		5	17		85
CITAC 210B	3		25	75	
CNET ANTINEA	1		-	-	
CNET RAMSES	1		-	-	
ELLIOTT 402		1	22		22
ELLIOTT 803		2	35		70
GIER		1	41		41
GP/LGP 21		1	12		12
GP/LGP 30		1	18		18
GP/RPC 4000		1	29		29
IBM 305		20	65		1300
IBM 650	48	20	130	6240	1300
IBM 704		6	600		3600
C/Forward	250	114	-	22182	14397

SECTION 9. (Contd.)

FRANCE (Contd.)

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
B/Forward	250	114	-	22182	14397
IBM 705	8		700	5600	
IBM 1410	55		350	19250	
IBM 1460		20	130		2600
IBM 7030		1	1500		1500
IBM 7040	1		330	330	
IBM 7044	4		350	1400	
IBM 7070/2/4	37		240	8880	
IBM 7080		2	1000		2000
IBM 7090		10	1000		10000
IBM 7094		3	1000		3000
ICT 1202		27	45		1215
ICT 1300		1	45		45
ICT 1301		17	120		2040
ICT 1500		7	72		504
ICT MERCURY		1	120		120
KL902	1		50	50	
MONROBOT XI		2	9		18
PB 250	23	10	20	460	200
C/Forward	379	215	-	58152	37639

SECTION 9. (Contd.)

FRANCE (Contd.)

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
B/Forward	379	215	-	58152	37639
PDP 1		1	60		60
SEA/CAB 500	119		24	2856	
SEA/CAB 1000	1		25	25	
SEA/CAB 2000	1		25	25	
SEA/CAB 3000	3		24	72	
SEA/CAB CUBA ET SABA	2		26	52	
SEA/CAB DOROTHY	2		26	52	
SEREL 1001	6		50	300	
TELEREGISTER MAGNETRONIC		1	200		200
TRW 300		17	50		850
TRW 330		2	75		150
TRW 530		7	50		350
TOTAL	513	243	-	61534	39249

SECTION 9. (Contd.)

GERMANY

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
BULL GAMMA 30		37	120		4440
BULL GAMMA 150		3	60		180
BULL GAMMA 300		15	22		330
CELLATRON SER 2	6		9	54	
CONTROL DATA 1604		1	460		460
ELLIOTT 402F		1	35		35
ELLIOTT 803		16	35		560
FACIT EDB		1	120		120
GIER DISADEC		3	41		123
GP/LGP 21		22	12		264
GP/LGP 30		33	18		594
GP/RPC 4000		6	29		174
IBM 305		51	65		3315
IBM 650		70	130		9100
IBM 704		2	600		1200
IBM 705		2	700		1400
IBM 1410		50	350		17500
IBM 1460		39	130		5070
C/Forward	6	352	-	54	44865

GERMANY (Contd.)

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
b/Forward	6	352	-	54	44865
IBM 7040		4	330		1320
IBM 7044		1	350		350
IBM 7070		25	240		6000
IBM 7072		1	240		240
IBM 7074		2	260		520
IBM 7090		11	1000		11000
IBM 7094		3	1000		3000
ICT 1202		3	45		135
ICT 1300		4	45		180
ICT 1301		7	120		840
ICT 1500		7	72		504
ICT ARGUS		2	20		40
ICT PEGASUS		1	50		50
LIBRATROL 500		2	30		60
NATIONAL ELLIOTT 405		1	120		120
OMEGA 203	1		45	45	
PB 250		3	20		60
PERM	1		-	-	
c/Forward	8	423	-	99	69284

GERMANY (Contd.)

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
B/Forward	8	429	-	99	69284
SEA CAB 500		1	24		24
SEL/DB 10	1		30	30	
SEL/DB 40	2		70	140	
SEL/ER 56	8		50	400	
SEL/ES 92	1		45	45	
SEL/KA 21	1		40	40	
SIEMENS 2002	37		100	3700	
STANTEC ZEBRA		3	28		84
TR 4	12		300	3600	
TRW 300		1	50		50
USS 80/90		48	100		4800
XL		18	110		1980
ZUSE II	30		10	300	
ZUSE 22	51		15	765	
ZUSE 23	72		40	2880	
ZUSE 31	7		40	280	
ZRA 1	5		40	200	
TOTAL	235	500	-	12479	76222

GREECE

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	TOTAL VALUE IN £1,000
	HOME BUILT	IMPORTED		
IBM 650		1	130	130
IBM 1410		2	350	700
IBM 1460		2	130	260
UNIVAC SS 80/90		21	100	2100
TOTAL		26	-	3190

SECTION 9. (Contd.)

HOLLAND

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
BULL GAMMA 30		15	120		1800
BULL GAMMA 150		8	60		480
BULL GAMMA 300		7	22		154
BULL GAMMA 500		1	31		31
ELLIOTT 803		8	35		280
IBM 305		3	65		195
IBM 650		14	130		1820
IBM 704		2	600		1200
IBM 705		1	700		700
IBM 1410		11	350		3850
IBM 1460		4	130		520
IBM 7070		1	240		240
IBM 7070/2/4		3	240		720
IBM 7090		1	1000		1000
IBM 7094		1	1000		1000
ICT 1301		1	120		120
ICT MADAM MK II		1	45		45
MONROBOT XI		3	9		27
NV/ANOC 231 R	1		-	-	
PASCAL/STEVIN	1		100	100	
C/Forward	2	85	-	100	14182

SECTION 9. (Contd.)

HOLLAND (Contd.)

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
B/Forward	2	85	-	100	14182
PB 250		1	20		20
SEA/CAB 500		1	24		24
STANTEC ZEBRA		13	28		364
TR 4		9	300		2700
UNIVAC SS 80/90		12	100		1200
XI	17		110	1870	
TOTAL	19	121	-	1970	18490

IRISH REPUBLIC

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	TOTAL VALUE IN £1,000
	HOME BUILT	IMPORTED		
ELLIOTT 803		2	35	70
IBM 650		1	130	130
IBM 1410		3	350	1050
IBM 1460		5	130	650
ICT 1201		2	33	66
ICT 1300		3	45	135
ICT 1301		5	120	600
TOTAL		21	-	2701

ITALY

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
BULL GAMMA 30		1	120		120
BULL GAMMA 60		2	700		1400
BULL GAMMA 150		21	60		1260
BULL GAMMA 300		37	22		814
BURROUGHS E 101		1	17		17
CDC BENDIX G 15		2	30		60
CDC BENDIX G 20		1	200		200
CEP	1		50	50	
ELEA 2001	1		55	55	
ELEA 6001	82		90	7380	
ELEA 9001	1		200	200	
ELEA 9002	27		"	"	
ELEA 9003	36		236	8496	
GP/LGP 21		1	12		12
IBM 305		33	65		2145
IBM 650		33	130		4290
IBM 704		3	600		1800
IBM 705		3	700		2100
IBM 1410		50	350		17500
C/Forward	148	188	=	16181	31718

ITALY (Contd.)

