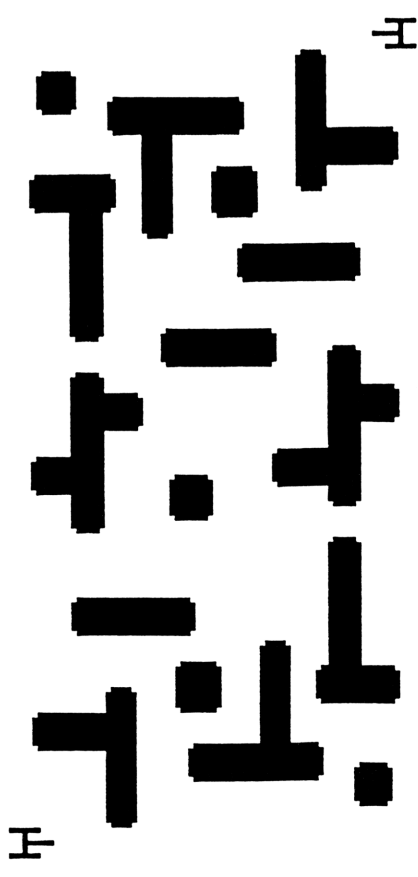


IR WARS



Instruction Manual

MicroNation Software Co.TM

MicroNation Software Co.
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Loading and Running Games

To load the games into your calculator's memory follow the procedure outlined in the HP-48SX Owner's Manual starting on page 621.

Each game will create a directory of its own. The first entry in this directory will be the main program of the game. To play the game simply press this menu key.

To terminate a game, press the ATTN key. To save calculator memory there is a program called PIG in the directory of each game. Execute PIG after terminating a game and it will clear all the memory-consuming variables used by the game program.

While playing these games it is "good form" to not press the keys faster than the calculator can respond to them. The calculator will remember up to 16 key presses and will execute them all in order. For example, if you are playing HP Tanks and you press the  key ten times because of an urgent need to turn your tank to the right, your tank will be doomed to "turn right 45°" ten times before it will respond to your next command.

The IR Wars programs run faster when there is more memory available.

Instructions for IR WARS

The two IR WARS (HP Tanks and IR Cannons) require two calculators and so, if you wish to play these games with a friend, you must load these programs into your friends calculator. Do the following:

- (1) Put your friends calculator in the directory where you wish the game to be located and set IR mode on both calculators.
- (2) Position the calculators to line up their infrared ports.
- (3) Execute the program on your calculator called SENDT and follow the instructions that appear on your screen. SENDT will be the second program in the directory containing the game you are sending.
- (4) To play the game, execute its main program on both calculators.

Note . . .

If the enclosed disc is found to be defective, MicroNation Software will replace it free of charge. Send us the defective disc, your name, address and \$1.00 shipping & handling to receive a replacement.

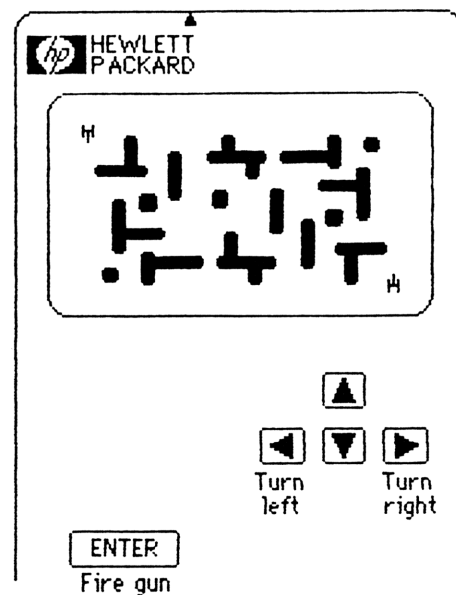
For a complete description of MicroNation products send us a self-addressed, stamped envelope. Dealer inquiries welcome.

Direct all correspondence to:

MicroNation Software
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HP Tanks

Test your battle skills.



The  and  keys turn your tank 45° at a time. The  and  keys control the speed of your tank. There are three forward and three reverse speeds. If your tank is stationary and you want it to travel at the forward speed of 3, then you must press the  key three times— to stop you must then press the  key three times, etc.

