

  
Bettermaker SPE Mastering  
Limiter 2.0



# Bettermaker SPE Mastering Limiter 2.0 User Manual

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## Bettermaker SPE Mastering Limiter 2.0



## Product Information

## Specifications

- Model: Bettermaker Mastering Limiter 2.0
- Connectors: Balanced XLRs, USB
- Power Supply: External power required
- Memory: Internal non-volatile memory for settings and presets

## Product Usage Instructions

### Connection

For best audio performance, use balanced XLRs and quality USB cables provided with the unit. The USB connection is for DAW control and recall only; audio streaming requires XLR connection with AD/DA converters. Ensure external power supply is connected for proper functionality.

### Software Update

Visit [www.bettermaker.com](http://www.bettermaker.com) for the latest firmware versions and DAW plugins. Use the dedicated macOS/Windows app to easily update the firmware. Initiate Firmware Update mode in the Setup screen before updating.

### Basic Screen Layout & Limiter

Quickly access Limiter, Sidechain, Clipper, and Color settings from the main screen. You can adjust Input Level Gain Reduction, Link Input and Output Gain for optimal mastering level, and Saturation Output Level Amount.

### Sidechain Filters

Tap the top half of the screen for full-screen and metering options. Configure Sidechain settings such as Gain Reduction Range and Sidechain Mid Boost options for precise control.

### Saturation & Clip

Adjust Zener Diode-based Saturation and Analog Hard Clip settings on the Clipper screen. Reset peaks by tapping the bottom half of the screen and fine-tune the Auto Make-up Gain for peak-free output.

### Color Screen

Apply changes to both channels or select a specific channel to listen to. Toggle Color A and Color B on/off, adjusting the amount of color added to the mix. Choose between ODD and EVEN harmonics for COLOR B.

### DAW Plugin Connection

To utilize the full potential of the Bettermaker Mastering Limiter 2.0, establish a connection with the hardware following the signal & data flow diagram. The hardware should automatically lock with the software, indicated by a blue USB icon on the menu bar.

## FAQ

### Q: Can I use USB power only for the Bettermaker Mastering Limiter 2.0?

A: No, the unit requires an external power supply for operation; USB power alone will not work.

Thank you for purchasing Bettermaker Mastering Limiter 2.0!

## IMPORTANT SAFETY INFORMATION

- Do not operate this unit in the presence of rain, liquids or condensing moisture. Liquid entering the product enclosure presents the risk of electric shock, fire or permanent failure. Use the unit in well ventilated

environment. Make sure it is not exposed to high temperatures as it might affect the performance.

- Use provided AC/DC adapter only. It will work with variety of mains voltages and all most popular socket types around the world.
- No user serviceable parts are available inside the unit. Do not remove the top lid, as it will void the warranty. In case of any questions or issues, please contact your seller.

