

PROGRAM SUBMITTAL

New Program

Revision to Program

Model No.

67

97

41C

Program Title

TREASURE QUEST

No. of Steps/Lines

819

Category No. 820

Category Name

GAMES

Abstract — 50 Word Maximum

Treasure Quest takes the traveler on a trip through highlands and caverns. The goal of the traveler is to gather and return to safe storage all treasures scattered throughout this fixed world. There are numerous hazards to be encountered, most favoring experience over luck. The 41C's alpha capability is used to give the traveler a vivid picture of his surroundings. When the game ends automatically, the score is presented for that game.

Necessary Accessories: Full memory (318 registers)

Name Gerard J. Maynard

Company

Address 850 Panorama 1B

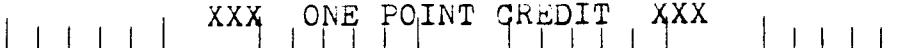
City Palatine

State/Country Illinois Zip Code 60067

Phone Number (312) 359 3024

If my program is accepted, my bonus choice is: (Please select two programs if your program is a revision.)

Acceptance Choice: ~~XX FOR YOUR PROGRAM, XX CREDIT FOR FOUR PROGRAMS, OR TWO PROGRAMS AND 10 BLANK CARDS.~~



* No partial credit will be given. Select all four programs at the same time.

Submittal Checklist: Please use the checklist below to insure submittal of all proper program documentation.

Program Submittal

Program Description II

Program Listing(s)

Registers, Status ...

Program Description I

User Instructions

Magnetic Card(s)

Keyboard, Card Labeling (optional)

ACKNOWLEDGMENT AND AGREEMENT

To the best of my knowledge, I have the right to contribute this program material without breaching any obligation concerning nondisclosure of proprietary or confidential information of other persons or organizations. I am contributing this program material on a nonconfidential nonobligatory basis to Hewlett-Packard Company (HP) for inclusion in its program library, and I agree that HP may use, duplicate, modify, publish, and sell the program material, and authorize others to do so without obligation or liability of any kind. HP may publish my name and address, as the contributor, to facilitate user inquiries pertaining to this program material.

Signature

Date

PROGRAM DESCRIPTION I

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| | | | |
|--------------------|-----------------|---------------|----------------|
| Program Title | TREASURE QUEST | | |
| Contributor's Name | Gerard Maynard | | |
| Address | 850 Panorama 1B | | |
| City | Palatine | State/Country | Illinois 60067 |

Program Description, Equations, Variables From the depths of a deep, dark forest, the traveler ventures out to make his fortune. Roaming from the highlands to the bowels of the earth, your goal is to gather the riches lying about and return them to your treasure place. But be wary of the possessive Troll, for he guards his treasures well and will take them away from you unless you are properly prepared. You will find a wealth of different rooms, passages and trails, all described vividly using the alphanumeric capability of the 41C. By keeping track of your travels, you will travel further and find more valuable treasure in the lifetime set for you by the actions you take. Your efforts will be evaluated at the end of this lifetime, and you are encouraged to better previous efforts.

Necessary Accessories full memory (2.2K)

Operating Limits and Warnings Only TREASURE QUEST may exist in user memory.

Reference(s) Several "Adventure"-type games

This program has been verified only with respect to the numerical example given in Program Description II. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

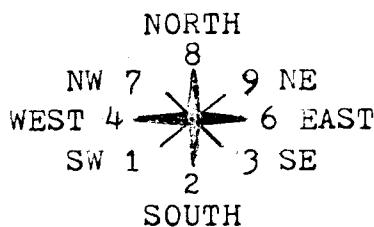
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(CONTINUATION PAGE)

TRAVELING ABOUT THE "WORLD"

In this game, the traveler is offered a number of choices for the direction of travel. In this game, you will use a compass to judge the way to move. As you know, North, East, South and West are the main points of a compass. I have also included the four minor choices: Northeast, Southeast, Southwest and Northwest. Notice that the directions have been given in a clockwise direction from North. I have used this convention throughout the program to eliminate ambiguity.

You will find the choices for direction in the display as N (North), E (East), S (South) and W (West) for the major directions, and NE (Northeast), SE (Southeast), SW (southwest) and NW (Northwest) for the minor choices. Using the keyboard labeled as follows, the appropriate directions are entered as numbers.



Since ambiguity could exist in the displayed choices, you must follow the conventions listed below:

1. In a direction display, the first block of letters are the major choices N E S or W. Following block(s) contain the minor choices NE, SE, SW or NW.
2. The minor choices are always separated from each other by a space; the major choices are always grouped together without any spacing.

For example, the choices North, East, Southwest and Northwest would be displayed as NE SW NW.

(CONTINUATION PAGE)

3. Two other choices, UP and DOWN, are displayed as U and D, and are grouped with the major choices. Up is entered by the program as 5 and DOWN is Ø.

Entering an improper direction will cause the program to search for the next area in program memory that is entered with that direction. Assuming you are making your own map of the world as any good adventurer would, this will cause you great confusion. You will not be penalized for this, but will certainly miss other exciting areas.

I chose a non error-checking program design because of headroom restrictions. Several interesting elements were added in its place. (Besides, in a land where intelligence and strength are the minimum requirement, misreading a compass is an unforgivable sin.)

STATUS

You will occasionally be asked if you want your "STATUS". The status routine lists all treasure and supplies in your posession. If you desire to know your STATUS, depress any key that doubles as an alpha key (i.e. has blue letters on it) while the alpha annunciator is lit. You have two seconds to decide if you want this report. If an alpha key is not pressed during this time, program execution will continue with your travel decision.

GET SUPPLIES AND TREASURE

When you enter an area containing supplies or treasure, you will be asked if you want to GET that item. You must press any alpha key during the two seconds provided if you do. Once an article is picked up, that item will no longer be available. (There is one "hairy" exception to this. I'm sure you'll discover this soon.)

