Wind Machine ™

OPERATING INSTRUCTIONS

HOW WIND MACHINE™ WORKS

Wind Machine was developed to interface a Yamaha® breath controller BC1™or BC2™ (not supplied) to virtually all synthesizers that respond to standard MIDI continuous controllers such as Modulation or Aftertouch. This allows the musician to control volume, timbre and other parameters during performance by simply varying breath pressure on the breath controller mouthpiece. Wind Machine reads the resistance created by the breath controller and converts it to any one of eight MIDI continuous controllers on any one of sixteen MIDI channels. Switches on the top of the product select the controller type and MIDI channel and these settings will be maintained even while the unit is powered down. Wind Machine may be used as a MIDI transmitting device only (see Connection 1 below) or it can merge incoming keyboard data with the controller data it generates (See Connection 2).
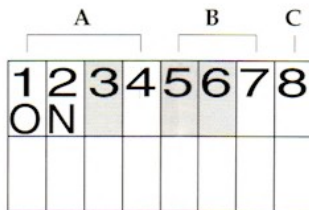
CONNECTIONS

1)

2)
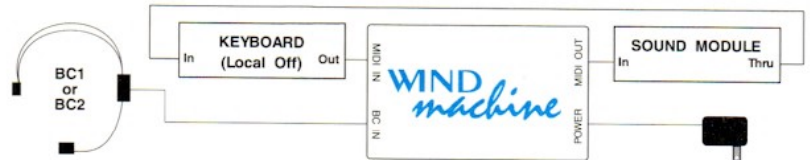
SELECTING TRANSMIT PARAMETERS

The 8 DIP switches on Wind Machine match it's output with the type to which the synthesizer responds. The combination of switches 1 to 4 determine the MIDI output channel; switches 5 to 7 determine the type of controller and switch 8 is the Controller Thru Disable (see below). Experimentation with MIDI Volume, Modulation or Pitch Bend parameters on MIDI channel 1 are most likely to produce initial results quickly unless the synthesizer's exact controller specifications are known. This information is usually found at the back of the synthesizer's manual in the MIDI Implementation chart under Control Change (Recognized). The example below shows switches 3, 5 and 6 pressed indicating that Wind Machine is transmitting Modulation on MIDI channel 5.

NOTE 1: Wind Machine is capable of transmitting one controller type on one MIDI channel only.
NOTE 2: A switch is ON when it's lettered part is flat against the lid of Wind Machine.

A) MIDI CHANNEL SELECT

ON OFF

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

B) CONTROLLER TRANSMIT SELECT

ON OFF

Breath Control	Pitch Bend
Aftertouch	Modulation
Foot Controller	MIDI Volume
Pan	Expression

C) CONTROLLER THRU DISABLE.

When this switch is on, Wind Machine blocks continuous controller data received at it's MIDI input that would interfere with MIDI data it is generating. For instance, if you are connected as in Connection 2 diagram above and wish to have the sound module's Filter setting modified by Aftertouch, applying pressure on the keys while blowing into the breath controller would cause the filter to erratically jump from one value to another as the module tries to keep up with the Aftertouch values generated by the keyboard and the Aftertouch values generated by Wind Machine. Setting the disable switch to ON will prevent this problem. In most cases however, the disable switch may be left OFF.

TROUBLESHOOTING

It is important to note that for Wind Machine to control your synthesizer, the synth's sound patch must be programmed to make a change in its sound when it receives input from Wind Machine. Factory patches do not always respond to the particular type of controller data you are sending and some patch modification may be necessary. If it is unclear whether or not the synthesizer is receiving control signals, setting the Wind Machine to MIDI Volume or Modulation on channel one will most likely cause a change in the sound. A synthesizer may respond globally to Aftertouch, Breath Control etc. but certain *patches* may not and will need to be modified. For more information, consult your synthesizer manual.

LED MODES

The red status LED is used to indicate power on or off and the presence of MIDI data. When connection is made between an AC adaptor and Wind Machine, the LED will glow indicating power on status. During normal operation, the LED will blink off and then on when data is either transmitted from the output or received at the input. Real time messages such as MIDI Clock, Start/Stop/Continue, and Active Sensing do not cause the LED to blink.

SPECIFICATIONS
POWER   Minimum 12 volt AC/DC unregulated supply
MIDI RECEIVED   All
MIDI TRANSMITTED   All

This device has been designed to comply with the MIDI 1.0 Specification Document Version 4.0 and will operate with all MIDI equipment designed to this specification.