

# CoCo EPROM Pak

## DISCLAIMER

CoCoEPROMpak is a free hardware design conceived of, and first produced by, Mark J. Blair under the GNU General Public License. For further information please see <http://gnu.org/licenses>.

This "Version 1.0.3." of the design was modified from the original by Chad Hendon. All credits, rights and licenses have been preserved.

**Many Thanks to Mark J. Blair for his hard work on this project!**

Check out his page on this here.

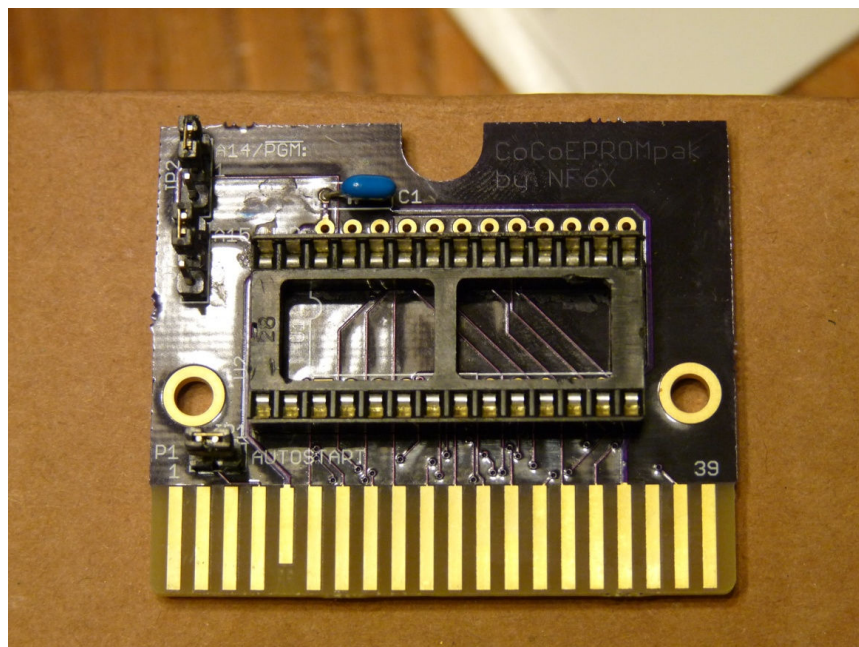
<http://www.nf6x.net/tag/cocoeeprompak/>

## Board Versions

Version 1.0 of the board provides support for 2732, 2764, 27128, 27256 and 27512 EPROM types ranging from 4K through 64K. The board could be fitted with a 24-pin socket for 2732's OR a 28-pin socket for the higher capacity chips (See Figure 1 below). Chips ROM's greater than 16K in size can also be set to operate in "banks" of the ROM image. For example, with a 27256 chip, containing 2 x 16K ROM's combined into a single 32K chip, the separate 16K ROM's can be selected via jumpers at JP2 and JP3. 16K chips and below do not require jumpers on JP2 or JP3.

Version 1.0.1 adds support for 8K banking and a LED indicator to show that the Color Computer is powered.

Version 1.0.3 adds support for 32K banking.



Version 1.0 (Figure 1)

- AutoStart Jumper (JP1 at lower left)
- 16K bank select jumper (J2 and J3 at top left)

The following table assumes that the >16K ROM was flashed with a image that placed the lower banks at the beginning (or lower addresses) of the ROM image.

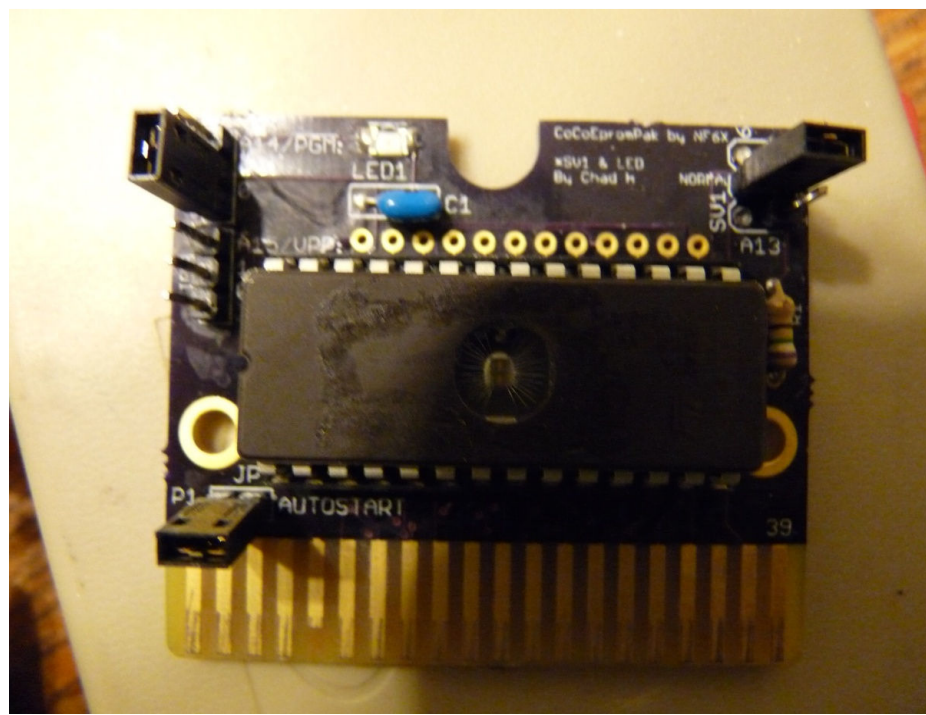
**ON = Jumper the upper 2 pins (1)**

**OFF=Jumper the lower 2 pins (0)**

**Bank Select table (16K paging)**

| Bank Number | JP3 | JP2 |
|-------------|-----|-----|
| 1           | OFF | OFF |
| 2           | OFF | ON  |
| 3           | ON  | OFF |
| 4           | ON  | ON  |

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Version 1.0.1 (Figure 2)

V1. 0.1 Features and Changes:

- All version 1.0 features and support retained.
- Addition of 8K bank select via SV1 jumper (jumper to NORMAL as in Figure 2 to remain in the original 16K mode). Up to 4 banks with 27256, 8 banks with 27512.
- Addition of LED indicator to show the Color Computer is powered.

