Burroughs L Series Model 1
Accounting Computers

MANAGEMENT SUMMARY

Burroughs Corporation has been successfully marketing the L Series Model 1 family of small business computers since 1968. These operator-oriented accounting systems are internally programmed, desk-size computers used for processing accounting records and generating management reports.

More than 25,000 systems have already been installed in the United States, and they contribute substantive labor savings in the operations of a variety of business, commercial, and governmental offices. The L Series systems are typically used in such accounting and management environments as sales and customer accounting, invoicing, payroll and government report preparation, purchase order preparation, purchase and payment accounting, general ledger, financial statement and management report preparation, cost management, and government accounting.

In addition to being stand-alone systems, L Series minicomputers can be upgraded to on-line L/TC Series (Terminal Computer) systems by incorporating data communications capabilities. And, when equipped with the necessary communications interfaces, these computers are widely used as intelligent remote batch terminals. ▷

Forty different configurations comprise the Burroughs L 2000, L 3000, L 4000, and L 5000 families of small accounting computer systems. Each is supported by extensive applications software. In all, the L Series is one of the largest and most widely used product lines in the minicomputer industry.

CHARACTERISTICS

MANUFACTURER: Burroughs Corporation, Burroughs Place, Detroit, Michigan 48232. Telephone (313) 972-7000.

MODELS: L 2000, L 3000, and L 4000 Accounting Computers; L 5000 Magnetic Record Computer.

DATA FORMATS

BASIC UNIT: 64-bit word. Each memory word holds 15 decimal digits plus sign (4 bits for each digit and sign), or up to 4 instructions (16 bits per instruction).

FIXED-POINT OPERANDS: One word, consisting of 15 digits plus sign or 8 alphanumeric characters.

FLOATING-POINT OPERANDS: No provisions for floating-point arithmetic are offered. ▶

A Series L 5000 Magnetic Record Computer is shown here. The operator is seated at the desk-sized console, and to her right is a free-standing Magnetic Record Reader. Purchase price for this system ranges from $23,780 to a maximum of $26,780. Other Series L systems sell for as little as $6,995.

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The L Series minicomputers can be programmed by the user provided he has personnel and facilities available to write COBOL or Assembler programs and compile object programs on punched tape or cards. Programs can be written in Burroughs L/TC COBOL or Assembler and compiled on either the Burroughs large-scale data processing systems or the L/TC Series. Programs are prepared on punched paper tape and are easily loaded either at the console or through peripheral input units.

Alternatively extensive software support is available from Burroughs Corporation. Applications program packages, including documentation and program tapes, can be purchased from the company. Individual program product packages range in price from $130 for a general accounting, age analysis package (for use on the L 3000) to $2,745 for a "home builders—job cost with accounts payable" package (for use on the L 5000). A complete list of program product packages and their prices is given in the accompanying software price list. ▷

► INSTRUCTIONS: The machine language used with the L Series minicomputers is Burroughs' System Language 3. Decimal instructions four digits in length are used, with arithmetic instructions being the one-address "add-to-accumulator" type.

INTERNAL CODE: ASCII.

MAIN STORAGE

STORAGE TYPE: A fixed, ceramic, magnetic disk is used for main storage.

ACCESS TIME: Average disk access time is 5 milliseconds for the L 2000, L 3000, L 4000, and L 5000.

CAPACITY: L Series Model 1 (L 2000, L 3000, L 4000 and L 5000) disk storage contains a maximum of 1,280 64-bit words organized into 5 blocks (256 words per block). Each block consists of eight tracks, with a read/write head servicing each track. Memory is divided into three areas: normal, control, and variable. System control functions are under microprogram control. Tha