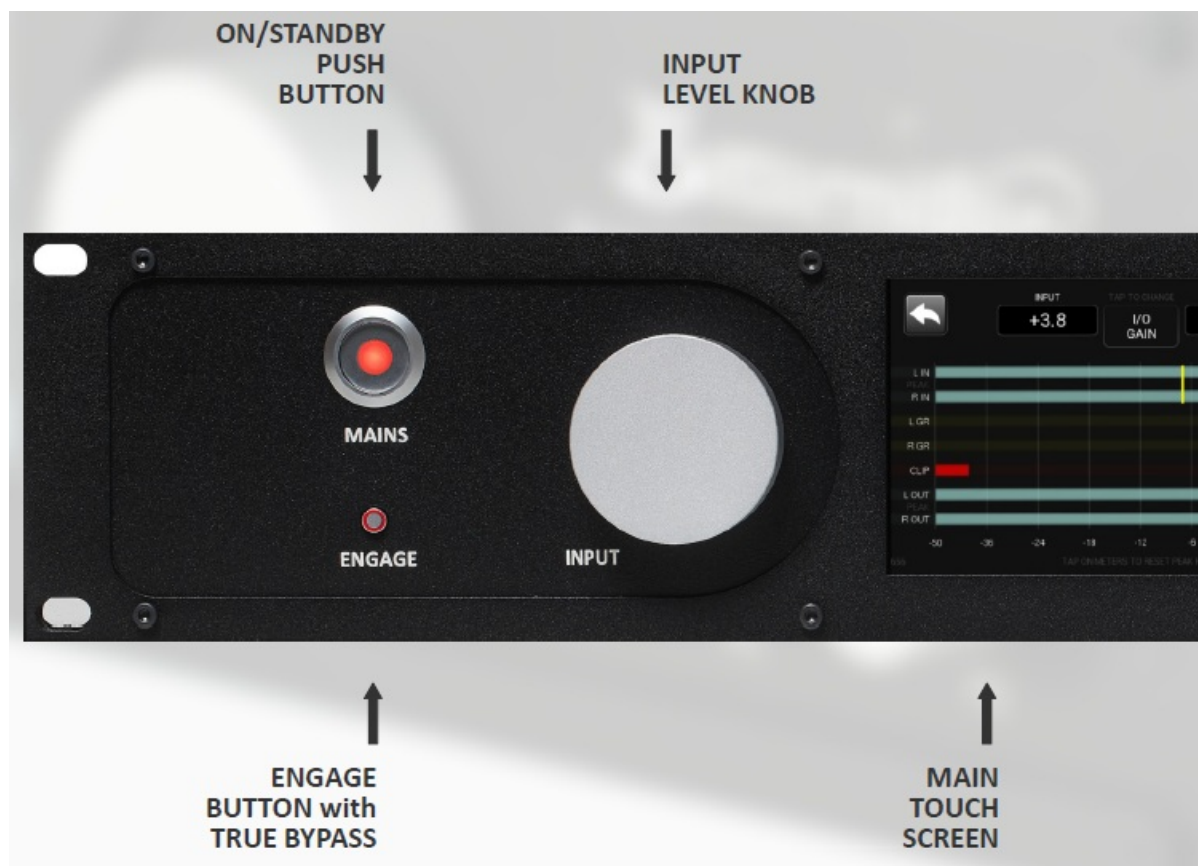


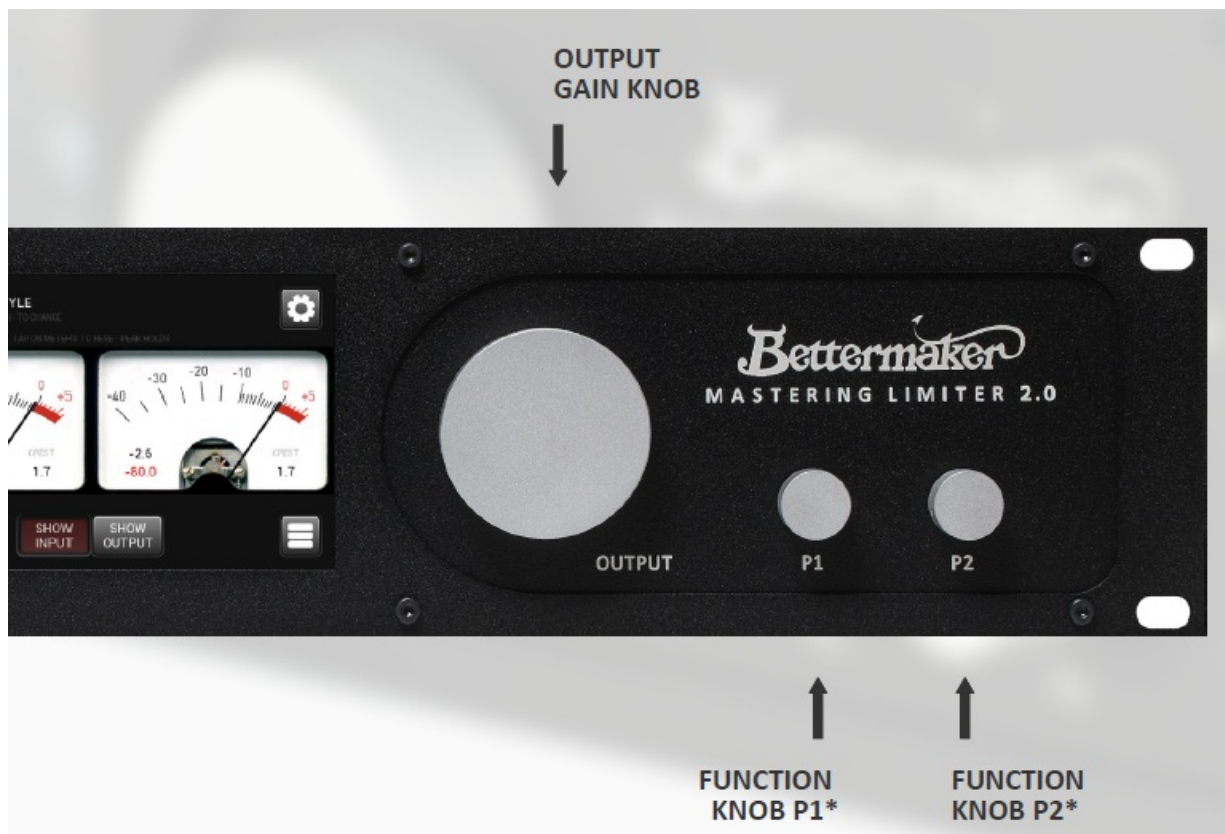
## CONNECTIONS

- For best audio performance use balanced XLRs and quality USB cables (like the one provided with this unit). Please note that the USB link is for DAW control and recall only. It does not stream audio, so the