



Welcome to the guide to the new PolyGame Master Extended BIOS (placeholder name).

## Index:

### Section 1:

Settings Menu

### Section 2:

RAM test display

### Section 3:

Pause menu

### Section 4:

Cheat Menu

### Section 5:

Memory Viewer

### Section 6:

Development

### Section 7:

Credits

Documentation by IQ\_132. PGM Extended BIOS based on software copyright International Games System. <http://www.igs.com.tw/>

For more information visit <http://neo-source.com> or <http://www.igspgm.com>

## Section 1. The settings menu:



This menu can be accessed by setting the test (diagnostics) switch on start-up. Press up/down on the player 1 joystick to select the desired setting, and P1 button A to cycle through each option for that setting or by the in-game pause menu (section 3).

The “**FORCE REGION (IF AVAILABLE)**” setting attempts to override the regional settings supplied by the protection device in each game cartridge. It is not 100% guaranteed to not cause glitches or even to work.

The “**SHOW BIOS ANIMATION**” setting disables the animated ‘PGM / PolyGame Master / IGS’ animation that plays normally on bootup.

The “**ENABLE PAUSE MENU**” enables a pause menu in-game that can be brought up by pressing P1 Start and P2 Start simultaneously.

The “**PERFORM RAM TESTS ON START-UP**” does an extensive battery of tests on all the on-motherboard RAM regions. You must reset the system after enabling this setting.

The “**CALCULATE CART CRC32(S)**” option (highlight and press P1 button A) will output CRC32s of each 1mb of cartridge ROM. This is helpful for verifying that your cartridge is a new / unknown version.

The “**SAVE AND EXIT**” option (highlight and press P button A) will advance to the either the start-up animation or the game depending on the whether the setting above is toggled on or not.

The text at the top right is the cartridge’s internal name of the game, internal version number, and compile date of the cartridge. It is not guaranteed that the cartridge has an updated version number of compile time. IGS was not particularly good at updating these. If a cartridge is not inserted, this is not displayed.

## Section 2. The RAM test display:



This screen tests all the main RAM regions of the PGM motherboard multiple times. Any failures are noted. This screen will display until P1 Button A is pressed. It can be triggered by enabling this option from the settings menu and rebooting the system. To loop this test, enable the ‘Test Mode’ dip (#0).

This is particularly helpful when attempting to diagnose an issue with a PGM motherboard.

## Section 3. The in-game pause menu:



The in-game pause menu can be triggered by pressing both the P1 START and the P2 START buttons simultaneously. Highlight any of the options with the P1 Up or P1 Down on the joystick and select the desired option with P1 button A. Note that it is normal for the music to continue playing as the sound processor (Z80) is not stopped or reset during the pause menu's interruption. The pause menu can be exited by pressing P1 button A while "PAUSE" is highlighted or by pressing P1 START.

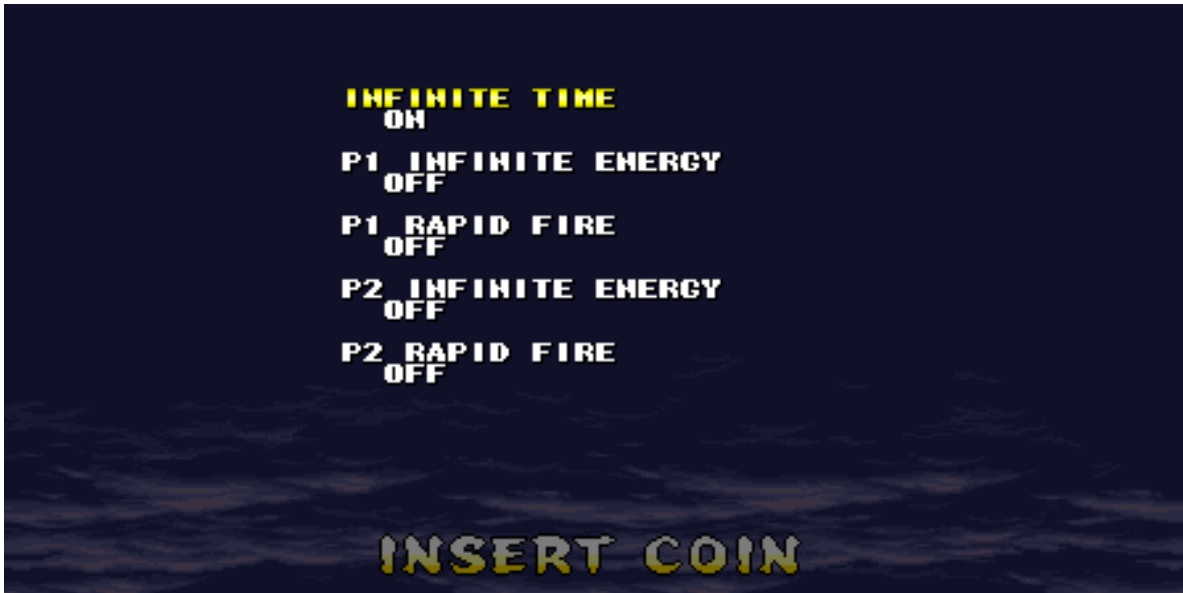
For more information regarding the CHEAT MENU, view section 4.

