MEMOTRON m2k

OS v1.3

User Manual

manikin
electronic

Preface

Many thanks for purchasing the Memotron m2k. The Memotron m2k enables you to reproduce the famous sound of the original vintage instrument with highest authenticity. Thanks to latest digital technology, the Memotron m2k is easy to use and most reliable in every stage and studio situation.
To become quickly familiar with the Memotron m2k's capabilities, we recommend you to take a break and study (and internalize...) this manual first.
Enjoy your Memotron m2k!

Your Manikin team

The Memotron m2k development team:

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Axel Jungkunst	:	Beta testing
Version	:	March 2016

Note

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Introduction

About the Memotron m2k

The Memotron m2k is an advanced sample playback based musical instrument. It can emulate the famous, specific and genuine sound in highest audio quality. Thanks to its digital technology, the Memotron m2k is most reliable and easy to use. Features are:

- Access to up to three sounds simultaneously
- Fully polyphony
- Internal, adjustable effect processor
- Complete MIDI implementation
- Internal data storage, import of new sounds by means of an external memory card (SD card)
- Compatible with G-Media M-Tron® sound library

The special characteristics of the original have been carefully emulated. This includes a maximum duration of a played note of about 8 seconds (about 16 seconds at HALF SPEED).

The Memotron m2k supports standard data structures of memory cards. This compatibility enables you to create and organize your own Memotron m2k sound library with your PC.

The Memotron m2k is fully compatible with G-Media's M-Tron® plug-in and can play its sounds (recognizable at the ending .cpt). The Memotron m2k is **not** compatible with the newer M-Tron Pro® plug-in.

About this manual

This manual is intended to make the first steps of using the Memotron m2k easier for you. Moreover it also provides support and hints to the experienced user for his/her daily work.

Symbols used

To ensure a better overview, this manual uses standardized spelling and symbols which are explained below. Important notes are highlighted in bold print.

! **Attention – Pay special attention to this note to avoid malfunctions**

• **Some short additional information is given**

+ **Instructions – Mind these instructions to execute the requested function**

Marking of parameters

All designations of buttons, controllers and parameters of the Memotron m2k in the text are highlighted in **bold print**.

Example: Press the **ESC** button

The value range permitted for a parameter setting is highlighted by indicating the maximum and minimum values in italics, separated by three dots. Settings, which can not be represented by a value range, are separated by a comma.

Example: **Rx Channel** *01... 16, omni*

General safety instructions

Please read the safety instructions below very carefully. They comprise some basic rules for the use of electronic devices. Please read all the notes before you start using the device.

Suitable location

- Only operate the device in closed rooms.
- Never operate the device in humid environments such as bathrooms, washing rooms or swimming pools.
- Do not operate the device in extremely dusty or dirty environments.
- Ensure unhindered air supply to all sides of the device. Do not place the device in close proximity of heat sources such as radiators.
- Do not expose the device to direct sunlight.
- Do not expose the unit to heavy vibration.

Mains connection

- Only use the supplied connection cable or the supplied power supply.
- If the supplied mains connector does not fit into your socket you should consult a qualified   electrician.
- Disconnect the mains connector from the socket if you do not use the device for a longer period of time.
- Never touch the mains connector with wet hands.
- When disconnecting, always pull the connector and never the cable.

Operation

- Never place any vessels containing liquids on top of the device.
- Ensure that the device cannot move during operation. We recommend to install it into a 19'"rack or to put it on a sturdy pad.
- Ensure that no objects can get inside the device. Should this happen against all odds, switch the device off, disconnect it from the mains and contact a qualified technician.

Maintenance

- Do not open the device. Any repair or maintenance should be done by qualified tech-personnel only. There are no parts inside the device that could be maintained by the user. You will also lose your right to claim warranty if you open the device.
- Only use a dry, smooth cloth or brush for cleaning the device. Do not use any alcohol, solvents or similar chemicals that will damage the surfaces.

Proper use

This device is exclusively intended for creating audio signals and creating / processing control signals according to the MIDI standard. Any other use is not permitted and will exclude any warranty claims towards Manikin Electronic.

Controls & Connectors

Top

DATA: Encoder with click function to edit menu-driven functions
ESC: Exits the current menu page, cancels a function
HALF SPEED: Simulates the halving of the tape speed
A B C: Simulates the track selector for shifting the tape heads from sound to sound
PITCH: Pitch alteration by +/- 3 halftones
TONE: Changes the sound by means of a 12 dB lowpass filter
VOLUME: Master volume

Rear Panel

OUTPUT Phones: Headphones output jack
OUTPUT Left / Right: Audio output jacks, line level, unbalanced
PEDAL Volume: Socket for a volume pedal
LCD: Contrast control for the LC-display
CARD: Card slot for insertion of an external memory card (SD card)
MIDI In: MIDI-Data input jack
MIDI Out: MIDI-Data output jack
MIDI Thru: Data coming in on MIDI-In jack is transmitted to the MIDI-thru jack
AC In: Power supply socket (110V – 240VAC & 50Hz / 60Hz)

Setting Up

Unpacking

When unpacking, please check if all parts are included. If something should be incomplete, please contact your local Manikin dealer immediately.

The Memotron m2k box contains:

- the Memotron m2k
- power cable
- this user manual
- one memory card (SD card)
- one DVD packed with sounds

We recommend to keep the original box for further transportation – or better – purchase a suitable case.

Installation

Set up the Memotron m2k on a clean and smooth pad. For this purpose four stable feet are provided underneath the Memotron m2k.

Connections

You require a mains outlet and a suitable audio system or at least headphones.

$+$ **The Memotron m2k automatically adapts to your local power system (110V – 240V AC& 50Hz / 60Hz)**

$+$ **How to hook up the Memotron m2k:**

$+$ Make sure that both the Memotron m2k and your audio system are powered OFF.

$+$ Connect the included power cable to the Memotron m2k's AC socket and to a suitable power outlet.

$+$ Connect the audio outputs of the Memotron m2k to the line-level inputs of your audio system. Use shielded high quality 6,3 mm mono jack cables.

$+$ If you wish to play the Memotron via a suitable external MIDI-keyboard or –sequencer (e.g. the Manikin Schrittmacher), please connect the MIDI input of the Memotron m2k with the MIDI output of a master keyboard, a computer or a sequencer (like the Manikin Schrittmacher) using only fitting MIDI cables.

$+$ Power ON the Memotron m2k and subsequently your audio system (!)

Proceed with the chapter "Basic Operation" on the next page.

Basic Operation

Power On

Push the **Power** switch on the rear to switch on the Memotron m2k. The Memotron m2k will need some seconds to initialize and will then be ready for use.

! **Attention** – First power ON the Memotron m2k and then power ON your audio system in order to avoid a cracking noise.

• After powering ON the Memotron m2k and the initialization, settings that were stored in a "Default Frame" might be loaded automatically.

Power Off

Push the **Power** switch to switch off Memotron m2k.

! **Attention** – To avoid a cracking noise, first power OFF your audio system and then switch OFF the Memotron m2k.

! By switching OFF the Memotron m2k, all settings will be lost. Thus save your settings as a 'Frame' on a memory card before you switch OFF!

Realtime Sound-manipulation Functions

Up to three sounds (here called tracks) can simultaneously be selected and played in the Memotron m2k. By means of several controls on the top that can not be stored and only serve your performance, the sound of the selected tracks can be processed.

• **A B C** cross-fades the tracks by turning the knob, simulating the Tron's tape heads shifting from sound to sound.

• **PITCH** shifts the pitch 3 halftones up and 3 halftones down. This will slightly affect the maximum duration of a played note.

• **TONE** changes the sonic character with help of a passive 12 dB lowpass filter.