SUMMARY DATA FOR BURROUGHS L SERIES MODEL 1 ACCOUNTING COMPUTERS

	L 2000	L 3000	L 4000	L 5000	L 7000
Number installed in U.S.	Over 12,000 combined		Over 2,000	Over 10,000	Not specified
First delivered	2/69	2/69	5/70	10/70	11/71
Wideth of forms handler (inches)	15	15	26	26	15 or 26
Number of print positions	150	150	255	255	150 or 255
Type of forms feed	Rear	Front	Front	Front	Front
Type of platen	Normal	Split	Split	Split	Split
Magnetic Memory Record facilities	None	None	None	Standard	7500 only
Maximum capacity of magnetic-stripe documents (digits)	—	—	—	349	349 or 699
Basic user memory capacity (words)	128	128	128	576	1,900
Maximum user memory capacity (words)	768	768	768	608	8,400
Basic price	$11,490*	$12,990*	$14,390*	$19,990**	$21,900***

*Basic price includes processor, disk memory with 512 user words, printer console, and keyboard.
**Basic price includes processor, disk memory with 576 user words, printer console, and keyboard.
***Basic price for the L 7500 with 960 user words and magnetic record capability. The L 7000 Series is virtually obsolete due to the advent of the L 8000 (Report M11-112-301).

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PERIPHERALS/TERMINALS

DEVICE	DESCRIPTION	SPEED
MAGNETIC TAPE EQUIPMENT		
A9490-25	Cassette tape drive	1 KCS
A1495	Industry-compatible, 12.5 ips, 9-track, 800 bpi	10 KBS
PUNCHED PAPER TAPE/EDGE-PUNCHED CARD EQUIPMENT		
A562	Punch; 5-, 6-, 7-, or 8-channel strip or fanfold tape	50 cps
A581	Reader; 5-, 6-, 7-, or 8-channel strip or fanfold tape	50 cps
PUNCHED CARD EQUIPMENT		
A595	Card reader; 80-column	100 cpm
A596	Card reader; 80-column EBCDIC	100 cpm
A149	Card punch; 80-column	60 cpm

▷ A basic L Series Mod 1 system consists of a desk-size keyboard/printer console, a 20-character-per-second ball printer, and a forms handler. Forty such models are currently available, and the company offers a broad selection of forms handling and input and output devices for use with the systems.

List prices of the L 2000, L 3000, L 4000, and L 5000 systems range from $6,995 to $21,990, and monthly rentals (for one-year leases) range from $243 to $723. These prices are basic system prices only and do not include auxiliary input and output units or forms handling options.

All L Series computers are controlled by disk-resident firmware systems. This firmware is a form of microprogramming, which consists of Burroughs-designed microinstruction sets. These microinstructions, strung together, perform the commands specified by the source-level (user) macroinstructions. Firmware is stored in the control area of disk, while user programs, constants, and accumulated totals are stored in the normal area. The normal area is alterable by the user; the control area is not. The available user memory space in any L Series system depends on such factors as the number and types of input/output devices in the system. This user space ranges from 128 to 768 64-bit words in the L 2000, L 3000, and L 4000 systems. The L 5000 ▷

▶ is, two or more microinstructions (machine-level instructions) are linked together to execute a macroinstruction. The normal memory area is the user program storage area, where series of macroinstructions are stored as macroprograms. The control area stores all system microinstructions, and the composite of this area is called System Firmware. The variable area is available for enhancement of the user (macroprogram storage) and control (microinstruction storage) areas.

Maximum-storage systems, in which the entire 1,280 words of storage are implemented, are called "Series L with extended memory." In such systems, a part of the variable area is implemented with the normal area to contain up to 768 words of user (macroprogram) storage, and the control area contains a minimum of 512 words for microinstruction storage. Where more than 512 words of microinstructions are required, the additional storage is taken from the variable area, thus reducing the available user storage by a corresponding amount.

L 5000 disk memory, for example, can be implemented with a minimum of 576 user words. Since all L 5000's are extended memory systems, the control area contains up to 704 words for microinstruction storage. At the upper range of user storage, L 5000's can be implemented with a maximum of 608 user words. The control area then contains up to 672 words for microinstruction storage.