(CONTINUATION PAGE)

GENERAL INSTRUCTIONS AND SLIGHT HINTS

At times you will need certain things to go in certain directions, and you will also be prohibited from places if you have too much. I'm sure you'll try to figure this out so you can achieve a high positive score. There are other stages in the game where you will be asked if you wish to do something requiring a response on your part. PRESSING AN ALPHA KEY WITH THE ALPHA ANNUNCIATOR LIT IS INTERPRETED AS A POSITIVE RESPONSE (YES). If you wish to say no, do not touch any keys during the prompt.

SPEEDING UP PLAY

As you may know, the jump distances between GTO or XEQ and the local label are stored in the GTO or XEQ statement's extra byte. With this distance in place, execution time is greatly reduced in a program of this length. To take advantage of this, do the following every time you play:

1. Load the cards- DO NOT PACK (or GTO..)
2. Run the program
3. Record the game program again when finished

You can only take advantage of this if you never pack the program. Since it needs full memory, packing will not be necessary anyway. You can stop re-recording after you don't discover any new areas (not too likely for some time).

SCORE

When your game life expires, you will automatically be given your score.

The numeric output is interpreted as follows:

| | |
|-----------------|--|
| Negative Score- | O.K. for the first several games |
| 0 | - You should try to put something away for old age |
| 30-60 | - Average score. |
| 100+ | - Plenty of luck. I dare you to try again |

PROGRAM DESCRIPTION II

Sample Problem (Sketch if Desired)

Run the program

SOLUTION:

| Input | Function | Display | Comments |
|-----------|---------------------------------|-------------|---|
| seed | XEQ SIZE 018 XEQ "TQ" R/S | SEED? | enter seed($\emptyset < \text{seed} < 1$) I don't want to give you any clues, but assuming a seed was entered- |
| NORTH (8) | 8 | FOREST | try NORTH to escape (# is equivalent of NORTH not the right direction) |
| SW (1) | 1 | FOREST | next guess wrong again |
| UP (5) | 5 | FOREST NESW | try climbing a tree that did it! continue your travels by moving either n,e,s or w. |
| | | | If you find yourself back in the FOREST you know how to escape. |

USER INSTRUCTIONS

| STEP | INSTRUCTIONS | INPUT | FUNCTION | SIZE: (HP-41C) 018 |
|------|---|-------|----------|-----------------------|
| | | | | DISPLAY |
| 1 | Clear all programs or perform a master clear. All registers are necessary for this program. | | | |
| 2 | XEQ "SIZE" 018 | | | |
| 3 | Load the 10 program cards | | | |
| 4 | Execute the program, press | | XEQ "TQ" | SEED |
| 5 | Enter a seed, $\emptyset < \text{seed} < 1$ | seed | R/S | FOREST |
| 6 | Game has begun. Enter directions N, NE, E, SE, S, SW, W, NW, U, D until you move out of the "FOREST" and see the prompt- The game continues from here by pressing either of the numbers corresponding to N E S W | | | FOREST NESW |

PROGRAM LISTING

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| STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS | STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS |
|---------------|-----------|--------------------------|---------------------|---------------|-----------|--------------------------|-----------------|
| 01 | ♦LBL "TQ" | | | 46 | XEQ | 98 | |
| 02 | FIX 0 | | initialize | 47 | GTO | IND | |
| 03 | CLRG | | | 00 | | | |
| 04 | "SEED?" | | | 48 | ♦LBL | 08 | |
| 05 | PROMPT | | | 49 | GTO | 62 | |
| 06 | STO 00 | | | 50 | ♦LBL | 06 | |
| 07 | .2 | | 200 move life | 51 | GTO | J | |
| 08 | STO 15 | | | 52 | ♦LBL | 04 | |
| 09 | .023 | | | 53 | ♦LBL | 64 | |
| 10 | ♦LBL 29 | | clear all flags | 54 | XEQ | 34 | |
| 11 | CF IND X | | (not all used) | 55 | "HNSW" | | |
| 12 | ISG X | | | 56 | XEQ | 98 | |
| 13 | GTO 29 | | | 57 | GTO | IND | |
| 14 | XEQ 89 | | do random rout. | 00 | | | |
| 15 | 10 | | | 58 | ♦LBL | 08 | |
| 16 | * | | | 59 | GTO | F | |
| 17 | INT | | | 60 | ♦LBL | 02 | |
| 18 | ♦LBL 60 | | "wake up" | 61 | GTO | I | |
| 19 | XEQ 34 | | | 62 | ♦LBL | 63 | |
| 20 | XEQ 98 | | | 63 | XEQ | 34 | |
| 21 | RCL Z | | | 64 | "HSUN E | | |
| 22 | X#Y? | | | 65 | XEQ | 98 | |
| 23 | GTO 60 | | | 66 | GTO | IND | |
| 24 | ♦LBL 61 | | first location | 00 | | | |
| 25 | XEQ 34 | | | 67 | ♦LBL | 02 | |
| 26 | "HNESW" | | directions | 68 | GTO | C | |
| 27 | XEQ 98 | | | 69 | ♦LBL | 04 | |
| 28 | GTO IND | | | 70 | GTO | 61 | |
| 00 | | | | 71 | ♦LBL | 65 | |
| 29 | ♦LBL 02 | | | 72 | "LIBRARY | | a room |
| 30 | GTO 63 | | | | | | |
| 31 | ♦LBL 06 | | | | | | |
| 32 | ♦LBL 62 | | listing continues | 73 | 2 | | items in the |
| 33 | XEQ 34 | | with areas you | 74 | XEQ | 99 | room, available |
| 34 | "HSUN E | | may see if you move | 75 | 3 | | for pick-up |
| NES" | | | in that direction | 76 | XEQ | 99 | |
| 35 | XEQ 98 | | | 77 | XEQ | C | |
| 36 | GTO IND | | | 78 | "WED" | | directions |
| 00 | | | | 79 | XEQ | 98 | |
| 37 | ♦LBL 04 | | | 80 | GTO | IND | |
| 38 | ♦LBL 08 | | | 00 | | | |
| 39 | GTO 60 | | | 81 | ♦LBL | 04 | |
| 40 | ♦LBL 06 | | | 82 | GTO | 72 | |
| 41 | GTO a | | | 83 | ♦LBL | 00 | |
| 42 | ♦LBL 02 | | | 84 | GTO | 73 | |
| 43 | ♦LBL F | | | 85 | ♦LBL | G | |
| 44 | XEQ 34 | | | 86 | "ATTIC" | | |
| 45 | "HNEW" | | | 87 | 5 | | |

