

DIGITAL EQUIPMENT CORPORATION

# education

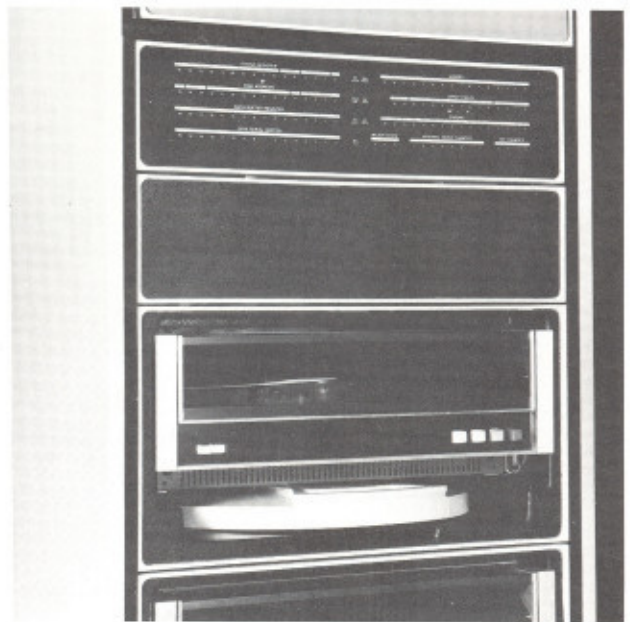
## MINI-RSTS-11

BASIC-PLUS, a powerful version of the popular BASIC language, is now available on an economical version of the PDP-11 Resource Time Sharing System known as MINI-RSTS.

MINI-RSTS is based on 2.4 million word moving head (removable) cartridge disks and a PDP-11/20 processor with 24,000 words (48,000 bytes) of core storage. The price for an 8-user system, not including terminals, is under \$45,000. Lease cost including maintenance is \$1,407 per month, or \$1,848 per month including terminals.

MINI-RSTS is the first computer system to integrate all system resources, including peripheral devices, into a single timesharing language, BASIC-PLUS, which gives each of up to eight users complete access to all system facilities.

BASIC-PLUS is compatible with standard Dartmouth BASIC, but has a unique set of language extensions for advanced programming work. It is an ideal language for beginning computer users because it is easy to learn and easy to remember. The language's direct, or calculator, mode allows even nonprogrammers to perform complex calculations. Explicit, line-by-line error diagnostics point out mistakes immediately.



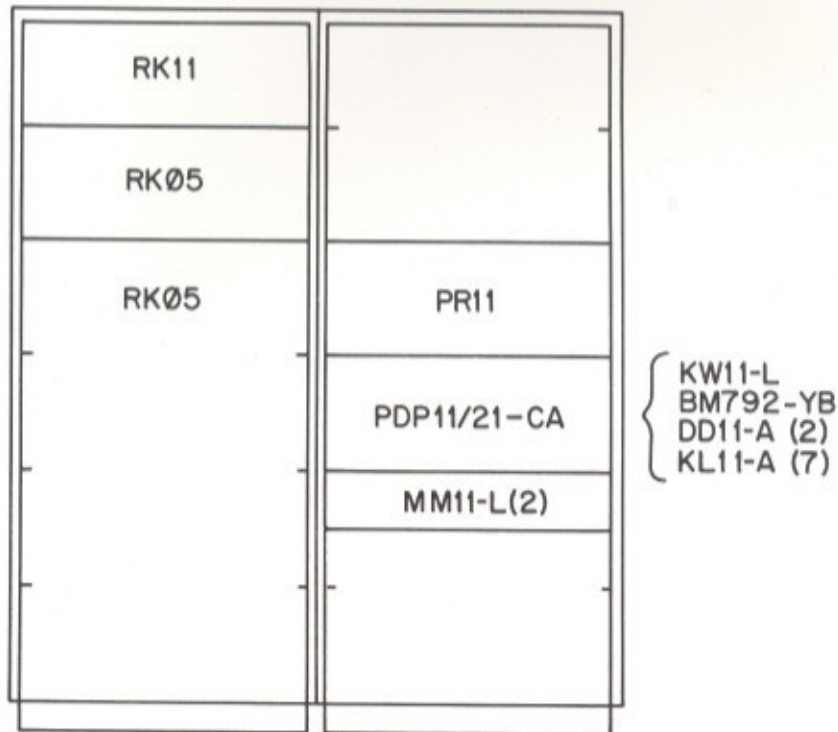
BASIC-PLUS augments the standard BASIC language structure with powerful string and matrix facilities. Its remarkable string operations permit character strings of any length to be manipulated by means of 12 distinct commands. Strings may be concatenated together or extracted from longer strings. Groups of strings may be organized into tables or arrays.