L Series minicomputers without extended memory (L 2000 through L 4000) are limited to 1,024 words of storage. These L Series systems can have 128 words of user storage (with up to 896 words for microinstruction storage) or as much as 768 words of user storage (leaving up to 256 words for microinstruction storage). ▶

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▷ systems support 576 or 608 64-bit user words of disk memory.

Designed primarily for applications that involve visible records and keyboard entry of transaction data, L Series minicomputers feature "human engineered" controls and flexible forms-handling facilities that can accommodate a wide variety of continuous and cut forms, either singly or in various combinations. In addition, the L 5000 Magnetic Record Computers can read and write up to 352 digits of data on magnetic-stripe documents, which can be fed and stacked automatically by unique console attachments.

L Series minicomputers can be equipped with data communications interfaces to become TC 500, TC 700, TC 1500, or TC 2500 Series Terminal Computers. Data can be transmitted in either asynchronous or synchronous mode, at speeds up to 2,000 bits per second. The TC Series terminals can communicate with other Burroughs computers or terminals, enabling them to serve a wide range of communications functions.

In December 1973, Datapro asked its subscribers to fill out and return a questionnaire describing their experience with small accounting computers. A total of 11 users of the Burroughs L Series Model 1 systems responded. This is a fairly small sample, and no claims are made that the survey is representative of *all* such users. Nevertheless, based on this survey, one can conclude what the 11 respondents collectively thought of the relative strengths and weaknesses of the L Series Model 1 systems.

By combining the excellent and good responses from this survey, we can assay system strengths; similarly, by combining the fair and poor responses, we can pinpoint relative system weaknesses. Relative strengths of the L Series systems are then seen to be overall performance (9 favorable out of 11 possible responses), ease of operation (9 favorable responses), hardware reliability (9 favorable responses), maintenance service (8 favorable responses) and manufacturer's software (7 favorable responses). Relative weaknesses cluster in the areas of ease of programming (7 unfavorable out of 11 possible responses) and technical support (9 unfavorable responses). One can also conclude that these 11 users are in general quite well satisfied with their systems. The complete results of the user survey are listed below.

Burroughs handles all servicing through its staff of field engineers, who are dispatched from major metropolitan offices throughout the United States and Canada. There are more than 270 sales offices staffed by over 4,650 service engineers in the U.S. alone.

The L Series minicomputers are in direct competition with the NCR 399, the Litton ABS 1200 systems, the ▷

▶ CHECKING: None.

STORAGE PROTECTION: The control area of disk is protected in that this area is not accessible to the programmer and cannot be written into.

CENTRAL PROCESSOR

GENERAL: Central processing functions are performed by defined strings of micrologic software instructions (firmware) stored as microinstructions in the control area of disk. Firmware accomplishes all processing tasks, including arithmetic and logical operations, input and output control, and data manipulation. Each macroinstruction in a user's program is decoded in the logic section and is carried out by executing the appropriate string of microinstructions in the System Firmware.

The L Series minicomputers described in this report comprise the L 2000, L 3000, L 4000, and L 5000 systems. Each member of the series is targeted for use in following accounting areas: the L 2000 is an electronic billing computer; the L 3000 is an accounting computer which is also available as a window accounting computer (in the latter configuration, the console is narrower but higher than the desk-type console to accommodate operators who normally stand while performing their duties; i.e., bank tellers, reservations agents, etc.); the L 4000 is an accounting computer with more extensive applications than either the L 2000 or L 3000 systems; the L 5000 is a magnetic record computer with the widest accounting usage in the series.

L 2000, L 3000, and L 4000 systems have similar logic and memory but exhibit differences in keyboards, console printers, and forms handling. The L 2000 provides rear feeding of cut or continuous forms, with dual pin feed for the continuous forms. It is equipped with a 15.5-inch split platen (11-inch and 4-inch is standard, with other splits optional). The L 3000 differs from the L 2000 in that it provides front form-feed. All versions of the L 2000 and most versions of the L 3000 have 16 program function keys for selecting program starting, program loading, utility routines, and alternate application-program routines. One version of the L 3000 window accounting computer is offered with 12 program keys.