XLR connection with AD/DA converters is needed.
- The unit requires external power supply and will not work using USB power only.

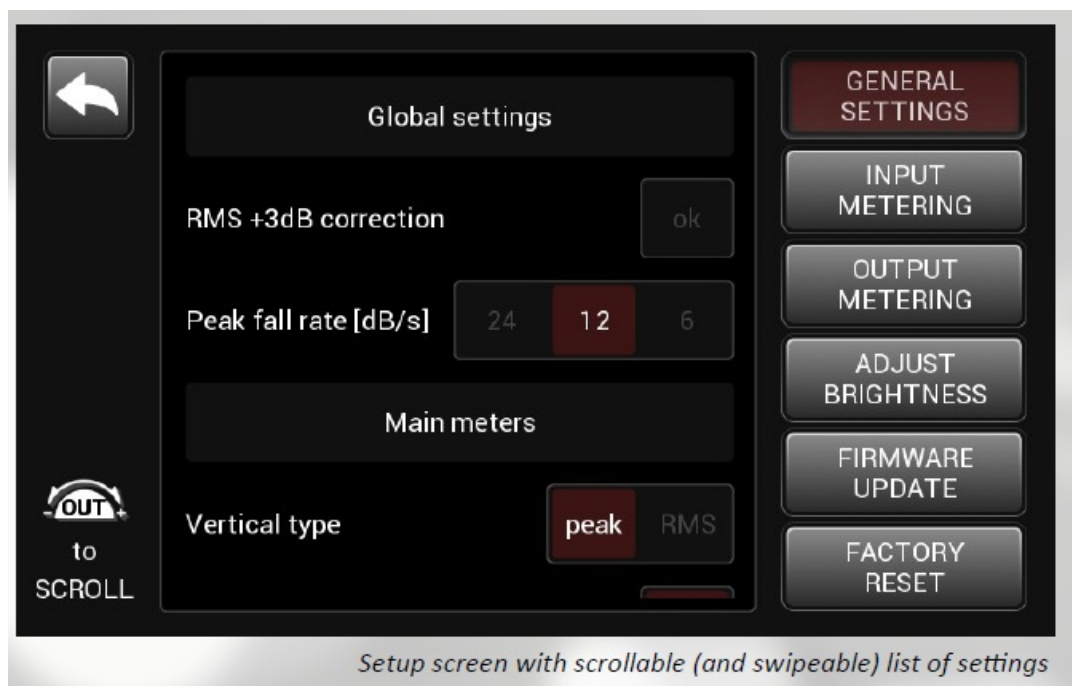
## SOFTWARE

For most recent versions of firmware and DAW plugins please visit [www.bettermaker.com](http://www.bettermaker.com)





