

Small Business Computer Specifications—Addendum I

MANUFACTURER & MODEL	Basic Four Corporation Model 200	Basic Four Corporation Model 610	Cincinnati Milacron GEORGE (Series 40)	Cincinnati Milacron GEORGE B (Series 60)	Cincinnati Milacron GEORGE C (Series 70)
DATA FORMATS Word length, bits Decimal digits per word Bytes (characters) per word Operand length, words Instruction length, words	8-bit byte 1 per byte 1 per byte 16, 32 bytes 2 bytes	8-bit byte 1 per byte 1 per byte 16, 32 bytes 2 bytes	16 2 2 ½ to 2, string ½ to 4	16 2 2 ½ to 2, string ½ to 4	16 2 2 ½ to 2, string ½ to 4
CPU Model Add time, microseconds No. of programmable registers No. of I/O ports on basic system and maximum	BFC 1340 7.4 3 —	BFC 1320 7.4 3 11 (above req.)	CIP/2200B 10.3 (1 word) 3 7, 14	CIP/2200B 10.3 (1 word) 3 7, 14	CIP/2200B 10.3 (1 word) 3 7, 14
INTERNAL STORAGE Type Capacity of basic system, bytes Maximum capacity, bytes Increment size, bytes Cycle time, microseconds Access time, microseconds	MOS 32K 32K — 0.6 0.4	MOS 40K 96K 8K, 16K 0.6 0.4	MOS 32K 64K 16K 1.1 0.66	MOS 32K 64K 16K 1.1 0.66	MOS 32K 64K 16K 1.1 0.66
MASS STORAGE CAPABILITIES* Floppy disk drive Cartridge disk drive Pack disk drive Fixed-head disk/drum	No Std.; 10M bytes No No	No Std.; 35M bytes No No	Std.; 2.52M bytes No No No	Opt.; 1.26M bytes Std.; 40M bytes No No	Opt.; 1.26M bytes Std.; 40M bytes No No
KEYBOARD INPUT* Alphanumeric (typewriter) keyboard 10-key numeric keyboard Full accounting keyboard	Standard Standard No	Standard Standard No	Standard Optional No	Standard Optional No	Standard Optional No
INPUT/OUTPUT DEVICES* Paper tape reader Paper tape punch Punched card reader Punched card punch Punched card reader/punch Serial printer Line printer Reel-to-reel tape drive Cassette tape drive Cartridge tape drive Magnetic ledger card device CRT	No No No No No Std.; 120 cps No No — Std.; 2.5M bytes No Std.; 24 x 80 char.	Opt.; 300 cps Opt.; 75 cps Opt.; 300-400 cpm No No Std.; 165 cps Opt.; 150-600 lpm Opt.; 10 KBS No No No No Std.; 24 x 80, 16 x 32 char.	No No Optional; 600 cpm No No Std.; 60 cps Opt.; 60-600 lpm No No No No Std.; 960 char. Opt.; 1920 char.	No No Optional; 600 cpm No No Opt.; 60 cps Std.; 60-600 lpm Opt.; 20 KPS No No No No Std.; 960 char. Opt.; 1920 char.	No No Optional; 600 cpm No No Opt.; 60 cps Std.; 60-600 lpm Opt.; 20 KPS No No No No Std.; 960 char. Opt.; 1920 char.
COMMUNICATIONS CAPABILITIES* Maximum no. of lines Synchronous Asynchronous Protocols supported	No No No None	8 Opt.; 2400 bps Std.; 9600 bps IBM 2780	4 Opt.; 9600 bps Std.; 9600 bps IBM 2780	9 Opt.; 9600 bps Opt.; 9600 bps IBM 2780	9 Opt.; 9600 bps Opt.; 9600 bps IBM 2780
SOFTWARE SUPPORT COBOL RPG FORTRAN BASIC Assembler Other programming languages Multiprogramming Language implemented in firmware Operating system implemented in firmware General accounting packages Industry application areas Data base management system File access methods supported Software separately priced Technical help separately priced	No No No Yes No None No Partially Standard General business No Sequential, random No No	No No No Yes No — Yes; 8 partitions No Partially Yes Medical, insurance, general business No Sequential, random Yes Yes	No Yes No No Yes None Yes Yes No Yes Bus. acctg. No Random, sequential, indexed sequential Some Yes	No Yes No No Yes None Yes Yes No Yes Bus. acctg. No Random, sequential, indexed sequential Some Yes	No Yes No No Yes None Yes Yes No Yes Bus. acctg. No Random sequential, indexed sequential Some Yes
PRICING & AVAILABILITY Purchase price of basic system, \$ Monthly rental of basic system, \$ Date of first US delivery Number installed in U.S. to date	29,000 638 January 1978 4700 (all models)	51,400 1,131 1978 4700 (all models)	16,100 NA February 1977 590 (all models)	30,200 NA 1973 590 (all models)	30,300 NA 1973 590 (all models)
COMMENTS	Turnkey accounting system	Available as packaged systems only; system price also includes cartridge disk subsystem, serial or line printer, and CRT terminal. Disk storage to 105M bytes.	GEORGE includes CPU with 32K, 960-char. VDT, dual floppy disk drives, and 60-lpm printer; see report M11-131-101	GEORGE B includes CPU with 32K, 960-char. VDT, 5M-byte disk drive, and 60-lpm printer	GEORGE C includes CPU with 32K, 960-char. VDT, 5M-byte disk drive, and 60-lpm printer

*"Std." means the device is included in the price of the "basic system" as listed here.

