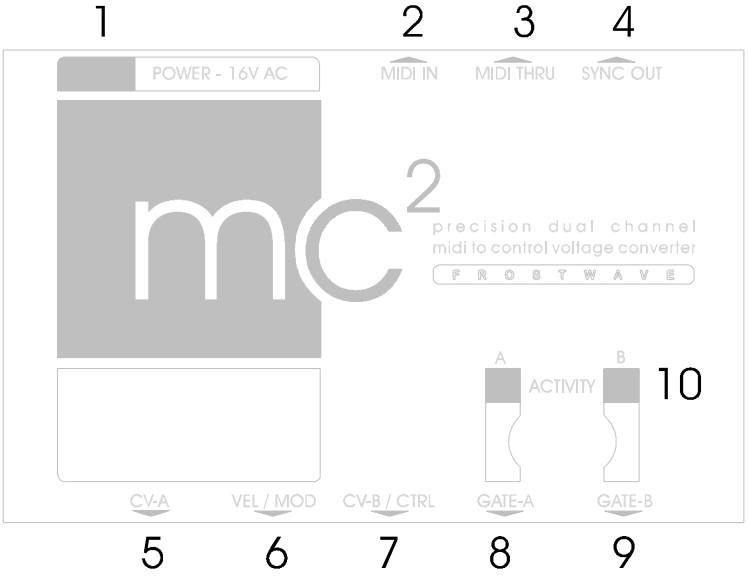
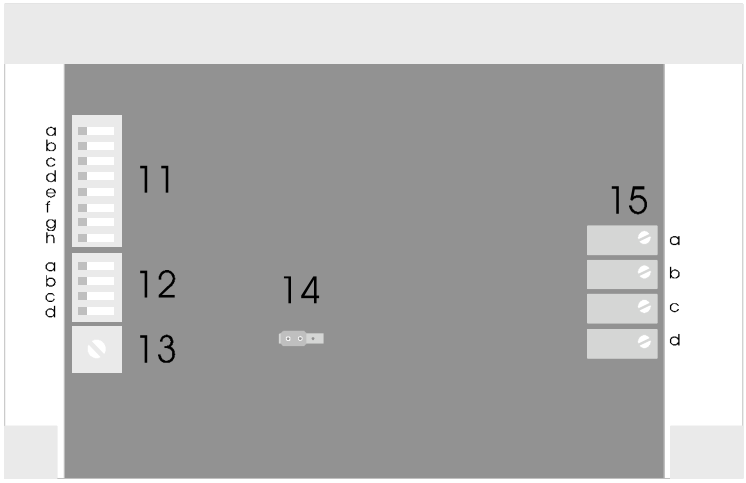
precision dual channel
midi to control voltage converter

FROSTWAVE

USERS MANUAL


1
2
3
4
POWER - 16V AC
MIDI IN
MIDI THRU
SYNC OUT
mc2
precision dual channel
midi to control voltage converter
FROSTWAVE
A
B
ACTIVITY
10
CV-A
VEL / MOD
CV-B / CTRL
GATE-A
GATE-B
5
6
7
8
9


a b c d e f g h
a b c d
11
12
13
14
15
a
b
c
d

SETTING UP THE MC

A number of user features are available on the MC. These features are setup using DIPswitches, jumpers, and tuneable pots inside the casing of the unit. These settings should not need to be changed often.

The setup procedure:

1. Turn power off.
2. Remove power cable.
3. Unscrew base of the MC.
4. Setup the required feature/s.
5. Replace the base unit and reconnect power.

The operating features are listed below.

<11a> CV-A OUTPUT TYPE

off - CV-A is a linear voltage output
on - CV-A is an exponential voltage output

<11b> MOD OUTPUT TYPE

off - VEL/MOD is a linear voltage output
on - VEL/MOD is an exponential voltage output

<11c> CV-B OUTPUT TYPE*

off - CV-B is a linear voltage output
on - CV-B is an exponential voltage output

<11d> GATE-A TRIGGER TYPE

off - GATE-A is a normal type (high=on).
on - GATE-A is S-TRIG type (short/low=on).

<11e> GATE-B TRIGGER TYPE*

off - GATE-B is a normal type (high=on).
on - GATE-B is S-TRIG type (short/low=on).

<11f> PITCH BEND RANGE

off - Pitch Bend up/down a tone (two semi-tones).
on - Pitch Bend up/down an octave.

<11g> MOD OUTPUT SELECT

off - VEL/MOD output is note VELocity of channel-A.
on - VEL/MOD output is 14bit MOD wheel on channel-A.

<11h> EXTENDED OCTAVE RANGE

off - Standard octave range (7 octaves, midC=note60) active.
on - Extended octave range (10 octave, midC=note24) - recommended.

<12a/b/c> CONTROLLER TYPE – A/B/C*

CV-B has the alternative function of a controller output. The following table shows the controller types available for CV-B:

SWITCH C	SWITCH B	SWITCH A	CV-B Output	GATE-B Output
Off	Off	Off	Channel-B PITCH (16bit)	Channel-B GATE
Off	Off	On	Channel-A Modulation (14 bit)	Chan-A SUS pedal
Off	On	Off	Channel-A Channel Aftertouch (7 bit)	Chan-A SUS pedal
Off	On	On	Channel-A MIDI Main Volume (14 bit)	Chan-A SUS pedal
On	Off	Off	Channel-A MIDI Pan (14 bit)	Chan-A SUS pedal
On	Off	On	Channel-A Effect1 CTRL12(14 bit)	Chan-A SUS pedal
On	On	Off	Channel-A Effect2 CTRL13(14 bit)	Chan-A SUS pedal
On	On	On	Channel-A MIDI Data Slider. (14 bit)	Chan-A SUS pedal

<12d> Y/N SELECT*

This is an unused switch.

<13> MIDI CHANNEL

This rotary switch sets the receiving MIDI channel for the MC. The MC2 will have the adjacent MIDI channel for the Channel-B output. For example, if MIDI channel is set to 14 then Channel-A of the MC will respond to MIDI channel 14 and Channel-B of the MC2 will respond to channel 15.

NOTE: Positions 0-9 correspond to MIDI channels 1-10, and positions A-F correspond to MIDI channels 11-16.

<14> GATE VOLTAGE

The jumper is place in either or two positions. It must be preset to enable the gate outputs.

5V - Gate output voltage will be 5V maximum.
15V - Gate output voltage will be 15V maximum.

*** only active on MC2 model**

OFFSET AND GAIN ADJUSTMENTS

The gain and offset of CV-A and CV-B* may be individually set using the gain and offset trim pots on the MCs'circuit board. The MC will be shipped with these settings optimised. When using the MC with some equipment, particularly older synthesizers, the gain and offset may be adjusted to match the inaccuracies of these devices inputs.