• **HALF SPEED** emulates the halving of the tape speed. The playback-pitch will be lowered by one octave and the duration of a played note of about 8 seconds is doubled. Using HALF SPEED results in a slight reduction of the audio quality, especially in higher frequency ranges.

• **VOLUME** defines the total output volume.

Menu-driven Functions

All other functions of the Memotron m2k are controlled via the menus with the help of the display and the **DATA** knob. These functions are:

- Load, save and delete frames (sound selection and effect settings) in the Frame Menu

- Select and initialize tracks (sounds) in the Track Menu

- Set the sound parameters in the Sound Settings

- Set the effect parameters in the Effect Setup

- Configure the MIDI interface in the Midi Setup

- Import and delete sound data in the Internal Mem Menu

- Update the operating system with Update.

+ **Basic access to menu-driven functions:**

  1. Move the **DATA** knob to place the *CURSOR* in the desired position. Menus may cover several display pages – simply turn the **DATA** knob...

  2. Click the **DATA** knob to select a function or to enter a deeper menu level.

  3. Move and click the **DATA** knob to select a parameter and to enable a parameter value change.

  4. Move the **DATA** knob to alter the value of the selected parameter.

  5. Press the **ESC** button to cancel a function and / or return to a higher menu level.

The menu overview shows all menu-driven functions of the Memotron m2k.


```
MEMOTRON                 SOUND SETTINGS          FRAME MENU              LOAD FRAME
> Sound Settings <       F:In the Church         Load Frame              Basic
  Effect Setup                                   Save Frame              In the Church      <
  Midi Setup                                     Delete Frame

MEMOTRON                 SOUND SETTINGS          FRAME MENU              NAME FRAME
  Internal Mem           C:Empty Track         >   Init Frame   <        Name frame:
  Update                 B:Empty Track                                    In the Church_
                         A:Empty Track                                   →Entry:      [SAVE]←

                         SOUND SETTINGS                                  DELETE FRAME        DELETE
                         VolumeC:      127<                              In the Church       Delete file:
                         VolumeB:      127                               Flute Mix      <    Flute Mix
                         VolumeA:      127                                                   →Are you sure? Yes ←

                         SOUND SETTINGS                                                      INIT FRAME
                         AttackC:        0                                                   Initialise frame:
                         AttackB:        0
                         AttackA:        0                                                   →Are you sure? Yes ←

                         SOUND SETTINGS          TRACK MENU              SELECT TRACK        SELECT TRACK
                         ReleaseC:       0     > Select Track  <         Basic           <   ..
                         ReleaseB:       0        Init Track                                  2 Saxes TenorAlto  <
                         ReleaseA:       0                                                    2Trombs 2Trumpts

                         SOUND SETTINGS                                                      INIT TRACK
                         PanoramaC:    C00                                                   Initialise track:
                         PanoramaB:    C00                                                    2 Saxes TenorAlto
                         PanoramaA:    C00                                                   →Are you sure? Yes ←

                         SOUND SETTINGS
                         VelocityC:      0
                         VelocityB:      0
                         VelocityA:      0

                         SOUND SETTINGS
                         MixC:           C
                         MixB:           B
                         MixA:           A

                         SOUND SETTINGS
                         PlaceC:       F_3
                         FirstC:       F_3
                         LastC:        F_6

                         SOUND SETTINGS
                         PlaceB:       F_3
                         FirstB:       F_3
                         LastB:        F_6

                         SOUND SETTINGS
                         PlaceA:       F_3
                         FirstA:       F_3
                         LastA:        F_6

                         EFFECT SETUP
                         AMP MODEL:   [OFF]<
                         Prog:     JC Clean
                         Send:          64

                         EFFECT SETUP
                         MOD/DELAY:   [OFF]
                         Prog:       Chorus
                         Send:          56

                         EFFECT SETUP
                         Rate:          40
                         Depth:         30
                         Feedback:       0

                         EFFECT SETUP
                         REVERB/ECHO: [OFF]
                         Prog:   Short Room A
                         Send:          64

                         MIDI SETUP
                         RxChannel:      1<
                         TxChannel:      1
                         LocalCtrl:     On

                         INTERNAL MEM            IMPORT TRACK            IMPORT TRACK        IMPORT TRACK
                       > Import Track  <         Basic                   ..                  Track:      101/320
                         Import Dir             Vintage           <      3 Violins      <    3 Violins
                         Delete Track                                    Brass B             ■■■■■■□□□□□□□□□□

                         INTERNAL MEM            IMPORT DIR                                  IMPORT TRACK
                         Delete All             Basic                                       Track:      101/320
                         Info                   Vintage           <                         3 Violins
                                                                                            ■■■■■■□□□□□□□□□□

                                                DELETE TRACK            DELETE TRACK        DELETE TRACK
                                                Basic                   ..                  Delete track:
                                                Vintage           <     3 Violins      <    3 Violins
                                                                        Brass B             →Are you sure? No ←

                                                                                            DELETE ALL
                                                                                            Delete all
                                                                                            internal tracks !
                                                                                            →Are you sure? No ←

                                                                                            INFO
                                                                                            Tracks:       100
                                                                                            Free:         220
                                                                                            Max:          320

                         UPDATE                                                             LOAD
                         MEMOTRON m2k                                                       m2d_m2k_OS12.mos  <
                         OS v1.1
                         →     Update     ←
```

Track Menu

The Memotron m2k makes use of sound sample data (here called tracks) that can be stored in and loaded from the internal memory. Up to three tracks can be selected and played in the Memotron m2k.

Selecting Tracks

With the **DATA** knob you navigate through the menu levels to the Sound Settings. By pressing the **DATA** knob, you select which track shall be loaded into one of the sound slots (A, B, C). Subsequently you are automatically prompted to the Track Menu where you switch by "Select Track" into the data system of the internal memory.
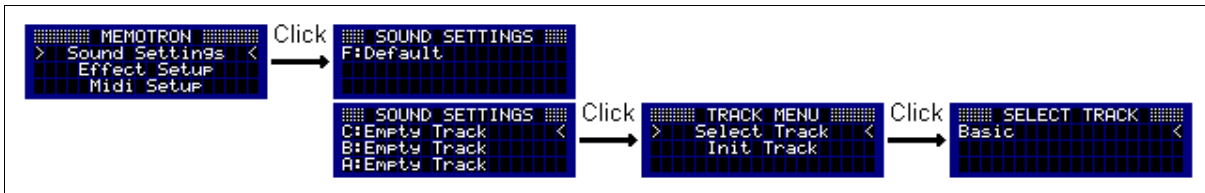
In the data system, directories and data can easily be selected. Pressing the **DATA** knob, enables the change into a sub-directory. Choose ".." to get back to the next higher level. By pressing the **ESC** button you can leave the data system without selecting any track.

Press the **DATA** knob to select the corresponding track. To make things easier, a selected track will then be replaced and without warning all its sound parameters will be initialized. After the completion of the selection process the Sound Settings appear again.

Initializing Tracks

This feature allows to initialize one of the three selected tracks. The track and all its sound parameters will be reset while the effect settings are retained.