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MANUFACTURER & MODEL	Cincinnati Milacron GEORGE D (Series 80)	Cincinnati Milacron GEORGE E (Series 90)	Computer Automation SyFA	Hewlett-Packard Calculator Products Div. System 45	IBM 5110
DATA FORMATS Word length, bits Decimal digits per word Bytes (characters) per word Operand length, words Instruction length, words	16 2 2 ½ to 2, string ½ to 4	16 2 2 ½ to 2, string ½ to 4	16 2 2 1 bit to 255 bytes 1, 2	16 4 2 — 1	8-bit byte 1 per byte 1 per byte — 2 bytes
CPU Model Add time, microseconds No. of programmable registers No. of I/O ports on basic system and maximum	CIF/4400 2.1 (1 word) 3 7, 14	CIF/4400 2.1 (1 word) 3 7, 14	CA LSI-2/60 2.4 (1 word) 2 12, 36	98455 1.6 — 4	IBM 5110 NA Software-assigned 2; variable
INTERNAL STORAGE Type Capacity of basic system, bytes Maximum capacity, bytes Increment size, bytes Cycle time, microseconds Access time, microseconds	MOS 64K 256K 32K 0.8 0.6	MOS 64K 256K 32K 0.8 0.6	Core 64K 304K 32K 1.2 0.5	MOS 13,498 62,650 1 —	MOS 16K 64K 16K 0.53 (2 bytes) 0.33
MASS STORAGE CAPABILITIES* Floppy disk drive Cartridge disk drive Pack disk drive Fixed-head disk/drum	Opt.; 1.26M bytes Std.; 40M bytes No No	Opt.; 1.26M bytes Std.; 20M bytes Std.; 320M bytes No	No Opt.; 40M bytes Opt.; 1760M bytes No	Opt.; 470K bytes No Opt.; 32; 50M bytes No	Std.; 4.8M bytes No No No
KEYBOARD INPUT* Alphanumeric (typewriter) keyboard 10-key numeric keyboard Full accounting keyboard	Standard Standard No	Standard Standard No	Optional Optional No	Standard Standard No	Standard Standard No
INPUT/OUTPUT DEVICES* Paper tape reader Paper tape punch Punched card reader Punched card punch Punched card reader/punch Serial printer Line printer Reel-to-reel tape drive Cassette tape drive Cartridge tape drive Magnetic ledger card device CRT	No No Optional; 600 cpm No No Opt.; 60 cps Std.; 60-600 lpm Opt.; No No No Std.; 960 char. Opt.; 1920 char.	No No Optional; 600 cpm No No Opt.; 60 cps Std.; 60-600 lpm Opt.; No No No Std.; 960 char. Opt.; 1920 char.	No No No No No Opt.; 165 cps Opt.; 300, 600 lpm Opt.; 800/1600 bpi No No No Optional; 24 × 80 char.	Opt.; 20 cps Opt.; 75 cps Opt.; 300 cpm No No Opt.; 30-100 cps Opt.; 240-480 lpm No No Std.; 1.48KBS No Std.; 1920 char.	No No No No No Opt.; 80, 120 cps No No Opt.; 2850 cps No Standard; 16 × 64 char.
