

## MINE FINDER

NEJ

V 1.1 for MSX / MSX2 / MSX2+ / MSX TurboR

2022 by Paolo Fabrizio Pugno

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### GAME LANGUAGE:

During initialization, the software detects the type of machine it is running on. In case the machine runs at 50Hz video refresh rate (regardless of keyboard layout) or at 60Hz with a non "International" keyboard layout, the language will default to English, otherwise it will be Brazilian Portuguese (and the game name will show as "Campo Minado").

If you desire to invert this configuration, just hold down the "HOME" key during the start-up sequence.

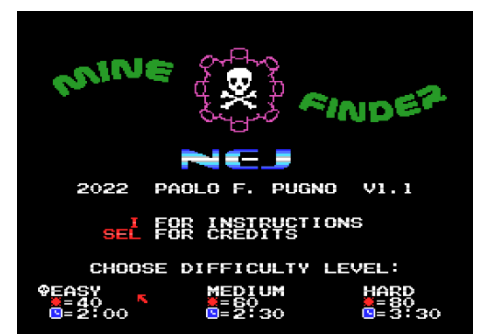


Figure 1 - Main Screen (Menu)

### GAME MECHANICS:

The game field is a **30x20 grid of cells** covered with **tiles**. The goal is to identify with **flags** which cells have a concealed **mine** and remove all other cover tiles. Tiles can be removed by just clicking on them. However, if the selected tile conceals a mine, it will explode, and the game will be over. Only by placing a flag over a tile you can prevent the mine from going off. You have as many flags as there are mines in the game.

By removing a regular tile, you will expose the ground below. If there are mines hidden in adjacent<sup>1</sup> cells, then the newly opened cell will display a number indicating how many mines are hidden in adjacent cells. This information and logic will be used to mark the cells where there are hidden mines. If a tile is successfully removed, all empty tiles around it will be automatically removed for you, until cells with mines surrounding them are reached.

You control an arrow pointing to the cells. You can move the pointer to indicate what tile is to be removed or to place or remove a flag.

You have a limited time to complete the task. If time runs out and you did not place all flags or did not remove all remaining tiles, you will lose the game. If all flags are placed on the correct spots, but there are still tiles to be removed, you will lose as well.

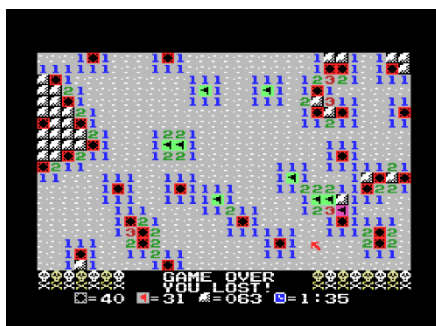


Figure 3 (left):  
End game: You lost (note wrongly placed flag in magenta colour)

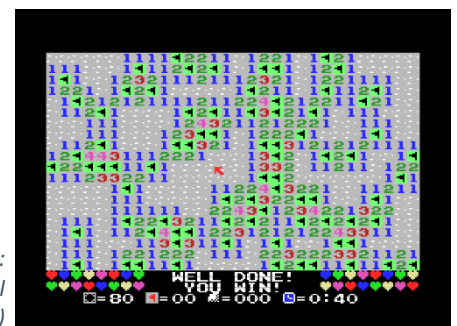


Figure 2 (right):  
End game: You win (all flags placed correctly)

<sup>1</sup> "Adjacent" means all the eight cells surrounding the target cell (vertically, horizontally, and diagonally).

## CONTROLS:

You can play the game using the keyboard, a joystick, or a mouse. If you intend to use a joystick, it should have 2 independent buttons. We will call the buttons as 'A' (primary) and 'B' (secondary).

During initialization, the software will look for a mouse in both ports #1 and #2<sup>2</sup>. If a mouse is found, the remaining port will be automatically assigned to a joystick.

All three control methods work at the same time, but you should choose and use only one of them.

If you are not using a mouse, then the joystick must be connected to port #1 only.

### MAIN MENU:

The Main Menu is used to choose the difficulty level, start the game, see the instructions, and see the credits section.

There are three levels of difficulty. The difference is the number of mines randomly hidden under the tiles and the amount of time available for you to find and flag them all:

Level	Easy	Medium	Hard
Mines	40	60	80
Time(minutes)	2:00	2:30	3:30

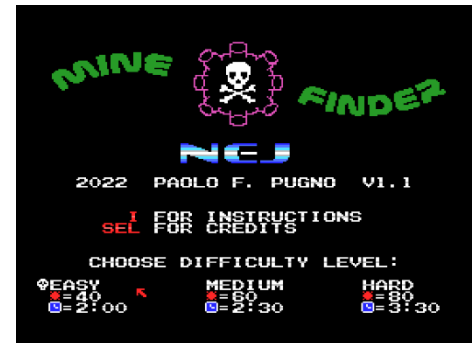


Figure 4: Main Menu

- **F1, F2, F3:**  
Start the game immediately on difficulty "Easy", "Medium", or "Hard" respectively.
- **Cursor keys, Joystick:**  
Moves the skull icon to select one of the difficulty levels.
- **Left mouse button:**
  - Over the difficulty selection area in the lower three lines of the screen, allows the selection of the difficulty level. If that level is already selected, the game will start.
  - Outside the lower selection area, the game will start at the currently selected difficulty level (same as pressing **SPACE** or **Joystick button 'A'**).
- **SELECT:**  
Shows the Credits screen.
- **SPACE, Joystick button 'A':**  
Starts the game at the currently selected difficulty level.
- **I, CTRL, Joystick button 'B', right mouse button:**  
Shows a screen with instructions.