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| STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS | STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS |
|---------------|-----------|--------------------------|--------------------|---------------|-----------|--------------------------|---------------|
| 88 | XEQ 99 | | | 131♦LBL | 04 | | |
| 89 | " D" | | one choice only | 132 | GTO | H | |
| 90 | XEQ 98 | | for travel | 133♦LBL | 06 | | |
| 91♦LBL | 06 | | | 134♦LBL | a | | |
| 92♦LBL | H | | | 135 | XEQ | 34 | |
| 93 | "KITCHEN | | | 136 | FCLRG | N | "clearing" |
| | | | ES" | 137 | XEQ | 98 | |
| 94 | CF 05 | | (I'll never tell) | 138 | GTO | IND | |
| 95 | 7 | | | 00 | | | |
| 96 | XEQ 99 | | | 139♦LBL | 06 | | |
| 97 | RCL 07 | | obviously, if you | 140♦LBL | 08 | | |
| 98 | X<=0? | | don't have a cup | 141 | GTO | 60 | |
| 99 | GTO 01 | | you can't get the | 142♦LBL | 02 | | |
| 100 | 8 | | water | 143♦LBL | b | | |
| 101 | XEQ 99 | | | 144 | XEQ | 34 | |
| 102♦LBL | 01 | | | 145 | FNSW | SE | |
| 103 | 10 | | | | | | |
| 104 | XEQ 99 | | | 146 | XEQ | 98 | |
| 105 | "EWU" | | | 147 | GTO | IND | |
| 106 | XEQ 98 | | | 00 | | | |
| 107 | GTO IND | | | 148♦LBL | 08 | | |
| 00 | | | | 149 | GTO | a | |
| 108♦LBL | 04 | | | 150♦LBL | c | | |
| 109 | GTO 65 | | | 151 | XEQ | 34 | |
| 110♦LBL | 05 | | | 152 | FCLR | TO | clear to east |
| 111 | GTO 6 | | | | E NEW" | | |
| 112♦LBL | 08 | | | 153 | XEQ | 98 | |
| 113♦LBL | I | | | 154 | GTO | IND | |
| 114 | XEQ 34 | | | 00 | | | |
| 115 | "FESW" | | | 155♦LBL | 04 | | |
| 116 | XEQ 98 | | | 156 | GTO | 63 | |
| 117 | GTO IND | | | 157♦LBL | 03 | | |
| 00 | | | | 158♦LBL | 06 | | |
| 118♦LBL | 02 | | | 159♦LBL | d | | |
| 119 | GTO 63 | | | 160 | "CANYON | | |
| 120♦LBL | 04 | | | | W NW" | | |
| 121 | GTO 64 | | | 161 | RCL | 05 | |
| 122♦LBL | 06 | | | 162 | X>0? | | |
| 123♦LBL | J | | If you are running | 163 | F D" | | |
| 124 | "HOUSE N | | the program, you | 164 | XEQ | 98 | |
| ESW" | | | shouldn't be | 165 | GTO | IND | |
| 125 | XEQ 98 | | reading this !! | 00 | | | |
| 126 | GTO IND | | | 166♦LBL | 02 | | |
| 00 | | | | 167♦LBL | 04 | | |
| 127♦LBL | 08 | | | 168 | GTO | c | |
| 128 | GTO F | | | 169♦LBL | 07 | | |
| 129♦LBL | 02 | | | 170♦LBL | 08 | | |
| 130 | GTO I | | | | | | |

