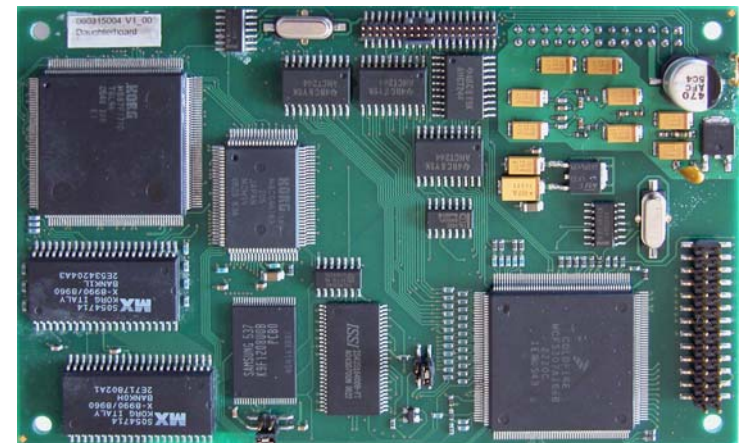


MIDITEMP

DoX-1

Wavetable-Daughterboard



User Manual & Installation

Level-Modification at the Multistation

Older Multistation models don't have very much power at the daughterboard's audio-output-section. Miditemp has taken thoughts about how to change this issue, and if it might be possible at all – and found a solution.

Just a very little modification at audio-output 3+4 does it.

*(Current models of the MSX with a serial-number above **300300099** needn't to be modified no more)*

Mind out:

After this modification, or even if your Multistation is a brand new one:

As soon as a daughterboard is built in, audio level at audio-output 3+4 increases at about +6dB and is now clearly louder than output 1+2.

If there is no daughterboard installed, audio levels are the same at all 4 audio-outputs.

This modification must be made by an experienced technician, or by Miditemp's technicians! It's best for you to get your Multistation modified, together with getting your daughterboard installed.

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Subjects might be changed without notice. No liability for misprints or errors.

DoX-1 Midi-Implementation Chart			OS-Version 1.0,
05/2006			
Function		Recognized	Remarks
Basic Channel		1-16	
Mode	Default	Poly	
	Messages	X	
Note Number	Altered	X	
	True Voice	0-127	
Velocity	Note On	<input type="radio"/> 9n, V= 1-127	
	Note Off	X	
Aftertouch	Poly (Key)	<input type="radio"/>	
	Mono (Channel)	<input type="radio"/>	
Pitch Bend		<input type="radio"/>	
Mode	0, 32	<input type="radio"/>	Bank Select (MSB, LSB)
	1, 2	<input type="radio"/>	Modulation (0-127)
	64	<input type="radio"/>	Sustain (Damper) (0/127)
	6	<input type="radio"/>	Data Entry MSB
	38	<input type="radio"/>	Data Entry LSB
	7, 11	<input type="radio"/>	Volume, Expression (0-127)
	10	<input type="radio"/>	Panorama (0-64-127)
	91, 93	<input type="radio"/>	Effect 1,2 Send (0-127)
	71	<input type="radio"/>	Harmonic Content
	72	<input type="radio"/>	Release Time
	73	<input type="radio"/>	Attack Time
	74	<input type="radio"/>	Brightness
	75	<input type="radio"/>	Decay Time
	76	<input type="radio"/>	Vibrato Rate (0-127)
	77	<input type="radio"/>	Vibrato Depth (0-127)
	78	<input type="radio"/>	Vibrato Delay (0-127)
	98, 99	<input type="radio"/>	NRPN (LSB, MSB)
	100, 101	<input type="radio"/>	RPN (MSB, LSB)
	120	<input type="radio"/>	All Sounds Off (0/127)
Program Change	True	<input type="radio"/> 0-127	
System Exclusive		X	
System Common		X	
Aux Messages	All Notes Off	<input type="radio"/> (123-127)	
	Active Sense	<input type="radio"/>	
Notes: *1: 100/00 + 101/00 = Pitch Bend Range 100/01 + 101/00 = Course Tune , 100/02 + 101/00 = Fine Tune *2: Includes Inquiry and Master Volume Settings			
			<input type="radio"/> = Yes X = No

Safety Informations



Attention! High Voltage!
 Risk of electrical shock
 Always remove the DC-Plug before opening your unit.

Important Notes



Even though no special knowledges are required for the installation of the DoX-1, we kindly ask you to read these instructions carefully before proceeding to avoid material damages and / or to prevent the risk of an electrical shock.

Avoid humidity, contact with liquid and wet hands while operating in your open unit.

