



ADDAC402 HEURISTIC RHYTHM GENERATOR

GUIDE TO MIDI EXPANSION

Revision.01 January.2017

ADDAC402 EXPANSION MIDI GUIDE

Revision.01 January,2017

INTRODUCTION

ADDAC402B MIDI Expansion allows full I/O Midi control of ADDAC402 plus access to a powerfull midi interface, with:

Midi Sync:

Allows the module to synchronize with any external MIDI device's Clock, including transport messages like play, stop and continue.

CV to MIDI:

5 CV inputs (Fills 1 to 4 and Assign) to MIDI Notes and/or CC messages, the Note and CC number can be independently configured via the Configuration Menu.

These CV inputs can be sent on independent MIDI Channels, for ex: Fills 1 to 4 on MIDI Channel 1 and Assign on MIDI Channel 2.

MIDI Controller:

All panel controls (9 knobs, 4 toggle switches and 11 push buttons) can be sent to MIDI Out as CC controls making it work just like any standard MIDI controller. The individual CC numbers can be configured through the Configuration Menu.

MIDI to Gate:

All 4 Gate outputs can be controlled/sequenced from an external MIDI device.

For ex: we can configure Gate 1 to be responsive to CC 1, Gate 2 to CC 2 and so on. Everytime CC 1 gets a value of 127 Gate 1 will be turned ON, if it gets a 0 value Gate 1 will be turned OFF.

MIDI Control:

All panel controls (9 knobs, 4 toggle switches and 11 push buttons) can be controlled/sequenced from MIDI CC controls. This allow full automation of the module via MIDI.

The individual CC numbers can be configured through the Configuration Menu and includes a midi learn feature for easier configuration.

Also controllable via MIDI is the change of Presets and Modes.

ADDAC402 EXPANSION MIDI GUIDE

Revision.01 January,2017

MENU Description

For any MIDI Configuration the user must get into the CONFIG Menu, this is done by pressing the MODE INFO / CONFIG push button for 3 seconds, after this the screen will show the first Menu Page:

CONFIG + ASSIGNS	Always available
MIDI GENERAL CONFIG	Only available with 402B expansion plugged in
MIDI IN CONFIG	
MIDI OUT CONFIG	

CONFIG + ASSIGNS:

In this page the user accesses several diferent settings of the 402 and can also Assign the Swing/Assign input to any parameter.

MIDI GENERAL CONFIG:

This page features most general MIDI settings

MIDI IN CONFIG:

This pages features all settings related with incoming MIDI messages

MIDI OUT CONFIG:

This pages features all settings related with outgoing MIDI messages

MENU Operation

Once in the first page the user can use the PRESET MENU / SCROLL Knob to scroll among the Menu options. Pressing the MODE INFO / CONFIG Button will enter the selected secondary Menu page. Pressing it once again will Exit the secondary Menu page back to the First page.

Once inside a secondary page the user can scroll its items with the PRESET MENU / SCROLL Knob. To change a parameter the user can use the Skip Step 3 / MENU -- button to decrease the current value or use the Skip Step 4 / MENU ++ button to increase the current value. It's also possible to use the Steps 4 / Set Value Knob for faster changes.

MIDI Learn:

While inside a secondary menu, the user can also press the Reset 4 / MIDI Learn push button and while keeping it pressed send a CC message to the 402 MIDI IN. The module will then detect the message and set the current selected value to the incoming CC number.

ADDAC402 EXPANSION MIDI GUIDE

Revision.01 January,2017

MIDI GENERAL CONFIGURATION

The General Configuration Menu page allows the User to configure:

MIDI SOFT THRU	ON / OFF
CLOCK TYPE	OFF / SLAVE
CLOCK DIV	6 to 48
REMOTE CONTROL	ON / OFF
CV1 MIDI CH	OFF to 16
CV2 MIDI CH	OFF to 16
CV3 MIDI CH	OFF to 16
CV4 MIDI CH	OFF to 16
CV5 MIDI CH	OFF to 16

MIDI SOFT THRU:

Allows any incoming message from MIDI IN to be routed to MIDI OUT, this is necessary if you're daisy chaining MIDI devices.