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
B/forward	148	188	-	16181	31718
IBM 1460		8	130		1040
IBM 7040		4	330		1320
IBM 7070		10	240		2400
IBM 7072/4		3	260		780
IBM 7080		1	1000		1000
IBM 7090		2	1000		2000
IBM 7094		5	1000		5000
ICT 1202		1	45		45
ICT MADAM MK 1		1	40		40
ICT MADAM MK 11		1	45		45
IME 84	80		.6	48	
LGP 30		3	18		54
PB 250		1	20		20
USS 80/90		46	100		4600
UNIVAC 1101		1	500		500
TOTAL	228	275	-	16229	50562

SECTION 9. (Contd.)

NORWAY

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	TOTAL VALUE IN £1,000
	HOME BUILT	IMPORTED		
BULL GAMMA 30		4	120	480
EEL/DEUCE II		2	50	100
ELLIOTT 803 B		1	35	35
FACIT EDB - 3		1	120	120
GIER		4	41	164
IBM 305		1	65	65
IBM 650		1	130	130
IBM 1410		3	350	1050
IBM 1460		4	130	520
IBM 7070/2/4		1	240	240
ICT 1301		2	120	240
WEGEMATIC 1000		1	35	35
TOTAL		25	-	3179

SECTION 9. (Contd.)

PORTUGAL

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	TOTAL VALUE IN £1,000
	HOME BUILT	IMPORTED		
ELLIOTT 803		2	35	70
IBM 650		2	130	260
IBM 1410		2	350	700
IBM 1460		2	130	260
STANTEC ZEBRA		1	28	28
TOTAL		9	-	1318

SPAIN

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	TOTAL VALUE IN £1,000
	HOME BUILT	IMPORTED		
BULL GAMMA 30		3	120	360
BULL GAMMA 300		2	22	44
ELLIOTT 803		3	35	105
IBM 650		1	130	130
IBM 1410		3	350	1050
IBM 1460		1	130	130
IBM 7070		1	240	240
ICT SIRIUS		2	17	34
UNIVAC S 80/90		5	100	500
TOTAL		21	-	2593

SWEDEN

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
ALWAC III/E		1	40		40
BULL GAMMA 30		19	120		2280
BULL GAMMA 150		1	60		60
BULL GAMMA 300		2	22		44
ELLIOTT 803		3	35		105
FACIT DS9000	1	-	-	-	-
FACIT EDB 3	7		120	840	
GIER		1	41		41
GP/LGP 21		2	12		24
GP/LGP 30		1	18		18
GP/RPC 4000		1	29		29
IBM 305		2	65		130
IBM 650		13	130		1690
IBM 1410		13	350		4550
IBM 1460		6	130		780
IBM 7044		1	350		350
IBM 7070/2/4		5	240		1200
IBM 7090/4		1	1000		1000
ICT 1301		9	120		1080
C/Forward	8	81	-	840	13421

SWEDEN (Contd.)

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
B/Forward	8	81	-	840	13421
ICT 1500		6	72		432
ICT ARGUS		1	20		20
ICT MERCURY		1	120		120
ICT ORION		5	300		1500
ICT PEGASUS I		1	50		50
ICT PERSEUS		1	250		250
MONROBOT XI		1	9		9
RCA 501		1	239		239
TAC (MARCONI)		6	50		300
WEGEMATIC 1000	3		35	105	
TOTAL	11	104	-	945	16341

SWITZERLAND

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
BULL GAMMA 30		9	120		1080
BULL GAMMA 150		3	60		180
BULL GAMMA 300		4	22		88
BURROUGHS E101		2	17		34
CONTROL DATA 1604 A		1	460		460
ELLIOTT 803		2	35		70
GP LGP 30		2	18		36
IBM 305		3	65		195
IBM 650		4	130		520
IBM 709		1	1000		1000
IBM 1410		10	350		3500
IBM 1460		1	130		130
IBM 7070		9	240		2160
IBM 7090		2	1000		2000
ICT ARGUS		2	20		40
ICT MERCURY		1	120		120
ICT 1300		2	45		90
ICT 1500		1	72		72
C/Forward	-	59	-	-	11775

SECTION 9 (Contd.)

SWITZERLAND (Contd.)

NAME OF COMPUTER	NUMBER INSTALLED		AVERAGE PRICE OF SYSTEM IN £1,000	HOME BUILT VALUE IN £1,000	IMPORT VALUE IN £1,000
	HOME BUILT	IMPORTED			
B/Forward	-	59	-	-	11775
SIEMENS 2002		1	100		100
STANTEC ZEBRA		2	28		56
USS 80/90		37	100		3700
ZUSE 22		3	15		45
ZUSE 23		1	40		40
TOTAL	-	103	-	-	15716

SECTION 10.

TABLE, BY NUMBERS AND MONETARY VALUE, OF ALL VINTAGE COMPUTERS OF BRITISH MANUFACTURE, INSTALLED OUTSIDE EUROPE.

NAME OF COMPUTER	NUMBER INSTALLED OUTSIDE EUROPE	AVERAGE PRICE OF SYSTEM IN £1,000	TOTAL VALUE IN £1,000
EEL/DEUCE I	1	45	45
EEL/KDP 10	1	400	400
EEL/LEO III	5	200	1000
ELLIOTT 402F	1	35	35
ELLIOTT 403	1	100	100
ELLIOTT 405	3	120	360
ELLIOTT 802	2	17	34
ELLIOTT 803	57	35	1995
ICT 1201	11	33	363
ICT 1202	14	45	630
ICT 1300	19	45	855
ICT 1301	21	120	2520
MADAM MK I	1	40	40
MERCURY	1	120	120
ORION II	1	500	500
PEGASUS I	2	50	100
SIRIUS	6	17	102
STANTEC ZEBRA	6	28	168
TOTAL	153	-	9367

SECTION 11.

