

Initial Review Blue Cat Dynamics

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OVERALL

I am pretty sure I have found the answer. Approximately 10 months ago I began a quest for finding a single channel dynamics processing plug-in that I could use while mastering any mix. In today's mastering, dynamics processing is a huge part of the mastering process. With a ton of plug-ins available, one would think that it was easy to find one main one to use in the process – one that you could always use to get the job done. With 6 months of trying different plug-ins I was unable to find one, until Blue Cat Audio.

HISTORY

Forty years ago we recorded on media (tape and disc) that had "natural" compression, whether we wanted it or not. With careful attention to recording levels the "loudness" of the recording was enhanced automatically. In the mastering process, with a good mix, dynamics processing was many times an optional part of the mastering process. When dynamics processing was used, it was relatively easy to apply it. With a couple of hardware units in the mastering suite, you could do anything you needed to do to achieve excellent results.

In Detroit in the mid 60's a company called Motown put out hit after hit with records that sounded much louder than the average release,

yet were at least as "clear" as the average release. At the time I supervised and directed all mastering for the company and personally did a significant part of it. Well over 90% of the mastering was done without any dynamic processing being used. This is on the mastering of a couple dozen gold/platinum records and over 100 "hit" records Motown released.

In today's world we record on digital media with a huge dynamic range (more dynamic range than the ear) and no "tape compression." As a result, even the best mixes can sound quite weak until they go through the mastering process. In today's mastering process, extensive dynamic processing is required almost 100% of the time.

THE UP SIDE TO BLUE CAT

Overall, there are many things that I like about the unit. I was able to get a smooth natural compression, largely due to additional parameter controls and ranges that are not found on most dynamics plug-ins. I am strongly considering using the plug-in as a main software example in advanced dynamic processing instruction at RID.

In particular, the Peak/RMS blend control was very useful. One of the age old problems in applying compression is to get the high-frequency transients controlled but not dulled out. Slowing the attack for a mild amount of gain reduction can work but transients go uncontrolled when trying to apply more gain reduction. Usually you are left with a knee adjustment with a softer knee giving more control but still tending to dull out transients when a lot of gain reduction is being used. With the Peak/RMS blend control you can bring the transients under control with the knee control but then restore lost transient quality with the blend of Peak/RMS detection. It is common to have a choice of Peak or RMS detection, but a blend of the two is brilliant.

Another huge up-point in the software is the input/output display, which seems to be highly accurate. I have encountered a large number of plug-ins (by other manufacturers) where the display will not really show you how the unit will affect the signal. The display on the Blue Cat is large, well contrasted and accurate. When you set the threshold to a certain value you can actually read that out accurately on the display.

Another good point is the lower curve that would normally be used as an expander to reduce noise and low-level sounds that tend to be brought up with compression. I found it partially interesting that it could be set as an expander and tried this out (with good results) in my initial tests.

Although I could site several other features that can make this software a valuable tool, there is one other point I want to make in this review. Several parameters have an unusually large range – well beyond what you find on other plug-ins. An example of this is the knee control, which can be set to a “depth” 300% “deeper” than any plug-in I have encountered. This extra depth has helped me improve the dynamic processing I used in a couple of difficult mixes.

THE DOWN SIDE

I pride myself in being able to setup parameters at good starting points without "playing" with the controls. The "playing," in my opinion should be to fine tune the parameters rather than to get reasonable starting points. Because of unusual nomenclature and limited documentation of what the parameters do, I was unable to use this approach. I'll give you two examples that got in the way of me initially using the plug-in:

Ratio Control:

A compression ratio is usually expressed with the number of dB over the threshold that will yield only one dB increase in output gain. An expansion ratio is usually expressed opposite to this with the number of dB decrease for every dB that the input falls below the threshold. The Blue Cat control is labeled from 0-2 with 1.0 being unity gain, numbers smaller than 1.0 being compression settings and numbers exceeding 1.0 being expansion settings.

By putting up curves on the grid, I was able to get an understanding of the ratio markings. Here's what I came up with: Take the setting and divide into 1; then convert to a fraction with "1" being the denominator (nominator in expansion ratio) to give a standard expression of the compression/expansion ratio.

Examples:

"0.25" = $1/0.25 = 4/1$ or a 4:1 compression ratio

"2.0" = $1/2$ or a 1:2 expansion ratio

[Note: the ratio control display has changed in v2.0 and now conforms to the standard]

Auto-Gain:

The description in the manual describes the auto-gain parameter as follows: "Auto compute gain for dynamics processing stage so that the output is 0 dB for 0 dB input (due to attack time, audio output may be louder than 0 dB though)."

A much more important warning, however, would be to mention that this auto gain works like this only when the makeup gain is set to "0"

In my initial test I had dialed in a 5 dB makeup gain to compensate for

loss of output due to gain reduction. I then decided to try "auto gain" and assumed that it would override the makeup gain. Fortunately I didn't damage my speakers.

CONCLUSION

Although I am still learning about the Blue Cat Dynamics Processing, I am convinced that you could probably use it with good results for any job that required single channel dynamic processing and that it could be used where other single channel dynamics processing can't do the job. I am therefore recommending it as a main dynamics processing tool.

I don't mean to imply that you should never go to a different plug-in. It may be that you may want to use a different dynamics plug-in for a job because you can quickly get the results you want with it or the "fixed" parameters of the unit work well for a specific job. That doesn't really affect my recommendation of using Blue Cat as a "main" tool.

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