



TK AUDIO BC2-ME

Stereo Buss Compressor - Mastering Edition

Congratulations on buying the mastering version of one of the most transparent stereo buss compressors ever made; manufactured and hand-assembled in Sweden and thoroughly tested before leaving the factory.

The BC2-ME provides smooth buss compression associated with one of the most famous buss compressors from the mid 80's. Mixing engineers call it the magic 'glue' when transparent compression strengthens mixes without compromising clarity.

The BC2-ME provides just that kind of compression bringing cohesion and punch; equally useful for drum buss and instrument compression. All controls of the new unit are now stepped for easier recall. Push buttons are also illuminated. The main signal path is more or less the same as in the BC1mk2 but we have added a switchable transformer balanced class-A output stage and also a function that adds extra even-harmonics to the signal.

The built-in blend control makes it easy to apply parallel compression by adjusting the mix of dry and compressed signal. A mute-switch is provided for muting the dry signal making it possible to adjust the compression without changing the blend control.

A switchable side-chain filter with 5 frequencies makes the BC2-ME less responsive to low frequency energy. The external side-chain input makes it possible to have the BC2-ME pump to an external source. The BC2-ME will add the magic 'glue' and make your mixes sound punchy and coherent.

THE PARAMETERS:

THRESHOLD: -20dB to +20dB in 41 steps. The threshold adjusts the level above which the signal is reduced. A lower threshold means a larger portion of the signal will be treated. For optimal results make sure that the input level is high enough.

RATIO: 1.25:1 / 1.5:1 / 2:1 / 4:1 / 10:1 / Hard. The ratio determines the input/output ratio for signals above the threshold. For example, a 4:1 ratio means that a signal overshooting the threshold by 4 dB will leave the compressor 1 dB above the threshold. At the 1.25:1 / 1.5:1 and 2:1 setting a relatively subtle soft-knee compression is applied. At 4:1, the compression becomes more obvious, and at 10:1 the BC2-ME is basically a peak limiter.

ATTACK: UF (ultrafast) / 0.1 / 0.3 / 0.6 / 1 / 3 / 10 / 30 / 60 / 120ms. The attack setting defines the time it takes for the compressor to decrease the gain and reach the level determined by the ratio. Faster attack settings means better control of the transient part of the sound, but if set too fast the compressor might cut away more transients than wanted. A good starting point is 10ms.

RELEASE: 50 / 100 / 300 / 600ms / 1.2S / Auto. The release setting defines the time it takes for the compressor to increase the gain to the level determined by the ratio, once the level has fallen below the threshold. Higher release settings will result in a less intrusive compression with lower distortion, but if set too high the compression might not be effective enough. A good starting point is 100ms or Auto.

AUTO-RELEASE: Makes the release function time dependent on the duration of the signal peak. In practise it's a fire-and-forget setting that behaves the same way as a classic British buss compressor used by many since the 80ies.

HPF: A 6dB/octave high-pass filter at 75Hz, 100Hz, 125Hz, 150Hz or 250Hz is applied to the internal or external side-chain signal, making the compression less responsive to low-frequency energy.

IN: True bypass switch. The inputs will be feeded directly to the outputs via relays.

EXT SC: Engages the external side-chain input on the back of the BC2-ME. By using the external side-chain another signal can control the behavior of the compressor; most commonly used by DJs for ducking - lowering the music volume automatically when speaking. It's also effectively used for ducking the bass track or background whenever the kick drum hits by sending the kick track to the external side-chain input. For more information please read the section about side-chain compression.

L+R: When engaged the side-chain signals are summed to mono before hitting the threshold detectors meaning that the compressor will be 6dB more sensitive to the centre information of the mix. That usually means kick drum, snare drum, bass guitar and lead vocals. In most cases L+R should not be used.

THD: Adds extra even-harmonics to the signal. (around 0.5%)

CLASS-A: Selects the transformer balanced class-A output stage for a more vintage tone like a fat, punchy low-end response with more mid character.

STRAIGHT MUTE: When engaged the uncompressed signal is muted; useful when doing parallel compression and just want to listen to the compressed signal.

GAIN-REDUCTION METER: 20 LED's shows the gain reduction in 0.5dB steps.

MAKE-UP: 0 to 10dB in 41 steps.

BLEND: Straight to compressed sound in 23 steps. Turning the knob clock-wise will mix the original signal with the compressed signal. For more information please read the section about parallel compression.

STARTING PRESETS

MIX BUSS

The main purpose of the BC2-ME is to act as a bus compressor and it does it very well.

AUTO-RELEASE MAGIC

One of the true unique features of the BC2-ME is the auto-release setting and its ability to glue the mix together. The auto-release is a good starting point when setting up the compressor for 2 buss duty. Adjust the Threshold until 2 to 3 dB of compression is shown by the meter. It's all it takes to glue the mix together.

Ratio: 1.25:1, 1.5:1, 2:1 or 4:1

HFP: 150Hz

ATTACK: 10 ms

Release: Auto

Blend: Comp

POP MIX COMPRESSION

For more obvious compression a fast release should be used. Adjust the Threshold until it shows about 3 to 4 dB of compression on the loudest parts of the song.