A LIST OF VINTAGE ANALOGUE COMPUTERS AND VINTAGE CALCULATORS

CALCULATORS

ADEC

The Aiken Dahlgren Electronic Calculator is manufactured by Harvard University at an approximate cost of £200,000.

BULL GAMMA 3

The Gamma 3 is a high speed arithmetic unit. It can be connected to a number of different punched card machines (150 DP Series) for input and output purposes. These machines include tabulators, reproducers and card read/punches etc. Thus the basic Gamma 3 can be connected to different punched card machines at the discretion of the user. The memory is expandable and includes card programming and fixed floating point arithmetic. An internal programme is provided with solid state hardware. Manufacturer: De La Rue Bull Machines Ltd., Price: £10,000.

BULL GAMMA C33

An inexpensive electromechanical calculator with a single channel enabling results to be punched into the same or subsequent cards. Manufacturer: De La Rue Bull Machines Ltd. Price: Estimated at £3,800. Rental: £75 per month.

BULL GAMMA G 172

A small machine at present available for decimal use only. Can be connected to the 150 Series DP equipment. Manufacturer: De La Rue Bull Machines Ltd. Price: £7,000.

BULL GAMMA G 300

A calculator of equivalent size to the Bull Gamma 3 for use with the 300 Series of equipment. Manufacturer: De La Rue Bull Machines Ltd. Price: £11,500.

BULL GAMMA G 322

A small calculator of equivalent size to the Bull Gamma 172 for use with the 300 Series equipment. Manufacturer: De La Rue Bull Machines Ltd. Price: £7,500.

BURROUGHS D 203

This computer is manufactured by Burroughs Corporation, America. The system is used for special purpose, small scale, computation and process control. It has a highly accurate analogue output and continuous updating of analogue outputs by means of incremental computing unit.

DECIPLEX

These calculators were intended for use in a design office or laboratory, and use Creed input/output equipment. They are no longer in production. Manufacturer: Southern Instruments Limited.

DECIPLEX K 1011

This is intended for direct calculation using complex numbers. There are a limited number of stores, depending upon whether the calculator is intended to be used for complex working or scalar operations. Manufacturer: Southern Instruments Limited.

DECIPLEX K 1012

A smaller machine intended for scalar number operations only and of more limited capacity. Manufacturer: Southern Instruments Limited.

DECIPLEX K 1013

Intended for scalar operations only but with the same capacity as the K 1011. Manufacturer: Southern Instruments Limited.

DIGITAL CORRELATOR 580

A Baird-Atomic Model 580 Digital Correlator, manufactured by Baird-Atomic Incorporated. The approximate cost of this system is £23,300.

FRIDEN 130

This is a 10 keyboard device incorporating solid state plug - in circuits, an ultrasonic delay line, and a cathode ray tube display unit. Manufacturer: Friden Limited.

IBM CPC

A card programmed calculator manufactured by International Business Machines Corporation. The approximate rental of this machine is £660 per month.

IBM 602

A small flexible punched card calculating punch. Manufacturer: IBM United Kingdom Limited. Four models available. Price: £5,000 - £6,500. Rental: £85 - £125.

IBM 604

This calculator may be used directly coupled to IBM 521 read punch unit and an optional IBM 421 accounting machine to provide a very flexible installation for limited applications. Manufacturer: IBM United Kingdom Limited. Price: £7,500 - £12,500. Rental: £150 - £275. IBM 521 Price: £3,750. Rental: £65.

IBM 607

A calculator priced at about £11,000. Manufacturer: IBM United Kingdom Limited.

IBM 608

Transistor calculator priced at over £30,000.

IBM 609

A solid state calculator with built in card reading and punching facilities. Many models are available. Manufacturer: IBM United Kingdom Limited. Price: £14,000 - £24,000. Rental: £275-£525.

IBM 610

Auto point calculator uses paper tape, not cards.

IBM 626

A low cost calculating punch with a very limited programme. Manufacturer: IBM United Kingdom Limited. Price: £6,000 - £8,000. Rental: £110 - £160.

IBM 628

This is equipped with a random access card memory enabling high speed operation. It can be coupled to an IBM 565 card read punch unit and an IBM 421 accounting machine. Manufacturer: IBM United Kingdom Limited. Price: £17,500 - £22,500. Rental: £350 - £475.

IBM 630 X

A rumoured new version of the IBM 632 which did not materialise. It has also been referred to as the 63 X. Manufacturer: IBM United Kingdom Limited.

IBM 632

A medium capacity card calculator. Manufacturer: IBM United Kingdom Limited. Price: In the region of £2,500. Rental: £75.

IBM 644

This is a relatively slower machine with less extensive storage capacities. It can be coupled to the IBM 564 card read punch unit. Manufacturer: IBM United Kingdom Limited. Rental: £125 - £175.

IBM 3000

The IBM 3000 Series of office equipment includes a punch/verifier, sorter, interpreter and accounting machine. The accounting machine combines the functions of a tabulator, a calculator, a summary punch/reproducer, a gang punch and a collator. This equipment operated on a reduced size of punched card. Manufacturer: IBM United Kingdom Ltd.

IBM 6400

An electronic accounting machine using magnetic ledger cards. Manufacturer: IBM United Kingdom Limited.

ICT 542

This is an electronic multiplier with plusboard programming facilities, operating on 80 column punched cards at 100 cards per minute. Manufacturer: International Computers & Tabulators Ltd. Price: £8,100.

ICT 544 - EMP

This is a limited decimal calculator designed for the purpose of extending multiplications in punched cards for use in a 40 column card system. This machine is no longer freely available. Manufacturers ICT Ltd.

ICT 547 - EMP

A rather more powerful multiplier with a number of additional features, including Sterling calculations for use with 40 column cards. Not freely available. Manufacturers ICT Ltd.

ICT 548 - EMP

A rather more powerful electronic multiplying punch for 65 column cards with interstage punching facilities. This is not freely available.

ICT 549 - EMP

An 80/160 column Sterling/decimal calculator. Manufacturers ICT Ltd. No longer freely available.

ICT 550

The 550 is a calculator which is used with a separate card read punch unit. The basic design of this calculator is extremely comprehensive and its programming facilities allow complex programs to be carried out. It is possible on this machine to carry out programs of far greater complexity than was intended when the system was devised. No longer available. Manufacturers ICT Ltd. Price £13,200 when available.

