Ming Mecca Micro info

these files will work with both the Ming Mecca and Ming Micro devices.

[**Ming Micro MIDI Implementation.pdf**](https://www.muffwiggler.com/forum/download/file.php?id=51166)

(43.65 KiB) Downloaded 2 times

[**Ming Mecca Users Guide.pdf**](https://www.muffwiggler.com/forum/download/file.php?id=51165)

(14.55 MiB) Downloaded 1 time

These are the sample world designs:

[**World\_Packs.zip**](https://www.muffwiggler.com/forum/download/file.php?id=51164)

(13.58 KiB) Downloaded 2 times

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and here is the info from the TXT files:

**MING MICRO QUICK START GUIDE**

Turning on the Device

Ming Micro does not have a power switch. Simply connect the AC Adapter to the power port.

Handling the Device

Ming Micro is fairly robust but, as an exposed PCB, some care must be taken not short components during operation. Do not touch the bottom of the PCB (even with your hands) during operation. If you do, it won’t hurt Ming Micro, but it can cause the main processor to crash, requiring physical reset (i.e., the Reset Button, instead of the Reset CC).

Hot-Swapping

Ming Micro is fully hot-swappable —all cables, jumpers, and even the SD card can be inserted or removed live without damaging the device or interfering with operation. Take care not to remove the SD card or power off Ming Micro during SD Read/Write operations, however (indicated by the READ and WRITE LEDs)

Selecting USB or DIN MIDI

Jumpers J4 and J3 toggle between USB MIDI and DIN MIDI. Their positions are marked on the board. both jumpers should always be moved together.

Using USB MIDI

Ming Micro is a fully class-compliant USB device, so no driver installation should be necessary. When you connect Ming Micro via USB, Audio MIDI Setup (or, on Windows, the device manager) should show a new midi interface labeled “Ming Micro.” Ming Micro will display both an input and an output. The output is not currently used.

Loading and Saving World Packs

To load a World Pack, simply insert an SD Card with a WPACK.TXT file and press the Reset button once. Ming Micro will reboot and load the new World Pack into memory

To save a World Pack, hold the save button for 3 seconds. A progress bar will appear on the LED graph display. Once completed, it’s safe to remove the SD Card.

Note that saving will override (replace) any WPACK.TXT file currently on the SD Card.

Loading and Saving can also be automated using MIDI CCs 46 and 47 (see midi implementation chart).

Updating Firmware

Unfortunately, there wasn’t enough room left in memory to include an SD boot loader.

Firmware can be updated in two ways:

1. Replacing the Firmware EEPROM

2. Programming the existing EEPROM using the PGM port

to program the existing EEPROM, you’ll need to purchase the Parallax Prop Plug, available here:

<https://www.parallax.com/product/32201>

Otherwise, i can send you new pre-programmed EEPROMs as needed (or, you can program the EEPROMs yourself directly, if you already have an external EEPROM programmer). the EEPROM is socketed for easy removal.

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**Ming Mecca / Micro Users Guide Note**

Since Ming Micro and Ming Mecca share the same underlying architecture, we’ve included a copy of the Ming Mecca User’s Guide for reference. Chapters 1, 2, and the appendices can be safely ignored, but Ming Micro owners should find chapters 3, 4, and especially 5 to be illuminating. Chapters 3 and 4 deal with the graphics engine architecture, and include a number of helpful illustrations. Chapter 5 deals with World Pack creation (a .TXT asset format common to both systems), and contains a brief overview of WPACKer, our .PNG to .TXT conversion tool.

Although the Mecca and Micro engines are similar, they are not identical; a list of Ming Micro’s differences from Ming Mecca is provided below.

MING MICRO hardware:

Choose between the integrated USB/MIDI interface or standard MIDI DIN

Class Compliant USB support on all OS’s or optional proprietary low-latency driver for Windows

Audio and Video output on RCA jacks

9V DC power input

Save and Reset buttons

LED Graph Display visualizes MIDI/Engine activity and system states

SD Card Slot loads WPACK.TXT and CONFIG.TXT files, fully cross-compatible with MING MECCA

Expansion Port

Differences from Ming Mecca:

Increased sprite and tile count: 3 sprites, 4 tiles

Sprites can be positioned in coarse (cc) or hi-res (pitch bend) modes

Improved Tile Map Editing uses x / y positional system

Dynamically modify palettes by editing individual colors

Pixel Draw system allows Tile and Sprite graphics to be modified, erased, or created in realtime

Save function commits any changes to WPACK.TXT

All new glitch system allows RAM to be “scrolled” using hi-resolution pitch bend messages

Software emulation of Oscillographic Block’s SN76489AN audio chip

3 channels: square1, square2, noise

pitch and amplitude control of all channels

Includes hi-resolution mode using pitchbend messages to control chip’s full frequency range

MIDI keyboard (note / velocity / pitch bend) support, includes basic “note stack” for trills and ostinattos

Sprite Lock feature allows audio parameters to be internally driven by sprite position

no collision

no gravity

no relative sprite position

no gamepad support

no physical interface except for Save and Reset buttons