The L 4000 system keyboard contains 24 program keys; its printer provides 255 print positions per line (L 2000 and L 3000 printers have 150 print positions). The L 4000 is designed for front form-feed insertion, and it has a 26-inch split platen (12-inch and 13-inch, with other splits optional).

The L 5000 is a magnetic record minicomputer that processes magnetic-striped ledgers. It is a "Series L with extended memory" whose total main storage capacity is 1,280 64-bit words. The L 5000 forms handler is a front-feed device with a 26-inch split platen and a 255-character print line. Magnetic records are automatically aligned by both program control and by the data stored on the card's magnetic stripe. Twenty-four program function keys are standard on the L 5000 keyboard, which is otherwise similar to the L 2000, L 3000, and L 4000 keyboards.

Operational ambient conditions for the L Series are 50°F to 105°F with a relative humidity between 5% and 95%. Storage conditions (non-operating) are −50°F to 160°F ▶▶

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▷ Philips P Series, and the Nixdorf 800 Series. In the small accounting computer market, Burroughs is unquestionably the leading manufacturer, and its strongest competitor is NCR.

The Burroughs' competitive edge has been further honed by the recent introduction of a new family, the L 6000. The Burroughs L 6500, the first member of a family that bridges the gap between the L Series Model 1 systems and the larger L 7000 and L 8000 families, was announced in May 1974. Pricing for members of the L 6000 family is expected to be between $7,350 and $22,480. These new systems constitute the Burroughs reply to the impressive NCR 299, against which the new L 6000's will compete. As a consequence of the L 6000, the earlier L 2000 is effectively eclipsed. The L 6000 offers better performance than the 2000 for virtually the same price.

The L Series Model 1 systems from Burroughs constitute one of the most successful minicomputer efforts among small businesses and first-time users of accounting minicomputers. These systems offer versatility and flexibility at a reasonable cost; additionally, they offer multiple lease plans and even two warranty periods. As a result, Burroughs' designs on the small businessman are well-intentioned and backed by strong products plus years of experience and expertise. □

	Excellent	Good	Fair	Poor
Overall performance*	2	7	1	0
Ease of programming**	1	1	4	3
Ease of operation	4	5	2	0
Hardware reliability	3	6	0	2
Maintenance service	2	6	3	0
Technical support	0	2	5	4
Manufacturer's software	1	6	0	4
Totals	13	33	15	13

*One user did not respond to this category.
**Two users relied on the manufacturer for their programming and did not respond to this category.

➤ with relative humidity between 5% and 100%. Power requirements for the L 2000, L 3000, and L 4000 are a nominal voltage of 120 vac at 8 amperes with a voltage range between 108 and 126 volts at 60 Hertz; heat is dissipated at the rate of 2,389 BTU/hour (maximum). Power requirements for the L 5000 are a nominal 120 vac at 8.2 amperes with a voltage range between 108 and 126 volts at 60 Hertz; heat is dissipated at the rate of 2,457 BTU/hour (maximum).

REGISTERS: One 64-bit (15 digits plus flag) accumulator is used for temporary storage of numeric data. It serves as a working memory location to move data between memory word locations, and it temporarily stores numeric data for printing. The accumulator is active whenever data is entered in the numeric mode, and

subsequent data entered in this mode replaces the previous contents with the new data. Four index registers are available, with indexing specified by a "Modify" instruction immediately preceding the instruction to be modified.

INDIRECT ADDRESSING: No.