Avoid damages caused by static electricity. Therefore, before touching electronic parts, please touch a grounded unit, such as your heating.

After the installation of the Dox-1 please check all connections inside your unit. Forgotten or wrong connections may cause problems.

Your unit must be closed before re-operation.

Please care for sufficient aeration, that might be needed, when you install your Multiplayer / Multistation inside a flightcase or 19" rack-unit.

For the DoX-1 is producing a bit of temperature during the operation, aeration is highly recommended!

Preface

Thank you for purchasing the DoX-1, another High-Tech-product made by MIDITEMP®.

Development and production of this unit were made under utmost care, because we want you to enjoy this product for a long time!

Features

- HI-Synthesis – tone-generator by **Korg®**
- 62-voice polyphonic
- 660 excellent sounds
- 30 drum kits
- 2 Stereo – digital-FX
- GM/GM2 – compatible

Included accessories:

- *Manual*
- *CD-ROM*
- *Div. Screws and distance-nuts*

We'd like to say "Thank you" to Korg Inc., Italy and also to Kanis Inc., Tutzing /Germany, for their valuable co-operation while developing the DoX-1.

Germany, October 2006

Controller

DoX-1 recognizes all standard-defined midi-controllers.

A complete list of controllers can be found at the „Midi-Implementation-Chart“ at page 18 of this manual.

Program-Change

DoX-1 has 660 top-quality sounds and 30 incredible drum kits. The basic programs at the DoX-1 are listed from PG1 up to PG128 .

Other hardware or software systems (eg. Emagic „Logic“) start counting at PG 0 up to PG 127.

Please consider this when you create or edit your midi-files. These different ways of counting often cause problems by using the wrong program-numbers.

Reset / Init

There is no special initialisation for the DoX-1.

By powering off your Multistation / Multiplayer resets all settings of the DoX-1 to default data. This is no professional way to reset your DoX-1 while performing on stage or elsewhere. So, if something sounds „strange“ to you or sounds on one channel are totally “screwed” you might need a fast and easy way to reset your DoX-1.

On the CD-Rom included with DoX-1 you find a midi-file called „DoX_Reset.Mid“. Just add this file to your patch files and route the midi-out to DGH. If you start this midi-file all parameters on all midi-channels will be reset after 2 seconds. Afterwards you may start your next midi-file and everything will be perfect again!

RPN / NRPN

Working with these controllers is a „higher level“ of using midi. It is a combination of three single controller numbers.

By using these controllers you may (of course only when the receiving units recognize these controllers) select a special function and change it.

RPN and NRPN use the third controller number, 6 or 38, to change a parameter's value.

(2 controller numbers are needed to select a special function)

NRPN = Non registered Parameter Number

RPN = Registered Parameter Number

DoX-1 recognizes three RPN - parameters:

CC-100: 0 + CC-101: 0 = Pitch Bend Range

CC-100: 1 + CC-101: 0 = Fine Tune

CC-100: 2 + CC-101: 0 = Course Tune

The respective value is changed by using controller 6. When changing tune parameters the basic value at parameter 6 is 64 and you can turn it up to 127 (tune higher) or down to 0 (tune lower). Pitch Bend range uses basically value 0, so you may go up/down over 2 octaves (24 semitones)

Example: Pitch Bend Range +/- 1 Oktave

CC-100: 0 +

CC-101: 0 +

CC-6 : 12

Important:

At the end of the midi-file you should reset these parameters to their original value, here: CC-100/0 + CC-101/0 + CC6/2.

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Installation into a Multiplayer

The DoX-1 wavetable-board works flawlessly with all models of the Miditemp Multiplayer (W-Series!) and can be easily installed.

On different types of the MP-series the location where to insert the DoX-1 may vary. But the socket, where you have to put the board on, is the same at all models. This socket is named **J4**. Just look for this socket inside your player and you have the right place.



For installation is needed:

4 x Spacer screws M3x5 (included)

4 x Screws M3x5 (included)

and a tiny plusdriver + a small plier



- 1)  **Unplug the AC-cord** 
- 2) Remove the small screws from the top and sides of the housing.
- 3) Remove the top-cover and place the unit in a way that you look at it from the front.
- 4) Remove the 4 mounted spacer-screws and replace them against the new ones that are delivered with your board.
- 5) Locate socket J4.
- 6) Discharge yourself (as written at P.3 of this manual) before carefully removing the DoX-1 out of the anti-static package and plug it onto the socket **J4**.

Please take care for the correct assembly of the DoX-1. Avoid mounting it out of position. It must be mounted exactly onto J4!

