

Hewlett-Packard

System 45B

Desktop Computer



Computer Games

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Date Received: _____

Program Part Number: 09845-10110

Other HP desktop computers _____

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	Model
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	Model
Floppy	
Digitizer	
Other	

Application _____

Name

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This collection of programs includes some traditional computer games and some you may not have seen before. While providing amusement, it will also allow the new user to become familiar with the System 45. When you have used several of the programs, you may notice the difference in the "style" of the programs, that is, method of display, use of special function keys and graphics. This variation in style is intentional in that it allows a potential programmer to see several different ways of accomplishing input and output. This collection was compiled from programs already written or adapted by several of our employees - we hope you enjoy them.

This library of programs is used with a "menu" program which displays the name and number of all the games, and allows you to enter a number to access any program. To use this feature, insert the cartridge into the tape drive and type in:

```
GET "MENU", 10,10  
then press: EXECUTE
```

When the "menu" program is loaded, a list of fourteen games will be displayed. Pick the game you want to use and type in its number and press CONT. The game you specified will be loaded from the cartridge and start executing automatically. If at any time you wish to discontinue the game you are using and want to return to the menu, press special function key 7. This will return you to the menu, and allow you to pick another game. If you do not wish to use the menu, but want to load a program directly, the instruction to do this is included in the instructions for that particular game.

If you load a program directly, key 7 may not return you to the menu if you use it when the program is waiting for a response. It should work if you use it while the program is computing something.

There are blank special function key templates included for you to use with these games. All the special function key definitions are given in the instructions for each game, so you may fill in the key definitions on the templates.

These games require a variety of system configurations. Following is a list of games which can be used with various configurations, for easy reference.

Games which don't use graphics

Standard memory

Gomoku
Race
Hangman
Wumpus
Calendar
King
Nim
Blackjack
Lander
Life
Star Trek

Games that use graphics

Basic Memory

Hangman
Birthday Plot
Ski
Biorhythm
Life

Ordering Information

Part Number

Complete Package

09845-10110

Manual Only

09845-10111

Cartridge Only

09845-10114

Gomoku is an old Japanese board game played on a 19 x 19 board. The object is to occupy five adjacent points in a straight line (horizontally, vertically or diagonally). The program included plays on a 9 x 9 board, you against the computer. Instructions are provided by the computer.

The Gomoku program requires only the standard memory. No graphics or special function keys are used.

To get this program directly, type

GET "GOMOKU", 10,10

Press: EXECUTE

This program simulates a blackjack game with the computer playing the dealer. Casino blackjack rules are used, allowing you to "double down" or "split pairs". The computer keeps track of all your finances, and even extends "credit". Instructions are provided by the computer. All responses are made with the following special function keys:

K0: STAY (STICK, STAND etc.)

K8: HIT (DRAW etc.)

K2: SPLIT (for splitting pairs)

K10: DOUBLE (to "double down")

K4: 21 (BLACKJACK, NATURAL etc. To declare that you
have a blackjack)

K14: YES

K15: NO

The BLACKJACK program does not require graphics.

To get this program directly, type

GET "BLACKJ", 10, 10

Press: EXECUTE

RACE is a car racing game in which you, the driver, try to get the fastest time while keeping the car on the track. You can move the car left and right, and speed up or slow down. Instructions are provided by the computer. The following special function keys are used in this program:

K0: moves car left a lot
K1: moves car left a little
K2: moves car right a little
K3: moves car right a lot
K9: brake
K10: accelerator

The RACE program requires only the standard memory and no graphics are used.

Hint: Use the repeat key to move to each side more quickly.

To get this program directly, type

GET "RACE", 10,10

Press: EXECUTE

HANGMAN is a traditional word game in which you try to guess the word before you get "hung". You have the choice of guessing one of the computer's words, or having someone else type in a word for you to guess. A series of dashes will appear on the screen, one dash for each letter in the word. To guess a letter, type that letter and press CONT. If the letter you guessed is in the word, it will be filled in everywhere it occurs. If it is not in the word, part of the body will appear in the hangman's noose. If the whole body is formed before you guess the word, you get "hung" and you lose. The correct word will then be displayed.

No special function keys are used in this program. HANGMAN requires only the standard memory and may be used with or without graphics.

To get this program directly, type

Get "HANGMN", 10,10
Press: EXECUTE

LANDER simulates landing a rocket ship on the planet of your choice. Any planet or major moon in our solar system is available, with gravitational force and fuel supply varying with each planet. Special function keys control the throttle for your ship as follows:

- K0: power off
- K1: decrease throttle by 1%
- K2: increase throttle by 5%
- K3: full power
- K8: half power
- K9: hover (thrust varies with planet)

This program uses the thermal printer to print out "Bulletins" if you crash, or "Landing Expert" certificates if you land at a velocity less than 1 mile per hour. No graphics are used.

To get this program directly, type

GET "LANDER",10,10

Press: EXECUTE

LIFE is a game of births, deaths, and survival.