CLOCK TYPE:

Allows the module to operate from it's Clock Input (OFF) or to Synchronize to an external MIDI device's clock (SLAVE).

CLOCK DIV:

This is an experimental feature not found in most MIDI devices, it defines the Incoming MIDI clock division. As a standard MIDI clock comes as a flow of 24 messages every 1/4 note, this makes it sync with high efficiency. Changing this value most probably will result in unsynchronized events but can also be used to divide the incoming BPM, if set to 12 it will multiply the incoming BPM by a factor of 2 and if set to 48 it will divide the incoming BPM by a factor of 2. For ex: 120 BPM and a clock division of 12 will result in a 240 BPM, if the clock division is 48 then the effective BPM will be 60.

Any value in between will make it work in very unusual and very interesting ways.

REMOTE CONTROL:

This allows for transport messages to be received and respected by the 402.

For ex: if connected to a sequencer it will Play every time the sequencer is set on Play, Stop everytime the sequencer is stopped and Continue (just like Play but the sequencer is not reset to Bar number 1) everytime the sequencer resumes playing.

CV 1 to 4 MIDI CH:

This allows the user to set independent MIDI Channels for each of the CV to MIDI converters.

ADDAC402 EXPANSION MIDI GUIDE

Revision.01 January.2017

MIDI IN CONFIGURATION MENU

MIDI CHANNEL	OFF to 16
MODE CHG CC	OFF to 119
PRESET CHG	OFF to 119
CLOCK CC	OFF to 119
PLAY/PAUSE CC	OFF to 119
SWING/ASSIGN CC	OFF to 119
GATE OUT1 CC	OFF to 119
GATE OUT2 CC	OFF to 119
GATE OUT3 CC	OFF to 119
GATE OUT4 CC	OFF to 119
GATE OUT1 NOTE	OFF to 119
GATE OUT2 NOTE	OFF to 119
GATE OUT3 NOTE	OFF to 119
GATE OUT4 NOTE	OFF to 119
MASTER RESET	OFF to 119
STEPS 1 CC	OFF to 119
FILLS 1 CC	OFF to 119
G/T 1 CC	OFF to 119
SKIP 1 CC	OFF to 119
RESET 1 CC	OFF to 119
STEPS 2 CC	OFF to 119
FILLS 2 CC	OFF to 119
G/T 2 CC	OFF to 119
SKIP 2 CC	OFF to 119
RESET 2 CC	OFF to 119
STEPS 3 CC	OFF to 119
FILLS 3 CC	OFF to 119
G/T 3 CC	OFF to 119
SKIP 3 CC	OFF to 119
RESET 3 CC	OFF to 119
STEPS 4 CC	OFF to 119
FILLS 4 CC	OFF to 119
G/T 4 CC	OFF to 119
SKIP 4 CC	OFF to 119
RESET 4 CC	OFF to 119

MIDI INPUT CONFIGURATION

The MIDI Input Menu page allows the User to configure:

MIDI CHANNEL:

The MIDI Channel which the 402 responds to.

MODE CHG CC:

The CC number that will make the 402 Change it's working MODE, the value will determine which mode it will change to.

PRESET CHG:

The CC number that will make the 402 Change it's working Preset, the value will determine which preset it will change to.

CLOCK CC:

Besides MIDI Sync and the Trigger Clock Input users can also clock the 402 from a MIDI CC message, so that everytime this message comes in the 402 advances to the next step. This parameter defines the CC number that will trigger the clock.

PLAY/PAUSE CC:

Play and Pause actions can also be triggered from a CC message

SWING/ASSIGN CC:

The 402 Swing/Assign value can also be set from a CC message that will take control over the panel's Knob position, so that the value is coming from the MIDI Input instead of the Panel control.