COMMUNICATIONS CAPABILITIES* Maximum no. of lines Synchronous Asynchronous Protocols supported	32 Opt.; 9600 bps Opt.; 9600 bps IBM 2780	32 Opt.; 9600 bps Opt.; 9600 bps IBM 2780	25 Opt.; 4800 bps Std.; to 2400 bps IBM 2780/3780 HASP, IBM 3270, IBM 3790	1 Opt.; to 9600 bps Opt.; to 9600 bps None	1 Opt.; to 9600 bps Opt.; to 300 bps IBM 2741, 3741 2770 Bisynch
SOFTWARE SUPPORT COBOL RPG FORTRAN BASIC Assembler Other programming languages Multiprogramming Language implemented in firmware Operating system implemented in firmware General accounting packages Industry application areas Data base management system File access methods supported Software separately priced Technical help separately priced	No Yes No No Yes Sys. Prog. Lang. Yes Yes No Yes Bus. acctg., wholesale dist No Random, sequential, indexed sequential Some Yes	No Yes No No Yes Sys. Prog. Lang. Yes Yes No Yes Bus. acctg., wholesale dist. No Random, sequential, indexed sequential Some Yes	No No Yes Yes No SYBOL Yes; 43 partitions No No Distributed processing No Random, sequential, index sequential No No	No No No Yes No None No Fully Fully No Bus. admin., mgt. sci., math./stat. No Direct Yes Yes	No No No Yes No APL No Fully Fully Yes Financial analy- sis, statistics No Sequential Some Yes
PRICING & AVAILABILITY Purchase price of basic system, \$ Monthly rental of basic system, \$ Date of first U.S. delivery Number installed in U.S. to date	45,900 NA December 1976 590 (all models)	58,500 NA March 1978 NA	29,000 Third party 1976 200	12,000 NA September 1977 NA	8,475 NA February 1978 NA
COMMENTS	GEORGE D includes CPU with 64K, 960-char. VDT, 10M-byte disk drive, and 60-lpm printer	GEORGE E includes CPU with 64K bytes, 960-char. VDT, 40M-byte disk pack drive, and 60-lpm printer	Supports up to 24 terminals and up to 35 peripherals; see Report M11-168-301 for details		Enhanced version of IBM 5100 with 2 to 3 times the internal computing power plus diskette I/O; 5110 with both diskette and tape costs \$9,875

*"Std." means the device included in the price of the "basic system" as listed here.

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MANUFACTURER & MODEL	Lockheed System III Model A	Lockheed System III Model B	Prime 350	Qantel 210	Sperry Univac BC/7-600
DATA FORMATS Word length, bits Decimal digits per word Bytes (characters) per word Operand length, words Instruction length, words	16 2 2 16 1, 2	16 2 2 16 1, 2	16 + 2 2 2 1-4 1, 2, 3	8 2 1 Variable 3-10	8 2 1 1 1, 2, 3
CPU Model Add time, microseconds No. of programmable registers No. of I/O ports on basic system and maximum	Lockheed SUE 12 16	Lockheed SUE 12 24	Prime 350 1.56 8 10	Qantel std. CPU — 17 in memory 6	Univac T3038 106 (5 digits) 7 3; 12
INTERNAL STORAGE Type Capacity of basic system, bytes Maximum capacity, bytes Increment size, bytes Cycle time, microseconds Access time, microseconds	MOSFET 32K 256K 32K 0.6 0.52	MOSFET 64K 262K 32K 0.6 0.52	MOS 64KB 512KB 64K, 256K 0.76 0.60	MOS 16K 32K 8K 1.5 1.5	MOS 48K 64K 16K 1.0 0.5
MASS STORAGE CAPABILITIES* Floppy disk drive Cartridge disk drive Pack disk drive Fixed-head disk/drum	Opt.: 1.0M bytes Std.: 40M bytes No No	Opt.: 1.0M bytes Std.: 40M bytes No No	Opt.: 2.4M bytes Opt.: 48M bytes Opt.: 2400M bytes Opt.: 8 million	Std.: to 2.6M bytes No No No	Std.: 2M bytes No No No
KEYBOARD INPUT* Alphanumeric (typewriter) keyboard 10-key numeric keyboard Full accounting keyboard	Standard Standard No	Standard Standard No	Standard Optional No	Standard Standard No	Standard Standard —
INPUT/OUTPUT DEVICES* Paper tape reader Paper tape punch Punched card reader Punched card punch Punched card reader/punch Serial printer Line printer Reel-to-reel tape drive Cassette tape drive Cartridge tape drive Magnetic ledger card device CRT	No No Opt.: 285, 300 cpm No No Std.: 180 cps Opt.: 300, 600 lpm Opt.: 800 bpi No No No Std.: 24 x 80 char.	No No Opt.: 285, 300 cpm No No Opt.: 60, 180 cps Std.: 300 lpm Opt.: 800 bpi No No No Std.: 24 x 80 char.	Opt.: 200 cps Opt.: 75 cps Opt.: 285 cpm No Opt.: 300 cpm Opt.: 165 cps Opt.: 1220 lpm Opt.: 120 KBS No No Opt.: 24 x 80 char.	No No No No No Opt.: 45-120 cps Opt.: 300 lpm No No No No Std.: 1728 char.	No No Opt.: 300, 600 cpm Opt.: 75-160 cpm No Std.: 200 cps Opt.: 125 lpm No No No No Std.: 1920 char.