For more information regarding the MEMORY VIEWER, view section 5.

The "**SOFT RESET**" option reboots the system. This is useful for a variety of reasons, but can be very buggy, especially for later PGM games (Demon Front, SVG, The Glad, Killing Blade Plus, Happy 6in1) that predominantly run the game code on the ARM7, on cart, processor. It is not guaranteed to work properly at all.

By pressing the P1 stick LEFT or RIGHT, with "SOFT RESET" selected, you can select the "SETTINGS" option. By pressing P1 button A, the "SETTINGS MENU" can be selected.

## Section 4: The Cheat Menu



The cheat menu, accessed through the pause menu (refer to section 3), displays a list of cheat options that are enabled on a per-game basis.

The list of cheat codes is hard coded into the BIOS and cannot be updated or changed without a BIOS chip replacement / update.

To select a cheat, press UP or DOWN on the P1 joystick.

To toggle a cheat on or off, press RIGHT or LEFT on the P1 joystick.

To exit this menu, simply press P1 START and it will return you to the "PAUSE MENU".

Please do note that cheat codes are not a fully tested or supported feature. Enabling these may cause abnormal behavior of your game, including causing crashes or possibly wiping saved data to memory.

Use cheats are your own risk!

## Section 5: The Memory Viewer

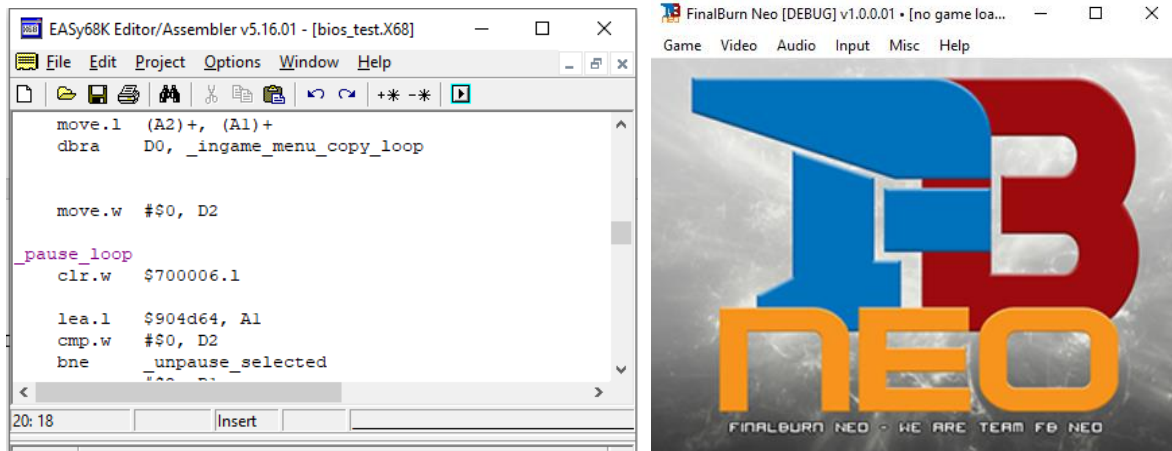


The memory viewer function is controlled by the P1 inputs. The display shows the current memory offset to the left (in blue) and across the top (00, 01, 02, ETC). The controls are as follows:

- P1 joystick UP subtracts -#10 (16 dec) from the offset.
- P1 joystick DOWN adds +#10 (16 dec) to the offset.
- P1 joystick LEFT subtracts -#100 (256 dec) from the offset.
- P1 joystick RIGHT adds +#100 (256 dec) to the offset.
- P1 button A subtracts -#10000 (65536 dec) from the offset.
- P1 button B adds +#10000 (65536 dec) to the offset.
- P1 button C adds +#100000 (1048576 dec) to the offset.
- P1 START exits the memory viewer and returns to the Pause menu.

This is particularly useful for inspection areas of ROM for changes, RAM for stored values, and generally inspecting the 68K's memory map for any useful data.

## Section 6. Development:



Development of this hack / modification was done using the Motorola 68K IDE Easy68K software <http://www.easy68k.com> and the software emulator FinalBurn Neo: <http://neo-source.com>

## Section 7. Credits:

**gc8tech** for the great suggestions and development hardware

<http://www.igspgm.com>

**Dink** for the input and testing

<http://neo-source.com>

**EL Semi** and **David Haywood** for the PGM documentation in MAME [www.mamedev.org](http://www.mamedev.org)

<http://nebula.emulatronia.com>

<https://mamedev.emulab.it/haze/>

**Pugsy** for the cheats

<http://cheat.retrogames.com>

Last edited: April 26, 2021 5:04 PM