

kk OF nn where **kk** is lowest numbered track not yet read and **nn** is total tracks to be read. Insert cards in any order. Terminate session at any time with **R/S** or **■**.

Writing Status Cards

While HP-41C is *not* in PRGM mode, execute **WSTS**. HP-41C prompts for cards with **RDY kk OF nn**

Reading Status Cards

Ensure that HP-41C is *not* set to PRGM mode and insert track one first. HP-41C prompts for cards with **RDY kk OF nn**

Writing and Reading "Write-all" Cards

To write, execute **WALL**. HP-41C prompts for cards with **RDY kk OF nn**. Premature termination results in incomplete **WALL** card which cannot be read.

To read, ensure that HP-41C is *not* set to PRGM mode and insert complete **WALL** set in any order. Interrupting session results in **MEMORY LOST**

XROM Functions

Programs containing card reader functions show XROM number while card reader is not plugged into HP-41C. Refer to *HP 82104A Card Reader Owner's Handbook* for XROM numbers.

HP-67/HP-97 Compatibility

HP-67/HP-97 card programs are translated to run on HP-41C (refer to compatibility functions listed in function index). To execute translated programs, set HP-41C to USER mode and press corresponding label letter (A thru E, **■** a thru **■** e) just as on HP-67/HP-97.

HP-41C Registers

R₀₀ thru R₀₉
R₁₀ thru R₁₉
R₂₀ thru R₂₄
R₂₅

HP-67/HP-97 Registers

Primary Registers
Secondary Registers
A thru E
I

HP 82104A Card Reader Quick Reference Card

While the HP 82104A Card Reader is plugged into the HP-41C, the following functions are active in the system. These functions and programs containing these functions are executable only while the card reader is plugged in. You can list all of these functions by executing **CATALOG** 2.

Function Index

MRG Merges program from card. Replaces all program lines after current line with card program. HP-41C must be positioned to last program or **MRG** must be in last program.
RDTA Reads data card. Places data on card into memory beginning with R₀₀.

RDTAX Reads data card as directed by number in X. Format of X is bbb.eee where bbb is beginning address and eee is ending address.

RSUB Reads subroutine. Replaces last program in memory with card program. If last program contains executing **RSUB** or HP-41C is positioned to last program (**RSUB** executed from keyboard), card program added after last program.

VER Verifies track (not programmable). Shows **TYPE t TR nn** where t is P(program), D(data), S(status), A(write-all), 7P(HP-67/HP-97 program), 7D(HP-67/HP-97 data); nn is track number. Bad card results in **CHECKSUM ERR**. Blank or unrecognizable card shows **CARD ERR**.

WALL "Write-all" (not programmable). Writes all information in HP-41C.

WDTA Writes data card. Writes all current registers beginning with R₀₀.



WDTAX

Writes data card as directed by number in X. Format of X is bbb.eee where bbb is beginning register to write and eee is ending register.

WPRV

Writes private program card (not programmable). Writes current program.

WSTS

Writes status card. Writes status of flags 0 thru 43; statistics register location; number of data storage registers; standard and plug-in function key assignments; contents of X, Y, Z, T, LAST X, ALPHA.

7CLREG

Clears R₀₀ thru R₀₉, R₂₀ thru R₂₅. Same as HP-67/HP-97 **CL REG**.

7DSP0

thru

Displays 0 thru 9 decimal digits. Same as HP-67/HP-97 **DSP** 0 thru 9.

7DSP9

Displays 0 thru 9 digits using R₂₅ for indirect control. Same as HP-67/HP-97 **DSP** 0.

7DSZ

Decrement and skip on zero. Same as HP-67 **DSZ**, HP-97 **DSZ** 1.

7DSZI

Decrement and skip on zero using R₂₅ for indirect control. Same as HP-67 **DSZ0**, HP-97 **DSZ** 0.

7ENG

Engineering notation. Does not change number of displayed digits. Same as HP-67/HP-97 **ENG**.

7FIX

Fixed notation. Does not change number of displayed digits. Same as HP-67/HP-97 **FIX**.

7GSBI

Go to subroutine using R₂₅ for indirect control. Same as HP-67/HP-97 **GSB** 0. Negatives result in **NONEXISTENT**.

7GTOI

Go to label using R₂₅ for indirect control. Same as HP-67/HP-97 **GTO** 0. Negatives result in **NONEXISTENT**.

7ISZ

Increment and skip on zero. Same as HP-67 **ISZ**, HP-97 **ISZ** 1.

7ISZI

Increment and skip on zero using R₂₅ for indirect control. Same as HP-67 **ISZ** 0, HP-97 **ISZ** 0.

7P<>S

Exchange primary and secondary register contents. Exchanges R₀₀ thru R₀₉ with R₁₀ thru R₁₉. Same as HP-67/HP-97 **PSS**.

7PRREG

If printer is attached, prints R₀₀ thru R₀₉, R₂₀ thru R₂₅. If not, displays register number then contents. Same as HP-67/HP-97 **REG**. If printer is attached, prints T, Z, Y, X. If not, displays them. Same as HP-67 **STK**, HP-97 **STACK**.

7PRTRX

If printer is attached, prints X-register. If not, displays X. Same as HP-67 **X**, HP-97 **PRINTX**.

7RCL

Recalls contents of statistics register. Same as HP-67/HP-97 **RCL** Σ+.

7SCI

Scientific notation. Does not alter displayed digits. Same as HP-67/HP-97 **SCI**.

Card Types

Track 1

(16 registers)



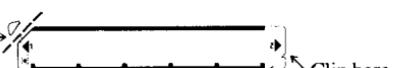
Track 2

(16 registers)

Program cards contain program instructions. Data cards contain data from storage registers. Status cards contain status information (refer to **WSTS**). "Write-all" cards contain all information in the HP-41C.

Protected (Clipped) Cards

Clip here

to protect
track 1.Clip here
to protect
track 2.

Clipping corner off of recorded track prevents recording of new information on that track. Clipped card can be read normally. To force recording of clipped card, set Overwrite Flag, 14.

Writing Programs onto Cards

In PRGM mode, position HP-41C to the desired program and insert card. HP-41C prompts for cards with **RDY kk OF nn** where **kk** is next track to be written and **nn** is total tracks required. Execute **WPRV** to write private program card. Cannot view, alter, or record private programs.

Reading Program Cards

Three ways to read program card: 1. Insert card while HP-41C is *not* in PRGM mode; 2. Execute **RSUB**; 3. Execute **MRC**. HP-41C prompts for cards with **RDY kk OF nn** where **kk** is lowest numbered track not yet read and **nn** is total tracks to be read. Insert cards in any order. Terminate session at any time with **R/S** or **END**.

Automatic Execution

Set flag 11 and write program card. Each time that card is read, program will begin execution at line 0 and beeper will sound.

Writing Data onto a Card

Two programmable functions used to write the contents of data storage registers onto cards: **WDTA** and **WDTAX**. HP-41C prompts for cards with **RDY kk OF nn**

Reading Data from a Card

Three ways to read data cards: 1. Insert card while HP-41C is *not* in PRGM mode (places data on card into memory beginning with R₀₀); 2. Execute **RDTA**; 3. Execute **RDTAX**. HP-41C prompts for cards with **RDY**

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