

brainworx 

# bx\_digital V2 mono manual





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## 1. What is bx\_digital V2 mono?

bx\_digital V2 mono is a latency-free 11-band EQ and De-Esser.

It is based upon the “modern classic” bx\_digital V2 and the analog bx1 EQ.

bx\_digital V2 now offers additional features that neither the original bx1 analog EQ nor the v1 plug-in offered.

→ [Details: see chapter 2.](#)

## 2. Features of the bx\_digital V2 mono:

### bx1:

- 7-band mastering quality EQ with Shelving, Bell and Pass-Filters.
- Auto Listen” Mode
- Input and Output Gain to adjust levels
- Filter section includes Lo-Shelving, Hi-Shelving, full-parametric Bell type, new „anti cruh“ Lo-Pass & Hi-Pass filters. All 7 bands have been adjusted in frequency-range and type-selection by international mix- and mastering engineers to help you get professional results for your mixes instantly.
- New mouse wheel control [place the cursor above any knob and use the mouse wheel...]

### bx2:

- 4 more EQ bands (in the Shifter EQs)
- Image Shifters for your bass frequencies and high frequencies. Tune your lo-end and hi-end of your mix for a „bigger“ overall sound with „more air“ at the same time and control potential harsh frequencies in your mixes.
- De-Esser/dynamic EQs. Solo buttons let you listen to what you cut away separated from the mix.

### EQ-Panel:

- shows up to 11 bands of EQ

## 3. Overview and Details



bx\_digital V2 mono - Screenshot



### 3.1. EQ-Section



7 Bands, 5 of them with G (Gain), f (Frequency) and Q (Quality) pots, plus Hi-Pass and Lo-Pass filters

- LF: switchable from shelving (1st order) to peak via Q-pot
- LMF: peak
- ME: peak
- HMF: peak
- HF: switchable from shelving (1st order) to peak via Q-pot
- Lo-Pass: 1st order („anti crush“ anaog style filters)
- Hi-Pass: 1st order („anti crush“ anaog style filters)

Please notice that each EQ band can be activated and bypassed (on/off) individually by clicking the labeled buttons.

A bright name indicates ON.



= off



= on

### 3.2. Input Gain and Output Gain



- Gain In: Input Gain adjustment
- Gain Out: Output Gain adjustment

### 3.3. The Brainworx logos in the GUI



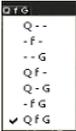
Click them to get credit info, release versions, etc.

### 3.4. Auto Listen, EQ on/off, Phase Reverse



- EQ on/off: Here you can switch ALL EQ bands on or off, this will not bypass the De-Esser, though.
  - If you need to bypass the whole bx\_digital please use the dedicated Bypass switch in the top left corner or use your audio sequencer´s plug-in bypass.
- Phase Reverse
  - If you need to change the channel´s phase please use the phase reverse button. This can be very helpful when mixing drums, etc.



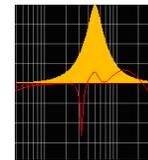
- AUTO LISTEN MODE(s):  
One of the new features of bx\_digital V2 mono and a powerful tool to select proper center frequencies in audio material that is hard to judge (Tom Toms, Vocals, Bass sounds, etc.).
- The AUTO LISTEN POP-UP MENU:  

 When you click on the letters next to the blue Auto Listen LED a pop-up menu will appear. In this menu you may choose which Auto Solo Listening features you want to use. 3 different functions of each EQ band can be switched to Auto Listen Mode:
  - “Q f G” (initial setting):  
Will make bx\_digital V2 mono auto solo all EQ features each time you click on either a G (Gain), f (Frequency) or Q (Quality) knob.
  - “- f -”:  
For example will only enable the Auto Listen features for the f (Frequency) knobs, but not automate G & Q, and so on...

## AUTO LISTEN MODE “Q”

This auto listen mode will boost or cut the respective EQ band’s gain to either (+12dB with positive Gain settings and “zero”) or (-12dB with negative Gain settings) whenever the Q knob is being clicked or touched (via a touch sensitive controller). As soon as you release the EQ band’s Q knob the gain setting will jump back to the actual G (Gain) setting. Clipping is avoided automatically. Notice that the temporarily EQ setting of the AUTO LISTEN MODE is always being displayed in ORANGE color while the actual EQ band’s gain setting is still being displayed in RED color.