Please select from the Sound Settings (A, B, C) the track to be initialized. Now enter the Track Menu and select "Init Track". To cancel the function, choose "**No**" or hit the **ESC** button and jump back into the Track Menu. Choose "**Yes**" to initialize the selected track. When the initialization is done, the display jumps back to the Sound Settings.
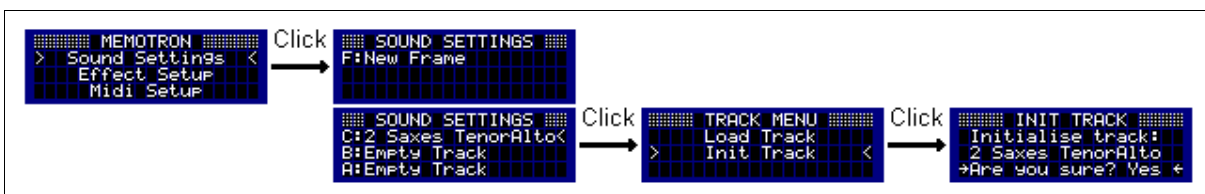
! **The finished initialization can not be made undone!!!**

Frame Menu

Frames offer the possibility to save and manage on an external memory card complete setups consisting of the selected tracks, the associated sound parameters and the effect settings. To this end, these functions are available in the Frame Menu: Load, Save, Delete and Initialize.

! **In a frame, only the names of the tracks are stored, but not the sound data itself. This enables more rapid storage and saves space on the memory card. However, when loading a frame, the selected tracks must be installed in the internal memory.**

Loading Frames

If you want to load a frame, first make sure that the desired memory card is in the Memotron m2k. If this is not the case, please insert the appropriate SD card into the card slot on the rear panel.

Use the **DATA** knob to navigate through the menu levels to the Sound Settings. Here, select "F:" and enter the Frame Menu. By selecting the menu item "Load Frame", you switch to the file system of the external memory card.
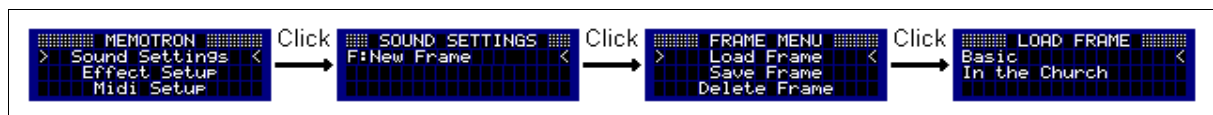
Navigate through the file system and select the desired frame. By pressing the **ESC** key, the file system will be left without loading a frame.
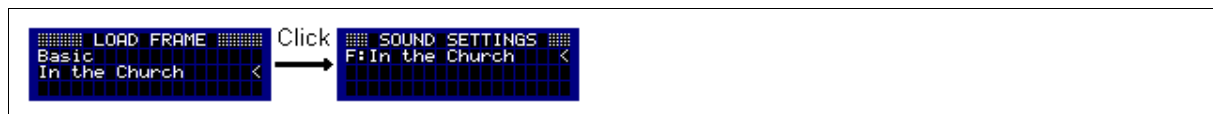
Pressing the **DATA** knob loads the tracks specified in the frame with all associated sound parameters and effect settings. When the loading is completed, the Sound Settings reappear automatically.

! **If two or more tracks of the frame are not installed, the frame can not be loaded.**

Saving Frames

If you want to save a frame, first make sure that there is the desired memory card in Memotron m2k. If this is not the case, please insert the appropriate SD card into the card slot on the rear panel.

Use the **DATA** knob to navigate through the menu levels to the Sound Settings. Here, select "F:" and enter the Frame Menu. After selecting the menu item "Save Frame", you must first name the frame.
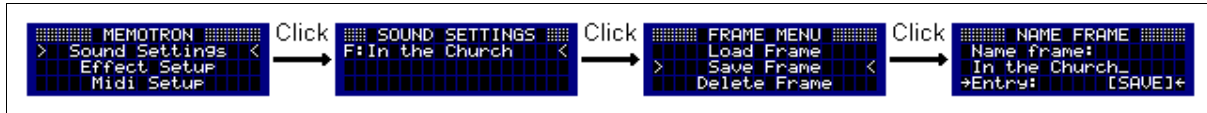
By turning the **DATA** knob, letters and characters can be selected which are appended to the name by pressing the **DATA** knob. By choosing [**Backspace**], it is possible to delete the last character. After entering the name, the frame can be saved with [**SAVE**].
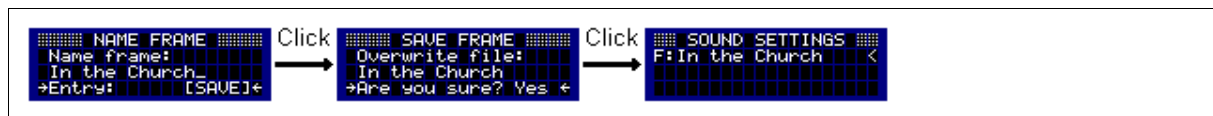
If a frame with the specified name already exists on the external memory card, a confirmation dialog will be displayed, asking if the existing frame should be overwritten. After the saving procedure, you will automatically return to the Sound Settings.

• **Frames can not be saved in the internal memory.**

Creating a Default Frame

If a Frame is named "Default" on the external memory card, it is automatically loaded when you start the Memotron. Upon delivery, such a default Frame is already on the supplied SD card.
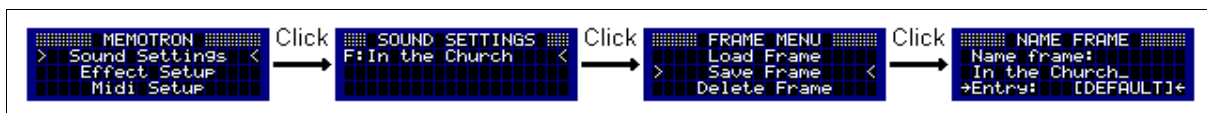
To create your own Default Frame, just save your Frame under the name "Default". Alternatively, you can select **[DEFAULT]** at the character selection.
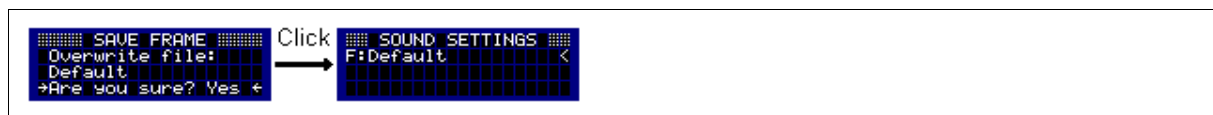
If you already have a Default Frame on the external memory card, a confirmation dialog will be displayed here.

Deleting Frames

With this function, a frame can be deleted from the external memory card. If you merely want to reset the active Frame, then please see the "Initializing Frames" section.

To delete a frame from the external memory card, first navigate, using the **DATA** knob, through the menu levels to the Sound Settings. Here select "**F:**" and enter the Frame Menu. By selecting the menu item "Delete Frame", you change to the file system of the external memory card.
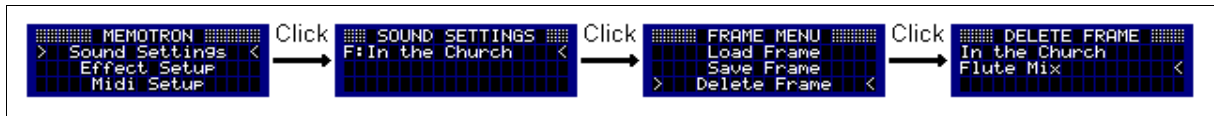
Navigate through the file system and select the desired Frame. By pressing the **ESC** key, you can exit the file system at any time without deleting a frame.
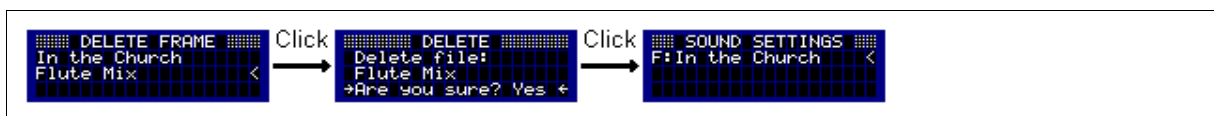
Pressing the **DATA** knob, the frame will be deleted from the external memory card after a security check. Then the Sound Settings will reappear automatically.