ICT 550/2

A more advanced and powerful version of the ICT 550. Price: £13,200. Manufacturers ICT Ltd.

ICT 556 - PCC

65 column card input and output with magnetic drum storage. Interstage facilities are available giving effectively 130 columns per card. Programming is by means of a series of interchangeable connection boards. This machine is no longer freely available. Manufacturer, ICT Ltd. Price: £20,000 estimated.

ICT 557 - PCC

An 80/160 column version of the PCC. Basically similar to the ICT 556. Manufacturers: ICT Ltd.

LITTON 20, 40

Portable Digital Differential Analysers manufactured by Litton Industries. Prices: Litton 20 - £4,250. Litton 40 - £5,600.

MAGNEFILE B

Magnefile Electronic Data Processing System B. Manufacturers: Electronics Corporation of America, Business Machines Division. The approximate cost of the basic system is £6,600.

MAGNEFILE D

Magnefile Electronic Data Processing System model D. Manufacturers: Electronics Corporation of America, Business machines division. Approximate cost for basic system of £16,600.

MAGNETRONIC INVENTORY CONTROL

This is manufactured by The Teleregister Corporation, subsidiary of The Ogden Corporation. Price for a basic system was approximately £100,000.

MAGNETRONIC SAVINGS ACCOUNTING

Manufactured by the Teleregister Corporation, subsidiary of the Ogden Corporation, this is applied for the automatic processing of savings accounts and mortgages. Price: Dependent upon customer requirements.

NORC

This is manufactured by IBM Corporation. It is a general scientific calculator used in ordnance research, development and testing. Total cost for system including core memory and CRT printer is £1,064,000.

OLIVETTI DIVISUMMA 24

This machine is fitted with one register and a memory device. Operating at high speed, it carries out the four arithmetical operations and gives automatic credit balances.

OLIVETTI TETRACTYS

This is fitted with two registers and a dynamic memory. It is designed to solve the most complex numerical problems. Because of its wide range of applications it can alone carry out the calculating work of several machines. Cost: £425,000.

SN 1011

This numerical computer has been so designed as to afford, although extremely versatile, good operational renderings especially in air-traffic control. Input is controlled by an alpha-numerical keyboard and paper tape.

SN 1020

This is a machine which may be classed as being midway between electronic ordinators and electro-mechanical machines, and is designed to meet the requirements of the engineering and design department engineer.

UDEC 1/11/111

These computers are manufactured by the Burroughs Corporation, America. They are general purpose scientific and commercial data processors. UDEC I costs in the region of £160,000 and UDEC II and III cost in the region of £66,000. All three use paper tape input.

UNIVAC 1004

Univac 1004 is effectively a transistorised punched card processor. It consists of a processor card reader, printer unit, including a limited magnetic core memory. A separate card punch is available as an optional extra. It fills the gap between conventional punched card tabulators and computers. Extended programme capacity is available at extra cost. A large number of instruction facilities are designed as by - product operations and do not require programme steps for their operation. This enables more complicated and extensive routines to be carried out than is normal in a machine of this capacity. Manufacturer: Remington Rand Ltd. Price: £20,750 and upwards. Now being sold in Britain and certain other areas by ICT Limited.

UNIVAC MINIPUTER

Costs less than £2,000 and is used for invoicing operations. Manufacturers: Remington Rand Limited.

ZIME 84

A transistorised calculator with a small memory unit. Sells for £550 and is made by Industria Macchine Electtroniche, Spa.

ANALOGUE COMPUTERS

AD 256

This is a general purpose analogue computer designed for hybrid applications. This computer is manufactured by the Applied Dynamics Inc., Ann Arbor, Michigan, U.S.A.

AD - 2 - 64 PBC

Moderately priced console analogue computer with push button control monitoring. A removable board is provided. Manufacturer: Applied Dynamics Inc., U.S.A. Price: From £5,500.

AEI 955

A general purpose analogue computer. Manufacturer: Associated Electrical Industries Limited. Price according to specification. Now discontinued.

AMBLOG 200

This machine is specially designed for data acquisition and reduction systems involving one or more analogue inputs and analogue and/or digital outputs. Manufacturer: Adage Incorporated. It has up to 32,768 words of core storage.

ANALAC A 110

This is a general purpose computer designed to solve scientific problems in all branches of industry and science. This computer is manufactured by the Societe Pour L'Etude et la Realisation des Procedes Electronique de Calcul Analac.

CRANK MINOR

Iterative analogue computer built by College of Aeronautics, Cranfield. Now being built as a large scale machine. Used for control problems.

DONNER 3500

A table top computer for scientific and educational purposes. This machine can also be rack mounted. Separate students boards are provided with connecting cables for education purposes. Size 5" high and 10" square approximately. The weight is 28 lbs. Manufacturer: Donner Scientific Co. Inc., California. Price £500 approximately.

EAI 24A (PACE 24A)

An analogue machine manufactured by Electronic Associates. Obsolete since 1957.

EAI 24D (PACE 24D)

An analogue machine manufactured by Electronic Associates. Obsolete since 1957.

EAI 31R (PACE 31R)

An analogue machine manufactured by Electronic Associates. Obsolete since 1957.

EAI 131 (PACE 131R)

This computer is manufactured by Electronic Associates. Obsolete since 1957.

EAI 200 (PACE 200)

This computer is manufactured by Electronic Associates. Smaller version of the PACE 221R.

EAI 221R (PACE 221R)

A low cost version of the 231R. This computer uses the same components as the 231R but has rather limited facilities. It is manufactured Electronic Associates Ltd., and the price is from £9,000 to £19,000. Basically a 60 - 70 amplifier computer of high accuracy.

EAI Operations Control Computer

A low cost analogue computer for the rapid solution of matrix problems.

EAI TR 5 (PACE TR 5)

This is an analogue machine which is manufactured by Electronic Associates Ltd. The Price is £600.

EAI TR 10 (PACE TR 10)

This machine is designed for desk top use enabling engineering problems to be analysed and solved rapidly. An interchangeable range of plug-in components make this system flexible and enable rapid expansion to take place. Plotters and associated equipment are available. It is manufactured by Electronic Associates Ltd., at a price of £1,700.

EAI TR 20 (PACE TR 20)

Solid state desk top analogue computer with better accuracy, to succeed the TR 10. Uses bottle plugs and patch cords. Price about £1,600. Manufacturer: Electronic Associates Limited.