The BASIC-PLUS matrix commands allow entire arrays to be input, manipulated or output with just a single command. Since matrix elements may be designated as integers, larger matrices (up to 4 times as large) can exist in the same storage space. The system can also handle matrices that are too large for core memory. In BASIC-PLUS, matrices may be stored on the disk and paged into core automatically as needed. Array size is therefore limited only by the size of the disk.

Further extensions add still more power to BASIC-PLUS. The PRINT USING command provides precise output formatting for administrative data processing. With its line printer capability, complete text handling and removable disk files, MINI-RSTS is an ideal system for EDP work.

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## MINI-RSTS-11 SYSTEM LAYOUT



ALGOL-like constructs such as WHILE, UNTIL and integer mode greatly expand the capacity of the system for scientific problem solving. Unique system-level error handling is available from within a BASIC-PLUS program, providing the control necessary for dedicated application packages and simulations.

By combining the speed and sophistication of the PDP-11 with the BASIC-PLUS language, MINI-RSTS achieves a system that is versatile as well as powerful. Through the medium of "Resource Sharing," each timesharing user has system hardware and peripherals at his finger tips. He has access to 16,000 bytes of core memory, and if more storage is needed, programs can be "chained" from the system disk.

BASIC-PLUS provides both random and serial access to user disk files. With MINI-RSTS, each user can create and reference an unlimited number of data files under program control and can have up to 12 files open simultaneously. In addition to disk files, the user can open files on the line printer, card reader, paper tape reader, and paper tape punch and use any of these devices either for short bursts or for permanent assignment. This unique multi-device capability makes BASIC-PLUS a true resource sharing language.

MINI-RSTS will support up to 8 users. By expanding to 28,000 words of memory, the system will support peripheral devices such as the line printer, high-speed paper tape reader/punch, card reader, and up to four RK05 removable cartridge disks. The system can also be expanded to the standard RSTS-11 system (which supports up to 16 users) by adding a fixed-head disk and DECTape.



The time-shared BASIC-PLUS Language Processor includes the following language elements:

HELLO	DIM	PRINT USING	LOG 10 (X)
BYE	RANDOMIZE	INPUT	PI
NEW	IF-THEN	INPUT LINE	RND (X)
OLD	IF-GOTO	NAME-AS	SGN (X)
DELETE	IF-THEN-ELSE	KILL	SIN (X)
LIST	FOR	ON ERROR GOTO	SQR (X)
LISTNH	FOR-WHILE	RESUME	TAN (X)
CONTINUE	FOR-UNTIL	STOP	POS (X)
RUN	NEXT	END	TAB (X)
RUNNH	DEF	CHAIN	CHR\$ (X)
SAVE	FNEND	MAT READ	ASCII (A\$)
UNSAVE	GOTO	MAT PRINT	LEFT (A\$, N)
RENAME	ON-GOTO	MAT INPUT	RIGHT (A\$, N)
REPLACE	GOSUB	MAT ZER	MID (A\$, N, M)
COMPILE	ON-GOSUB	MAT CON	LEN (A\$)
LENGTH	RETURN	MAT IDN	DATE\$ (X)
CATALOG	CHANGE	ABS (X)	TIME\$ (X)
TAPE	OPEN	ATN (X)	TIME (X)
KEY	CLOSE	COS (X)	SLEEP (X)
ASSIGN	READ	EXP (X)	WAIT (X)
DEASSIGN	DATA	FIX (X)	TRN (X)
REM	RESTORE	INT (X)	INV (X)
LET	PRINT	LOG (X)	DET

#### MINIMUM CONFIGURATION

Cat. No.	Description	Price	Monthly Maint.
PDP11/21-CA	Processor, 8K Memory, TTY	\$13,650	\$120
(2) MM11-L	8K Memories	8,800	70
KW11-L	Clock	250	3
BM792-YB	Bootstrap	300	3
PR11	Paper tape reader	2,400	15
RK11	Disk Controller	5,900	40
(2) RK05	1.2M Disks	10,200	120
(2) DD11-A	Mounting Panels	350	—
(7) KL11-A	TTY Interfaces	2,800	42
EDU-11C	Software	500	—
	Purchase Price without Terminals	\$45,150	\$413
	Purchase Price with 8 TTY Terminals	55,650	623
	Monthly Lease without Terminals	994	413
	Monthly Lease with 8 TTY Terminals	1,225	623
	Installation Fee (leased systems only)	\$ 500	

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