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| STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS | STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS |
|---------------|-----------|--------------------------|----------|---------------|-----------|--------------------------|-------------------|
| 171 | GTO b | | | 216 | LBL | 06 | |
| 172 | ♦LBL | 71 | | 217 | ♦LBL | 74 | |
| 173 | "RIVER W | | | 218 | "TROLL R | | |
| " | | | | 219 | XEQ | 98 | |
| 174 | RCL 05 | | | 220 | FS? | 15 | check for troll |
| 175 | X>0? | | | 221 | XEQ | 93 | |
| 176 | "HU" | | | 222 | GTO | IND | |
| 177 | XEQ 98 | | | 223 | | 00 | |
| 178 | GTO IND | | | 224 | GTO | 73 | |
| 00 | | | | 225 | ♦LBL | 08 | |
| 179 | ♦LBL | 04 | | 226 | GTO | 76 | |
| 180 | GTO 43 | | | 227 | ♦LBL | 02 | |
| 181 | ♦LBL | 00 | | 228 | ♦LBL | 77 | |
| 182 | ♦LBL | 05 | | 229 | "CRAWL N | | one of the places |
| 183 | ♦LBL | 70 | | 230 | XEQ | 98 | in the cavern |
| 184 | "LEDGE" | | | 231 | GTO | IND | |
| 185 | 14 | | | 232 | ♦LBL | 08 | |
| 186 | XEQ 99 | | | 233 | GTO | 74 | |
| 187 | "U" | | | 234 | ♦LBL | 02 | |
| 188 | XEQ 98 | | | 235 | GTO | 79 | |
| 189 | GTO d | | | 236 | ♦LBL | 04 | |
| 190 | ♦LBL | 72 | | 237 | ♦LBL | 75 | |
| 191 | "TRIP" | oops | | 238 | "S SIDE | | |
| 192 | AVIEW | | | 239 | AVIEW | | |
| 193 | 0 | | | 240 | PSE | | |
| 194 | STO 08 | | | 241 | "ESW" | | |
| 195 | ♦LBL | 73 | | 242 | XEQ | 98 | |
| 196 | "CELLAR | things really get | | 243 | GTO | IND | |
| " | | exciting now! | | 244 | | 00 | |
| 197 | CF 05 | | | 245 | GTO | 06 | |
| 198 | RCL 03 | check to see if | | 246 | ♦LBL | 77 | |
| 199 | X>0? | you have the pro- | | 247 | GTO | 04 | |
| 200 | "HES" | per "key" | | 248 | ♦LBL | 73 | |
| 201 | "HU" | | | 249 | "PASSAGE | | |
| 202 | RCL 08 | | | 250 | EW | | |
| 203 | X<=0? | bonus life is | | 251 | XEQ | 98 | |
| 204 | FS? 09 | quite conditional | | 252 | GTO | IND | |
| 205 | GTO 01 | | | 253 | 00 | | |
| 206 | SF 09 | | | 254 | ♦LBL | 04 | |
| 207 | .05 | | | 255 | GTO | 74 | |
| 208 | ST- 15 | | | 256 | ♦LBL | 02 | |
| 209 | ♦LBL | 01 | | | | | |
| 210 | XEQ 98 | | | | | | |
| 211 | GTO IND | | | | | | |
| 00 | | | | | | | |
| 212 | ♦LBL | 02 | | | | | |
| 213 | GTO 75 | | | | | | |
| 214 | ♦LBL | 05 | | | | | |
| 215 | GTO 65 | | | | | | |

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| STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS | STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS |
|---------------|-----------|--------------------------|-------------------|---------------|-----------|--------------------------|----------------|
| 257 | 12 | | | 299 | XEQ | 98 | |
| 258 | XEQ | 99 | | 300 | GTO | 85 | |
| 259 | "NS" | | | 301 | LBL | 09 | |
| 260 | XEQ | 98 | | 302 | LBL | 83 | |
| 261 | GTO | IND | | 303 | "ROCKY C | | |
| 00 | | | | RWL | "W" | | |
| 262 | LBL | 08 | | 304 | XEQ | 98 | |
| 263 | GTO | 75 | | 305 | "ALCOVE | | |
| 264 | LBL | 02 | | ED | " | | |
| 265 | LBL | 79 | | 306 | XEQ | 98 | |
| 266 | "STUDIO | | | 307 | FS? | 16 | |
| NU | NW | | | 308 | XEQ | 93 | |
| 267 | XEQ | 98 | | 309 | GTO | IND | |
| 268 | GTO | IND | | 00 | | | |
| 00 | | | | 310 | LBL | 06 | |
| 269 | LBL | 07 | | 311 | GTO | 83 | |
| 270 | GTO | 78 | | 312 | LBL | 00 | |
| 271 | LBL | 05 | | 313 | "GOLDEN | | |
| 272 | GTO | H | | RM | " | | |
| 273 | LBL | 06 | | 314 | 1 | | yet another |
| 274 | LBL | 80 | | 315 | XEQ | 99 | valuable prize |
| 275 | "CIRCLE | | | 316 | "D" | | |
| RM | SPIN | | | 317 | XEQ | 98 | |
| 276 | "HNING | | getting dizzy? | 318 | GTO | 77 | |
| " | | | | 319 | LBL | 02 | |
| 277 | AVIEW | | | 320 | LBL | 50 | |
| 278 | XEQ | 89 | | 321 | "DAMP CA | | |
| 279 | 10 | | | VE | EW | " | |
| 280 | * | | | 322 | XEQ | 98 | |
| 281 | GTO | IND | | 323 | FS? | 20 | |
| X | | | | 324 | XEQ | 93 | |
| 282 | LBL | 08 | | 325 | GTO | IND | |
| 283 | GTO | 77 | | 00 | | | |
| 284 | LBL | 05 | (that'll keep | 326 | LBL | 06 | |
| 285 | GTO | 61 | you from cheating | 327 | GTO | 80 | |
| 286 | LBL | 06 | | 328 | LBL | 04 | |
| 287 | GTO | 82 | | 329 | LBL | 51 | |
| 288 | LBL | 04 | | 330 | "DAM E" | | |
| 289 | GTO | 76 | | 331 | RCL | 12 | |
| 290 | LBL | 07 | | 332 | X<=0? | | |
| 291 | GTO | 80 | | 333 | "HU" | | |
| 292 | LBL | 01 | | 334 | XEQ | 98 | |
| 293 | GTO | H | | 335 | GTO | IND | |
| 294 | LBL | 00 | | 00 | | | |
| 295 | GTO | 71 | | 336 | LBL | 06 | |
| 296 | LBL | 03 | | 337 | GTO | 50 | |
| 297 | LBL | 91 | | 338 | LBL | 05 | |
| 298 | "PASSAGE | | | 339 | LBL | 52 | |
| E | | | | 340 | "LAKE ND | | |
| | | | | " | | | |