**\*NOTE:** both function knobs can be pressed to select various functions.




return to previous screen



use INPUT, OUTPUT, P1 or P2 knob

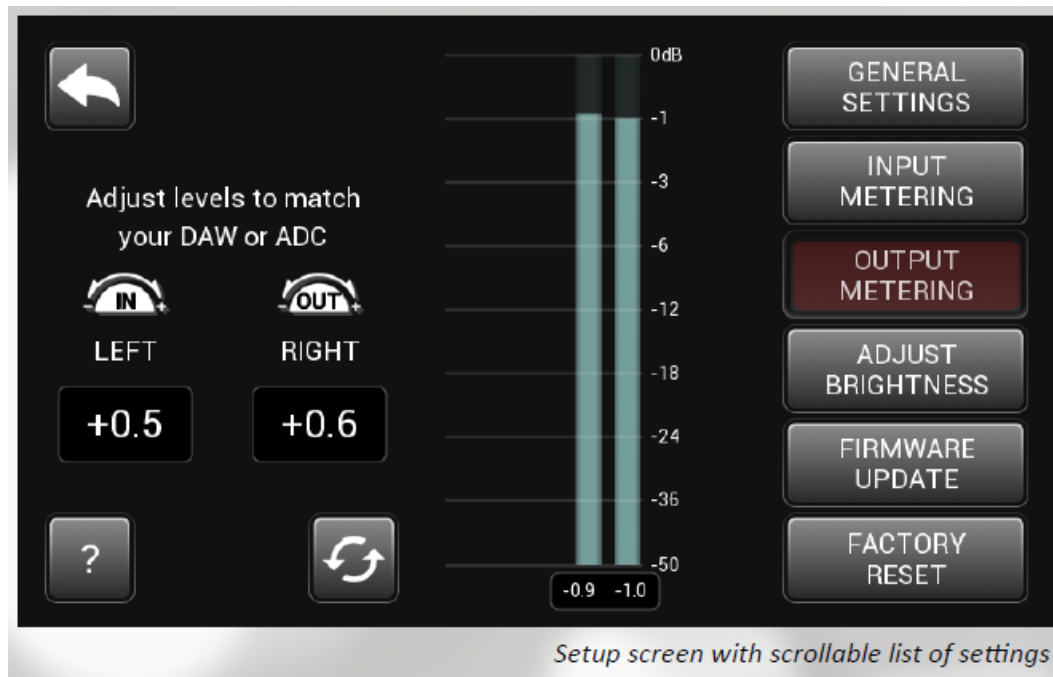
## FIRMWARE UPDATE



You can easily update the firmware inside the unit with dedicated macOS/Windows app available on [www.bettermaker.com](http://www.bettermaker.com)

But first, you need to initiate Firmware Update mode in Setup screen (use  in Main Menu).

## STATE MEMORY

Internal non-volatile memory will restore all settings after sudden mains power loss.  
It also provides 400 slots for presets and user configurations (regardless of DAW plug-in).