!   **A deleted Frame can not be restored!!!**

Initializing Frames

With this feature, the selected tracks together with the associated sound parameters and effect settings can be reset.

In the Frame Menu, a prompt is displayed after selecting the menu item "Init Frame". Select "**No**" or press the **ESC** key to return to the Frame Menu. When you select "**Yes**", the frame is initialized. After the initialization, the system returns to the Sound Settings.
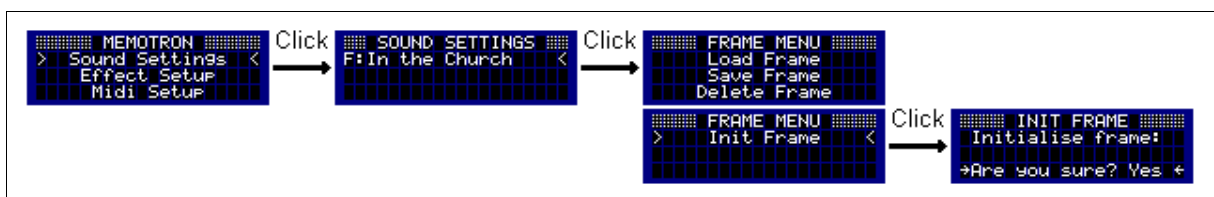
!   **The initialization of a Frame can not be undone!!!**

Internal Mem

The Memotron m2k features an internal memory from which the tracks will be played. On delivery, the hundred tracks of the Basic Collection are preinstalled here. To use other tracks, they first must be imported. Besides its own Memotron sample files (file extension ".mtk"), also sample files of the plug-in M-Tron® of G-Media (file extension "cpt") can be used. With G-Media's newer M-Tron Pro® plug-in, the Memotron m2k is **not** compatible.

- **On a Windows® PC installed M-Tron® sample files can not be used in the Memotron m2k as these were converted during the installation of the plug-in. Use the original sample files of the M-Tron® CD-Roms instead.**

With the following functions you can import individual tracks or all tracks of a directory, remove individual tracks or erase all internal memory of the Memotron m2k. In addition, the info page gives information on the number of installed tracks, the remaining capacity for other tracks and the maximum number of installable tracks.

Importing Tracks

This function allows you to import individual tracks from an external memory card to the internal memory. If you want to import a complete Sound Collection or more tracks, then please see the "Importing Directories" section.

To import a single track into the internal memory of Memotron m2k, go first to the "Internal Mem" menu. By selecting the menu item "Import Track", you change to the file system of the external memory card.
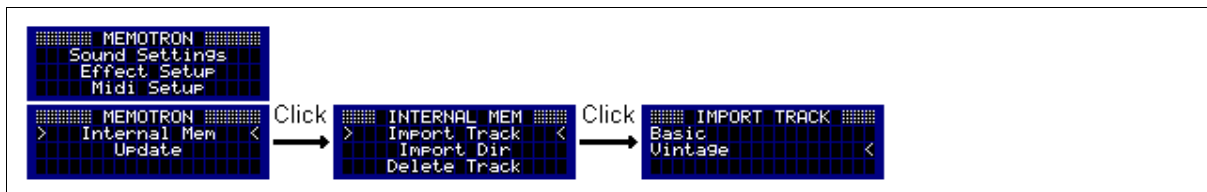

Navigate through the file system and select the track you want to import. By pressing the **ESC** key, you can exit the file system at any time without importing a track.
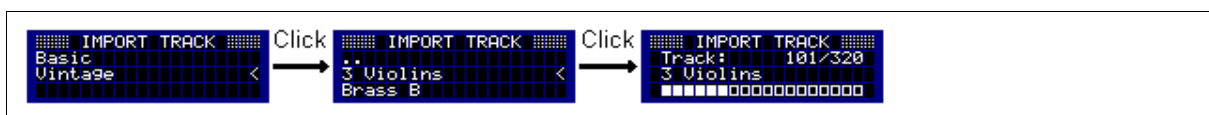
After selecting the desired track, the Memotron m2k starts the import which takes a few seconds to complete. After a successful import, you are returned to the file system of the external memory card and can now select another track. If you do not want to import any other track, you return by pressing the **ESC** key to the "Internal Mem" menu. With one more press on the **ESC** key, you return to the main menu.

- **If a Memotron sample file ("**.mtk**") is not too big (some <u>original samples</u> were recorded longer than others!), the first two keys (F & F#) will be interpolated during the import and the track can then be played with the full keyboard range.**

Importing Directories

If all tracks of a sound collection shall be imported to the internal memory of Memotron m2k, the function "Import Dir" is very useful. With this function, all tracks within a directory can be imported from an external memory card to the internal memory of the Memotron m2k.

To start the import, first switch to the "Internal Mem" menu. By selecting the menu item "Import Dir", you change to the file system of the external memory card.
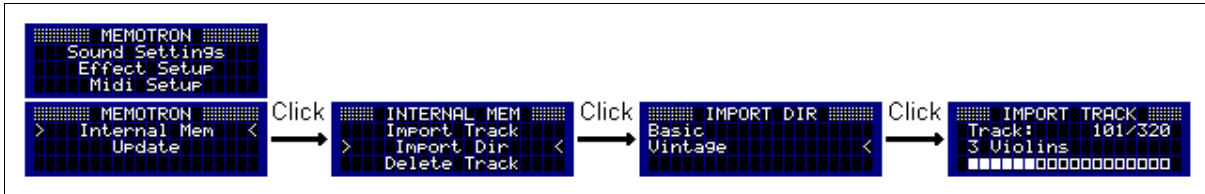
Navigate through the file system and select the directory that contains the tracks you want to import. Depending on the amount of tracks, the import of multiple tracks from a directory can take a few minutes to complete. The current import can be cancelled at any time by pressing the **ESC** key.

Deleting Tracks

To delete individual tracks from the Memotron m2k's internal memory, first go to the "Internal Mem" menu. By selecting the menu item "Delete Track", you switch to the file system of the internal memory.
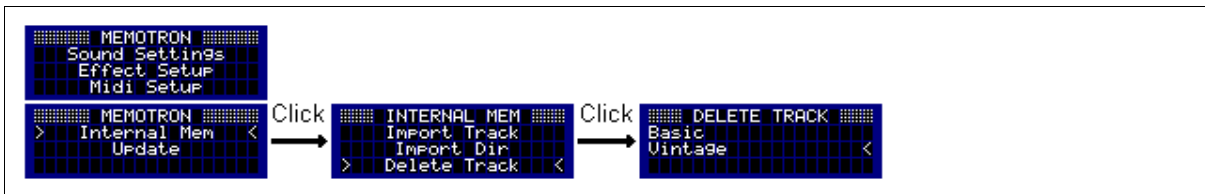
The track to be deleted can now be selected and deleted after confirming a confirmation prompt. To cancel the operation, select in the prompt "**No**" or press the **ESC** key. After the deletion, you will automatically return to the Sound Settings.
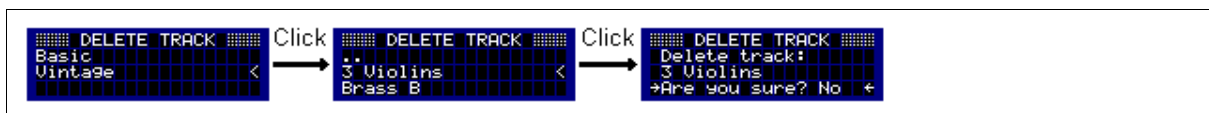
!   **The deleted track can only be restored by importing it again!!!**

