BOBPERRY AUDIO

Ducker Manual

Preface

Thank you for purchasing the Bob Perry Ducker. To be able to get the best out of this product, we recommend you carefully read these instructions.

Firstly we will describe the user interface and will give a brief introduction to the control elements. After that we will provide a quick guide to show some typical use cases for the plug-in.

System Requirements

To use the Bob Perry Ducker, a Digital Audio Workstation (DAW) with support for AU (Mac) or VST3 (PC, Mac) is required. We thoroughly tested the plug-in with various versions of the following DAWs:

Steinberg Cubase (Mac, PC)
Steinberg Nuendo (Mac, PC)
PreSonus Studio One (Mac, PC)
Image-Line FL Studio (PC)
Adobe Audition (Mac, PC)
Logic Studio (Mac)

To use the plug-in in beautiful high resolution (HiDPI), you need a Mac with Retina Display. High resolution is currently only supported for Mac OS X systems.

Installation

For Mac OS X systems: Most users should be fine just following the instructions after opening the .dmg file.

For Windows systems: Simply copy the file `BPADucker_x86.vst3` (for 32-bit environments) or `BPADucker_x64.vst3` (for 64-bit environments) into the corresponding VST3 folder of your DAW. Please refer to your DAW's manual concerning the correct location.

Common VST3/AU paths are:

For a 32-bit VST3 DAW in a 32-bit environment (Windows PC):
```
C:/Program Files/Common Files/VST3
```

For a 32-bit VST3 DAW in a 64-bit environment (Windows PC):
```
C:/Program Files (x86)/Common Files/VST3
```

For a 64-bit VST3 DAW in a 64-bit environment (Windows PC):
```
C:/Program Files/Common Files/VST3
```

For Mac OS X systems, VST3 32-bit as well as VST3 64-bit:
```
/Library/Audio/Plug-Ins/VST3/
```

For Mac OS X systems, Audio Unit (AU):
```
/Library/Audio/Plug-Ins/Components/
```

You cannot use the Windows 64-bit version in a Windows 32-bit environment / DAW!
The Mac versions are universal binaries and work in either 32 and 64 bit environments.

What does a Ducker do?

Since you already have purchased the Bob Perry Ducker, you probably already know what it's good for.
Nevertheless, here is a quick summary:

A Ducker reduces one signal's volume when a second signal's volume crosses a set threshold.

Sounds legit.
But why should I not use a compressor for this?

Using a compressor will give you a result that is similar to a Ducker but will give you less control. Some people say that „Side Chain Compressing" is ducking but that is somewhat wrong. A compressor will not only lower the volume but compress the signal. The whole character of the sound is likely to change. Additionally you cannot control the level of volume reduction as it always depends on the side chain signal. The resulting sound might become imbalanced. Our Ducker solves these problems: it lowers the volume evenly and without any unwanted compression, giving you full control over your production.

User Interface

Input (top left)
Lowers the input signal's level if a plug-in in the signal chain has a high output. Most of the time you won't need to use it. It will take a very high level to create distortion within the Ducker.

Threshold (bottom left)
Serves for the adjustment of the threshold. If the level of the side chain exceeds the threshold, the ducking process will be triggered. A threshold below the side chain signal's amplitude should be chosen, otherwise the Ducker won't alter your signal.

Attack
Time the Ducker will take to reach the set range value after being triggered by the side chain signal exceeding the threshold. The higher the attack value, the longer it takes the Ducker to reach the final gain reduction.

Hold
Time the Ducker will keep its full gain reduction even when the threshold is not exceeded anymore. When the threshold gets exceeded again during hold time, the hold duration will be extended accordingly.

Release
Time the Ducker needs to revert back to its original state.

Please note: Very short Attack and Release times might cause distortion when working with low frequencies. This might happen when the Attack and/or Release are shorter than the frequencies' oscillating period.

Range
Sets the gain reduction in dB. For subtle effects we recommend using a range of up to 3dB. If you want pumping club / house music sound go up to 10dB.