GATE OUT 1 to 4 CC and NOTE:

The 402 Gate outputs can also be controlled from MIDI, here you can set individual CC or Note messages numbers that will change the state of the Gate Outputs. Users can choose using a CC number with value 127 for ON and value 0 for OFF or a Note number so that Note On will make the Gate output go ON or a Note Off to make the output go OFF. This actions will work either if the 402 is in Play or Stop state.

MASTER RESET:

The CC number that will make the 402 reset all it's voices to their sequences Step 1.

STEPS CC - 1 to 4:

The CC numbers that will control the 402's Steps values for all 4 voices.

FILLS CC - 1 to 4:

The CC numbers that will control the 402's Fills values for all 4 voices.

ADDAC402 EXPANSION MIDI GUIDE

Revision.01 January.2017

MIDI IN CONFIGURATION MENU

MIDI CHANNEL	OFF to 16
MODE CHG CC	OFF to 119
PRESET CHG	OFF to 119
CLOCK CC	OFF to 119
PLAY/PAUSE CC	OFF to 119
SWING/ASSIGN CC	OFF to 119
GATE OUT1 CC	OFF to 119
GATE OUT2 CC	OFF to 119
GATE OUT3 CC	OFF to 119
GATE OUT4 CC	OFF to 119
GATE OUT1 NOTE	OFF to 119
GATE OUT2 NOTE	OFF to 119
GATE OUT3 NOTE	OFF to 119
GATE OUT4 NOTE	OFF to 119
MASTER RESET	OFF to 119
STEPS 1 CC	OFF to 119
FILLS 1 CC	OFF to 119
G/T 1 CC	OFF to 119
SKIP 1 CC	OFF to 119
RESET 1 CC	OFF to 119
STEPS 2 CC	OFF to 119
FILLS 2 CC	OFF to 119
G/T 2 CC	OFF to 119
SKIP 2 CC	OFF to 119
RESET 2 CC	OFF to 119
STEPS 3 CC	OFF to 119
FILLS 3 CC	OFF to 119
G/T 3 CC	OFF to 119
SKIP 3 CC	OFF to 119
RESET 3 CC	OFF to 119
STEPS 4 CC	OFF to 119
FILLS 4 CC	OFF to 119
G/T 4 CC	OFF to 119
SKIP 4 CC	OFF to 119
RESET 4 CC	OFF to 119

MIDI INPUT CONFIGURATION

(continued)

G/T CC - 1 to 4:

The CC numbers that will control the 402's Gate/Trigger switches. 0 for Gate, 127 for Trigger. Changing these over MIDI will take control and ignore the front panel switch. If the user physically changes the switch then it will re-gain it's control over MIDI.

SKIP CC - 1 to 4:

The CC number that will trigger the 402 to Skip a step in any of it's 4 voices.

RESET CC - 1 to 4:

The CC number that will Reset the particular 402 voice sequence to step 1.

ADDAC402 EXPANSION MIDI GUIDE

Revision.01 January.2017

MIDI OUT CONFIGURATION MENU

MIDI CHANNEL	OFF to 16
MODE CHG CC	OFF to 119
PRESET CHG	OFF to 119
CLOCK CC	OFF to 119
PLAY/PAUSE CC	OFF to 119
SWING/ASSIGN CC	OFF to 119
GATE OUT1 CC	OFF to 119
GATE OUT2 CC	OFF to 119
GATE OUT3 CC	OFF to 119
GATE OUT4 CC	OFF to 119
GATE OUT1 NOTE	OFF to 119
GATE OUT2 NOTE	OFF to 119
GATE OUT3 NOTE	OFF to 119
GATE OUT4 NOTE	OFF to 119
MASTER RESET	OFF to 119
STEPS 1 CC	OFF to 119
FILLS 1 CC	OFF to 119
G/T 1 CC	OFF to 119
SKIP 1 CC	OFF to 119
RESET 1 CC	OFF to 119
STEPS 2 CC	OFF to 119
FILLS 2 CC	OFF to 119
G/T 2 CC	OFF to 119
SKIP 2 CC	OFF to 119
RESET 2 CC	OFF to 119
STEPS 3 CC	OFF to 119
FILLS 3 CC	OFF to 119
G/T 3 CC	OFF to 119
SKIP 3 CC	OFF to 119
RESET 3 CC	OFF to 119
STEPS 4 CC	OFF to 119
FILLS 4 CC	OFF to 119
G/T 4 CC	OFF to 119
SKIP 4 CC	OFF to 119
RESET 4 CC	OFF to 119

MIDI OUTPUT CONFIGURATION

The MIDI Output Menu page allows the User to configure:

MIDI CHANNEL:

The MIDI Channel which the 402 sends messages to.