Deleting the Internal Memory

This feature deletes the Memotron m2k's entire internal memory. To do this, switch to the "Internal Mem" menu and select the menu item "Delete All".
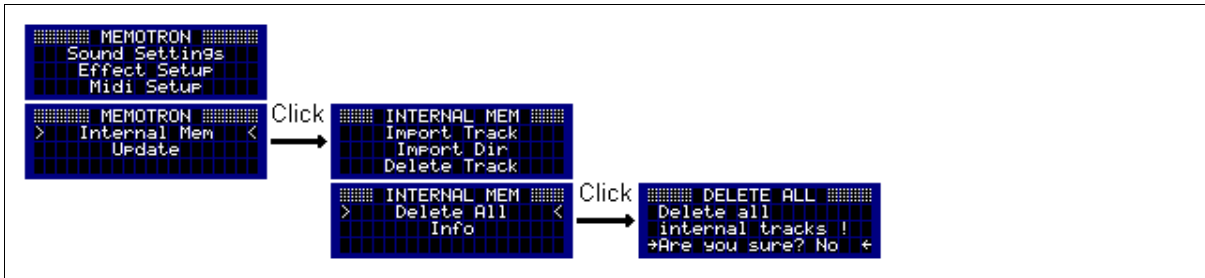
The internal memory can be deleted after confirming a confirmation prompt. To cancel the operation, select "**No**" in the prompt or press the **ESC** key. After the deletion, you will automatically return to the Sound Settings.

! **Deleting the internal memory can not be undone. To use the Memotron m2k again, tracks have to be imported with the "Import Track" or "Import Dir".**

Memory Information

This function provides an overview of the way the internal memory is used. First change to the "Internal Mem" menu and select the menu item "Info".
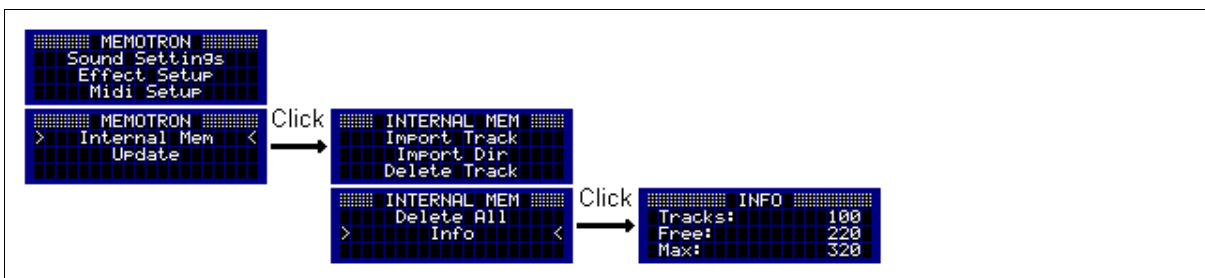
On the Info Page, the number of the already installed, the free and the maximum installable tracks appears. You leave the Info Page by pressing the **ESC** key and return to the "Internal Mem" menu. One more press on the **ESC** key brings you back to the main menu.

! **The maximum amount of installable tracks depends on the built-in internal memory card and may therefore differ from the displayed amount.**

Sound Settings

The Sound Settings contain Frame and track names as well as various parameters to tailor each track to your personal needs.

The following parameters can be adjusted on each of the three tracks:

Parameter	Value Range	Description
Volume	*0 ... 127*	Volume of a track
Attack	*0 ... 127*	Fast or slow attack phase of the sound
Release	*0 ... 127*	Fast or slow decaying of the sound after the key release
Panorama	*L64 ... C00... R63*	Stereo panning
Velocity	-63 ... 0 … 63	Touch response (max. inverted … off … max. active)
Mix	Off, A, B, C	Blending of tracks
Place	Place, First, Last	Positioning of tracks

All Sound Setting parameters can be accessed by turning the **DATA** knob. A selected parameter can be edited by pushing the **DATA** knob. The cursor will turn into a pointer. Turning the **DATA** knob, will now alter the parameter values. Pushing the **DATA** knob again, will confirm the value changes and by turning the **DATA** knob, another parameter can be selected for tailoring.
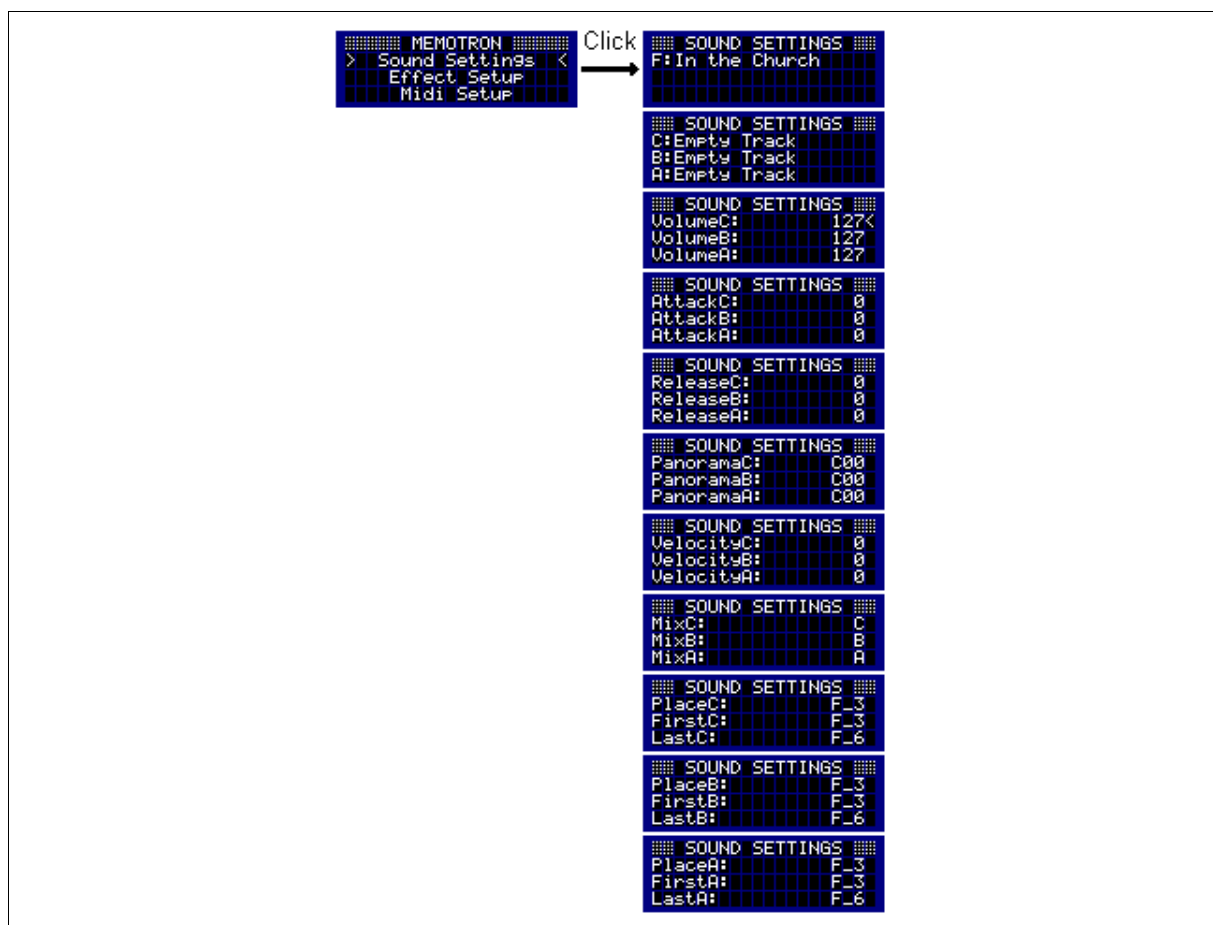
By pressing the **ESC** button, you can leave the Sound Settings and return to the main menu.