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| STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS | STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS |
|---------------|-----------|--------------------------|---------------------------------------|---------------|-----------|--------------------------|----------|
| 341 | XEQ | 98 | | 383 | GTO | IND | |
| 342 | GTO | IND | | 00 | | | |
| 00 | | | | 384 | LBL | 04 | |
| 343 | LBL | 00 | | 385 | GTO | 87 | |
| 344 | GTO | 51 | | 386 | LBL | 06 | |
| 345 | LBL | 08 | | 387 | GTO | 61 | |
| 346 | "DEAD EN | | think it's a dead end? think again | 388 | LBL | 36 | |
| D" | | | | 389 | "LONG PA | | |
| 347 | 11 | | | SS | EU" | | |
| 348 | XEQ | 99 | | 390 | XEQ | 98 | |
| 349 | "S" | | | 391 | GTO | IND | |
| 350 | XEQ | 98 | | 00 | | | |
| 351 | GTO | 52 | | 392 | LBL | 05 | |
| 352 | LBL | 82 | | 393 | GTO | 35 | |
| 353 | "CHAPEL" | | | 394 | LBL | 06 | |
| 354 | 13 | | wow! another treasure! | 395 | LBL | 37 | |
| 355 | XEQ | 99 | | 396 | "DUSTY R | | |
| 356 | XEQ | A | | M" | | | |
| 357 | "EWU" | | | 397 | 4 | | |
| 358 | XEQ | 98 | | 398 | XEQ | 99 | |
| 359 | GTO | IND | | 399 | "EW" | | |
| 00 | | | | 400 | XEQ | 98 | |
| 360 | LBL | 06 | | 401 | GTO | IND | |
| 361 | GTO | 84 | | 00 | | | |
| 362 | LBL | 04 | | 402 | LBL | 04 | |
| 363 | GTO | 80 | | 403 | GTO | 36 | |
| 364 | LBL | 05 | | 404 | LBL | 06 | |
| 365 | LBL | 87 | | 405 | "DEAD EN | | |
| 366 | "CHIME R | | | D W" | | | |
| M" | | | | 406 | XEQ | 98 | |
| 367 | 6 | | and another! | 407 | FS? | 19 | |
| 368 | XEQ | 99 | | 408 | XEQ | 93 | |
| 369 | "ESD" | | | 409 | GTO | 37 | |
| 370 | XEQ | 98 | | 410 | LBL | 02 | |
| 371 | GTO | IND | | 411 | LBL | 84 | |
| 00 | | | | 412 | "CRAWL N | | |
| 372 | LBL | 00 | | S SE" | | | |
| 373 | GTO | 82 | | 413 | XEQ | 98 | |
| 374 | LBL | 06 | | 414 | GTO | IND | |
| 375 | "EAST EN | | this could be a real dead end | 00 | | | |
| D " | | | | 415 | LBL | 08 | |
| 376 | RCL | 12 | | 416 | GTO | 82 | |
| 377 | X<=0? | | | 417 | LBL | 02 | |
| 378 | "HE" | | | 418 | GTO | 85 | |
| 379 | "HW" | | | 419 | LBL | 03 | |
| 380 | XEQ | 98 | | 420 | LBL | 35 | |
| 381 | FS? | 17 | | 421 | "TINY CR | | |
| 382 | XEQ | 93 | | VE WD" | | | |
| | | | | 422 | XEQ | 98 | |

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| STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS | STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS |
|---------------|-----------|--------------------------|------------------|---------------|-----------|--------------------------|----------|
| 423 | GTO | IND | | 463 | LBL | 06 | |
| 00 | | | | 464 | LBL | 24 | |
| 424 | LBL | 00 | | 465 | "N E SW" | | |
| 425 | GTO | 36 | | 466 | XEQ | 98 | |
| 426 | LBL | 02 | | 467 | GTO | IND | |
| 427 | LBL | 04 | | 00 | | | |
| 428 | LBL | 05 | | 468 | LBL | 06 | |
| 429 | "GLASS | R | walk carefully | 469 | GTO | 41 | |
| M | NSW | | | 470 | LBL | 08 | |
| 430 | XEQ | 98 | | 471 | GTO | 23 | |
| 431 | GTO | IND | | 472 | LBL | 05 | |
| 00 | | | | 473 | LBL | 25 | |
| 432 | LBL | 08 | | 474 | "NESWD" | | |
| 433 | GTO | 84 | | 475 | XEQ | 98 | |
| 434 | LBL | 04 | | 476 | GTO | IND | |
| 435 | GTO | 91 | | 00 | | | |
| 436 | LBL | 02 | | 477 | LBL | 07 | |
| 437 | LBL | 86 | | 478 | LBL | 08 | |
| 438 | "LADDER | | | 479 | GTO | 21 | |
| ND | " | | | 480 | LBL | 06 | |
| 439 | XEQ | 98 | | 481 | GTO | 23 | |
| 440 | GTO | INI | | 482 | LBL | 02 | |
| 00 | | | | 483 | LBL | 26 | |
| 441 | LBL | 08 | | 484 | "NEW" | | |
| 442 | GTO | 85 | | 485 | XEQ | 98 | |
| 443 | LBL | 00 | | 486 | FS? | 18 | |
| 444 | LBL | 21 | enter the maze, | 487 | XEQ | 93 | |
| 445 | "ESWU" | | the main purpose | 488 | GTO | IND | |
| 446 | XEQ | 98 | of which is to | 00 | | | |
| 447 | GTO | IND | eat up life | 489 | LBL | 00 | |
| 00 | | | points | 490 | LBL | 06 | |
| 448 | LBL | 04 | | 491 | GTO | 22 | |
| 449 | GTO | 25 | | 492 | LBL | 01 | |
| 450 | LBL | 05 | | 493 | LBL | 04 | |
| 451 | GTO | 86 | | 494 | LBL | 27 | |
| 452 | LBL | 02 | | 495 | "SWU" | | |
| 453 | LBL | 22 | | 496 | XEQ | 98 | |
| 454 | "U SE NW | | | 497 | GTO | IND | |
| " | | | | 00 | | | |
| 455 | XEQ | 98 | | 498 | LBL | 02 | |
| 456 | GTO | IND | | 499 | GTO | 24 | |
| 00 | | | | 500 | LBL | 04 | |
| 457 | LBL | 03 | | 501 | LBL | 06 | |
| 458 | LBL | 23 | | 502 | LBL | 08 | |
| 459 | "SWU" | | | 503 | GTO | 25 | |
| 460 | XEQ | 98 | | 504 | LBL | 05 | |
| 461 | GTO | IND | | 505 | GTO | 26 | |
| 00 | | | | 506 | LBL | 41 | |
| 462 | LBL | 02 | | 507 | XEQ | A | |