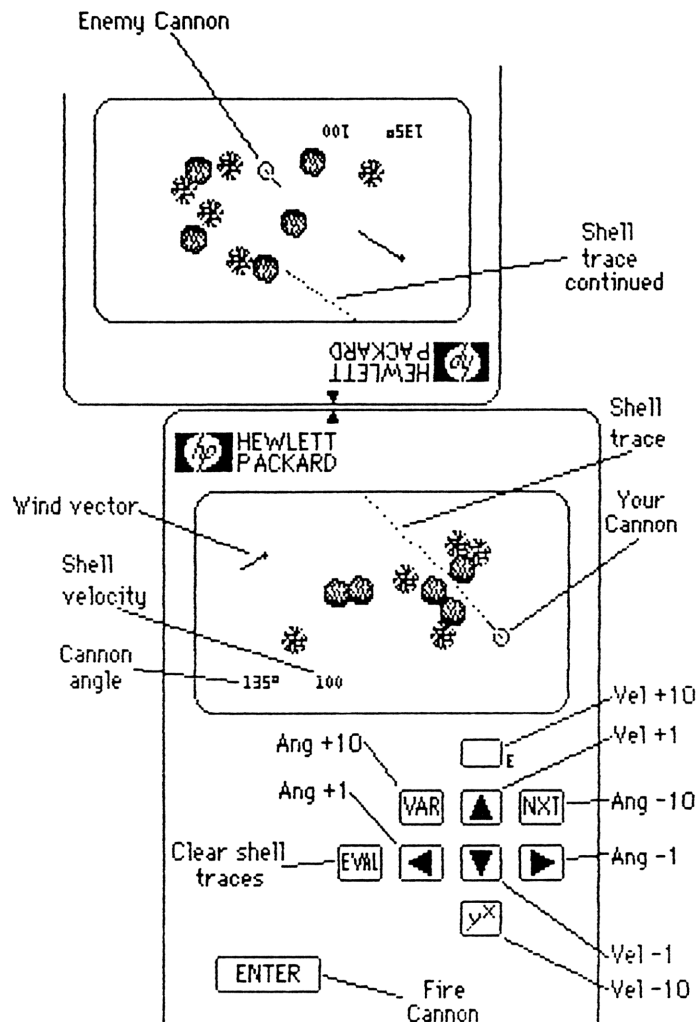
To fire your gun, press the **ENTER** key. The bullet may be steered by turning your tank.

Both calculator's screens will show the same thing, but your calculator will control the tank that starts in the lower right corner of both screens. Your friend's calculator will control the tank that starts in the upper left corner of both screens.

After one of the tanks has been hit, the screens will show the scores. You can continue the game by pressing any key on both calculators.

IR Cannons

This is a game of skill. The object is to destroy the other player's cannon before he destroys yours. You will have a bird's eye view of the battle field that spans both your screen and the other players screen.



You can see from this non-scale drawing that the shell from your cannon actually travels off the end of your screen and then continues its path on the other players screen.

The placement of the cannons and trees and the strength and direction of the wind is random.

To aim the cannon you can change its angle by degrees with the ◀ and ▶ keys and by ten degrees with the VAR and NXT keys. To control the distance a shell travels you can change its muzzle velocity with the ▲ and ▼ keys and by units of ten with the □ and yX keys. Pressing the EVAL key clears away the shell traces on both screens. To fire your cannon press the ENTER key.

If your calculator has its beep mode on then you will hear beeps in ascending and descending pitch as your shells ascend and descend. To hit

the enemy cannon your shell must end its trajectory on the cannon's base-circle; your shell may pass over the enemy cannon without hitting it. Also, your shell will hit a tree (if it is low enough as it passes over one) and blow a hole in it. In this way the trees may provide a temporary shelter for you or your enemy.

After one of the cannons has been hit, the screens will show the scores. You can continue the game by pressing any key on both calculators.

Connect Five

This is a game of strategy. The object of the game is to get five in a row vertically, horizontally, or diagonally. The game is played with X's and O's— the computer always plays with X's.

The game will first ask you if you want the computer to make the first move. Pressing the "Y" key will allow it to do so, pressing any other key will allow you to make the first move. The first move for either player is automatically placed in the center of the field, at (11,12).

The program will beep to signal you that it is ready for you to enter your next move, then you will see the current playing field with a block on the X that was the computers last move. The block can be moved around to view the entire game which will eventually grow too tall to be shown on the seven line display. Place the block where you want to make your next move and press the **ENTER** key.

The game will then give you the coordinates of your move while it takes a few seconds to do some processing. The game will go to its "thinking screen" where you will see the number of possible moves that the computer can make, a counter to give you an idea of its progress and an active display of what the computer is currently analyzing. The time the computer takes to make its move will increase as the number of possible moves increases, but as the game grows larger the time the computer takes to think will level off as it will skip over moves that are not worth analyzing.

Playing a game will take about an hour with most of the time used by the computer to think, but, since the computer beeps to tell you that it has finished thinking, it is easy to play the game while doing something else like taking notes in a boring class.

Pressing the  and  keys will move the block left and right on the screen.

Pressing the  and  keys will move the block up and down the screen.

Pressing the **ENTER** key will place your "O" where the block is.

Concentration

This is a game of memory skill. The game is taken from the card game of the same name where the deck is placed face down and spread out over a flat surface. Each player turns over a pair of cards, if the cards match in number they stay face up, the player is awarded a point and is allowed to search for another matching pair. If the pair does not match, the cards are turned face down again and it is the end of that players turn. The trick is to try and remember where the cards were so that you can find matching pairs and win the game.

The version of the game given below is only slightly different. Instead of cards, it uses a part of the HP-48SX character set.



The grid is a set of 12 matching pairs of characters that are randomly scattered around. The characters appear as blocks because they are now face down. The two numbers are the scores for two players and the arrow points to the score of the player whose turn it currently is. If only one person wishes to play the game, he can ignore the scores and time himself to judge how well he did.

To turn over a card a player uses one of the keys in the top four rows of keys on the keyboard. For example to turn over the left-most card in the top row of the grid, a player would press the left-most key in the top row of keys.