The idea is to put a pattern of cells on the screen and watch how each generation produces births and deaths according to the following rules:

1. Births occur in an empty cell with exactly 3 neighbors.
(A neighbor is an occupied cell in one of the eight adjacent positions.)
2. Deaths occur in two ways. A cell will die of overpopulation if it has more than 3 neighbors, or it will die of isolation if it has less than 2 neighbors.
3. Each occupied cell survives to the next generation if it has 2 or 3 neighbors.

When you run the program, a cursor will appear in the center of the screen. Several special function keys are used with this program:

- K13: NORMAL CURSOR - you can move it around the screen without affecting the cell pattern.
- K14: CELL CURSOR - each place the cursor is moved to gets a cell.
- K15: ERASE CURSOR - each place the cursor is moved to has its cell erased (if there's one there).

The following keys move the cursor (any type) one position in the direction indicated:

K0: ←
 K1: ↖
 K2: ↑
 K3: ↗
 K4: →

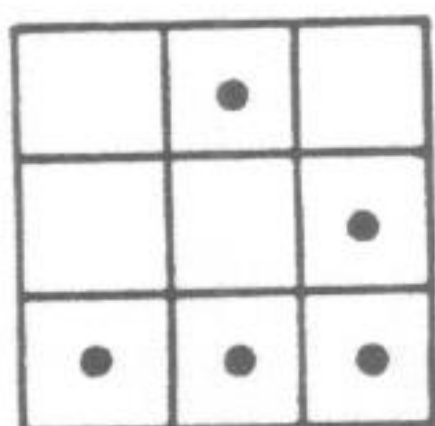
K8: ←
 K9: ↙
 K10: ↓
 K11: ↘
 K12: →

K6: RUN/STOP - when you press this key, the pattern of cells you have entered will begin generating new patterns according to the 3 rules described earlier. When you press it again, the pattern will stop generating and the pattern will be lost.

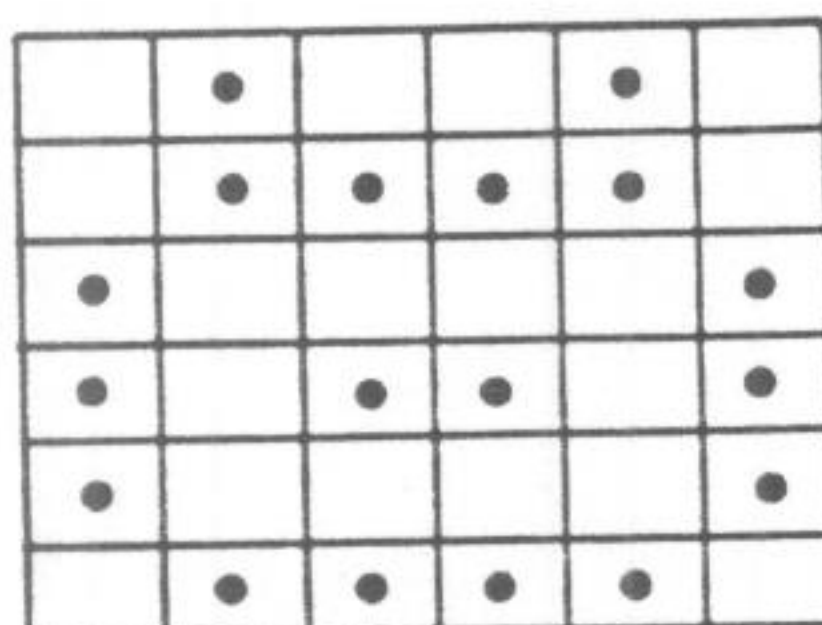
K22: STOP-NO ERASE - will allow you to stop the generations without losing the pattern. Then you may add or delete cells with the cursor and continue the generations by pressing RUN/STOP (K6).

Some interesting patterns to try:

The glider:



The cheshire cat:



Try putting a cross the entire length and width of the screen.

LIFE may be used with or without graphics. Both programs require the Option 201 memory.

To get the graphics version of this program, type

GET "LIFEG", 10,10

Press: EXECUTE

To get the alphanumeric version of this program, type

GET "LIFEA", 10,10

Press: EXECUTE

This is our version of the popular Star Trek game, in which you pilot the starship Enterprise around the galaxy in an attempt to kill all the Klingons before your time runs out. The computer can provide you with instructions, but here are the special function key definition:

K0: increase heading by 90°
K16: decrease heading by 90°
K1: increase heading by 10°
K17: decrease heading by 10°
K2: increase heading by 1°
K18: decrease heading by 1°
K3: increase phaser energy by 500 units
K19: decrease phaser energy by 500 units
K4: increase phaser energy by 100 units
K20: decrease phaser energy by 100 units
K5: increase phaser energy by 20 units
K21: decrease phaser energy by 20 units
K29: Long Range Scan
K8: increase warp factor by 5
K24: decrease warp factor by 5
K9: increase warp factory by 1
K25: decrease warp factor by 1
K10: increase warp factor by .1
K26: decrease warp factor by .1
K11: Warp out (move in direction and warp factor you have set)
K12: Fire Photon torpedo in direction set
K13: Fire Phasers
K27: Damage Report
K28: Fix damage

K6: increment shields by 500 units
K7: increment shields by 100 units
K22: decrement shields by 500 units
K23: decrement shields by 100 units
K14: reset warp factor
K15: reset course
K30: reset phasers
K31: reset shields

Hints: Use the live keyboard to figure your course.