INSTRUCTION REPERTOIRE: Firmware instructions are activated by 167 commands (macroinstructions) at the user or source level, which fall into the following groups: standard set (76); additional data communications, magnetic record (L 5000 only) and I/O optional device instructions (91). The standard set includes 12 keyboard instructions, 11 print instructions, 11 forms handler and forms control instructions, 17 arithmetic and data move instructions, 4 flag instructions, 6 index register instructions, 3 branch instructions, 9 skip/execute instructions, and 3 miscellaneous instructions. The 91 optional instructions include 32 data communications instructions, 22 punched card instructions, 21 paper tape instructions, and 16 magnetic unit record instructions. Because of the firmware system used in L Series equipment, all of the source-level instruction sets are alterable by Burroughs.

INSTRUCTION TIMINGS: All execution times listed below are in *milliseconds* for 15-digit (1-word) operands at the user level.

Move:	30
Add/Subtract:	50/50
Multiply/Divide:	Not available
Compare and Branch:	60

INTERRUPTS: None. However, keyboard error conditions cause a machine halt, a sound alarm, and a keyboard indication (light). Pressing the reset key removes the error condition.

CONTROL STORAGE: Micrologic firmware is stored in the main memory disk control section. The amount of storage depends upon the total system configuration. L 5000 systems are all implemented with extended memory and have a firmware storage capacity between 672 and 704 64-bit words. Systems without extended memory, have control areas for microinstruction storage (firmware) ranging from 256 to 896 words. The control area is used to perform the basic interpreter function of translating (interpreting) the user-level object-program code and causing execution of the appropriate microinstructions.

INPUT/OUTPUT CONTROL

I/O CHANNELS: Each type of peripheral device (except the console and keyboard) can use any available I/O control, and each I/O control requires an appropriate slot electrically connected to the system backplane. All I/O operations are performed under program control.

SIMULTANEOUS OPERATIONS: In general, only one I/O data transfer operation at a time can be performed, and internal processing is suspended while the processor is transferring data to or from any peripheral device.

CONFIGURATION RULES: The number of peripheral devices and/or memory modules that can be used in an L Series system is limited by the capacity of the processor backplane, which can house a maximum of 60 circuit cards. ➤

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► **MASS STORAGE**

Neither magnetic disk units nor any other types of random-access mass storage devices have been announced for the L Series Model 1 computers.

INPUT/OUTPUT UNITS

See Peripherals/Terminals table.

CONSOLE: This basic unit, in different models, is the central component of every L Series system. It houses the system's processing logic, memory, keyboard, basic printer and forms handler, control keys and indicators, and basic program loader (a small paper tape reader). The L 5000 console also contains magnetic record facilities.

The basic program loader reads 8-channel paper tape from self-threading cartridges at a speed of 15.5 characters/second. Designed solely for program loading, the unit cannot be used for input of transaction data.

The integrated printer uses an interchangeable ball-shaped printing element that prints data one character at a time at a rated speed of 20 characters/second. The element contains 64 ASCII characters. The print line has a maximum of 150 character positions in the L 2000 and L 3000 and 255 position in all other models. Forms can be inserted from the front in all models except the L 2000, which has a rear-feed forms handler. A split platen is standard in all models.

MAGNETIC RECORD FACILITIES: These facilities, standard in the L 5000 systems, permit data to be read from and recorded upon ledger cards containing magnetic stripes. The L 5000 models have a single-track magnetic record facility and can record a maximum of 349 data digits plus a block-check digit and two line-location digits on each document.

COMMUNICATIONS CONTROL

When equipped with a data communications interface, an L Series minicomputer can become a Terminal Computer (TC). Transmission can be in either asynchronous or synchronous mode, at speeds up to 2,000 bits/second. In addition to the Burroughs standard line control procedures used for communication with other Burroughs computers and terminals, the TC can be equipped to use the binary synchronous (BSC) procedures as well as numerous other communications disciplines and communicate with various IBM and IBM-compatible devices.

The TC can be equipped to handle dual data communications operations, with each operation occurring independently of the other. In addition, the two operations can use different transmission speeds, different modes, and different line control procedures. Thus, a TC can control a "mini-network" of smaller terminals while simultaneously communicating with a larger central computer, or it can act as a data concentrator for other Burroughs terminal systems. Hence, it can serve as a terminal, central processor, or data concentrator.