-  return to previous screen
-  reset calibration to 0dB

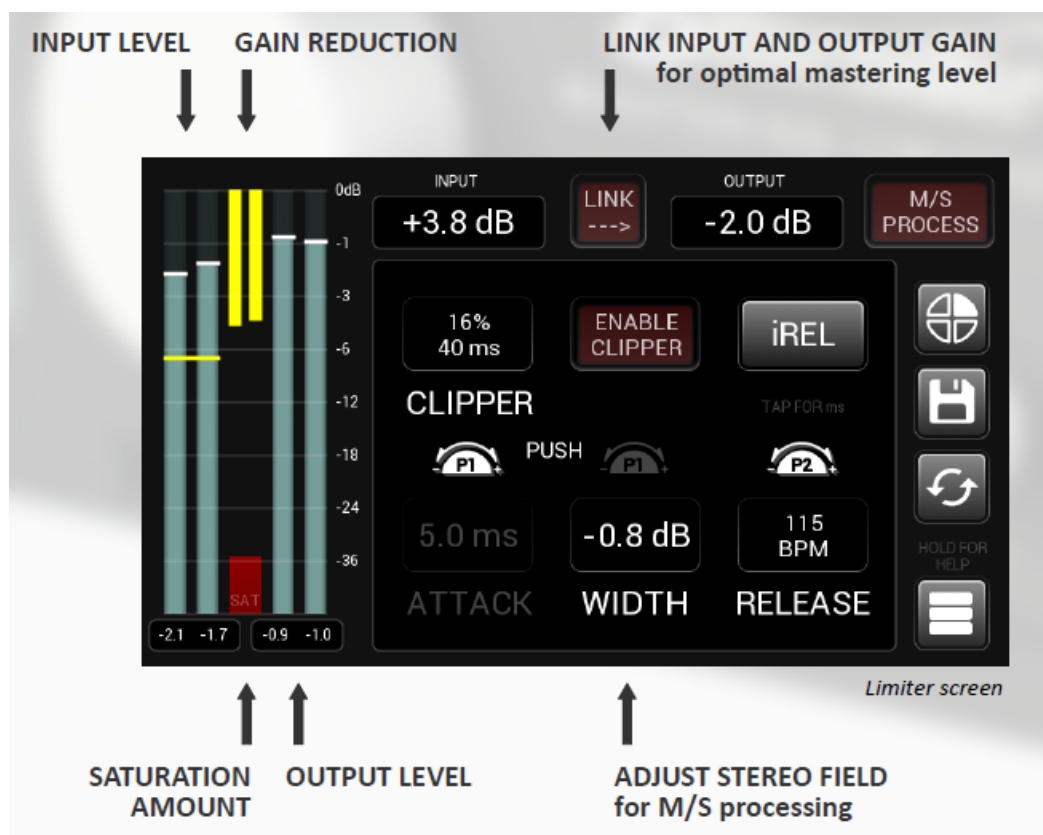
## ABOUT METERING CALIBRATION

- You can calibrate readings for the input and output metering independently.
- Use INPUT and OUTPUT knobs on the Mastering Limiter 2.0 to offset the values below bar indicators, so they match with your AD/DA or DAW readouts.
- Please note that the calibration is for metering only – it does not affect audio levels or any other part of the analog signal path. It's only here for the convenience of work with the Limiter.