Blending Tracks (Mix)

The Memotron m2k offers the possibility to blend three tracks. To control the blending effect, you can use the ABC Controller of the Memotron m2k or the modulation wheel of a connected master keyboard. By default, the cross-fading of the tracks is initially configured that position A of the ABC Controller is assigned to Track A, position B to Track B and position C to Track C.

The mix mode for each track is set in the Sound Settings with the parameters "MixC:", "MixB:" and "MixA:". The following settings are possible:

- • Off   The blending of this track is deactivated. It can be heard constantly.
- • A: The track can be heard at full volume in the position A of the ABC Controller or   respectively in the lower position of the modulation wheel. Moving it towards the   position B / middle position constantly fades out the track.
- • B: The track can be heard at full volume in the position B of the ABC Controller or   respectively in the middle position of the modulation wheel. Moving it towards the   position A or C / lower or upper position constantly fades out the track.
- • C: The track can be heard at full volume in the position C of the ABC Controller or   respectively in the upper position of the modulation wheel. Moving it towards the   position B / middle position constantly fades out the track.

The assignments of the individual tracks can be selected in the Sound Settings by turning the **DATA** knob. After a parameter has been selected, it is ready for editing by pressing the **DATA** knob. The cursor changes its shape to an arrow. Turning the **DATA** knob, the parameter value can now be changed. By pressing the **DATA** knob again, another parameter can be selected for editing.
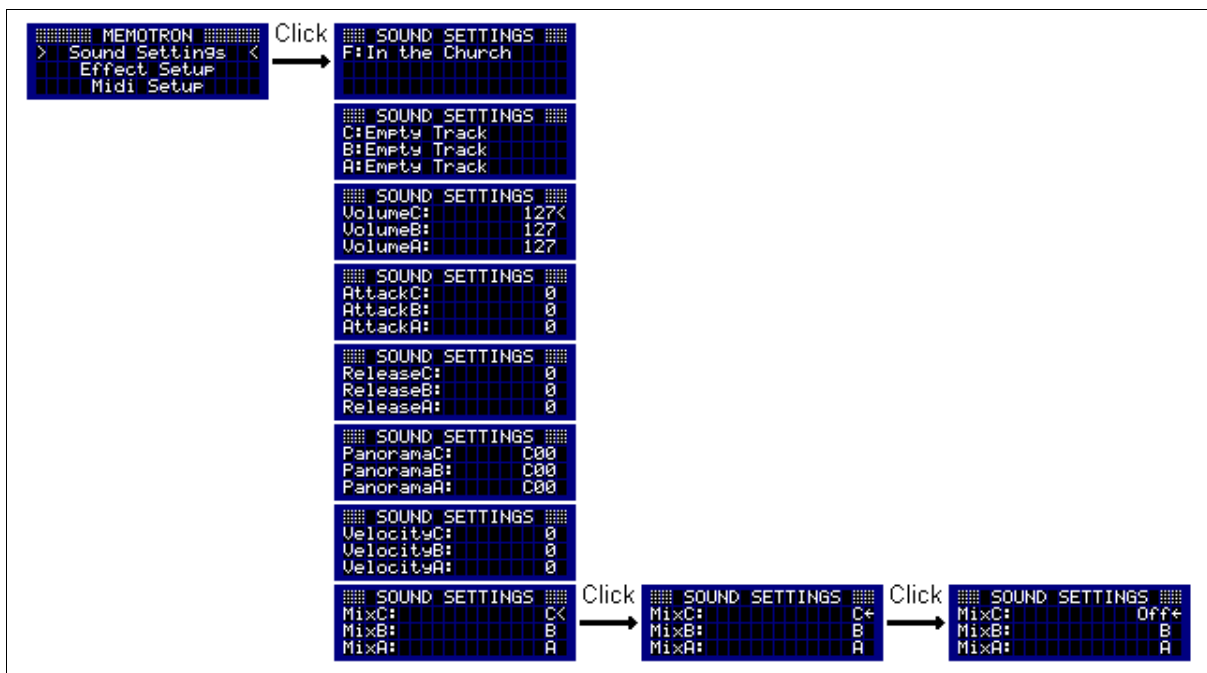
Positioning Tracks

Usually a track consists of 37 sounds that can be played in the range from "F 3" to "F 6". In the Midi Settings, each track can be positioned by means of the parameter "Place" while its tonal range can be restricted by the parameters "First" and "Last". With "Place", you can define the first key on the keyboard where the first sound of a track can be heard, while "First" defines the lowest and "Last" the highest audible sound of a track.

The following illustration shall explain the various options.

In this configuration, the parameters of track A are unchanged and correspond to the basic setting. Here, all 37 sounds of track A are playable from "F 3" to "F 6". This track is cut off in the illustration on the right side and is not fully visible due to restricted space.

Track B was limited to 12 playable sounds from "C 4" to "H 4"(= B 4) while in the lower part 7 notes and at the top 18 notes were cut off. These sounds can be played with a keyboard from "C 3" to "H 3"(= B 3).

Like Track B, Track C is limited to 12 playable sounds from "C 4" to "H 4"(= B 4). With a connected keyboard, the sound can thus be played one octave higher from "C 4" to "H 4"(= B 4). Track C also is not fully visible due to restricted space.

Effect Setup

The Memotron m2k has a digital effects section which enhances its tonal expressiveness a lot. In addition, the Memotron m2k is largely independent (especially on stage) from external effects devices.

The effect section consists of three successive effect blocks: the Amplifier Modeling Effect block, a Modulation / Delay effect block and a Reverberation / Echo effect block. All three blocks can be used individually or simultaneously, each with one effect program.

The Effect Setup is accessible from the main menu. After a parameter has been selected, it can be released for editing by pressing the **DATA** knob. The cursor changes its shape to an arrow. Turning the **DATA** knob, the parameter value can now be changed. By pressing the **DATA** knob again, another parameter can be selected for editing.
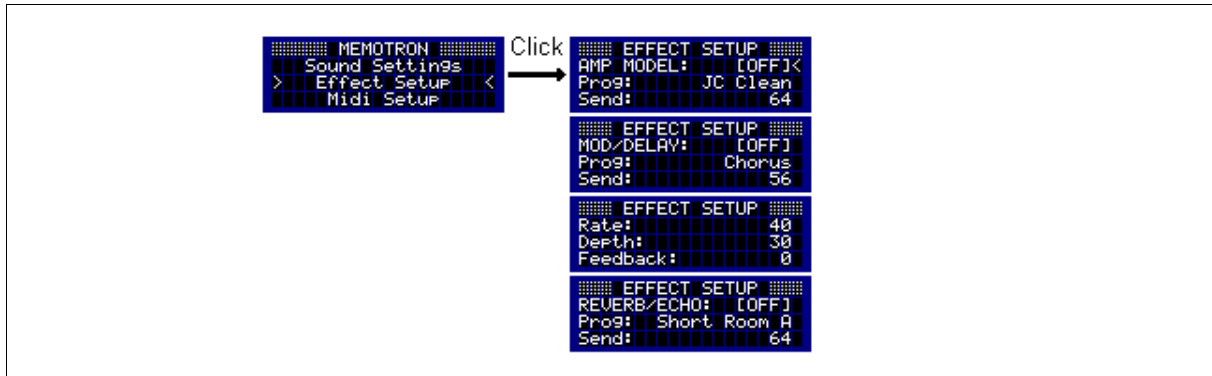
By pressing the **ESC** button, you can quit the Effect Settings section and return to the main menu.