EASE

The EASE computer is one that has been produced in the past by Beckman in U.S.A. No such computers have been installed in U.K., although one or two on the Continent of Europe. Manufacturer: Electronic Associates Limited.

EMIAC II

A general purpose analogue computer consisting of a standard range of interchangeable computing units, supplied as a self-contained module of up to 18 operational units. The design enables an unlimited number of modules to be interconnected. Manufactured by EMI Limited, the price varies according to specification £2,000 - £3,000 per module.

ENDIM 2000

This is manufactured in East Germany.

FAIREY

A unit based machine comprising a number of functional units either control or computing (Linear or non-linear) which are mounted in standard size racks. This can be built to any size according to requirements. It is manufactured by The Fairey Aviation Co.Ltd., and the price varies according to specification.

G - PAC MARK I

An expandable analogue system designed as a series of cabinets to contain functional units according to requirements. Normally built as special purpose computer according to specification for individual jobs. It is manufactured by Elliott Automation Ltd., at a price of £4,500, but is no longer available.

G - PAC MARK II

An expandable analogue system manufactured by Elliott Automation Ltd. Price according to specification. No longer available.

GENERAL PRECISION

An analogue computer manufactured by General Precision Systems Ltd. Price from £7,000.

HEATHKIT ANALOGUE COMPUTER

This comprises a series of kits containing the parts for a number of operational units. These are models ES2, 100, 201, 151, 50 and 505. These kits enable the skilled amateur, and professional electronics engineer to construct their own computers with various individual units. The price of a complete kit varies from £359 to £658 and the price for the additional units varies from £10 to £245. It is manufactured by Daystrom Ltd., Gloucester, a subsidiary of Daystrom International, U.S.A. Price from £359.

HITACHI - WAC 301

Analogue computer built by Hitachi Limited.

HITACHI - WAC 3030

Analogue computer built by Hitachi Limited.

HITACHI ALM 502 T

Analogue computer built by Hitachi Limited.

HITACHI ALP 501 T

Analogue computer built by Hitachi Limited.

HITACHI ALS 1000

Analogue computer built by Hitachi Limited.

HITACHI ALS 1010

Analogue computer built by Hitachi Limited.

LACE MARK II

An analogue computer manufactured by English Electric Limited. Price £7,000.

LAN - ALOG

This is a completely solid state computer and it is manufactured by Lan Electronics Ltd., Slough. It is intended mainly for educational purposes, and new instrument will sell for about £220.

MARC

An analogue computer manufactured by Miles Electronics at a price of £1,308 - £23,305.

MARK III

Built by Computer Products Inc. Capable for real-time, rep-op, iterative and hybrid applications.

MC 5800

An economic system providing rather more extensive facilities than usual. Primarily intended for process control. It is manufactured by Computer Systems Inc., New York. The price varies according to specification.

MC 5900

A larger version of the 5800. It is manufactured by Computer Systems Inc., New York and is priced according to specification.

MINIPAC

An analogue computer for specific applications. It was manufactured by Elliott Automation Ltd., the price varied according to specification. No longer available.

MN - II

A computer designed for automatically seeking optimum output for given processes. Designed to automatically select the solution best satisfying several previously described conditions. Capable of solving non-linear equations of the 6th or 9th order.

MULTIUNIT

An analogue computer manufactured by Short Bros. & Harland Ltd. Price according to specification.

NADAC 20

A smaller version of the NADAC 100 built be S.E.A.

NADAC 100

A high speed process control computer built from standard modules to specification. It is manufactured by S.E.A.

NEWMARKET 3000

An analogue computer manufactured by Newmark Instruments Limited at a price of between £600 - £1,400.

NEWMARKET 3400

This analogue computer is manufactured by Newmark Instruments Limited. Price £1,200 - £3,000.

ORACLE (WAYNE KERR)

This desk top machine is a sophisticated version of a slide rule apparatus that A.I.C. devised in 1962 for short term forcasting and stock control. Price: £1,050. It is manufactured by The Wayne Kerr Corporation of America.

PACE

These computers are manufactured by Electronic Associates Inc., New Jersey, U.S.A. They are also manufactured and marketed in Britain by Electronic Associates Limited and are referred to as the EAI Series, under which they have been listed.

PANALOG

Panalog data reduction systems are designed for process control and are engineered to meet the specific requirements of the individual application. The main types of system are :

605 Information system
605 II Information system with extended capacity.
625 Automatic Logger with alarm retransmission.
645 High speed scanner
647 High speed scanner with additional control settings.
655 High speed scanner with non-magnitude logger.
667 Contact logger.

Manufactured by Panellit Ltd. Price according to specification.

RA 800

This computer is claimed to have the highest degree of accuracy of any fully transistorised analogue computer in serial production. It is a German computer manufactured by Telefunken AG. It is used mainly for Spaceflight calculations.

RADIC

The system consists of an integrated assembly of analogue and digital sub units. The number of sub units incorporated depend on customers' requirements. A normal assembly will contain a computer rack, control desk, digital memory unit and a plotting recorder. Magnetic tape transports are also available. Manufactured by Redifon Limited, the price is according to specification.

REDIFON 10/20

This is manufactured by Redifon Limited, Sussex. This computer uses up to 20 amplifiers and 30 helipots. It has a selling price from £2,000 to £4,800.

SARO

A variable capacity computer built from a number of modules according to the requirements of the installation. Manufactured by Saunders Roe Ltd. The price is according to specification.

SC 30

An analogue computer manufactured by Solartron Electronic Group Ltd., at a price of approximately £10,500. 30 amplifiers plus non - linear units and removable problem board and digital voltmeter.

SCD 10

A limited size computer up to 20 amplifiers with full non-linear facilities designed for simplicity of operation and flexibility of unit complement. Manufactured by Solartron Electronic Group Limited at a price of £1,500 to £3,800.

SCD 24

An extended system similar to the SCD 10. Manufactured by Solartron Electronic Group Limited at a price of £7,750.

SHORTS EDUCATIONAL COMPUTER

Manufactured by Short Bros. & Harland Ltd. A limited size machine designed for teaching analogue principles. Price: £900.

SHORTS GENERAL PURPOSE COMPUTER

A small scale analogue system manufactured by Short Bros. & Harland Ltd. Price: £5,300.

SHORTS MULTI - UNIT COMPUTER

Special specifications can be met by simply plugging in unit. High accuracy. Manufactured by Short Bros. & Harland Limited. Price varies greatly.