- 7) Fix the DoX-1 by using the included screws M3x5.
- 8) Put on the top-cover again and fix it.

Midi channel 1-9 and 11-16 respectively are the channels used by the internal keyboard sounds.

There is only one exception:

CC- 0 : **120**

CC-32 : 0-127 (*not used*)

PG: **1-128**

By using this sequence of midi-orders you are able to change these keyboard-channels into drum-channels, as usually channel 10 is used as. Then you have the same drum-sounds again but you can treat every drum separately. Especially interesting when you want your snare-drum with a lot more reverb than the rest of your kit. So you can use different effect-settings for drums on two different midi-channels, that is only possible by using 2 channels.

Even here, exactly as at midi-channel 10, a complete PG-change-order must be sent to DoX-1 to re-set it to a normal midi-channel and make it sound as usual, with keyboard-sounds.

CC- 0 : eg.: **0** or **121**

CC-32 : **0-127** (Variable)

PG: **1-128**

Sounds

Please take the time to listen to the outstanding sounds of your DoX-1. You'll be surprised of the various and excellent sounds you will discover.

It does not take much time to edit and change a midi-file, so the new assigned sounds will make it sound like it was programmed completely new.

Maybe you just try out this one: the Legato-Strings, or the Stereo Strings, the EP Phase Rhodes, the Dirty Jazz Organ, Jump Brass, Voices or the Finger Electric Bass, various variations of Brass-sounds et cetera, et cetera... – your ears will make big eyes – for sure!

Example:

The DoX-1 responds to CC-00:81 + CC-32:1+ PG 49 exactly the same way as if it had received CC-00:0 + CC-32:0 + PG 49 (Strings-1)

Controller 0 and Controller 32 are the standard-defined parameters to change or to select a sound-bank.

Using CC-00 : 0 automatically activates the basic - GM –sounds.

DoX-1 responds to the following bank-select – parameters:

CC- 0 : **121**

CC-32 : **0-127** (variable)

PG: 1-128

(Some other systems only use CC-00 : xx and ignore CC-32 at all)

Midi-channel 10, the drum-channel, basically ignores these controllers 0 and 32. Drum-kits are simply changed by a program-change.

But, as in every standard, we have **one exception** here:

CC- 0 : **120**

CC-32 : **0-127**(variable)

PG: 1-128

By using this special program-change sequence you are able to change the, normally only for drum-sounds used midi-channel 10, to a keyboard-sound-channel.

Might be necessary if you need more than 15 instrument-sounds simultaneously (eg midi-file with a classical song).

To return this channel to drum-sound - operation, controller 0 with any value – **except 121**, of course – needs to be sent to DoX-1 again, eg.:

CC- 0 : **0**

CC-32 : 0 (*Needless*)

PG: 1-128

Then anything sounds, as usual, like a drum kit!

Midi-File-Routing with the Multiplayer

Basically:

At the MP-22W-series another midi-output-port is added.

This new, third port is displayed as SC (soundcard).

The MP-44W-series sends midi-data to the DoX-1 only via midi-out 3, the MP-88W-series does this via midi-out 7.

This is a fixed item and cannot be changed by the user.

Please load a standard-midi-file (SMF), after that please press:

- Enter

- Out

Move the dial to the left until you see „All“ and activate, according to your MP- model, midi output SC, 3 or 7, as shown at your display.

When the LED below your midi-out is lit then the output is active. If you only want to use the DoX-1 you may de-activate the other outputs.

If your Multiplayer is already hooked up to an amplifier-system, you should hear your MP with the sounds of your DoX-1 after pressing the „Play“-button.

With your MP-Player you have several more functions you can use to adjust lots of things inside your Multiplayer.

These are explained on page 7.

Playing the factory life-patches (to find on CD-Rom)

On the included CD-Rom you find some pre-programmed patches to play some of the sounds of your DoX-1 manually via a midi-keyboard, that is connected to you Midiplayer at midi-input number 1