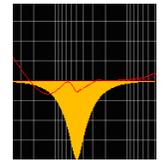
- You HEAR the ORANGE setting when you see it.

- Mouse wheel control:  
Notice that changing knobs using the mouse wheel (just place the cursor above any knob of bx\_digital V2 mono and turn the wheel!) will not engage the Auto Listen Mode. This is a nice way to avoid bypassing the Auto Listen Mode for small changes that you prefer to do without this mode.



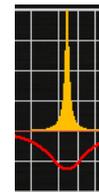
Auto listen “Q” with positive gain

Whenever bx\_digital boosts AUTO bands to +12 dB temporarily the overall output volume is always being controlled and adjusted intelligently to avoid clipping automatically!



Auto listen “Q” with NEGATIVE gain

## AUTO LISTEN MODE “f”



This auto listen mode will play a very steep (narrow) and inversed notch filter sound of the actual audio signal as long as you click a knob or grab a (touch sensitive) controller pot or fader.

This lets you hear the center frequency you are searching for exactly – and all this without the multiple mouse clicks or controller moves that needed to be done without the Auto Listen feature.

- Gain up to the max, Q to a very narrow setting, sweep through the frequencies, re-adjust the Q, re-adjust the gain, etc... you know what we’re talking about... :-)



### AUTO LISTEN MODE “G”

This AUTO LISTEN MODE finally is pretty easy to explain... as long as you click a Gain knob (or grab a touch sensitive controller pot or fader) all other bands of that EQ will be bypassed. This way all you hear is the touched EQ band solo-ed, without other EQ bands eventually effecting / overlaying your EQ setting.

This may or may not be wanted, so remember: you have the choice to activate or deactivate each and every AUTO feature (Q, f or G) or any combination of these 3 features using the Auto Listen pop up menu. (see -12- above)

The Auto Listen Mode can be switched off using the blue LED.

### 3.5. Window switch



You may hide the graphic EQ curves if you want to save some screen space (we know bx\_digital is not a small plug-in...), or if you simply prefer EQ-ing without seeing the EQ curves. Just click the “arrow” symbol.

### 3.6. Level LEDs



We have included a digital level control in bx\_digital V2 mono that the hardware does not have. Red LEDs indicate potentially distorted signals in the respective signal-path and should be avoided...

### 3.7. Bass Shift



The Bass Shift is an „intelligent“ EQ band for the bass frequencies of your mix. We call it Bass Shift because 2 different frequencies will be „shifted“ against each other with the turn of just one knob. The frequencies have been pre-set and cannot be changed. If you are looking for a sweepable Bass- (and Presence-) Shifter please check out bx\_hybrid (available individually).

The Bass Shift EQ can be used to easily adjust the overall bass sound of your recordings in a professional yet easy & fast way... turning the Bass Shift to the right will „push“ your bass down one octave by boosting one part of your bass frequencies while at the same time cutting other (higher) bass frequencies. Turning the BASS SHIFT to the left will cause the opposite...

→ Please check the EQ panels to actually see what you are doing when working with the Bass Shift!

Turning your BASS SHIFT to the right will result in a more „indirect“ and „deep soft“ bass sound, while turning to the left will result in a „drier“ bass sound.

→ A lot of contemporary pop & rock productions can be enhanced with „phatter“ guitar / keys sounds by turning the Bass Shift to the right up to 2 or 3, and the same setting will make your bass drums sound huge!

### 3.8. Presence Shift



A similar function to what the Bass Shift EQ does to your bass signals for the high end of your recordings. Turning the Presence Shift EQ to the right will put more „air“ into your signals without making them harsh!



→ The Presence Shift boosts frequencies above the ones that usually cause sibilance problems with voices.

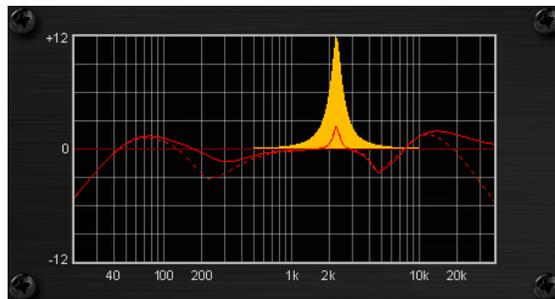
### 3.9. De-Esser



The bx\_digital De-Esser works with dynamic EQs that you can adjust to the needs of your mix. With the Solo button of the De-Esser section it is possible to listen to only the frequencies that you want to filter out of your mix.

