

AP116 Reface Breath Controller



Description

The AP116 Breath controller is designed for use with the Yamaha Reface range of keyboards (DX/CS/CP/YC) and allows the operator to control one of expression, pitch or on the Reface YC organ, rotary control.

Model	Pitch	Expression	Melodica	Rotary
DX	Yes	Yes	Yes	No
CS	Yes	Yes	Yes	No
CP	Yes	Yes	Yes	No
YC	Yes	Yes	Yes	Yes

Preparation - **IMPORTANT!**

Ensure that your Reface is set to receive MIDI control change messages. See the section in the Reface manual for this, but basically you must ensure the mode is ON by holding down the lowest E key while turning the keyboard on. For mode change confirmations, please also ensure that the MIDI channel is set to 1 (default).

If control change messages are not enabled, then Expression control or Rotary control will not operate. If MIDI channel 1 is not set, then pitch control will not operate.

See the reface manual for these settings.

Getting Ready To Play

Install the provided flexible tube into the opening on the breath controller and plug the connector on the cable into the MIDI port on the Reface keyboard. Switch on the keyboard and allow the unit to power up for five seconds before operating the breath controller. During these five seconds, DO NOT blow or suck into the tube (unless you are changing modes) - the device is measuring the ambient pressure at this time.

Controls available

The device can be configured for different breath controls. As shipped, it is configured as a pitch controller, but can be changed to Expression control or Rotary Control (YC only). Different controls are performed by blowing (increasing pressure) or sucking (reducing pressure) on the tube.

Pitch Control

Pitch of the playing keys can be increased by blowing and decreased by sucking on the tube.

Expression Control

By changing the pressure, the output volume of the keyboard can be reduced. You can choose to blow or suck, both reduce the volume. The opposite of this function is 'Melodica' mode.

Melodica

In this mode, no sound will come from the keyboard unless you blow into the tube, controlling the volume, thus simulating the operation of a melodica. Beware that if this mode is set, then no sound will come out of the instrument UNLESS you blow into the tube.

Rotary Control (YC only)

A sharp suck on the tube will toggle the rotary speed to stop. A sharp blow on the tube will toggle between fast and slow rotary speeds.

Selecting Modes

Immediately after power up, you can select modes by making sharp blows into the tube. This must be done within five seconds of turning the unit on - while the Reface is initialising. You can also let the Reface power up and plug the unit in, this way you will hear a tone as each puff is recognised.

The number of puffs into the tube will select the mode of operation. When the new mode is set, the keyboard will play a morse code confirmation of the selected mode. When you hear this tone, confirm the selection with another sharp puff and the

code 'K' will be played to confirm your selection. After this, the unit will store the new mode and continue.

Puffs	Mode	Confirmation
1	Pitch Bend	P - short long long short
2	Expression	E - short
3	Rotary	R - short long short
4	Melodica	M - long long

Morse letter	Tone played
E	.
K	- . -
M	- -
P	. - - .
R	. - .
S	. . .

If you do not confirm the selection, the unit will continue, and measure ambient

pressure as before. Once the keyboard is ready to use again a code 'S' will be played (three short tones).

To hear the confirmation tones, the keyboard must be set with the volume on and in a mode where notes can be heard.

MIDI Commands

Controller Mode	Command	MIDI Channel mode	Control Change	Parameter
Expression (all models)	Expression	0xB0	11	127 - breath value
Melodica (all models)	Expression	0xB0	11	breath value
Pitch Bend (all models)	Bend	0xE0	n/a	8192 +/- breath value
Rotary (YC only)	Off	0xB0	19	0
	Stop	0xB0	19	42
	Fast	0xB0	19	85
	Slow	0xB0	19	127