



Thank you for purchasing the DECromancer MFM Emulator!

**Please follow these important steps before using your new device.**

- The emulator *must be powered from the 4-pin Molex power connector when in use.*
- USB devices *must be plugged in prior to powering up the unit* for recognition.
- The 4 USB ports provide minimal power and are intended for “thumb” flash drive connection only. The following devices are supported only when connected via an externally powered USB hub:
  - Amazon Basics USB 3.0 to 10/100/1000 Gigabit Ethernet Adapter
  - Cable Matters USB 2.0/3.0 Ethernet /RJ45 Adapter Model No. 202023
- Connectivity to the emulator is possible via USB “Gadget” Ethernet support on the micro USB port . Your macOS or Linux PC will see the device at 192.168.7.2 or 192.168.7.3; set your host as 192.168.7.1. Windows 10 & 11 machines may require manually installing an RNDIS driver; contact us if you have any problems.

Unfortunately, the Beaglebone Green Wireless BT/WiFi functionality requires expansion pins used by the MFM Emulator, and has to be disabled in software.

- If you intend to use the auto-start capability, *you must edit the `/etc/mfm_emu.conf` file* and set **PowerFailOptions="--scale 0.1213"** before enabling the systemd unit. For more information on full voltage calibration in your system, see the link in the notes at the bottom of our website @ <https://decromancer.ooo/mfm-emulator/> .
- The MFM Emulator now ships with **a free 4GB microSD card**. This card is mounted by default at `/mnt`. We recommend placing any drive images you wish to emulate on this card, to prevent eMMC wearout. If you substitute a different card, it must have a single FAT partition and be labelled **MFMEMULATOR** for the auto-mount to work correctly.
- Your cape has been shipped with the supercapacitors discharged and shorted for safety. Before using the device, be sure to move the **CAPS** jumper from **DRAIN** to **FILL**. This gives the Beaglebone about 1 minute to shut down gracefully at power-off.
- The images pre-loaded onto the BBGW are slightly modified from David Gesswein's base image, to include the correct device tree overlay for the BeagleBone we ship and drivers for the tested 3<sup>rd</sup> party Ethernet adapters. Our website has instructions on how to re-flash your Beaglebone if necessary.
- The easiest way to keep your image up to date is to use **git** to clone the latest mfm emulator code to the `/root` directory if desired. The latest code is always available at <https://github.com/dgesswein/mfm> .

Keep those old machines running!

— The DECromancer