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| STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS | STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS |
|---------------|-----------|--------------------------|--------------------|---------------|-----------|--------------------------|------------------|
| 508 | "NARO TU | | | 550 | "GET " | | |
| NL | NW" | | | 551 | ♦LBL | 95 | |
| 509 | XEQ 98 | | | 552 | GTO | IND | list of treasure |
| 510 | GTO IND | | | X | | | and supplies |
| 00 | | | | 553 | ♦LBL | 01 | |
| 511 | ♦LBL 08 | | | 554 | "HGOLD" | | |
| 512 | GTO 24 | | | 555 | 5 | | |
| 513 | ♦LBL 04 | | | 556 | GTO | 00 | |
| 514 | ♦LBL 42 | | | 557 | ♦LBL | 02 | |
| 515 | "OIL RM | | | 558 | "HAXE" | | |
| ED" | | | | 559 | 2 | | |
| 516 | XEQ 98 | | | 560 | GTO | 00 | |
| 517 | GTO IND | | | 561 | ♦LBL | 03 | |
| 00 | | | | 562 | "HFLAMP" | | |
| 518 | ♦LBL 06 | | | 563 | 1 | | |
| 519 | GTO 41 | | | 564 | GTO | 00 | |
| 520 | ♦LBL 00 | | | 565 | ♦LBL | 04 | |
| 521 | ♦LBL 43 | | | 566 | "HJEWEL" | | |
| 522 | "COAL RM | | | 567 | 4 | | |
| " | | | | 568 | GTO | 00 | |
| 523 | 9 | | | 569 | ♦LBL | 05 | |
| 524 | XEQ 99 | | | 570 | "HROPE" | | |
| 525 | "EU" | | | 571 | 1 | | |
| 526 | XEQ 98 | | | 572 | GTO | 00 | |
| 527 | GTO IND | | | 573 | ♦LBL | 06 | |
| 00 | | | | 574 | "HBELL" | | |
| 528 | ♦LBL 05 | | | 575 | 3 | | |
| 529 | GTO 42 | | | 576 | GTO | 00 | |
| 530 | ♦LBL 06 | | | 577 | ♦LBL | 07 | |
| 531 | GTO 71 | | | 578 | "HFLASK" | | |
| 532 | ♦LBL 00 | | "safety net" will | 579 | 1 | | |
| 533 | ♦LBL 01 | | prevent game from | 580 | GTO | 00 | |
| 534 | ♦LBL 02 | | stopping in case | 581 | ♦LBL | 08 | |
| 535 | ♦LBL 03 | | the traveler mis- | 582 | "HWATER" | | |
| 536 | ♦LBL 04 | | reads his compass | 583 | 1 | | |
| 537 | ♦LBL 07 | | | 584 | GTO | 00 | |
| 538 | ♦LBL 08 | | | 585 | ♦LBL | 09 | |
| 539 | ♦LBL 09 | | | 586 | "HRUBY" | | |
| 540 | GTO 43 | | | 587 | 10 | | |
| 541 | ♦LBL 99 | | | 588 | GTO | 00 | |
| 542 | AVIEW | | treasure and | 589 | ♦LBL | 10 | |
| 543 | PSE | | supplies selection | 590 | "HGARLIC" | | |
| 544 | FS? 05 | | | " | | | |
| 545 | RTN | | | 591 | 1 | | |
| 546 | RCL IND | | one of each only! | 592 | GTO | 00 | |
| X | | | | 593 | ♦LBL | 11 | |
| 547 | X#0? | | | 594 | "HGEM" | | |
| 548 | RTN | | | 595 | 8 | | |
| 549 | RDN | | | 596 | GTO | 00 | |

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| STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS | STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS |
|---------------|-----------|--------------------------|---------------------|---------------|-----------|--------------------------|-------------------|
| 597♦LBL 12 | | | | 641♦LBL 96 | | | |
| 598 "HSCULPT | | | | 642 RCL IND | | | test for posess |
| URE" | | | | X | | | ion. You can't |
| 599 5 | | | | 643 X<=0? | | | drop it if you |
| 600 GTO 00 | | | | 644 GTO 03 | | | don't have it! |
| 601♦LBL 13 | | | | 645 CLA | | | |
| 602 "HGRAIL" | | | | 646 RDN | | | |
| 603 20 | | | | 647 XEQ 95 | | | |
| 604 GTO 00 | | | | 648 FC? 08 | | | |
| 605♦LBL 14 | | | | 649 AVIEW | | | display item |
| 606 "HJADE" | | | | 650 FC? 08 | | | |
| 607 15 | | | | 651 GTO 03 | | | |
| 608♦LBL 00 | | | | 652 XEQ 90 | | | test for drop |
| 609 FS? 06 | | | return depends | 653 FC?C 23 | | | |
| 610 RTN | | | on subroutine | 654 GTO 03 | | | |
| 611 "H ?" | | | calling | 655 "O.K." | | | acknowledge drop |
| 612 FS? 08 | | | | 656 AVIEW | | | |
| 613 RTN | | | | 657 X<>Y | | | |
| 614 XEQ 90 | | | test for pick-up | 658 INT | | | |
| 615 FS?C 23 | | | | 659 3 | | | |
| 616 STO IND | | | | 660 X<>Y | | | |
| Y | | | | 661 X=Y? | | | |
| 617 RTN | | | | 662 SF 05 | | | |
| 618♦LBL A | | | | 663 LASTX | | | |
| 619 "STATUS?" | | | "status" subroutine | 664 RCL T | | | |
| " | | | | 665 FC? 07 | | | |
| 620 XEQ 90 | | | tells you what | 666 GTO 01 | | | |
| 621 FC?C 23 | | | you have in your | 667 ST+ 17 | | | |
| 622 RTN | | | posession | 668 ST- IND | | | |
| 623 SF 06 | | | | Y | | | |
| 624 "YOU HAV | | | | 669 GTO 03 | | | |
| E" | | | | 670♦LBL 01 | | | |
| 625 GTO 01 | | | | 671 ST+ 16 | | | |
| 626♦LBL C | | | | 672 RDN | | | |
| 627 "DROP TR | | | subroutine for | 673 -.5 | | | |
| EASURE" | | | dropping items | 674 STO IND | | | |
| 628 FS? 07 | | | | Y | | | |
| 629 GTO 00 | | | in your posess- | 675♦LBL 03 | | | |
| 630 "H?" | | | ion, called by | 676 RDN | | | |
| 631 XEQ 90 | | | program | 677 ISG X | | | |
| 632 FC?C 23 | | | | 678 GTO 96 | | | continue for each |
| 633 RTN | | | return if you | 679 CF 06 | | | item in posession |
| 634♦LBL 00 | | | don't want to do | 680 CF 07 | | | |
| 635 SF 08 | | | | 681 CF 08 | | | restore flags |
| 636♦LBL 01 | | | | 682 RTN | | | |
| 637 AVIEW | | | | 683♦LBL 93 | | | |
| 638 PSE | | | | 684 "TROLL" | | | |
| 639♦CLA | | | | 685 AVIEW | | | |
| 640 1.014 | | | | 686 TONE 5 | | | uh-oh |