SIMLAC

A general purpose analogue computer containing linear and non - linear computing units. The introduction of continuous drift correction enables extended computing times to take place. It is manufactured by Short Bros. & Harland Ltd., at a price of approximately £50,000.

SKEDUFLO NTC - 18

A compact portable analogue computer small enough to be carried as luggage on an aeroplane. Capable of carrying out 18 operations. Based on the same units as the NTC - 100. It is manufactured by Mauchley Associates Inc., at a price of £650.

SKEDUFLO NTC - 100

A full scale analogue computer which is currently being developed. It is manufactured by Mauchley Associates Inc., and the price is according to specification.

SOLARTRON 247

Analogue computing system for computers in the range 36 to over 500 amplifiers. A central push button address system with manual and auto-print out, repetitive, automatic sequential, and iterative operation are incorporated. Servo set co-efficient potentiometers with punched tape input/output facilities also available. Price range £10,000 to £200,000.

SS 100 DYSTAC

Solid state analogue computer manufactured by Computer Systems Inc.

SS 110 MARK II

An analogue computer manufactured by Freedback Limited at a price of £375.

SUNDERLAND

A low priced analogue computer developed in conjunction with Sunderland Technical College, incorporating features previously found only in high priced installations. Manufactured by Power Systems Computers Limited, the price varies according to specification.

TAC - 8

A new educational computer introduced by Electronic Associates Limited, containing 8 operational amplifiers, limited non-linear facilities and full computer control facilities. The TAC - 8 computer is marketed at between £600 and £800.

TDA 2

A computer designed for two dimensional flow problems. It is manufactured by Carlson Computer Co., of U.S.A. The price varies according to specification.

TRICE

Although not strictly digital, it is included in that section.

TUTOR MARK II

Educational analogue computer featuring inexpensive removable problem board and fast repetitive operation. Built by Solartron Electronic Group Limited. Price: £920.

SECTION 12

This Section contains the cross reference of computer names. Where a computer is generally only known by one name it will be found in Section 2 and has not been included in this Section in order not to make the section too cumbersome.

COMPUTER	LISTED UNDER	PAGE NO. IN SECTION 2.
Ace	EEL/DEUCE I	15
	EEL/DEUCE II	18
AD/ECS	General Mills AD/ECS	19
ADV Airbourne III	Hughes ADV Airborne III	24
Airborne Instruments - Modac 404	Modac 404	36
Airborne Instruments - Modac 410	Modac 410	37
Airborne Instruments - Modac 414	Modac 414	37
Airborne Instruments - Modac 5014	Modac 5014	37
Air Line Reservation	Intelex Airline Reservation	32
Air Traffic	Cubic Air Traffic	12
Alwac III E	Wegematic 1000	58
AM 3100	RCA/AM 3100	45
AM 3200	RCA/AM 3200	45
AM-EDP 900	EDP 900	14
American Bosh Arma Co.-Micro	Micro	36
AN/ASN/24V	GP/AN/ASN 24V	19
ANOC/231 R	NV/ANOC 231 R	40
Antinea	Cnet Antinea	11
AN/TYK 4V	Philco AN/TYK 4V	43
AN/USQ 20	Univac AN/USQ 20	55
Apollo	ICT Apollo	29
	Ferranti Apollo	
APSAC	General Mills - APSAC	19
ARGUS 100	ICT Argus 100	29
	Ferranti Argus 100	
ARGUS 200	ICT Argus 200	29
	Ferranti Argus 200	29
Athena	Univac Athena	56
Atlas	ICT Atlas	30
	Ferranti Atlas	52
	Titan	52
Atlas II	ICT Atlas II	30
	Ferranti Atlas II	30
Atlas III	Burroughs D 105	9
Atvidabergs - Facit EDB	Facit EDB	17
Autonetics 41	AV 41	4
Autonetics - Fadac	Fadac	18
Autonetics - Juke Box	Juke Box	32

Section 12. (contd.)

COMPUTER	LISTED UNDER	PAGE NO. IN SECTION 2.
AV - Recomp II	Recomp II	46
AV - Recomp III	Recomp III	46
AV - Repac	Repac	46
AV - Verdan	Verdan	57
BANK LN PROC	I.T.T. BANK LN PROC	32
Basic Pac	Philco Basis Pac	43
Bell Telephone - Leprechaun	Leprechaun	33
Bizmac I	RCA Bizmac I	46
Bizmac II	RCA Bizmac II	46
BM Guidance	Hughes BM Guidance	24
Boveri - Zuse II	Zuse II	58
Boveri - Zuse 22	Zuse 22	58
Boveri - Zuse 23	Zuse 23	58
Boveri - Zuse 31	Zuse 31	58
Brookhaven - Merlin	Merlin	36
Bull Gamma 30	RCA 301	45
Bull Gamma 500	SEA CAB 500	47
Burroughs D 209	Burroughs Maddam	10
Burroughs Maddam	Burroughs D 209	9
Burroughs Udec II	Udec II	53
Burroughs Udec III	Udec III	53
C 7000	Litton C 7000	34
C 8200	Collins C 8200	11
CAB 500	Bull Gamma 500	7
CAB 502 B	SEA/CAB 502 B	48
CAB 600	SEA/CAB 600	48
	SEA/CAB 500	48
	Bull Gamma 500	7
CAB 1000	SEA/CAB 1000	48
CAB 2000	SEA/CAB 2000	48
CAB 2022	SEA/CAB 2022	48
CAB 2124	SEA/CAB 2124	48
CAB 3000/018/118	SEA/CAB 3000/018/118	48
CAB 3030	SEA/CAB 3030	48
CAB/CUBA ET SABA	SEA/CAB CUBA ET SABA	47
CAE 210B	Citac 210B	11
CCC 500	Hampshire CCC 500	21
CG 24	Lincoln CG 24	33
Computer Research - 102A	NCR 102A	38
Computer Research - 102D	NCR 102D	38
Control Data 160	NCR 310	39
Control Data D 12	Bendix D 12	5