### INSTRUCTIONS SCREEN, CREDITS SCREEN:

- **ESC, CTRL, Joystick button 'B', right mouse button:**  
Returns to the Main Menu.

### GAME SCREEN:

- **Cursor keys, joystick, mouse:**  
Moves the pointer over the game field.

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<sup>2</sup> There is information that the **Gradiente Expert** does not support a mouse connected to port #2 due to the lack of a +5V connection to this port. In this case, the mouse should be connected to port #1.

- **SPACE, Joystick button 'A', left mouse button:**

Removes the tile under the pointer if present. If there is a mine under the tile, it will explode, and the game will be over. In case a flag has been previously placed there, nothing will happen (the flag protects the tile from being removed).

- **CTRL, Joystick button 'B', right mouse button:**

If the pointer is over a tile, a flag (if available) will be placed there. In case there is a flag there already, it will be removed. No action elsewhere.

- **Simultaneous<sup>3</sup> pressing of: CTRL+SPACE, Joystick buttons 'A' and 'B' or both mouse buttons:**

- over an open location with no numbers: nothing happens.
- over a numbered location where all the adjacent cells were already removed or flagged: nothing happens.
- over a numbered location with adjacent unopened tiles:
  - If the number of flags adjacent to the location matches the number, all remaining unopened tiles will be removed (as if you clicked over them). This is very important and super useful to progress; in fact, the conscient use of the simultaneous click is the main strategy to win the game. Please note that if a flag was wrongly placed, the unprotected adjacent mine will promptly explode, and you will lose the game.
  - If the number of adjacent flags doesn't match the number of the location, all unopened adjacent tiles will flash, and you will hear a warning sound (see Figure 5). This can (and should) be used as an efficient strategy to quickly locate cells containing hidden mines.
- If you perform this action over an unprotected tile, the outcome depends on which button of the pair is recognized as being pressed first (see note 3 below). So, you are advised to avoid pressing both buttons over unprotected tiles, since it is not necessary for the game and is potentially dangerous. See also Hint #3 for extra protection.

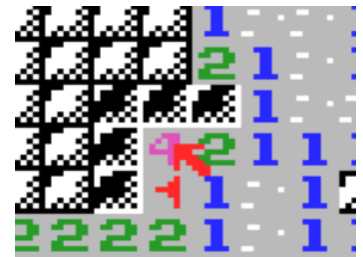


Figure 5: a double-click on the cell marked with a "4" with only one flag adjacent to it

- **ESC:**

Removes at once all remaining unopened tiles. If you haven't removed any tile yet, it will return to Main Menu.

- If you have not placed all the flags, you will lose the game.
- If you have placed all the flags but made a mistake, the unprotected mine will explode, and you will lose the game.
- If you have placed all the flags correctly, then you will win the game. **ESC** can be strategically used this way to save time.

## END SCREEN:

- **SPACE, CTRL, Joystick, or mouse buttons:**

Go back to the Main Menu.

## HINTS & TIPS:

- 1) Use the simultaneous pressing of both keys or buttons strategically; this will make the game easier to play and will save you a lot of time (provided you have been placing the flags in the right places).
- 2) Placing flags is a priority. "Empty" tiles can be removed at once later by pressing **ESC** once you placed all flags. This will save you considerable time, too.
- 3) As noted before, when using the simultaneous key/button press, try to press the secondary key/button first. In case the pointer is by mistake over an unopened cell, it will just place a flag (that you can then easily remove) instead of removing the tile and risk an explosion.
- 4) Last, but not least: consider playing with a mouse; it is *MUCH* more fun! ;)

<sup>3</sup> Since it is virtually impossible to click two buttons at exactly the same moment, we recommend that you start by clicking **CTRL, Joystick button 'B'** or the **right mouse button** *slightly before* pressing the other key or button.

# MINE FINDER

2022 by Paolo Fabrizio Pugno

## **Program, Graphics & Sound:**

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## **Thanks to:**

Marcus Garrett

Cesar Tiossi

Jan Inhetvin Jr. (*in memoriam*)

Mario Camara

Ricardo Ornellas (Jaú)

This program was entirely developed in Z80 assembly language and generated using RASM v1.8a  
RASM by EdouardBERGE - <https://github.com/EdouardBERGE/rasm>

All music was developed using Arkos Tracker 2 version 2.0.1

Arkos Tracker by Julien Nevo a.k.a. Targhan/Arkos - <https://arkostracker.cpcscene.net>