

Brotech Electronics

- **Mini Midi Sequencer**
- **Mega Midi Sequencer**

Tablet Wireless Midi Controller/Sequencer/Player

The Mini Midi (mMS) and Mega Midi (MMS) Sequencer are tablet controlled midi players for use with midi enabled automated musical instruments such as a band organ. It works with all midi to parallel interfaces. The mMS/MMS reads type 0 midi files from a local SD memory card, sequences the midi information and streams it to an external instrument. The hardware is controlled wirelessly via Bluetooth linked to an Android tablet using a custom App. The tablet acts as a remote directory and filename viewer and selector. The file and directory names are alphabetically sorted in a scrolling list. The custom App has soft keys for Play Selection, Stop, Play Sequential, Play Random, Tempo change, and more... Can also play songs in order from a playlist. Edit it yourself or use our simple companion *MMS Playlist Editor App* and create a playlist using the tablet.

The system ships with mMS or MMS custom hardware, standard 7" Android OS tablet (8" with HD display optional) with the mMS/MMS App preinstalled, 4Gig SDHC class 4 SD memory card, Power Supply, inline switch (customer can use their own Android tablet).



Mini and Mega Midi General Operation

One adds songs and directories to the memory card using a personal computer and SD memory card adapter. An unlimited number of directories can be created, and each directory can store up to 1500 songs. After this, the SD card is inserted into the mMS/MMS hardware, the system is powered on, and with the App running, the tablet can be linked to the hardware.

When they first link or whenever the directory is changed, all {/Root} directory names and all midi and playlist filenames in the current directory are uploaded quickly and wirelessly to the tablet (the default boot directory can be set by the user). These names are presented in a scrollable list on the tablet, alphabetically sorted and separated by directory, playlist, and midi files.

One can scroll through the list and select and play any individual song by tapping on it. In a similar way, one can select a new directory by tapping on it (equivalent to changing directories on a computer). One can also select a playlist and play songs in order.

Besides selecting individual songs, one can also use the App softkeys to play songs automatically in either of continuous *Sequential* or *Random Play*, or press the *STOP* key to quickly terminate current song play. In autoplay modes, the selection bar on the tablet shows the next song countdown and the currently playing song name.

The tablet does not actually stream any midi data - it only acts as a remote menu control. All midi files are played from the mMS/MMS hardware local SD memory card. The tablet is only used to select which song to play, or what auto play mode to play in, and this is why the system works so reliably. Once set to playing a song, the mMS/MMS hardware will continue playing even if the tablet enters sleep mode or is powered off. Songs never stop midstream, mid-play - unless you press the *STOP* button.

Whenever a song is playing, one can select the BPM skeleton keys to increase or decrease the playing song tempo. There is also a control for settings the in-between song delay (silence) during auto play, 0-60 secs.

Besides tablet control, both systems have standalone basic automatic sequential or random play capability, and can play midi songs without the tablet. This is useful for quick song play test, or anytime one does not want to or can't use the tablet.

Unique to Mega Midi (MMS)

The MMS hardware also has a 4x20 LCD display, and dedicated controls to set the in-between song interval delay, and a mode selector switch to select any of *Continuous Auto Random Play*, *Continuous Auto Sequential Play*, or *Normal Tablet Remote* play. The LCD display shows status messages and currently playing song.

General Hardware, Controls, Ports, Technical

Midi Output Connector: A standard midi compliant 5-pin female DIN connector

SD Memory Slot: Accept standard SD Memory card – depress to seat, depress again to release.

DC Power Jack: DC power jack, 5.5mm x 2.1mm DC barrel plug, center positive polarity. Inline DC switch

Songs and Naming: Maximum midi filename length = 88 characters, and the maximum directory name length = 88 characters; Max number of songs in any single directory = 1500 (anything above these limits are ignored)

Autonomous play: mMS/MMS hardware have some rudimentary play capability without requiring a connection to the tablet. This feature is useful for testing new songs, and auto-play at power-on

Audible status signals: The mMS/MMS hardware can play user set status notes through the instrument. This feature provides useful audible feedback (much like an automobile electric lock and key fob)

Configuration File: The user can change the power-on Default Directory, and set other user selectable features by editing the *MegaMidiConfig.txt* configuration file, using a standard text editor.