The STAR TREK program does not require graphics.

To get this program directly, type

GET "STREK", 10,10

Press: EXECUTE

WUMPUS is a hunting game. The object is to hunt the wumpus and kill him before he eats you. The wumpus lives in a cave with 20 caverns. You, the hunter, move from cavern to cavern, searching for the wumpus.

As you move into each cavern, the three adjacent caverns will be listed. (Every cavern is adjacent to three others.) You may only move into one of the three caverns adjacent to the one you are in. Some of the caverns have special hazards, which you will be warned about if you are close:

"It smells like a wumpus in here." warns you that the wumpus is in one of the three adjacent caverns. If you move to that cavern, he eats you and you lose the game.

"Something smells batty." warns you that one of the adjacent caverns has a super-bat in it. If you move into that cavern, the super-bat will grab you and drop you in some other cavern, (probably not adjacent to the one you were in).

"Sure is drafty." warns you that one of the adjacent caverns is a bottomless pit. If you move into that cavern, you fall in the pit and lose the game.

Use special function key 8 to move from cavern to cavern.

If you think you know where the wumpus is, you may shoot at him, using special function key 0. You have 5 arrows, each with a maximum range of 5 caverns. You are asked to enter the distance and flight path. As an example, suppose you are in cavern 5 and you think the wumpus is in cavern 19, which happens to be adjacent

to you. The distance is 1 cavern, and the flight path is just 19. Now suppose you think the wumpus is in cavern 12, which is adjacent to 19, which is adjacent to 5 (where you are). Then the distance is 2 caverns, and the flight path is 19,12. Enter the flight path by typing in the cavern number closest to you and pressing CONT, then the next cavern number and CONT etc. For the second example above you would type:

19 CONT

12 CONT

Be sure the flight path is a sequence of adjacent (connected) caverns. If you hit the wumpus, you win the game. If you miss, he wakes up and moves to a different cavern.

K8: MOVE - allows you to move to an adjacent cavern.

K0: SHOOT - allows you to shoot an arrow at the wumpus.

WUMPUS requires only the standard memory and no graphics are used.

To get this program directly, type

GET "WUMPUS", 10,10

Press: EXECUTE

This program enables you to print a calendar of the year of your choice on the thermal printer. No graphics or special function keys are used, and the standard memory is required.

To get this program directly, type

GET "SUPCAL", 10,10

Press: EXECUTE



BIRTHDAY PLOT

This program will design your very own birthday plot based on your date of birth. You can plot on either the CRT (and then execute "DUMP GRAPHICS"), or on the 9872A plotter in four colors. Only the standard memory is required, and graphics capability is necessary. No special function keys are used.

To get this program directly, type

```
GET "BPLOT", 10,10
```

```
Press: EXECUTE
```




KING

KING is an economic simulation in which you are in charge of a small country, and must feed the countrymen, plant crops, sell land to industry and fight pollution. You have an eight-year term and the object is to survive all eight years of your term, keeping as many people happy as you can. The computer will provide instructions.

No graphics or special function keys are used, and only the standard memory is required.

To get this program directly, type

GET "KING", 10,10

Press: EXECUTE

The SKI game lets you "ski" through a randomly laid out race course and compete for the best time. Using the special function keys to control your movements, you must pass through all the gates (perhaps knocking some down) to get a time. If you miss one or more you are disqualified.

Enter any number for the course code then use the following special function keys to run the race:

- K0: START - starts the race
- K1: LEFT - turns you to the left, the more times you hit the key, the more left you turn.
- K2: RIGHT - turns you to the right.
- K3: REPEAT - gives you the same course again.

If you hit START (K0) after a race, then you can enter a different course code.

Remember:

Turning slows your downhill speed. Try to turn as little as possible to get the best time.

The degree of skill you enter (1 to 5) does not affect the course layout but it affects your downhill speed. The higher the number, the faster you go.

SKI uses the standard memory and also uses graphics.

To get this program directly, type

```
GET "SKI",10,10
Press: EXECUTE
```


NIM is a classic computer game in which you compete against the computer to see who takes the last star from several piles. Instructions are provided by the computer. Only the standard memory is required and no graphics or special function keys are used.

To get this program directly, type

GET "NIM", 10,10

Press: EXECUTE

BIORHYTHMS are theoretical cycles occurring in everyone's life. This program plots the three cycles (sensitivity, physical and cognitive) on the CRT for any month, and for any birthday. The program provides more explanation of biorhythms. You can execute "DUMP GRAPHICS" to get a copy of your biorhythm on the thermal printer.

No special function keys are used, and the standard memory, and graphics are used.

To load this program directly, type

```
GET "BIOPLT", 10,10  
Press: EXECUTE
```