COMMUNICATIONS CAPABILITIES* Maximum no. of lines Synchronous Asynchronous Protocols supported	4 Std.: 9600 bps No RPG II, HASP, 2780, 3780, 3741, 1004	4 Std.: 9600 bps No RPG II, HASP, 2780, 3780, 3741, 1004	64 Opt.: 56K bps Opt.: 19.2K bps 2780, HASP, UT200	1 Opt.: to 50K bps Opt.: to 38,400 bps HASP	2 Std. to 9600 bps No Transparent
SOFTWARE SUPPORT COBOL RPG FORTRAN BASIC Assembler Other programming languages Multiprogramming Language implemented in firmware Operating system implemented in firmware General accounting packages Industry application areas Data base management system File access methods supported Software separately priced Technical help separately priced	No Yes Yes No Yes No Yes No No Yes Insurance, medical No — Some Yes	No Yes Yes No Yes No Yes No No Yes Insurance, medical No — Some Yes	Yes Yes Yes Yes Yes Forms Yes; 31 Partially Partially No Graphics, statistics No Sequential, random, index sequential Yes Yes	No No No No Yes QICBASIC Yes; 5 partitions Partially Partially Yes Wholesale dist., medical clinics No Random, sequential, index sequential Some Yes	No Yes No No No ESCORT Yes; 2 partitions Partially No Yes Distribution, manufacturing No Random, sequential, index sequential No Partly
PRICING & AVAILABILITY Purchase price of basic system, \$ Monthly rental of basic system, \$ Date of first US delivery Number installed in U.S. to date	29,950 NA 1973 500 (both models)	49,950 NA 1975 500 (both models)	30,500 NA April 1978 NA	11,950 — NA NA	21,795 484 July 1978 NA
COMMENTS	Lockheed Electronics Company, Inc., Data Products Division, U.S. 22, Plainfield, NJ 07061. Telephone (201) 757-1600		Each user has 2M bytes of virtual address space		Supports up to 2 workstations; entirely diskette-based

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MANUFACTURER & MODEL	Sperry Univac BC/7-700	Sperry Univac BC/7-800	Tandem T16/240-1	Tandem T16/212-1	Tandem T16/244-1
DATA FORMATS					
Word length, bits	8	8	16	16	16
Decimal digits per word	2	2	4.5	4.5	4.5
Bytes (characters) per word	1	1	2	2	2
Operand length, words	1	1	½	½	½
Instruction length, words	1, 2, 3	1, 2, 3	1	1	1
CPU					
Model	Univac T3038	Univac T3048	Tandem T16	Tandem T16	Tandem T16
Add time, microseconds	106 (5 digits)	106 (5 digits)	0.5 (5 digits)	0.5 (5 digits)	0.5 (5 digits)
No. of programmable registers	7	7	8	8	8
No. of I/O ports on basic system and maximum	3; 12	3; 12	64	256, 1024	256, 1024
INTERNAL STORAGE					
Type	MOS	MOS	MOS	Core	MOS
Capacity of basic system, bytes	48K	128K	96K	192K	192K
Maximum capacity, bytes	64K	128K	480K	448K	512K
Increment size, bytes	16K	16K	96K, 32K	64K	96K, 32K
Cycle time, microseconds	1.0	1.0	0.5	0.8	0.5
Access time, microseconds	0.5	0.5	0.5	0.5	0.5
MASS STORAGE CAPABILITIES*					
Floppy disk drive	Opt.; 2M bytes	Opt.; 4M bytes	No	No	No
Cartridge disk drive	Opt.; 40M bytes	Opt.; 40M bytes	Opt.; 10M bytes	Opt.; 10M bytes	Opt.; 10M bytes
Pack disk drive	No	No	Opt.; 160M bytes	Opt.; 160M bytes	Opt.; 160M bytes
Fixed-head disk/drum	No	No	No	No	No
KEYBOARD INPUT*					
Alphanumeric (typewriter) keyboard	Standard	Standard	Standard	Standard	Standard