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| STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS | STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS |
|---------------|-----------|--------------------------|---------------------------------|---------------|-----------|--------------------------|---------------------------------------|
| 687 | XEQ 89 | | reset troll | 733 | GTO 01 | | |
| 688 | RCL 02 | | | 734 | ST- IND | | |
| 689 | X<=0? | | | 735 | LBL 01 | | |
| 690 | GTO 02 | | | 736 | RDN | | |
| 691 | "USE AXE | | one possible defense | 737 | ISG X | | |
| ?" | | | | 738 | GTO 49 | | |
| 692 | XEQ 90 | | | 739 | 10 | | |
| 693 | FC?C 23 | | | 740 | ST- 16 | | |
| 694 | GTO 02 | | | 741 | ST+ 15 | | |
| 695 | RDN | | | 742 | SF 05 | | |
| 696 | .7 | | probability | 743 | RTN | | |
| 697 | X<Y? | | | 744 | LBL 98 | | adjust life and score if unsuccessful |
| 698 | GTO 03 | | | 745 | RCL 00 | | |
| 699 | "TROLL K | | | 746 | FRC | | |
| ILLED" | | | | 747 | STO 00 | | |
| 700 | AVIEW | | | 748 | AVIEW | | |
| 701 | BEEP | | | 749 | LBL 97 | | |
| 702 | 10 | | | 750 | CF 22 | | |
| 703 | ST+ 16 | | bonus for doing away with troll | 751 | PSE | | |
| 704 | ST- 15 | | | 752 | FC? 22 | | |
| 705 | RTN | | | 753 | GTO 97 | | |
| 706 | LBL 02 | | | 754 | ST+ 00 | | |
| 707 | RCL 10 | | | 755 | ISG 15 | | |
| 708 | X<=0? | | | 756 | RTN | | |
| 709 | GTO 03 | | | 757 | 1.014 | | |
| 710 | LBL 94 | | | 758 | LBL 31 | | |
| 711 | "TOLL" | | another way... | 759 | RCL IND | | |
| 712 | AVIEW | | | X | | | |
| 713 | PSE | | | 760 | X<0? | | |
| 714 | 0 | | | 761 | GTO 01 | | |
| 715 | STO 17 | | drop accumulation register | 762 | ST+ 16 | | |
| 716 | SF 07 | | | 763 | LBL 01 | | |
| 717 | XEQ C | | | 764 | RDN | | |
| 718 | RCL 10 | | | 765 | ISG X | | |
| 719 | X<=0? | | | 766 | GTO 31 | | |
| 720 | GTO 03 | | | 767 | "SCORE " | | |
| 721 | 8 | | check for enough toll paid | 768 | ARCL 16 | | |
| 722 | RCL 17 | | | 769 | PROMPT | | |
| 723 | X>Y? | | | 770 | LBL 34 | | |
| 724 | RTN | | | 771 | "FOREST" | | |
| 725 | LBL 03 | | | 772 | RTN | | |
| 726 | "CHOMP" | | not a good result | 773 | LBL 90 | | |
| 727 | AVIEW | | | 774 | AVIEW | | |
| 728 | TONE 0 | | | 775 | RON | | |
| 729 | 1.014 | | | 776 | PSE | | |
| 730 | LBL 49 | | | 777 | PSE | | |
| 731 | RCL IND | | | 778 | ROFF | | |
| X | | | | | | | |
| 732 | X<=0? | | | | | | |