SOFTWARE

OPERATING SYSTEMS: None.

PROGRAMMING: The principal programming language used by the L Series minicomputers is L/TC COBOL. In addition to L/TC COBOL programming, assembler language programs can be assembled on the L Series minicomputers or on larger Burroughs computer systems such as the B3500.

System software used with L 2000 equipment includes assemblers, debugging aids, and a basic report writer. In addition, an L/TC COBOL compiler can be used on the other L Series minicomputers. Object programs can be prepared on standard punched paper tape and loaded either at the keyboard (which has a paper tape reader) or, optionally, through a separate A581 paper tape reader.

APPLICATIONS: Burroughs offers a wide variety of standard accounting, billing, and report programs from its comprehensive program library. A list of application programs is included in the software price list. These programs are available for use in areas such as manufacturing, contracting, credit unions, hospitals, retailing, banking, and government.

PRICING

POLICY: The standard equipment lease agreement includes equipment maintenance and permits use of the equipment during one eight-hour period per day. For usage in excess of eight hours per day, Burroughs may negotiate for extra-shift charges; however, this is not normally done unless the user wants extended maintenance coverage during these extra-use periods.

In addition to the one-year, three-year, and five-year leases shown in the equipment price list, Burroughs offers two-year and four-year leases at intermediate monthly rates. These latter leases, however, are not available on all devices.

SUPPORT: Burroughs technical assistance is available at $120 per day, in half-day increments. Burroughs also offers fixed-price turnkey contracts under which it assumes total responsibility for the programming and installation of a system.

EQUIPMENT: The following systems include control units. Rental prices are for the basic one-year lease and include equipment maintenance.

MINIMUM L 2000 BILLING COMPUTER SYSTEM: Consists of a processor, 1,024-word disk memory with 128 words available to the user, standard alphanumeric keyboard, 16 program keys, console printer, and 15.5-inch rear-feed forms handler. Monthly rental and purchase prices are $243 and $6,995, respecitvely. (This purchase price carries a three-month warranty; the same system purchased with a one-year warranty costs $7,350.)

L 3000 ACCOUNTING COMPUTER WITH CASSETTE TAPE: Consists of a processor, 1,280-word disk memory (extended memory) with 544 user words, standard alphanumeric keyboard, 16 program keys, printer console, 15.5-inch front-feed forms handler, and one cassette tape station. Monthly rental and purchase prices are $457 and $13,890, respectively.

MINIMUM L 5000 MAGNETIC RECORD COMPUTER SYSTEM: Consists of a processor, 1,280-word disk memory with 608 user words, alphanumeric keyboard with 24 program keys, built-in magnetic stripe reader, printing console, and 26-inch front-feed forms handler. Monthly rental and purchase prices are $627 and $18,990, respectively. ►

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► MAXIMUM L 5000 MAGNETIC RECORD COMPUTER SYSTEM: Same as the minimum L 5000 (above) except: it has a 576-word user memory capacity and includes a console magnetic record handler (for automatic reading of magnetic ledgers) and an 80-column punched card reader. Monthly rental and purchase prices are $1,046 and $32,520, respectively. ■