- Solo the De-Esser on the bx2 panel. Turn up the De-Esser knob until you start hearing some high frequencies. Adjust the frequency to be filtered with the „f DSR“ knob and set the De-Esser knob to a value where the De-Esser will deduct as many high frequencies as you need to be filtered out.
- Use the De-Esser´s LEDs to control the De-Esser´s gain deduction.

### 3.10. EQ-Panel



The EQ panel show you all the EQ curves of bx\_digital V2 mono. Unlike a lot of other EQ plug-ins we have not included any possibility to change your EQ settings via the graphic panel, and we did that on purpose.

There are simply too many EQ-bands (if you keep in mind that the BASS SHIFT and PRESENCE SHIFT are displayed additionally to the 7 „regular“ EQ bands.

Otherwise we feel that mixing, mastering and recording music (the main applications for bx\_digital) is all about making cautious changes to your mix (unless the

mix you work on was completely screwed up...), and when we tested bx\_digital EQ-ing in the panels often led us to making pretty big changes very quickly.

In the end we also wanted to give you the “feel“ of the hardware as authentically as possible, so we decided to make the EQ panel only a visual control tool for what you do with the knobs of the bx\_digital – or your mouse:

#### Mouse Wheel - Control:

It is possible to use the mouse wheel to control all knobs of the EQ! Just place the cursor above any knob and turn the mouse wheel up or down... no clicking needed ever...

This is also a very cool alternative when working with Auto Listen Modes. In case you want to make some changes using the Auto Listen Mode and some without just use the mouse wheel for the latter – and the Auto Listen Mode will not be engaged.

#### → Type in exact values:

Please notice that it is also very easy to type in exact values to any parameter of the bx\_digital by simply clicking on the text fields below each knob. This makes it particularly comfortable to tune your EQ-bands to certain frequencies.

### 3.11. Bypass



With the BYPASS button you can bypass the whole bx\_digital plug-in to compare your original mix and your corrections / improvements with the bx\_digital.



### 3.12. Settings (A/B/C/D)



You can store up to 4 Settings of bx\_digital V2 without using the audio sequencer's "Preset window" (most of them are not really fast and intuitive to use...).

Start with one Setting (A by default), copy it to B (press "copy", click B, click "Paste", done!), then compare A and B. The same goes for C and D, of course. Also, you can Reset single Settings.

Using Automation in mixing can be helpful to get the maximum out of your mixes. Maybe your mix needs different EQ-settings for various parts of the song? Settings are the way to go...

→ Presets: (in your audio sequencer host program)

It's still a good and professional idea to store one preset for every song that you mix, even if you use settings, maybe even make folders for certain projects, albums, etc.

All 4 Settings of bx\_digital V2 mono will be stored with each preset!

This way you can easily recall any preset you made to change settings after you checked your mixes on other stereo systems (outside the studio). Keep in mind: if YOU don't do it.... your customers WILL! :-)

### 3.13. Manual & Help



Press Manual to open the PDF version of the manual which will be saved on your computer during installation.

Help will open a small "splash screen" in the plug-in window that will explain the most common shortcuts to operate bx\_digital V2 mono with ease.

Please see "14" for these shortcuts and some tips.

### 3.14. Brainworx keyboard shortcuts

- SHIFT/MOUSE CLICK on any knob will change the bx\_digital's knob behaviour (toggle between linear and circular)
- ALT/MOUSE CLICK: will reset any knob to its initial value
- APPLE key (Mac) or CTRL key (PC) plus MOUSE CLICK (or SCROLL WHEEL USE above any parameter!) will allow for fine tuning of any knob.
- SCROLL WHEEL CONTROL: place your mouse above any knob and turn the mouse wheel to increase/decrease values.
- Also, any bypassed feature of bx\_digital will not use any CPU power.
- TYPING IN VALUES into your plug-ins will save you some time:

→ GENERAL TYPING:  
10.000 Hz can be typed in as "10k", 12.000 Hz would be "12k", etc.

**ENJOY WORKING WITH bx\_digital V2 mono!**