

BOBPERRY AUDIO

Ducker Pro Manual

Preface

Thank you for purchasing the Bob Perry Ducker Pro. 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 Pro, 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 Pro (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 `BPADuckerPro_x86.vst3` (for 32-bit environments) or `BPADuckerPro_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/`

It is not possible to 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 Pro, you probably already know what it's good for.

Nevertheless, here is a quick summary:

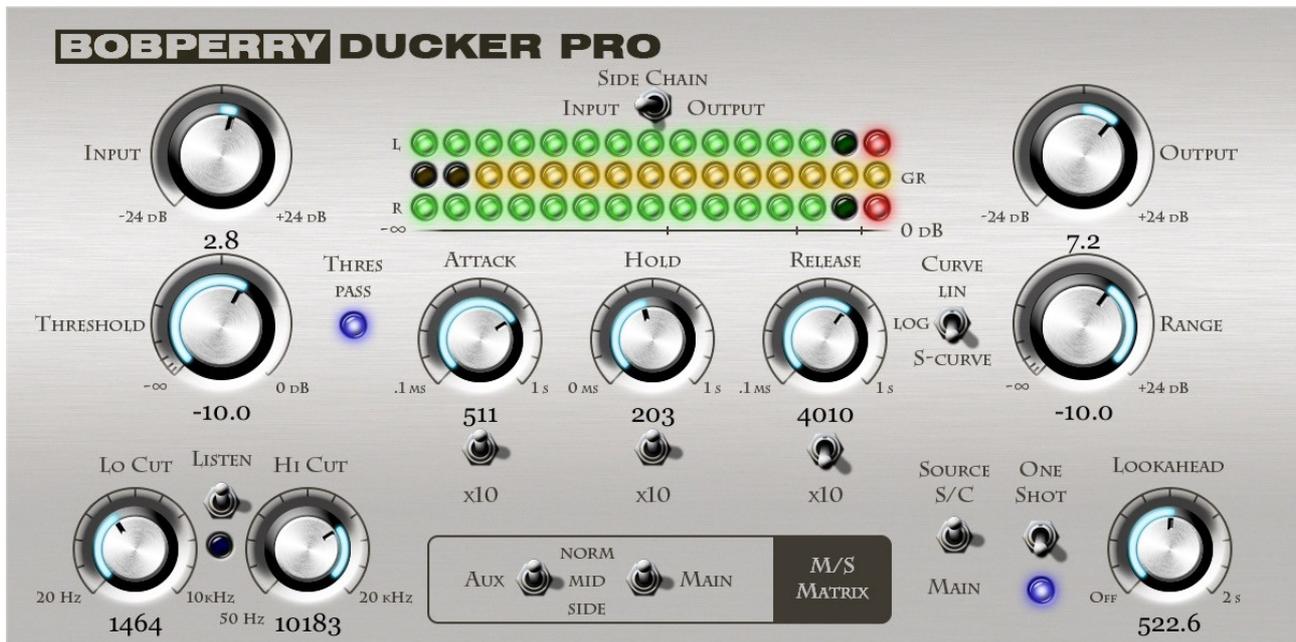
A Ducker reduces one signal's volume when a second signal's volume crosses a set threshold.

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)

Adjusts the input signal's level if a plug-in in the signal chain has a high or low output. Most of the time you won't need to use it. It will take a very high level (>1500 dB) 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.

Thres Pass LED

Indicates that the gain of the signal in the Aux chain has surpassed the set Threshold.

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. When One Shot mode is enabled, this is also the time until the Ducker starts to “listen” to the aux signal again.

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 or boost in dB. For subtle effects we recommend using a range of up to ± 3 dB. For pumping club / house music sound go down to -10dB.

Output

Adjusts 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 Thres Pass LED lights up whenever the side chain signal exceeds the set threshold. This gives you control over the adjustment of the threshold parameter.

Input / Side Chain / Output Meter Switch

Switches the green LED rows between input signal, aux 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 linear, logarithmic and S-Curve 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. Enabling the side chain is mandatory for using Ducker Pro with two signals. Please refer to your DAW's manual for details.

Pro Features

Lo and Hi Cut Filter

Reduces the bandwidth of the Aux-Signal. To bypass the filters, simply dial the Lo Cut filter down to its minimum (counter-clockwise), and the Hi Cut filter to its maximum (clockwise).

Listen Switch

Enables you to listen to the Aux chain, useful for filter adjustments.

x10 Switches

Multiplies the linked time parameter by 10.