Ratio: 4:1

HFP: 150Hz

ATTACK: 10 ms

Release: 100 or 300 ms

Blend: Comp

DRUM

The BC2-ME can go from subtle to pretty slamming compression on a drum buss and here are a few good starting points. Make a habit of adjusting the Make-up gain until the compressed signal is equally loud as the uncompressed signal, and toggle the Comp in button to listen what's actually happening to the drums when they are compressed.

A TOUCH OF DRUM COMPRESSION

The effect should be very subtle and just make the drums come together without adding altering the kick or snare drum. Adjust the Threshold until the compression meter shows about 2 dB of gain-reduction.

Ratio: 2:1

HFP: 150Hz

ATTACK: 3 ms

Release: AUTO

Blend: Comp

TIGHT DRUM COMPRESSION

To tighten up the drum buss without altering the drums too much a low ratio should be used. Adjust the Threshold until about 3 or 4 dB of compression is done.

Ratio: 2:1

HFP: 150Hz

ATTACK: 10 ms

Release: 100 ms

Blend: Comp

HARD DRUM COMPRESSION

Applying hard drum compression will alter the sound of the snare drum and cymbals but in a dense mix that might be the right thing to do. Adjust the Threshold until about 5 to 6 dB of compression is shown.

Ratio: 4:1

HFP: 150Hz

ATTACK: 10 ms

Release: 50 or 100 ms

Blend: Comp

VOCAL RIDING

Lead vocals usually need a bit of volume automation to cut through a dense mix - an important and time consuming job. Due to its ultra transparent compression the same job can automatically be done with the BC2-ME. The trick is to use a low Ratio and fast release, and set the Threshold until about 4 dB of compression is done.

Ratio: 1.5:1 or 2:1

HFP: 150Hz

ATTACK: 10 ms

Release: 50 ms

Blend: Comp

GUITAR SOLO GAIN-RIDING

Similar settings can be used to gain-ride a guitar solo or other solo instruments.

Adjust threshold until about 4 dB of compression is done.

Ratio: 1.5:1 or 2:1

HFP: 150Hz

ATTACK: 10 or 30 ms

Release: 50 or 100 ms

Blend: Comp

BASS RIDING

Bass guitar can be a pretty tricky animal to harness. Often more coloured compression is used, but due to the transparent nature of the BC2-ME it can very effectively even out stray notes that are played too loud or too soft without adding any pumping or distortion. The result is a more coherent bass guitar that still sounds like a bass guitar. Similar settings can effectively be used on bass synthesizers as well. Adjust the Threshold until 3 to 5dB of compression is shown by the metering.

Ratio: 10:1

HFP: OFF

ATTACK: 3 ms

Release: 300 ms

Blend: Comp

Parallel compression with the BC2-ME

Parallel compression is a great way of injecting more nerve and energy into a mix or instrument - without affecting the transients or the overall sound too much. The trick is to make the compressor work pretty hard - around 8 to 16dB on the meter - and blend the compressed signal with the original sound. To get the best resolution set the Blend knob to Comp (the fully clock-wise position). Adjust the Make-up knob until the compressed signal sounds equally loud or slightly louder than the original signal. Check by toggling the Comp In button. Then use the Blend knob to set the proper amount of parallel compression, usually somewhere between the fully counter-wise position and 12 o'clock. Always toggle the Comp In button to compare it with the original signal. Use the Straight Mute button to check the compressed signal without altering the Blend control.

2 BUSS WITH SOFT PUNCH PARALLEL COMPRESSION

There is a great way to add some energy without affecting the overall sound too much using long attack time and auto release. Adjust the Threshold level until the compression meter shows roughly 8dB of compression.

Ratio: 10:1

HFP: 150Hz

ATTACK: 30 or 60 ms

Release: AUTO

Blend: 9-12 o'clock

2 BUSS WITH SNAPPY PARALLEL COMPRESSION

For a more snappy compression use slow attack and one of the faster release settings and Ratio 10:1 - adjust the Threshold until there is about 8 to 12dB of gain-reduction.

Ratio: 10:1

HFP: 150Hz

ATTACK: 30 or 60 ms

Release: 50, 100 or 300 ms

Blend: 9-12 o'clock

EXTERNAL SIDE-CHAIN COMPRESSION

The external side-chain inputs on the back is an balanced input and can be used to control the compressor with an external signal.

BASS TRACK DUCKING BY KICK DRUM

A classic mixing technique is to have the kick drum duck the bass track. It's done by sending the bass track into the compressor and the kick drum into the external side-chain input. The try the settings below. Adjust the Threshold until about 2 dB of compression is shown. This will make room for the kick drum without having to back down the bass track.

Ratio: 10:1

HFP: OFF (note that the high-pass filter is deactivated)

EXT SC: ON (note that the external side-chain is activated)

ATTACK: 1 ms

Release: 50 ms

Make-up: 0

Blend: Comp

DUCKING DANCE PADS WITH KICK DRUM

Another classic trick is to duck the pads and synthesizer parts with the kick drum. Adjust the Threshold until 1 to 4 dB compression is shown and try different release settings to find out which works best with the tempo of the song. Naturally the release time can't be perfectly matched with the tempo of the song, but that's the charm of it.

Ratio: 10:1

HFP: OFF (note that the high-pass filter is deactivated)

EXT SC: ON (note that the external side-chain is activated)

ATTACK: 1 or 3 ms

Release: 50, 100, 300 or 600 ms

Make-up: 0

Blend: Comp