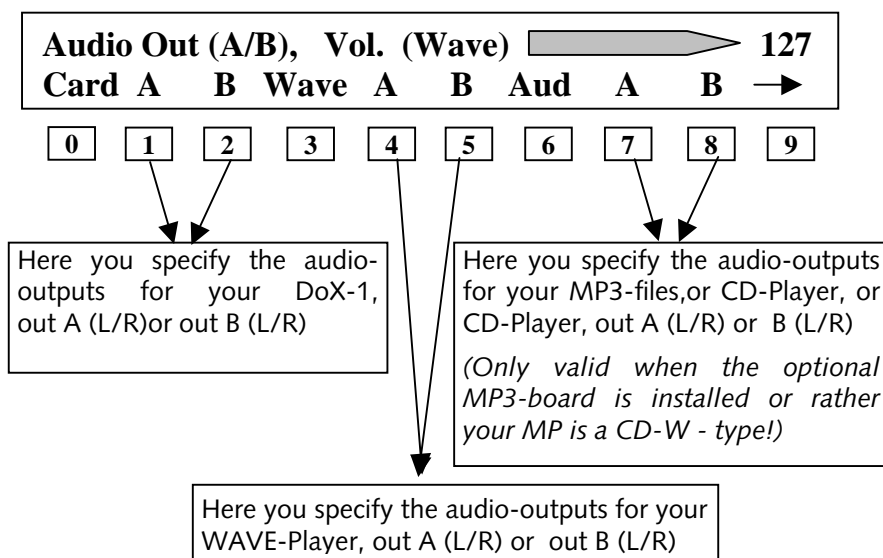
Just copy the file „MP-Patches.bnk“ from the CD-Rom to your internal fdd or to a floppy-disc and then load it into your MP's internal memory.

Attention: The existing matrix-bank will be overwritten! Please save it before loading the new matrix-bank (Drive-SVB)

To recall these patches, select the matrix-level, select them by using the alpha-dial and press enter.

Global audio - and sound-card - settings

While beeing in the standard play-mode please press the button „Audio“. Now you have a mass of functions – don't worry, it's just as half as much as it seems to be.
At anytime you can press „Exit“ to be back in the basic play-screen.



Pressing the respective button automatically activates its volume-function. Volume can be changed from value 0-127 by turning the data-dial. By pressing the button below **9** (below the arrow) you get to the CD-Player's side (*CD-W-series only!*). As your DoX-1 has nothing to do with it we can ignore this page..

Tips and Tricks

The DoX-1 uses a GM / GM2-compatible tone-generator.
All standard midi-files (SMF) being programmed within this format will work with the DoX-1, trouble-free.

GM-Sound-set uses 128 sounds + 1 drum kit.
Those 128 sounds are named as „basic-sounds“ or „capital-tones“ and are recalled by a simple program-change order.
In the course of time more and more sounds were added to the synthesizers and sound-modules. Users wanted to have more than one string-sound or several bass-sounds etc. Fortunately the developers of midi-systems implemented control-changes called „bank-select“ - a part of midi that is getting more and more important. By using this bank-select command you have the ability to recall hundreds of sounds by using just one single program-change order, without leaving the GM-standard!

These extra sounds per program-number are mostly called „Variation-sounds“. The number of these sounds may vary for any model of every manufacturer, same for the program-number.
Unfortunately the definition of the control-change command, how to set a bank-select, is not defined. So we have the problem that the order for a bank-select may vary even between products of one manufacturer.
So: different standards – different variations
(GM / GM-2 / GS / GS-2 / XG etc.)

Bank Select

If the DoX-1 receives a program-change that cannot be assigned to one of its sounds, it automatically switches to the basic sound of this program-number. So you will always hear a sound that fits to the selected program.

Midi-file-routing with the Multistation

Basics:

The first generation of the Multistation-series was had two different types, called M2 and M8/M8-CD. Those were just different by the numbers of their midi-inputs and midi-outputs. Because all Multistations handle the daughterboard the same way (called DGH) it doesn't matter what model you use! You don't even have to care about volume settings.

Please load a standard-midi-file (SMF) into your player. While being in the play-mode please tap (at the touch-display) onto:

- „Song“
- „Edit Routing“

Any track you want to hear with your DoX-1 is activated by a simple tick at „DGH“. If you want to hear all tracks played by DoX-1, tick at „All“ at the row “DGH” – that's it.

If your Multiplayer is already hooked up to an amplifier-system you should hear your MP with the sounds of your DoX-1. Don't forget to press the „Play“-button.

Important:

The audio-routing of the DoX-1 is pre-configured to audio-out **3 + 4**. Please note when connecting the unit to an amplifier-system! Even you cannot hear the internal board with your headphones!

Playing the factory life-patches (to find on CD-Rom)

On the included CD-Rom you find some pre-programmed patches to play some of the sounds of your DoX-1 manually via a midi-keyboard, that is connected to you Multistation at midi-input number 1
Just copy the file „Multistation-Patches.pch“ from the CD-Rom to your internal fdd and then load it into your Multisplayer
To recall these patches just tap onto „Layers“ – „Layer-1“ , then select the desired patch by using the alpha-dial - “Enter”.

Installing the DoX-1 into a Multistation

The DoX-1 Wavetable-Board works with all models of the Miditemp – Multistation-series and can be installed into them.