Effect Block 1: Amplifier Modeling

This effect block provides twelve different effect algorithms:

1. JC Clean
2. Acoustic
3. Black Panel
4. Brit Combo
5. Tweed
6. Stack Classic
7. Metal
8. R-Fier
9. Crunch
10. VO Drive
11. BG Lead
12. MS Higain

The following parameters can be adjusted in the Amplifier Modeling effect block:

Parameter	Value Range	Description
AMP MODEL	*OFF / ON*	deactivates / activates this effect block
Prog	*JC Clean … MS Higain*	selects one of 12 effect algorithms
Send	*0 ... 127*	adjusts the effect amount in the output signal

Effect Block 2: Modulation / Delay

This effect block provides six different effect algorithms:

1. Chorus
2. Flanger
3. Phaser
4. Tremolo
5. Delay Mono
6. Delay Stereo

The following parameters can be adjusted in the Modulation / Delay effect block:

Parameter	Value Range	Description
MOD/DELAY	*OFF / ON*	deactivates / activates this effect block
Prog	*Chorus … Delay Stereo*	selects one of six effect algorithms
Send	*0 ... 127*	adjusts the effect amount in the output signal

Depending on the effect algorithm, further parameters can be set in this effect block.

Chorus / Flanger:

Parameter	Value Range	Description
Rate	*0 … 127*	Modulation rate: 0= ~0,023Hz to 127= ~5,8Hz
Depth	*0 … 127*	Modulation depth: 0= 0% to 127= 100%
Feedback	*0 ... 127*	Feedback rate: 0= 0% to 127= 100%

Phaser:

Parameter	Value Range	Description
Rate	*0 … 127*	Modulation rate: 0= ~0,023Hz to 127= ~5,8Hz
Feedback	*0 … 127*	Feedback rate: 0= 0% to 127= 100%
HiDamp	*0 ... 127*	High frequency damping: 0= 0% to 127= 100%

Tremolo:

Parameter	Value Range	Description
Rate	*0 … 127*	Modulation rate: 0= ~1Hz to 127= ~20Hz
Shape	*0 … 127*	Modulation waveform: 0= Triangle to 127= Square
HiDamp	*0 ... 127*	High frequency damping: 0= 0% to 127= 100%

Delay Mono / Delay Stereo:

Parameter	Value Range	Description
Time	*0 … 127*	Delay time: 0= ~1ms to 127= ~150ms
Feedback	*0 … 127*	Feedback amount: 0= 0% to 127= 100%
HiDamp	*0 ... 127*	High frequency damping: 0= 0% to 127= 100%

Effect Block 3: Reverb / Echo

This effect block provides 26 different effect algorithms:

Reverb
1. Short Room A
2. Short Room B
3. Short Room C
4. Room A
5. Room B
6. Small Hall A
7. Small Hall B
8. Large Hall
9. Spring
10. Short Plate
11. Vocal Plate
12. Church A
13. Church B
14. Cathedral
15. Gated Reverb A
16. Gated Reverb B
17. Gated Plate A
18. Gated Plate B

Echo
19. Mono Echo
20. Stereo Echo
21. Mono 3 / 4 Echo
22. Stereo 3 / 4 Echo
23. Mono 4 / 4 Echo
24. Stereo 4 / 4 Echo
25. Mono Triple Echo
26. Stereo Triple Echo

The following parameters can be adjusted in the Reverb / Echo effect block:

Parameter	Value Range	Description
REVERB/ECHO	*OFF / ON*	deactivates / activates this effect block
Prog	*Short Room A … St. Tri Echo*	selects one of 26 effect algorithms
Send	*0 ... 127*	adjusts the effect amount in the output signal

MIDI Setup

The MIDI Setup controls all functions that are used to play the Memotron m2k from a suitable external MIDI device (e.g. a master keyboard or a MIDI sequencer such as the Manikin Schrittmacher).

The following parameters can be edited:

Rx Channel	*1 ... 16*	MIDI channel on which the track receives MIDI data
Tx Channel	*1 ... 16*	MIDI channel on which MIDI data is sent
Local Control	*Off / On*	Separates the controllers from the Memotron m2k's sound generator.

Enter the MIDI Setup via the main menu. A selected MIDI parameter can be edited by pressing the **DATA** knob. The cursor will turn into a pointer. Turning the **DATA** knob will now alter the parameter values. Pressing the **DATA** knob again will confirm the value changes and by turning the **DATA** knob, another parameter can be selected.
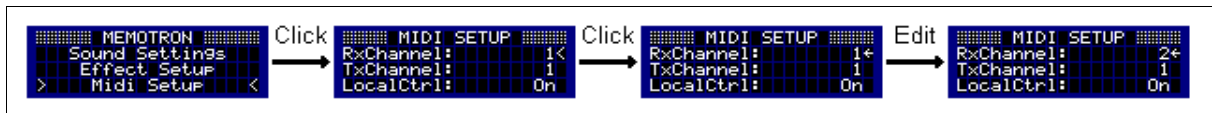
By pressing the **ESC** key, you can leave the MIDI Setup and you are returned to the main menu.

Update

To keep the Memotron m2k on the latest technical level, Manikin Electronic will launch operation system updates from time to time. These updates can easily be installed from a memory card. The operation is basically no different from loading a Frame.

The update process can be accessed via the main menu item "Update". By pressing the **DATA** knob, you enter the "Update" menu. The currently installed operation system version number is displayed here. To update, you select the menu item "Update" and enter the file system of the external memory card.
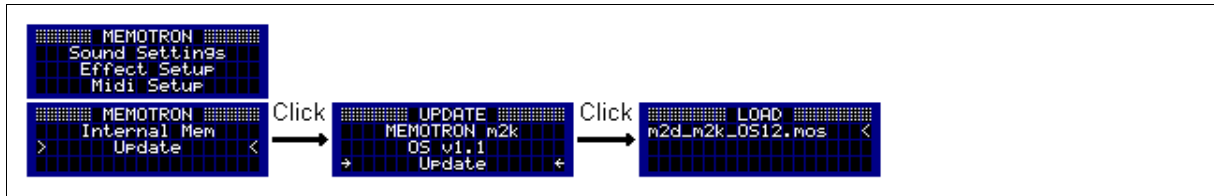
The following procedure is basically the same as loading a Frame: Select the directory which holds the new operation system file. Select the operation system file (m2k_m2k_OSXX.mos) and press the **DATA** knob to initiate the update process. The update process will take some seconds and will be completed when the main menu reappears.
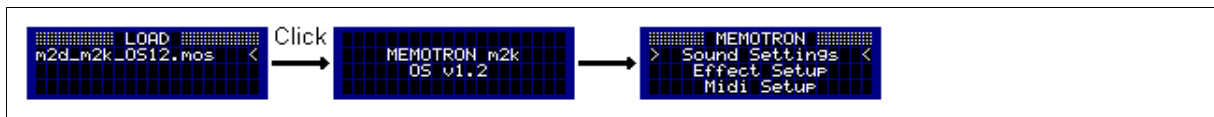
The Memotron m2k is ready for performance as soon as the update process has been successfully performed.