Tip: You can use high values for triggering fadeouts.

M/S Matrix

Switches M/S modes (Normal (Stereo) / Mid / Side) for the Main and Aux signals. You can duck only the mid signal in a stereo track by switching the Main switch to “Mid”. If you want only the side signal of your side chain to be your trigger signal, switch the Aux-Signal to “Side”.

Advice: Don't use the M/S Matrix if you only have mono signals or stereo signals with the same signal on the left and right channels, as mono signals don't have a side signal.

Hint: “Side Signal” and “Side Chain” are two completely different things.

Source

Selects the input for the Aux chain. Select S/C for default side chain use.

Select Main for de-essing or ducking the mid / side signal.

One Shot

Enables the special “One shot” mode. In this mode the Ducker will “Duck” only once with each Attack, Hold and Release period. It will only restart an Attack period once the previous Release period is over.

Use this mode for Effects like Pumping Remixes. If for example your Side-Chain Signal (i.e. Bass Drum) varies in duration, the Bass Drum length won't extend the Ducking period when One Shot mode is enabled.

Pro Tip: You can use the One Shot mode to effectively act as a tremolo effect if you set the threshold to a very low value, thus always re-triggering the Ducker after each Release period.

Lookahead

You can make the Ducker Pro start the Ducking process before the Aux signal passes the threshold. Example: If you set the Lookahead time to 20ms and the Attack time to 20ms, the

Attack period starts 20ms before the Aux signal passes the threshold. The Ducker will then have reached full gain reduction/amplification by the time the Threshold is reached.

Advice: Lookahead may increase the overall latency of your DAW. Not suitable for live applications.

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 trigger signal (side chain). Then proceed as follows:

- 1) Load Ducker Pro into the channel of the signal that you want to be ducked. (Main Signal)
 - 2) Enable the side chain. (refer to DAW's manual for details)
 - 2a) In the channel that provides the trigger signal (side chain), use an Aux Send to route the channel's signal onto the Ducker's side chain.
- Beware: If you route the output to the side chain directly, you won't hear it any more.
- 3) Within the plug-in:
 - a) Adjust the Threshold
 - b) Adjust the Range
 - c) Adjust Attack, Hold and Release
 - 4) Listen to the effect and tweak it until it sounds as you please.

If you want to use Ducker Pro for M/S ducking without sidechaining, just skip points 2 and 2a and adjust the M/S functions as required.

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 electronic 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 process 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 you can calculate the length of a quarter note:

$60\,000 / \text{tempo in bpm} = \text{time in ms}$

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.

4) De-esser

If you have vocal recordings with too strong sibilance you can use the Ducker Pro as a perfect de-esser. Unlike the usual compressor based de-essers the reduction of the sibilance is proportional to the main signal and not inverse proportional.

The advantage is achieving a constant s-reduction regardless of high or low input levels.

1) Assign the plug-in to a channel (Voice Channel)

2) Switch the Source to Main.

Now you are using the same signal as Main and Aux Signal.

3) Activate the Lo Cut and Listen Switch. Turn the Lo Cut to 6000-9000 Hz until you only hear the sibilance. This is important, otherwise you will duck more than just the sibilance.

4) Lower the Threshold until the Thres Pass LED lights up. Make sure that the LED is on only

when you hear a sibilance.

5) Set Attack, Hold and Release to very short values. (around 5 ms)

6) You can use the Lookahead for values shorter than your Attack time to make sure you catch every sibilance.

7) Adjust the Range. Values between -3 and -6 dB are “normal”. Sometimes you have to use higher values if you are using a cheap condenser mic with a lot of high frequencies.

Note: If you have a Stereo track with mixed music you can do de-essing but it's a little bit less straight-forward. Try the M/S feature:

Usually the Vocals are in the center (Mid) of the mix. Switch the M/S modes of the Main and Aux to “MID”. Now you only process the center of the mix without touching the side signal.

5) Pumping Remix of a mixed Stereo Track

For a very quick solution of a pumping remix you can use the M/S Matrix and filters to detect only the Bass Drum hits of a stereo track to trigger the Ducker.

Set up the Ducker Pro like we described for de-essing. But instead of filtering the low frequencies, filter the high frequencies.

Use the Hi Cut and set it to around 50-80 Hz. Now you have only very deep Bass Signals. Try to isolate the Bass Drum from the Bass (Instrument) and set the Threshold and other parameters.

We hope this manual leaves no questions unanswered.

If you still have questions, feel free to contact us:

support@bobperry-audio.com