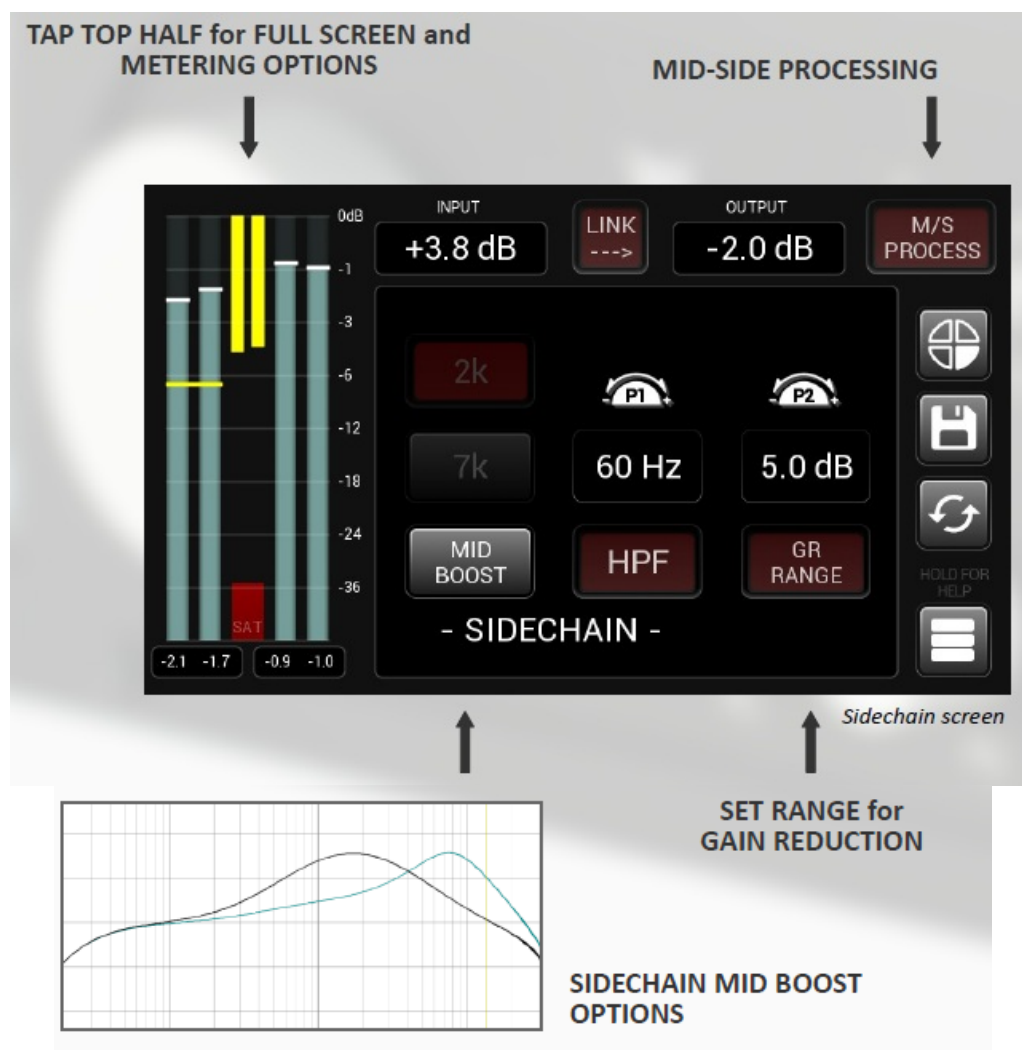
## BASIC SCREEN LAYOUT AND LIMITER

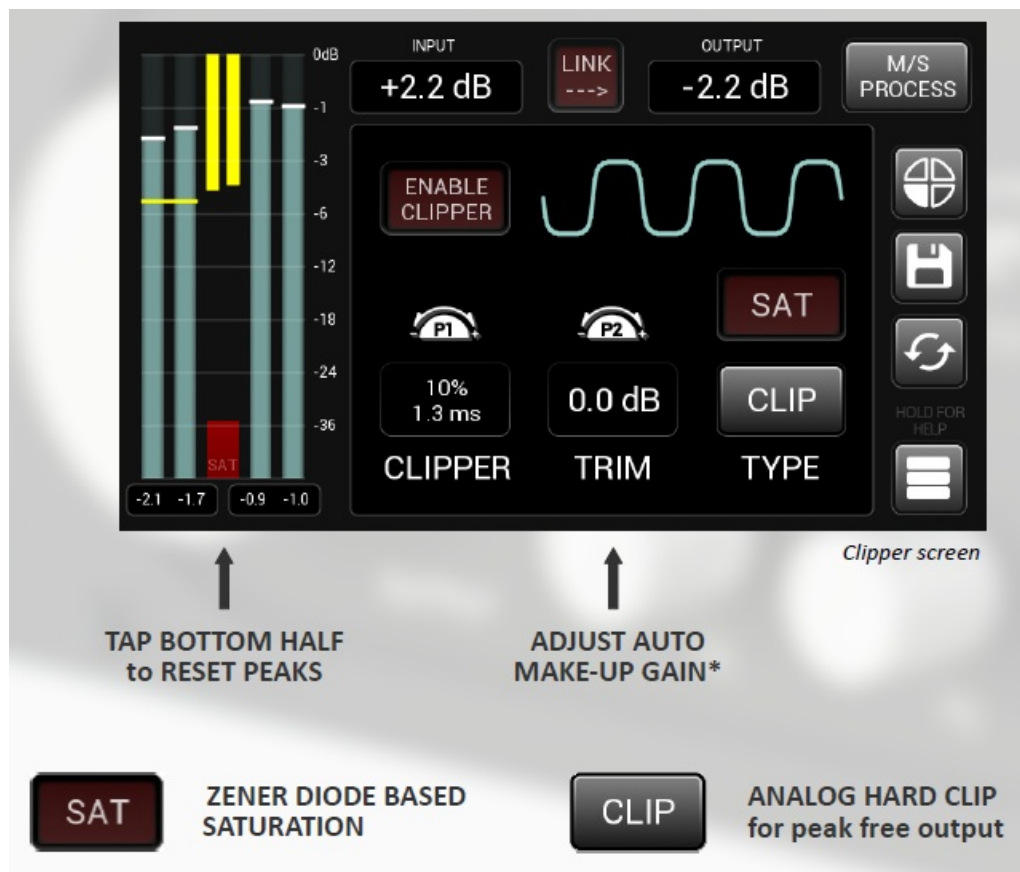
-  Quick access to Limiter, Sidechain, Clipper and Color (you can also press P2 knob)
-  Save settings
-  Set all to default state
-  Enter Main Menu