EQUIPMENT PRICES

			Monthly Rental*			
		Purchase Price	1-Year Lease	3-Year Lease	5-Year Lease	Monthly Maint.***
L 2000 ELECTRONIC BILLING COMPUTERS						
L 2000-008	System, 128-word store	$ 6,995/ 7,350**	$243	$221	$184	$53.08
L 2000-208	System, 256-word store	7,995/ 8,350**	276	251	209	53.08
L 2101-008	System, 128-word store, I/O	8,490	280	255	215	53.08
L 2101-208	System, 256-word store, I/O	9,490	313	285	240	53.08
L 2101-408	System, 384-word store, I/O	10,490	346	315	265	56.67
L 2101-608†	System, 512-word store, I/O	11,490	379	345	290	62.25
L 2301-008	System, 128-word store, I/O, communications	8,690	290	264	220	53.08
L 2301-208	System, 256-word store, I/O, communications	9,690	323	294	245	53.08
L 2301-408	System, 384-word store, I/O, communications	10,960	356	324	270	56.67
L 2301-608†	System, 512-word store, I/O, communications	11,690	389	354	295	62.25
L 2302-908†	System, 768-word store, I/O, communications	12,590	455	414	345	62.25
L 2392-908	System, 544-word store, I/O, communications, cassette tape	12,990	428	407	385	72.67
L 3300 ACCOUNTING COMPUTERS						
L 3111-008	System, 128-word store, I/O	9,990	326	297	247	53.08
L 3111-208	System, 256-word store, I/O	10,990	359	327	272	53.08
L 3111-408	System, 384-word store, I/O	11,990	392	357	297	56.67
L 3111-608†	System, 512-word store, I/O	12,990	425	387	322	62.25
L 3311-008	System, 128-word store, I/O, communications	10,290	336	306	255	62.25
L 3311-208	System, 256-word store, I/O, communications	11,290	369	336	280	62.25
L 3311-408	System, 384-word store, I/O, communications	12,290	402	366	305	62.25
L 3311-608†	System, 512-word store, I/O, communications	13,290	435	396	330	62.25
L 3312-908†	System, 768-word store, I/O, communications	14,190	495	450	375	62.25
L 3362-908	System, 544-word store, I/O, communications, cassette tape	13,890	457	435	412	72.67
L 3000 WINDOW ACCOUNTING COMPUTERS						
L 3231-307	System, 256-word store, communications	8,990	297	270	225	62.25
L 3231-608	System, 320-word store, communications	10,990	363	330	275	62.25
L 3331-608	System, 288-word store, I/O, communications	11,990	396	360	300	62.25
L 4000 ACCOUNTING COMPUTERS						
L 4111-009	System, 128-word store, I/O	11,290	372	339	282	56.67
L 4111-209	System, 256-word store, I/O	12,390	406	369	307	64.67
L 4111-409	System, 384-word store, I/O	13,390	439	399	332	64.67
L 4111-609†	System, 512-word store, I/O	14,390	472	429	357	70.83
L 4311-209	System, 256-word store, I/O, communications	12,690	415	378	315	64.67
L 4311-409	System, 384-word store, I/O, communications	13,690	448	408	340	64.67
L 4311-609†	System, 512-word store, I/O, communications	14,690	481	438	365	70.83
L 4312-909†	System, 768-word store, I/O, communications	15,290	514	468	390	70.83
L 4362-909	System, 544-word store, I/O, communications, cassette tape	15,290	503	478	453	81.25
L 5000 MAGNETIC RECORD COMPUTERS						
L 5012-604	System, 608-word store, no I/O upgrade	18,990	627	570	475	87.67
L 5012-639	System, 608-word store, I/O upgradable	15,790	521	473	395	87.67
L 5012-649	System, 608-word store, no I/O upgrade	17,490	577	525	437	87.67
L 5012-619	System, 576-word store, no I/O upgrade, console interface	19,990	658	625	593	87.67
L 5112-689	System, 576-word store, console interface	20,990	690	656	621	87.67
L 5112-619	System, 576-word store, I/O upgradable	21,990	723	687	651	87.67