**Bank Select Table (8K paging)**

| Bank Number | JP3 | JP2 | SV1 |
|-------------|-----|-----|-----|
| 1           | OFF | OFF | OFF |
| 2           | OFF | OFF | ON  |
| 3           | OFF | ON  | OFF |
| 4           | OFF | ON  | ON  |
| 5           | ON  | OFF | OFF |
| 6           | ON  | OFF | ON  |
| 7           | ON  | ON  | OFF |
| 8           | ON  | ON  | ON  |

Bank mode table

| Mode | SV1    | SV2    | JP3 |
|------|--------|--------|-----|
| 8k   | 0/1    | 0/1    | 0/1 |
| 16k  | NORMAL | 0/1    | 0/1 |
| 32k  | NORMAL | NORMAL | 0/1 |

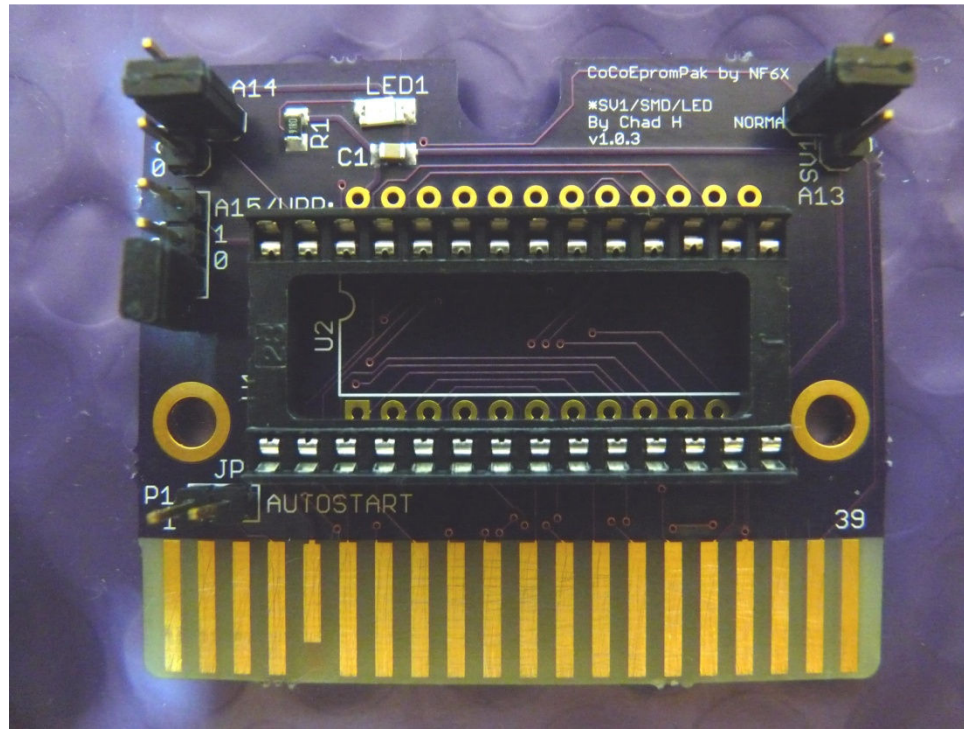
\*\*32k mode possible as of revision 1.0.3. \*\* ONLY COMPATIBLE WITH COCO 3 DUE TO GIME CHIP ON THAT MODEL. \*\*

## Chip Jumper Usage

\*\* = Use normally

| Chip  | SV1      | SV2      | JP3      |
|-------|----------|----------|----------|
| 2764  | 0FF or 1 | 0FF or 1 | 0FF or 1 |
| 27128 | **       | 0FF or 1 | 0FF or 1 |
| 27256 | **       | **       | 0FF or 1 |
| 27512 | **       | **       | **       |

\*\*When using a chip with less capacity than the jumper applies to, that jumper is not necessary. If left on, jumper it to 1. \*\*



Version 1.0.3 in 32K mode (Figure 3)

*Note the facing Jumpers at SV1 & SV2 (A13 & A14 lines)*

## \*\* Combining ROM's for flashing \*\*

Not all Flash programmer softwares have the ability to merge/append multiple ROM's into one single image.

If you have Windows (command line) or MS-DOS, here is a way you can combine your 8K or 16K .ROM files into one big .ROM file for flashing to EPROM.

In the following example, we will combine 4 original ROM's into one (4BANKS.ROM). The /B parameter just forces a Binary copy operation. Using this sequence, the individual banks could be selected utilizing the tables above (**IF all original ROM files are equal in size!**)

```
COPY BANK1.ROM/B 4BANKS.ROM
COPY 4BANKS.ROM/B+BANK2.ROM/B
COPY 4BANKS.ROM/B+BANK3.ROM/B
COPY 4BANKS.ROM/B+BANK4.ROM/B
```