10-key numeric keyboard	Standard	Standard	Optional	Optional	Optional
Full accounting keyboard	—	—	No	No	No
INPUT/OUTPUT DEVICES*					
Paper tape reader	No	No	No	No	No
Paper tape punch	No	No	No	No	No
Punched card reader	Opt.; 300, 600 cpm	Opt.; 300, 600 cpm	Opt.; 600 cpm	Opt.; 600 cpm	Opt.; 600 cpm
Punched card punch	Opt.; 75-160 cpm	Opt.; 75-160 cpm	No	No	No
Punched card reader/punch	No	No	No	No	No
Serial printer	Std.; 200 cps	Std.; 200 cps	Opt.; 30 cps	Opt.; 30 cps	Opt.; 30 cps
Line printer	Opt.; 125-600 lpm	Opt.; 125-600 lpm	Opt.; 120-1500 lpm	Opt.; 120-1500 lpm	Opt.; 120-1500 lpm
Reel-to-reel tape drive	Opt.; 20, 40 KBS	Opt.; 20, 40 KBS	Std.; 36 KBS	Std.; 72 KBS	Std.; 72 KBS
Cassette tape drive	No	No	No	No	No
Cartridge tape drive	No	No	No	No	No
Magnetic ledger card device	No	No	No	No	No
CRT	Std.; 1920 char.	Std.; 1920 char.	Opt. 24 x 80 char.	Opt. 24 x 80 char.	Opt. 24 x 80 char.
COMMUNICATIONS CAPABILITIES*					
Maximum no. of lines	2	2	64	2048	2048
Synchronous	Std.; to 9600 bps	Std.; to 9600 bps	Opt.; 5600 bps	Opt.; 5600 bps	Opt.; 5600 bps
Asynchronous	No	No	Opt.; 9600 bps	Opt.; 9600 bps	Opt.; 9600 bps
Protocols supported	Transparent	Transparent	IBM Bisync, TINET, Burroughs, ADM-2	IBM Bisync, TINET, Burroughs, ADM-2	IBM Bisync, TINET, Burroughs, ADM-2
SOFTWARE SUPPORT					
COBOL	No	No	Yes	Yes	Yes
RPG	Yes	Yes	No	No	No
FORTRAN	No	No	Yes	Yes	Yes
BASIC	No	No	No	No	No
Assembler	No	No	No	No	No
Other programming languages	ESCORT	ESCORT	TAL	TAL	TAL
Multiprogramming	Yes; 2 partitions	Yes; 2 partitions	256 partitions	256 partitions	256 partitions
Language implemented in firmware	Partially	Partially	Partially	Partially	Partially
Operating system implemented in firmware	No	No	Partially	Partially	Partially
General accounting packages	Yes	Yes	No	No	No
Industry application areas	Distribution manufacturing	Distribution manufacturing	Dist., banking, trans. processing	Dist., banking, trans. processing	Dist., banking, trans. processing
Data base management system	No	No	Yes	Yes	Yes
File access methods supported	Random, sequential, index sequential	Random, sequential, index sequential	Index sequential, random, sequential	Index sequential, random, sequential	Index sequential, random, sequential
Software separately priced	No	No	Partly	Partly	Partly
Technical help separately priced	Partly	Partly	No	No	No
PRICING & AVAILABILITY					
Purchase price of basic system, \$	31,200	35,475	59,750	92,800	87,100
Monthly rental of basic system, \$	693	788	NA	NA	NA
Date of first US delivery	March 1977	July 1978	October 1976	May 1976	May 1976
Number installed in U.S. to date	NA	NA	5	10	30
COMMENTS	Supports up to 4 workstations; disk-based, magnetic tape and diskettes for I/O	Supports up to 6 workstations; two applications programs and print spooling can be run concurrently	Multiprocessor, fault-tolerant, "nonstop" systems for on-line, transaction-oriented applications. Tandem Computers Inc., 20605 Valley Green Drive, Cupertino, California 95014. (408) 255-4800		

*"Std." means the device is included in the price of the "basic system" as listed here.