COMPUTER	LISTED UNDER	PAGE NO. IN SECTION 2.
Control Data G 15	Bendix G 15	5
Control Data G 20	Bendix G 20	5
Control Data G 25	Bendix G 25	5
Control Data - Daystrom 46	Daystrom 46	12
Control Data - Daystrom 136	Daystrom 136	12
Control Data - Daystrom 636	Daystrom 636	13
CP 209	GP/LIBRASCOPE CP 209	20
CP 642 B	Univac CP 642 B	56
CP 667	Univac CP 667	56
CP 685/GPQ	RCA 4101	46
CPS	Philco CPS	43
CUBA ET SABA	SEA/CAB CUBA ET SABA	47
Cubic Tracker	Control Data Cubic Tracker	12
CXPQ	Philco CXPQ	44
D 12	Control Data D 12	5
	Bendix D 12	5
D 104	Burroughs D 104	9
D 105	Burroughs D 105	9
D 107	Burroughs D 107	9
D 201	Burroughs D 201	9
D 202	Burroughs D 202	9
D 204	Burroughs D 204	9
D 209	Burroughs D 209	9
Data Assessor	Litton Data Assessor	34
Datamatic 1000	Honeywell Datamatic 1000	22
Datamatic - Raycom	Raycom	44
Data Communications - Pascal Stevin	Pascal Stevin	42
Data-Tron	Burroughs Datatron	9
DB 10	SEL DB 10	48
DB 40	SEL DB 40	48
DB 40 Special	SEL DB 40 Special	49
DB 70	SEL DB 70	49
DDP - 19	Computer Control - DDP 19	12
DEC - PDP I	PDP - I	42
DEC - PDP III	PDP - III	42
Deuce I	EEL/DEUCE I	14
Deuce II	EEL/DEUCE II	15
Digitaire MA I	Hughes Digitaire MA I	24
Disa Electronik - Dask	Dask	13
Dorothy	SEA/CAB DOROTHY	47
Dorothy II	SEA/CAB DOROTHY II	47
D PAT	Hughes D PAT	24
DS 9000	Facit DS 9000	17

COMPUTER	LISTED UNDER	PAGE NO. IN SECTION 2.
E 101	Burroughs E 101	9
	Burroughs E 103	9
E 102	Burroughs E 102	9
E 103	Burroughs E 103	9
	Burroughs E 101	9
EC 5	General Mills EC 5	19
EC 6	General Mills EC 6	19
EDB	Facit EDB	17
EEL/KDP 10	RCA 501	45
EL X1	X1	58
ELEA 2001	Olivetti Elea 2001	41
ELEA 6001	Olivetti Elea 6001	41
ELEA 9001	Olivetti Elea 9001	41
ELEA 9002	Olivetti Elea 9002	41
ELEA 9003	Olivetti Elea 9003	41
Elecom 50	Underwood Elecom 50	53
Elecom 100	Underwood Elecom 100	53
Elecom 120	Underwood Elecom 120	53
Elecom 125	Underwood Elecom 125	53
Elecom 200	Underwood Elecom 200	54
Electro Data Corp. B 204	Burroughs B 204	8
Electro Data Corp. B 205	Burroughs B 205	8
Electro Data Corp. B 220	Burroughs B 220	8
Electro Data Corp. D 104	Burroughs D 104	8
Electro Data Corp. D 105	Burroughs D 105	9
Electro Data Corp. D 107	Burroughs D 107	9
Electro Data Corp. D 201	Burroughs D 201	9
Electro Data Corp. D 202	Burroughs D 202	9
Electro Data Corp. E 101	Burroughs E 101	9
Electro Data Corp. E 102	Burroughs E 102	9
Electro Data Corp. Datatron	Burroughs Datatron	9
Electro Data Corp. Maddam	Burroughs Maddam	10
	Burroughs D 209	9
Electro Data Corp. D 209	Burroughs D 209	9
	Burroughs Maddam	10
Electro Mechanical Research - ASI II	ASI II	4
Electronic Equipment - Data Assessor	Litton Data Assessor	34
Electronic Research Associates - Logistics	Logistics	34
Elliott 405	National Elliott 405	39
Elliott 405M	National Elliott 405M	39
El-Tronics Alwac I	Alwac I	1
El-Tronics Alwac II	Alwac II	2
El-Tronics Alwac III	Alwac III	2

COMPUTER	LISTED UNDER	PAGE NO. IN SECTION 2.
El-Tronics Alwac III E	Alwac III E	2
El-Tronics Alwac IV	Alwac IV	2
EMC - Storekeeper	Storekeeper	50
EMI 1100	ICT 1100	28
EMIDEC 1100	ICT 1100	28
EMIDEC 2400	ICT 2400	29
EMR - ASI 210	ASI 210	4
EMR - ASI 420	ASI 420	4
EMR - ASI 2100	ASI 2100	4
ENIAC	Univac I	54
ER 56	SEL ER/56	49
ERMA	GE 100 ERMA	36
ES 92	SEL/ES 92	49
Ferranti Apollo	ICT Apollo	29
Ferranti Argus 100	ICT Argus 100	29
Ferranti Argus 200	ICT Argus 200	29
Ferranti Atlas	ICT Atlas	30
Ferranti Atlas II	ICT Atlas II	30
Ferranti Hermes	ICT Hermes	30
Ferranti Madam Mk I	ICT Madam Mk I	30
Ferranti Madam Mk II	ICT Madam Mk II	30
Ferranti Mercury	ICT Mercury	30
Ferranti Orion	ICT Orion	31
Ferranti Orion II	ICT Orion II	31
Ferranti Pegasus I	ICT Pegasus I	31
Ferranti Pegasus II	ICT Pegasus II	31
Ferranti Perseus	ICT Perseus	31
Ferranti/ICT Pluto	ICT Pluto	31
Ferranti Sirius	ICT Sirius	31
Ferranti Poseidon	Poseidon	44
File Computer 0	Univac File Computer 0	56
File Computer 1	Univac File Computer 1	56
File Computer 2	Univac File Computer 2	56
Ford - Datakeeper 1000	Datakeeper 1000	13
FP 6000	ICT 1900	29
	ICT FP 6000	30
Friden - HRB Singer	HRB Singer	23
G 15	Bendix G 15	5
	Control Data G 15	5
G 20	Bendix G 20	5
	Control Data G 20	5
G 25	Bendix G 25	5
	Control Data G 25	5

Section 12 (contd.)