Bluetooth: Typical Bluetooth range is at least 10M (at least 30feet)

Power: A/C adapter, 9VDC/1A, center positive, 2.1 x 5.5mm barrel plug

SD Memory Card: FAT32 file system, SDHC card up to 32G, tested speed class 4; standard file/directory naming convention

Serial USB Connector (Mini Midi only): future functionality

Mega Midi Sequencer - Hardware, Controls, Ports, Technical

Mega only:

LCD Display: 4 rows by 20 columns, displays current directory, current song, and status messages

Rotary Control Song Interval: Set silent time in-between songs during auto play, 0 to 60 seconds

Rotary Selection Switch (3 position)

Auto Sequential Play: Automatically play sequentially all songs in the current directory – this mode does not require the tablet.

After the last song completes, it loops back and repeats from the first song

Auto Random Play: Automatically play all songs in the current directory, randomly – this mode does not require the tablet. It plays continuously until another mode is selected

Tablet Remote: Set to Normal Tablet control mode

Sequencer App - Soft-Key Controls, and Indicators

STOP: This soft-button stops the currently playing midi song

PLAY SEQUENTIAL CONTINUOUS: Play all songs in the current directory, sequentially; after the last song, return to beginning and starts again (soft-button). Currently playing song is displayed on the tablet selection bar

PLAY RANDOM CONTINUOUS: Play all songs in the current directory, randomly. Keeps playing until STOP (soft-button). Currently playing song is displayed on the tablet selection bar.

Selection Bar: scrolling list selections that are tapped, are copied to this command bar. When the command bar is then tapped, the song plays or a directory change is initiated

BPM up/down: Two skeleton buttons to temporarily slow or speed up the currently playing song. The Beats Per Minute speed (BPM) is displayed on the MMS hardware LCD, and on the Mini Midi - briefly displayed on the tablet selection bar.

DLY up/down (Mini only): The two skeleton buttons change from BPM to DLY in the home screen when no songs are playing. They are used to set the in-between song interval delay during automatic play.

BTCONNECT: When tapped, reasserts Bluetooth connection; when pressed and held - restarts the Bluetooth link

DIR: Shows the currently selected directory

Bluetooth Status Indicator: blinking green indicates active and connected Bluetooth; red indicates disconnect

Status Messages: status messages appear from time to time briefly on the display and then disappear.

Tablet sleep mode: The mMS/MMS hardware will continue to play even if the tablet enters power saving sleep mode. Upon awakening, the tablet automatically reconnects to the mMS/MMS

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Satisfaction Guarantee: We want the Mini/Mega Midi Sequencer product to work for you the way you need it to, understanding that different applications may require different solutions. The customer has up to 30 days, to evaluate and try the system, and if it doesn't meet your requirements you can return it for credit. The items must be returned in like-new condition. Contact us first for a return authorization (RMA). The customer pays for UPS tracked and insured shipping. Under these conditions and upon receipt of the returned hardware, a full refund will be provided, less the shipping charges. The tablet cannot be returned if it has been registered in an end user Amazon account. In that instance, we will only refund the cost of the custom hardware.

Product Warranty: The Brotech Electronics Min/Mega Midi Sequencer custom hardware is guaranteed free from defects in material and workmanship for a period of 1 year from date of purchase. In the unlikely event that you experience a problem, contact us and we'll try to find a resolution. If the product needs to be returned for repair, contact us first for a return authorization (RMA). The customer pays for UPS tracked and insured shipping one way. Brotech does not warranty the tablet. Any tablet warranty or operating problems must be resolved through the manufacturer directly.