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| STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS | STEP/ LINE | KEY ENTRY | KEY CODE (67/97 only) | COMMENTS |
|---------------|-----------|--------------------------|-------------------|---------------|-----------|--------------------------|----------|
| 779 | CLA | | | | | 51 | |
| 780 | RTN | | | | | | |
| 781 | LBL | 89 | | | | | |
| 782 | CF | 15 | random number | | | | |
| 783 | CF | 16 | subroutine | | | | |
| 784 | CF | 17 | | | | | |
| 785 | CF | 18 | | | | | |
| 786 | CF | 19 | | | | | |
| 787 | CF | 20 | | | | | |
| 788 | RCL | 00 | | | | 60 | |
| 789 | ENTER | | | | | | |
| 790 | FRC | | | | | | |
| 791 | 9821 | | | | | | |
| 792 | * | | | | | | |
| 793 | .211327 | | | | | | |
| 794 | + | | | | | | |
| 795 | FRC | | | | | | |
| 796 | RDN | | | | | | |
| 797 | INT | | | | | 70 | |
| 798 | R↑ | | | | | | |
| 799 | + | | | | | | |
| 800 | STO | 00 | | | | | |
| 801 | FRC | | | | | | |
| 802 | STO | Y | | | | | |
| 803 | SF | 10 | | | | | |
| 804 | LBL | 92 | | | | | |
| 805 | 6 | | also sets random | | | | |
| 806 | * | | trolls cruising | | | 80 | |
| 807 | 15 | | the subteranean | | | | |
| 808 | + | | world | | | | |
| 809 | SF | IND X | | | | | |
| 810 | RDN | | | | | | |
| 811 | .5 | | | | | | |
| 812 | + | | | | | | |
| 813 | FRC | | | | | | |
| 814 | FS?C | 10 | | | | | |
| 815 | GTO | 92 | | | | | |
| 816 | RCL | 00 | R00 contains a | | | | |
| 817 | FRC | | random # 0<R<1 | | | 90 | |
| 818 | RTN | | and the direction | | | | |
| 819 | END | | vector | | | | |

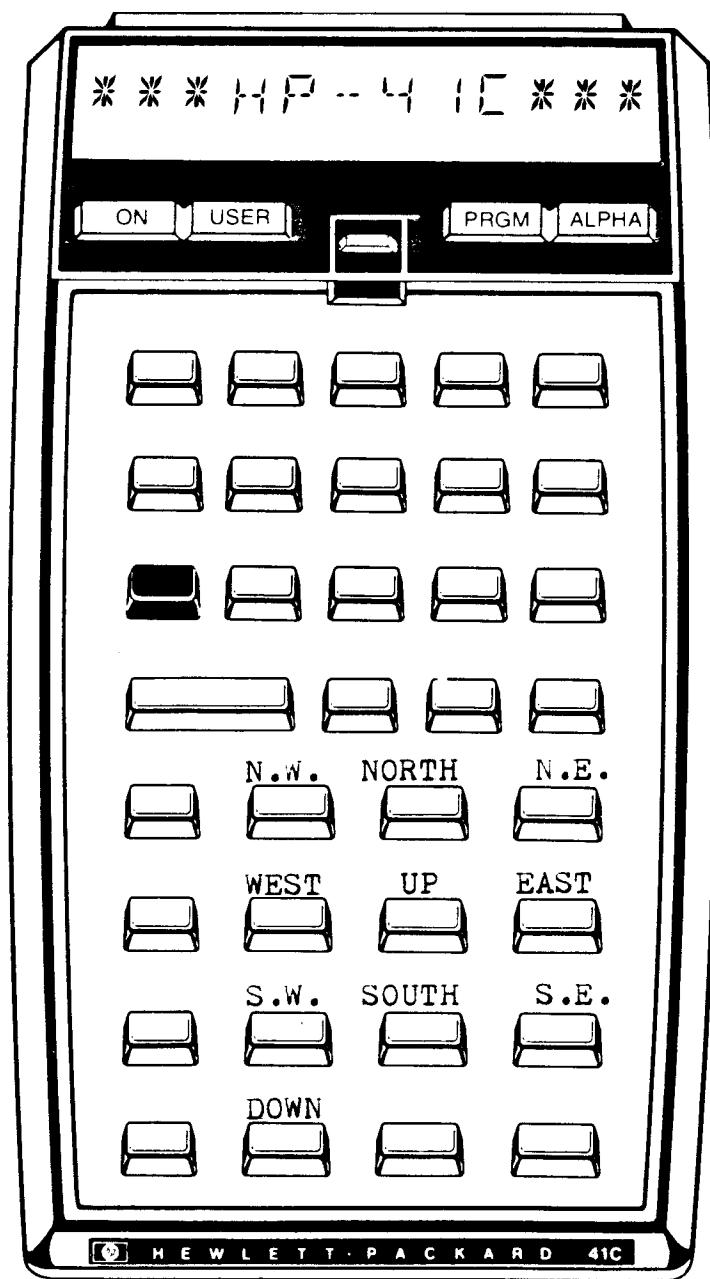
REGISTERS, STATUS, FLAGS, ASSIGNMENTS

| DATA REGISTERS | | STATUS | | | |
|----------------|----------------------------|----------|---------------|--------------------------|-----------------|
| R00 | INT (direction) FRC (seed) | SIZE 018 | TOT. REG. 318 | USER MODE | |
| R01 | | ENG | FIX | ON | OFF X |
| R02 | | DEG | RAD | GRAD | |
| R03 | | FLAGS | | | |
| R04 | | # | INIT S/C | SET INDICATES | CLEAR INDICATES |
| R05 | | 05 | C | used by the program to | |
| R06 | | 06 | C | control the various | |
| R07 | | 07 | C | attributes of the quest. | |
| R08 | Treasure registers | 08 | C | " | |
| R09 | | 09 | C | " | |
| R10 | | 10 | C | " | |
| R11 | | 15 | C | " | |
| R12 | | 16 | C | " | |
| R13 | | 17 | C | " | |
| R14 | | 18 | C | " | |
| R15 | "Life" register | 19 | C | " | |
| R16 | Score accumulator | 20 | C | " | |
| R17 | used | 22 | C | numeric entry | not n.e. |
| | | 23 | C | alpha entry | not a.e. |
| ASSIGNMENTS | | | | | |
| | | FUNCTION | KEY | FUNCTION | KEY |
| | | | | | |

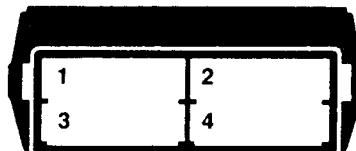
KEYBOARD CARD LABELING

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KEYBOARD



SYSTEM
CONFIGURATION



CARD