COMPUTER	LISTED UNDER	PAGE NO. IN SECTION 2.
Gamma 30	RCA 301	45
Gamma 60	Bull Gamma 60	7
Gamma 150	Bull Gamma 150	7
Gamma 300	Bull Gamma 300	7
Gamma 500	Bull Gamma 500	7
	SEA/CAB 500	47
GE 304	NCR 304	38
GIER	Disadec	13
GIER DISADEC	Disadec	13
GP/RPC 4000	RPC 4000	47
GP/RPC 9000	RPC 9000	47
HEC	ICT 1200	28
HERMES	ICT HERMES	30
	Ferranti Hermes	30
Honeywell Datamatic 1000	Datamatic 1000	13
Honeywell Raycom	Raycom	44
HRB Singer - Semac	Semac	49
IBM/AN/ASQ 28 (V) MDC	AN/ASQ 28 (V) MDC	3
IBM/AN/FSQ 7 AN/FSQ 8 Sage	AN/FSQ 7 AN/FSQ 8 Sage	3
IBM AN/FSQ 32	AN/FSQ 32	3
ICT 1500	RCA 301	45
ICT Diana	Diana	13
Invac H-W 15k	H-W 15k	24
Johnniac	Univac Rand Johnniac	56
KA 21	SEL KA 21	49
KDP 10	EEL/KDP 10	15
	RCA 501	45
L 90	GP/L 90	19
L 3055	GP/L 3055	19
LARC	UNIVAC LARC	56
LARC II	UNIVAC LARC II	57
LEO I	Edsac	14
	EEL/LEO I	15
LEO II	EEL/LEO II	15
LEO III	EEL/LEO III	15
LGP 21	GP/LGP 21	20
LGP 30	GP/LGP 30	20

COMPUTER	LISTED UNDER	PAGE NO. IN SECTION 2.
Librascope ATC	GP/Librascope ATC	20
Librascope Mk 48	GP/Librascope Mk 48	20
Librascope CP 209	GP/Librascope CP 209	20
Librascope 500	GP/Librascope 500	20
Librascope 3000	GP/Librascope 3000	20
Librascope L 2010	GP/Librascope L 2010	20
Librascope L 3060	GP/Librascope L 3060	20
Librascope RPC/4000	RPC 4000	47
Libratrol 500	GP/Libratrol 500	20
Libratrol 1000	GP/Libratrol 1000	21
Link Mk I	GP/Link Mk I	21
Logistics - Alwac II	Alwac II	2
Logistics - Alwac III	Alwac III	2
Logistics - Alwac 800	Alwac 800	2
Logistics - Alwac IIIE	Alwac IIIE	2
M 252	Hughes M 252	24
Magnetronic	Teleregister Magnetronic	51
Maddam	Burroughs D 209	9
	Burroughs Maddam	10
Madam Mk I	ICT Madam Mk I	30
	Ferranti Madam Mk I	30
Madam Mk II	ICT Madam Mk II	30
	Ferranti Madam Mk II	30
Marchant - Miniac	Miniac	36
Marchant - Miniac II	Miniac II	36
Marconi Tac	Tac (Marconi)	51
Mark 130 Mod. 0	GP/Mark 130 Mod. 0	21
Matsushita-Madic I	Madic I	34
Matsushita-Madic II	Madic II	35
Matsushita-Madic III B	Madic III B	35
Memory Test	Lincoln Memory Test	33
Mercedes Cellatron SER 2	Cellatron SER 2	10
Mercury	ICT Mercury	30
	Ferranti Mercury	30
Metrovick 950	AEI Metrovick 950	1
Metrovick 1010	AEI 1010	1
Micropac	RCA Micropac	46
Mitsubishi - Melcom 1101	Melcom 1101	35
Mitsubishi - Melcom 1101F	Melcom 1101F	35
Mitsubishi - Melcom 1102T	Melcom 1102T	35
Mobidic	Sylvania AN/MYK-1 Mobidic	51
Mobidic 64	Sylvania Mobidic 64 (AN-MYK)	51
Mobidic A	Sylvania Mobidic A (AN-MYK	51
Mobidic B	Sylvania Mobidic B (AN-MYK)	51
Mobidic C & D & 7A	Sylvania Mobidic - C & D & 7A (AN-MYK)	51

COMPUTER	LISTED UNDER	PAGE NO. IN SECTION 2.
RCA Bizmac I	Bizmac I	6
RCA Bizmac II	Bizmac II	6
RCA Flac I	Flac I	17
RCA Flac II	Flac II	17
Recomp I	CP 265	12
Recomp II	AV Recomp II	4
Recomp III	AV Recomp III	5
Regnecentralen - Dask	Dask	13
Regnecentralen - Disadec	Disadec	13
Remington I	Univac I	54
Remington II	Univac II	54
Remington 60	Univac 60	54
Remington 120	Univac 120	54
Remington 422	Univac 422	54
Remington 1101	Univac 1101	54
Remington 1102	Univac 1102	55
Remington 1103	Univac 1103	55
Remington 1103A	Univac 1103A	55
Remington 1104	Univac 1104	55
Remington 1105	Univac 1105	55
Remington 1206	Univac 1206	55
Remington 1218	Univac 1218	55
	Univac 418	55
Remington 1824	Univac 1824	55
Remington AN/USQ 20	Univac AN/USQ 20	55
Remington Athena	Univac Athena	56
Remington CP 642B	Univac CP 642B	56
Remington CP 667	Univac CP 667	56
Remington File Computer 0	Univac File Computer 0	56
Remington File Computer 1	Univac File Computer 1	56
Remington File Computer 2	Univac File Computer 2	56
Remington Rand Johnniac	Univac Rand Johnniac	56
Remington Larc	Univac Larc	56
Remington Larc II	Univac Larc II	57
Remington SS 80/90	Univac SS 80/90	57
Remington SS II	Univac SS II	57
Remington STEP	USSC STEP	57
Remington Target Intercept	Univac Target Intercept	57
Remington Rand - Datakeeper	Datakeeper 1000	13
RPC 4000	RPC 4000	21
RPC 9000	RPC 9000	21
RPC/LGP 30	RPC LGP 30	20
S 1000	Philco Transac S-1000	44
S 2000	Philco 2000	43
S 5001	Budd Stradap S-5001	6

Section 12 (contd.)

COMPUTER	LISTED UNDER	PAGE NO. IN SECTION 2.
Vote Tally	Norden Vote Tally	40
Wegematic - Alwac 800	Alwac 800	2
Wegematic 1000	Alwac IIIE	2
Westinghouse - Prodac 50	Prodac 50	44
Wredac	Elliott 403	16
Zebra	Stantec Zebra	50
Zebra Mk II	Stantec Zebra Mk II	50