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EQUIPMENT PRICES

			Monthly Rental*		
		Purchase Price	1-Year Lease	3-Year Lease	5-Year Lease
PERIPHERALS					
A 562	Paper Tape/Edge-Punched Card Perforator	$ 1,715	$ 52	$ 48	$ 40
A 581	Paper Tape/Edge-Punched Card Reader	1,500	46	42	35
A 595	Card Reader; 80-column, 100 cpm	2,950	97	89	74
A 596	Card Reader; 80-column, 100 cpm, EBCDIC	3,490	115	105	87
A 509	Card Punch Control Unit	1,000	33	30	25
A 149	Card Punch	5,990	120	120	120
A 1495-1	Magnetic Tape Unit and Controller—2 Ports	11,500	365	305	280
A 1495-2	Magnetic Tape Unit and Controller—4 Ports	11,750	373	312	286
A 1495-3	Magnetic Tape Unit and Controller—6 Ports	12,000	381	319	292
A 1495-4	Magnetic Tape Unit and Controller—8 Ports	12,250	389	326	298
A 4005	Magnetic Record Read (L 5000 only)	4,790	148	135	112
A 9362	Console and Magnetic Record Handler, Feeder, Stacker and Hold	2,790	78	74	70
A 9490-25	Cassette Tape Drive	1,940	55	52	50
PF7	Pin Feed Device, single synchronous (26")	250	7	7	6
PF8	Pin Feed Device, single independent (26")	250	7	7	6
PF9	Pin Feed Device, dual (26")	500	14	13	13

*Monthly rental includes maintenance.
**Lower price includes only a three-month warranty; higher price includes a one-year warranty.
***These rates apply to the regular 8-hour shift and to systems within metropolitan areas serviced by Burroughs field engineers.
† Words available to user may be less than figures given, depending on firmware requirements.

SOFTWARE PRICES

L 2100

	Purchase Price
Accounts Payable Direct Pay Plan	$ 320
Basic Billing	195
Billing and Report Writing	430
Brokerage Freight Billing	275
Client Accounting—Basic	1,080
Client Accounting—Payroll & Reports	1,080
Commodity Freight Billing	665
Completion Billing	470
General Billing	480
General Billing Report Writing—80-Column Card I/O	435
General Billing with Back Ordering & Analysis	170
Lumber Billing—Wholesale	770
Manifest Freight Billing	355
Net Billing Using Standard NRMA Format	145
Sales Audit	570
Simplified Route Accounting	270
Stock & Bonds Confirmation Notice Preparation	550
Style, Color and Size	455
Suppliers Billing—Dry Cleaning Industry	390

L 3000

Bank Proof	160
Commercial Loans	360
Demand Deposit—Including Service Charge	255
Installment Loans	170
Savings—Daily Interest	190
Auto Dealer (Ford)	1,185
Billing, Acct. Update	420
Cash Receipts	250
Clinic Patient Accounting	370
General Accounting:	
Accounts Receivable	135
Age Analysis	130
Accounts Payable	185
Payroll	150
Hotel, Front Office	455
Radio/TV Billing	970

Burroughs L Series Model 1
Accounting Computers

SOFTWARE PRICES

	Purchase Price
L 4100	
Accounts Payable	$ 590
Bal. Transfer & Report	295
Budgetary Accounting	315
Cash Receipts & DR/CR Posting	250
General Billing—Automated Sales Accounting	545
Payroll Accounting	620
L 5000	
Accounts Payable Direct Pay	545
Accounts Payable Vendor Record	935
Accounts Receivable DR/CR Posting	770
Auto Dealer	1,890
Billing Accounts Receivable—80-Column Card	995
Billing Accounts Receivable Inventory Record	870
Budgetary	1,325
Commercial Loan Accounting	565
Contractor—Job Cost Accounts Payable	1,115
Contractor—Labor Analysis	685
Credit Union	1,255
Cycle Billing	1,172
Financial Statements	345
General Ledger	260
Home Builders—Job Cost with Accounts Payable	2,745
Hospital Patient Accounting—Keyboard Input	2,005
Hospital Patient Acctg.—Punched Card Input	1,^65
Installment Loan Accounting	785
Inventory Record Update—80-Column Card	285
Mortgage Loan Accounting	470
Payroll—Certified Contractor	1,095
Payroll—Keyboard Entry	1,375
Payroll—Labor Report	395
Payroll—Tape Input	1,365
Payroll—Wage Accrual	1,615
Report Program	335
Savings Accounting	1,035
W2/941a	170
Report Writer or 941a/W2 Reports	400
Water Billing	690