! **While the update process is running, do NOT switch off the Memotron m2k!**

Appendix

Product Support

If you would like to ask any questions concerning your Manikin Electronic product, there are four ways to contact us:

1. Send us an email.

   support@manikin-electronic.com

2. Send us a telefax.

   +49 (0) 30 – 63 49 49 51

3. Send us a letter.

   Manikin Electronic
   Lipaer Straße 5
   12203 Berlin
   Germany

4. In very urgent cases, call us.

   +49 (0) 30 – 63 49 49 50

Technical data

Power Supply

Nominal voltage	:	AC 100V - 240V / 50Hz – 60Hz
Maximum power consumption	:	7W
Connector	:	Standard IEC socket

Connections

MIDI	:	In, Out and Thru
Line Out	:	Left, right (6,3 mm jack, mono)
Headphones	:	Output (6,3 mm jack, stereo)
Volume Pedal	:	Input (6,3mm jack)

Dimensions and weight

Dimensions (width / height / depth)	:	870 mm x 80 mm x 335 mm
Overall weight	:	10 kg

Disposal

The device is RoHS compliantly manufactured in accordance with the directive of the European Parliament and Council and is thus free of lead, mercury, cadmium and hexavalent chromium.

Nevertheless this product is special waste and shall not be disposed in ordinary household waste!!!

For disposal, please contact your local dealer or

Manikin Electronic
Lipaer Straße 5
12203 Berlin
Germany

CE

The product conforms to the following harmonized European standards:
EN 55013: 2003, CENELEC EN 55020: 2003, EN61000-3-2: 2000 and
EN 61000-3-3: 1995 + correction 1998

FCC Information (U.S.A.)

1. IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT! This product, when installed as indicated in the instructions, contained in this manual, meets FCC requirements. Modifications not expressly approved by Manikin Electronic may void your authority, granted by the FCC, to use this product.
2. IMPORTANT: When connecting this product to accessories and/or another product, use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.
3. NOTE: This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class „B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determinated by turning the unit „OFF" and „ON", please try to eliminate the problem by using one of the following measures: Relocate either this product or the device that is being affected by the interference. Utilize power outlets that are on branch (circuit breaker or fuse) circuits or install AC line filter/s. In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to co-axial type cable. If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product.
The statements above apply ONLY to products distributed in the USA.

Canada

The digital section of this apparatus does not exceed the „Class B" limits for radio noise emissions from digital apparatus set out in the radio interference regulation of the Canadian Department of Communications.
Le present appareil numerique n'emet pas de bruit radioelectriques depassant les limites applicables aux appareils numeriques de la „Classe B" prescrites dans la reglement sur le brouillage radioelectrique edicte par le Ministre Des Communications du Canada.
Ceci ne s'applique qu'aux produits distribués dans Canada.

Other Standards (Rest of World)

This product complies with the radio frequency interference requirements of the Council Directive 89/336/EC.

Cet appareil est conforme aux prescriptions de la directive communautaire 89/336/EC.

Dette apparat overholder det gaeldenda EF-direktiv vedrørendareadiostøj.

MIDI Implementation Table

Model: Memotron m2k		Midi Implementation Chart		Date: 2015-06-10 Version: 1.0
Function ...		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	x x	1 1 – 16	
Mode	Default Messages Altered	x x **********	3 x x	
Note Number	 True Voice	x **********	0 – 127 0 – 127	Transpose
Velocity	Note ON Note OFF	x x	o v=1-127 o	
After Touch	Key's Ch's	x x	x x	
Pitch Bender		o	o 3 semi	
Control Change	1 7 10 12 64 74	o o Pedal x o x o	o o o o o o	Modulation Wheel (Mix) Volume Panorama Effect Ctrl (Half Speed) Sustain Sound Ctrl 5 (Tone)
Prog Change: True		x **********	x x	
System Exclusive		x	x	
System Common	: Song Pos : Song Sel : Tune	x x x	x x x	
System Real Time	: Clock : Commands	x x	x x	
Aux Mes- sages	: Local ON/OFF : All Notes OFF : Active Sense : Reset : All Sound OFF	x x x x x	x o (123-125) x x o	
Notes				

Mode 1: OMNI ON, POLY   Mode 2: OMNI ON, MONO   o: Yes
Mode 3: OMNI OFF, POLY   Mode 4: OMNI OFF, MONO   x: No

Glossary

CD-ROM

Removable "Read Only Memory" data storage device.

Memory card

Removable and rewritable storage medium for storing and archiving data. The Memotron m2k uses SD cards.

Data system

Hierarchical structure within an electronic storage medium, organizing data in drives, folders and files.

Effect Algorithm

A software-based process to generate a certain kind of sound processing. The Memotron m2k offers the following different effect algorithms:

– Hall:	Simulation of a big room / environment
– Room:	Simulation of a small room / environment
– Plate:	Simulation of a Plate Reverberation
– Chorus:	Type of signal processing. Several slightly detuned copies of a signal are mixed together, to generate a type of choir-like effect that adds subtle animation and density to a sound.
– Flange:	Type of signal processing. A slightly time-delayed copy of a signal is mixed with the original, adding animation to a sound.
– Delay:	Echo effect
– Phaser:	A sound effect that is produced by a modulated filter with multiple erasures and increases in the frequency spectrum.

Effect Section

The Memotron m2k's internal selection of signal processing features.

MIDI

MIDI is short for "Musical Instrument Digital Interface". It was developed in the early eighties to link electronic musical instruments of different types and from different manufacturers. Up to that time, there was no standard for linking several sound generators and so MIDI was a considerable improvement. From then on, it became possible to link all devices using easy and always identical connection cables.
The basic steps are: a transmitter is always connected with one or several receivers. If e.g. a computer is to play a synthesizer, the computer is the transmitter and the synthesizer becomes the receiver. For this purpose, all MIDI devices (with only a few exceptions) have two or three connections: MIDI IN, MIDI OUT and possibly MIDI THRU. The transmitting device provides the information to the outside world via its MIDI OUT connection. The data are passed on to the MIDI IN connection of the receiver by means of a cable.

MIDI Clock

The time interval of the MIDI Clock message defines the tempo of a musical piece. It is used for synchronizing time-dependent processes.

MIDI functions

See MIDI

MIDI Channel

An important part of most messages. A receiving device only reacts to incoming messages if its set receiving channel is identical with the transmitting channel of the message. This enables a clear information transfer to a receiver. The MIDI channel can be selected within the range from 1 to 16. Beyond this range, a device can be switched to Omni to receive all 16 channels.

Frame

In the Memotron m2k, it is a combination of up to three tracks and their effect settings.

Note on / Note off

This is the most important MIDI message, determining the tone pitch and the velocity of the generated tone. The time of its arrival is at the same time the starting point of the tone. The pitch is the result of the transmitted note numbers, ranging from 0 to 127. The velocity's range is from 1 to 127. The velocity value 0 means "NoteOff", i.e. the note is switched off.

Panning

Designates the panorama position of a sound.

Pitch Bend

Pitch Bend is a MIDI message. Although the functions of the Pitch Bend message are similar to those of the control change messages, it represents a message type of its own. The reason why is above all that the Pitch Bend message is transmitted with a considerably finer resolution than the "usual" controller. This takes into account that the human ear is extremely sensitive to pitch changes.

Sample data

A digitally recorded representation of a sound.

Sampling

The process of encoding an analogue signal into digital form by reading (sampling) its level at short and precisely spaced intervals of time.

System Exclusive data

System Exclusive data represent the access to the innermost part of a MIDI device. They enable access to data and functions which are not represented by any other MIDI messages. "Exclusive" also means that the data indicated here only apply to one single type of device. Each device has its own System Exclusive data. The most frequent applications for this data type are the transmission of complete memory contents as well as the complete device control by means of a computer.

Low pass Filter

A filter that alters a sound by attenuating its high frequencies.

Track

In the Memotron m2k, it denotes one of three independent memory areas into which sound data can be loaded.

Sound Settings

In this menu, frames can be loaded and saved. Further tracks can be selected and the associated sound parameters can be set.