HP 82143A Printer
Quick Reference Card

While the HP 82143A Printer is plugged into the HP-41C, these operations become active in the system. These operations and programs containing these operations are only executable while the printer is plugged in and turned on. You can print these functions as well as functions in other plug-in accessories by executing `CATALOG` 2 while the printer is set to TRACE, or only view them in the display by executing `CATALOG` 2 while the printer is set to MAN or NORM.

Function Index

`ACA`	Accumulates ALPHA register into print buffer.
`ACCHR`	Accumulates character into print buffer. Place character number (1-127) into X and execute `ACCHR` .
`ACCOL`	Accumulates column into print buffer. Place column print number (0-127) into X and execute `ACCOL` .
`ACSPEC`	Accumulates special character built in X using `BLDSPEC` into print buffer.
`ACX`	Accumulate X-register into print buffer.
`ADV`	Advances paper and prints buffer right justified.
`BLDSPEC`	Builds special character. Place column print number (0-127) into X and execute `BLDSPEC` . Repeat up to seven times. Accumulate into print buffer using `ACSPEC` or store in a register.
`LIST`	Lists program lines. Place number to list in X and execute `LIST` . Not programmable.
`PRA`	Prints ALPHA register.
`PRAXIS`	Prints axis using these inputs: R_{00}=YMIN, R_{01}=YMAX, R_{02}=nnn, R_{04}=AXIS.

Key	Description
PRBUF	Prints print buffer left justified.
PRFLAGS	Prints flags and other status information.
PRKEYS	Prints key reassignments.
PRP	Prints named program. Execute PRP and key in name. If name not specified, prints current program (not programmable).
PRPLOT	Prints plot of named function. Prompts for these inputs: NAME, YMIN, YMAX, AXIS, XMIN, XMAX, XINC. Positive XINC specifies increment between values, negative XINC specifies number of increments. Store optional special plotting character in R_{03}.
PRPLOTP	Prints plot of function. Inputs must be stored in these registers: R_{00}=YMIN, R_{01}= YMAX, R_{03}=optional plot character, R_{04}= AXIS, R_{08}=XMIN, R_{09}=XMAX, R_{10}= XINC, R_{11}=NAME.
PRREG	Prints all registers beginning with R_{00}.
PRREGX	Prints registers as directed by X. Format of X-number is bbb.eee where bbb is beginning register and eee is ending register.
PRΣ	Prints statistics registers.
PRSTK	Prints stack.
PRX	Prints X-register.
REGPLOT	Plots single line using data in these registers: X=plot value, R_{00}=YMIN, R_{01}=YMAX, R_{02}=nnn.aaa where nnn is width of plot in columns and aaa is column location of axis. PRAXIS automatically supplies nnn.aaa to R_{02}.
SKPCHR	Skips characters, accumulates in print buffer. Place number of characters to skip in X and execute SKPCHR.
SKPCOL	Skips columns, accumulates in print buffer. Place number of columns to skip in X and execute SKPCOL.

STKPLOT	Plots single line using data in stack registers: T=plot value, Z=YMIN, Y=YMAX, X=nnn.aaa where nnn is width of plot in columns and aaa is column location of axis.

Print Mode Switch

In MAN printer is idle unless you or a program executes a print function. In NORM printer prints numbers and ALPHAs that are keyed in, function names as they are executed from the keyboard, and output from print functions. In TRACE printer prints numbers and ALPHAs that are keyed in, function names, intermediate and final answers, and output from print functions.

Print Key

In HP-41C normal mode, press PRINT to print the contents of X-register. In ALPHA mode, press PRINT to print the contents of the ALPHA-register. In PRGM mode, pressing PRINT inserts a PRX as a line in program memory, or while the HP-41C is also in ALPHA mode, inserts a PRA into the program.

Paper Advance Key

Advances printer paper; prints print buffer right justified. In PRGM mode, inserts ADV into program.

Standard HP-41C Printing Functions

VIEW prints and displays the contents of specifed register. AVIEW prints and displays ALPHA register. PROMPT prints and displays ALPHA register and halts program execution.

XROM Functions

Programs that contain printer functions will show an XROM function number while printer is not plugged into the HP-41C. Refer to the *HP 82143A Owner's Handbook* for XROM numbers and details.

Flags and the Printer

Flag 12: Double Wide Flag. When set, printing is double wide.

Flag 13: Lower Case Flag. When set, letters are printed lower case.

Flag 25: Error Ignor Flag. When set, ignores the first error encountered. Automatically cleared by error.

Flag 21: Printer Enable Flag. Controls printing in executing programs. See table 1.

Flag 55: Printer Existence Flag. Determines if printer is connected or not. See table 1.

Table 1

Here is a table that shows how flags 55 and 21 work together to control printing in executing programs.

Flag 55 Printer Existence Flag

		SET	CLEAR
Flag 21 Printer Enable Flag	**S E T**	Initial condition when printer is connected.	Printer is not connected but flag 21 has been set.
		1. If printer is ON, print functions print normally. 2. If printer is OFF, print functions result in **PRINTER OFF** display. VIEW and AVIEW perform normal functions and halt execution. ADV is ignored.	1. No printing occurs. 2. VIEW and AVIEW perform normal functions and halt execution. ADV is ignored 3. Execution of printer functions result in **NON-EXISTENT** display.

Flag 55 Printer Existence Flag

	SET	CLEAR
C L E A R	Printer is connected but flag 21 has been cleared. 1. Running programs do not print output from print functions, even if printer is connected and ON. `VIEW` and `AVIEW` operate normally in programs but do not print. 2. Printer ON: print functions executed from keyboard print normally. 3. Printer OFF: print functions executed from keyboard result in *PRINTER OFF.*	Initial condition when printer is not connected. 1. `VIEW` and `AVIEW` perform normal functions and do *not* halt execution. `ADV` is ignored. 2. Print functions displayed as XROM nn,nn in programs and result in *NON-EXISTENT* when executed in running program. 3. Print functions executed from keyboard are *NON-EXISTENT.*

Flag 21 Printer Enable Flag

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