But: Multistation-series have various hardware-versions, so the way of installation of the DoX-1 here is slightly different, according to its hardware-version.

Therefore, please check the hardware-version before you start to install!
(If you are a owner of a Multistation – model „**MSX**“, no check is required. These models do **not** have have various hardware-versions!)
User installation is **only** released when your M2 /M8 /M8CD has hardware-revision TMX rev.4.

Take a look on the backside of your Multistation and look for the serial number. If your unit is one of these listed above you must **not** install the DoX-1 yourself.

M2: Ser.-Nr.: 20200001 up to Ser.-Nr.: 20200099

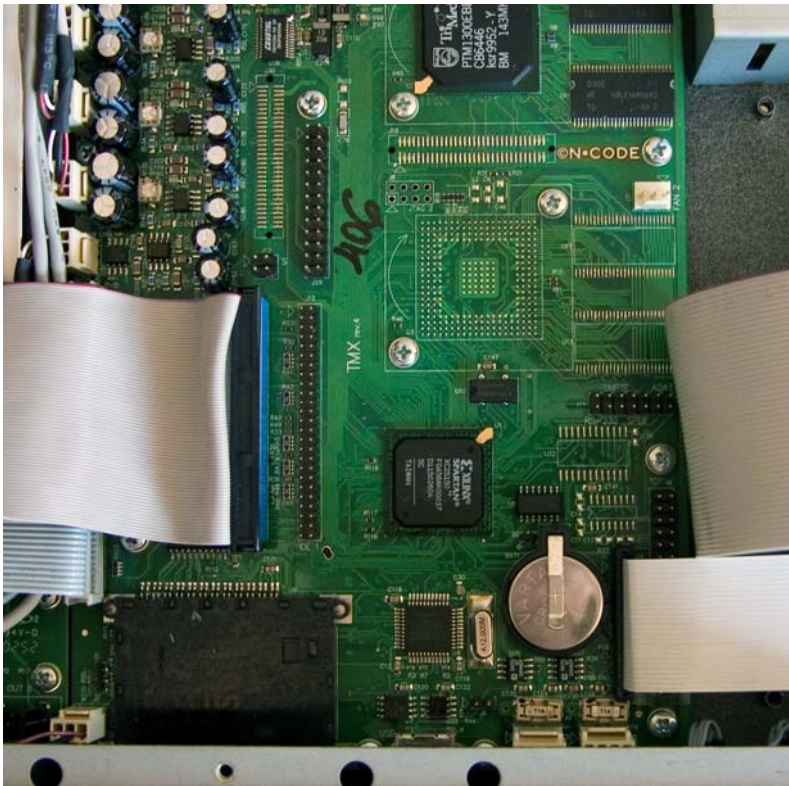
M8: Ser.-Nr.: 30200001 up to Ser.-Nr.: 30200099

M8: Ser.-Nr.: 300200281 up to Ser.-Nr.: 30200285

M8-CD: Ser.-Nr.: 30200405 up to Ser.-Nr.: 30200475

This will be done by a service-technician of Miditemp for only a small amount. Then also the audio-modification for the audio-out 3+4 (as written on page 10/11) will be made and your unit will even be completely tested and checked. Now, if you already own a DoX-1 – no problem – just add it to your unit when you ship this unit back to Miditemp or your local distributor/dealer.

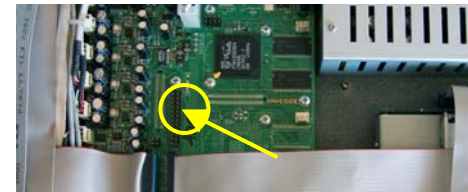
Inside your Multistation



For installation you need:

- 1 x spacer screw M3x12mm (included)
- 1 x screws M3x5 (4 pcs. included)
- a tiny plusdriver + a small plier

- 1) **! Unplug the power-cord !**
- 2) Remove the small screws from the case-cover's top and the sides.
- 3) Remove the case-cover and place the unit in a way so that you look onto it from the front-side.
- 4) Remove the screw behind the 26-pin socket **J20** and replace it by the included, long spacer screw.



- 5) Discharge yourself (as written at P.3 of this manual) before carefully removing the DoX-1 out of the anti-static package and plug it into the socket **J20**.

Please care for the correct assembly of the DoX-1.

Avoid mounting it out of position.

It needs to be mounted exactly onto J20!

- 6) Fix the DoX-1 by using one of the included screws M3x5.
- 7) Put on the case-cover and attach it again.



Please care for aeration when mounting the Multistation inside a rack / flight-case.