MODE CHG CC:

The CC number that will carry the 402 Mode number. Sent everytime the user presses the 402 Mode push-button.

PRESET CHG:

The CC number that will carry the 402 PRESET number. Sent everytime the user changes presets.

CLOCK CC:

This CC message will be sent everytime the 402 receives a Clock Trigger Input.

PLAY/PAUSE CC:

This CC message will be sent everytime the user pushes the Play/Pause push button, the CC value will reflect it's state: 0 if OFF, 1 if ON.

SWING/ASSIGN CC:

This CC message will be sent everytime the user moves the Swing/Assign Knob, the CC value will reflect it's position: 0 to 127.

GATE OUT 1 to 4 CC and NOTE:

These CC or Note messages will be sent everytime the 402 algorithms change it's 4 Gate Outputs: 0 if OFF, 1 if ON.

MASTER RESET:

This CC message will be sent everytime the user pushes the MST Reset push button.

STEPS CC - 1 to 4:

These CC messages will be sent everytime the user moves any of the 4 Steps Knobs, the CC value will reflect their positions: 0 to 127.

FILLS CC - 1 to 4:

These CC messages will be sent everytime the user or CV changes any of the 4 Fills states, the CC value will reflect their states: 0 to 127.

ADDAC402 EXPANSION MIDI GUIDE

Revision.01 January,2017

MIDI OUT CONFIGURATION MENU

MIDI CHANNEL	OFF to 16
MODE CHG CC	OFF to 119
PRESET CHG	OFF to 119
CLOCK CC	OFF to 119
PLAY/PAUSE CC	OFF to 119
SWING/ASSIGN CC	OFF to 119
GATE OUT1 CC	OFF to 119
GATE OUT2 CC	OFF to 119
GATE OUT3 CC	OFF to 119
GATE OUT4 CC	OFF to 119
GATE OUT1 NOTE	OFF to 119
GATE OUT2 NOTE	OFF to 119
GATE OUT3 NOTE	OFF to 119
GATE OUT4 NOTE	OFF to 119
MASTER RESET	OFF to 119
STEPS 1 CC	OFF to 119
FILLS 1 CC	OFF to 119
G/T 1 CC	OFF to 119
SKIP 1 CC	OFF to 119
RESET 1 CC	OFF to 119
STEPS 2 CC	OFF to 119
FILLS 2 CC	OFF to 119
G/T 2 CC	OFF to 119
SKIP 2 CC	OFF to 119
RESET 2 CC	OFF to 119
STEPS 3 CC	OFF to 119
FILLS 3 CC	OFF to 119
G/T 3 CC	OFF to 119
SKIP 3 CC	OFF to 119
RESET 3 CC	OFF to 119
STEPS 4 CC	OFF to 119
FILLS 4 CC	OFF to 119
G/T 4 CC	OFF to 119
SKIP 4 CC	OFF to 119
RESET 4 CC	OFF to 119

MIDI OUTPUT CONFIGURATION

(continued)

G/T CC - 1 to 4:

These CC messages will be sent everytime the user changes any of the 4 Gate/Trigger toggle switches, the CC value will reflect their states: 0 to 127.

SKIP CC - 1 to 4:

These CC messages will be sent everytime the user presses any of the 4 Skip Step push buttons.

RESET CC - 1 to 4:

These CC messages will be sent everytime the user presses any of the 4 Reset push buttons.

For feedback, comments or problems please contact us at:
addac@addacsystem.com

ADDAC402 EXPANSION MIDI GUIDE

Revision.01 January,2017