Output

Lowers the plug-in's output level. Although the plug-in itself won't distort even with very high signal levels, we recommend setting a value that won't make the red LEDs light up.

Metering

Please note: the LED-Meter is for visual feedback only. Don't use it for exact measurements. For setting a good Output value, refer to your DAW's channel meter.

The Threspass-LED lights up whenever the side chain signal exceeds the set threshold. This gives you contol over the adjustment of the threshold parameter.

Input / Side Chain / Output Switch

Switches the green LED rows between input signal, side chain signal and output signal.
The upper LED row (green/red) shows the left channel's volume.
The lower LED row (green/red) shows the right channel's volume.
The center LED row (yellow) visualizes the ducking process. It is independent of the gain reduction setting, i.e. all LEDs will be lit when ducking to the set range, regardless of its setting.

Curve Switch

The Curve Switch lets you choose between logarithmic and linear volume curves for attack and release of the ducking process. The decision which one to take will solely be based on your personal taste.

Side chain button (window of the DAW)

Activates the side chain. This is very important as the Ducker won't work without a side chain signal. Please refer to your DAW's manual for details.

How do I work with the Ducker?

First of all, you need to think about what signal you want to duck in dependence of which driving signal (side chain). Then proceed as following:

1) Load the Ducker into the channel of the signal that you want to be ducked.

2) Enable the side chain.

3) In the channel that provides the driving signal (side chain), use an Aux Send to route the channel's signal onto the Ducker's side chain. *Don't route the output to the side chain directly, as then you won't hear it any more.*

4) Within the plug-in

      a) Adjust the Threshold

      b) Adjust the Range

      c) Adjust Attack, Hold and Release

5) Listen to the effect and tweak it until it sounds as you please.

Typical Use Cases

We will now provide some examples for typical use cases of our Ducker.

1) Clean Up the Basement

Sometimes you may run into trouble when you have a bass drum and the bass competing in the same range of frequencies. In most cases, you certainly don't want muddy low frequencies, but cleanly separated instruments.

To clean things up a bit, the Ducker can lower the volume of the bass each time the bass drum kicks in. To do this, we firstly need to find out the average length of the bass drum signal. We assume the length to be around 60ms. Therefore, the whole ducking (including attack, hold and release) should not take longer than 60ms. As the bass drum's volume will decline in the end, the hold time may be a little shorter.

For tweaking the ducking effect, start with a high range value. It will make you able to easily hear the results of your adjustments. Afterwards, the range should not exceed 3dB as otherwise it might begin to sound unnatural. Of course it all depends on your taste.

Pro Tip: Carefully adjust the threshold as otherwise the ducking might be prolonged by the fading bass drum!

2) Pumping Remix

You are into electric music and want to get this cool contemporary pumping bass? No problem with our Ducker. Try ducking everything in the mix but your bass drum. The ducking should be triggered after the length of an eighth note in a four-four-time. Thus, the Ducker needs to do its work in this short period of time.

With this easy formula we can calculate the length of a quarter note:

60 000 / Tempo in bpm = time in ms

As an example with a tempo of 120 bpm:

$$\frac{60000}{120} = 500 \text{ ms for a quarter note.}$$

Divide this by 2 to get the value for an eighth note (250ms).

The attack should be short, but beware of distortions. 10 to 30 ms will mostly do the trick. Adjust hold and release to place the pumping effect on the right spot. In our example having 120 bpm it should be 250ms. Find your balance between hold and release to get the desired result.

3) Voice over / Voice over Guitar

Sometimes you want to lower the volume of the music while singing or talking. To get this done do the following:

1) Assign the plug-in to a channel or a channel group.

2) Send your vocal track's signal into the Ducker's side chain.

3) You might want to choose relatively high values for hold and release to achieve smooth blending of phases.

We hope this manual leaves no questions unanswered.
If you still have questions, feel free to contact us:

support@bobperry-audio.com