## SIDECHAIN FILTERS



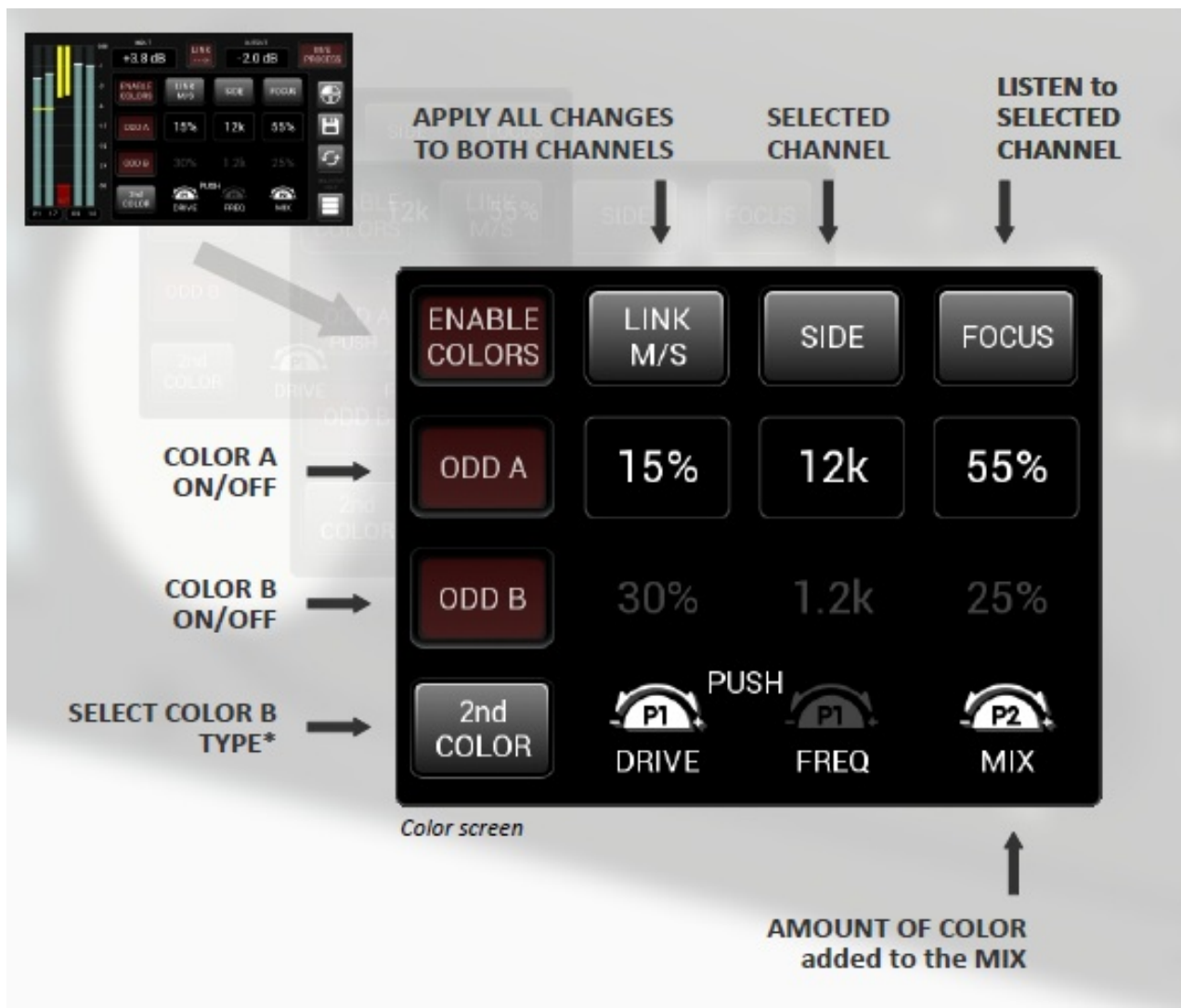
## SATURATION AND CLIP





**\*NOTE:** TRIM will also alter the amount of Saturation and Clip. It is recommended to start with this parameter set to 0dB

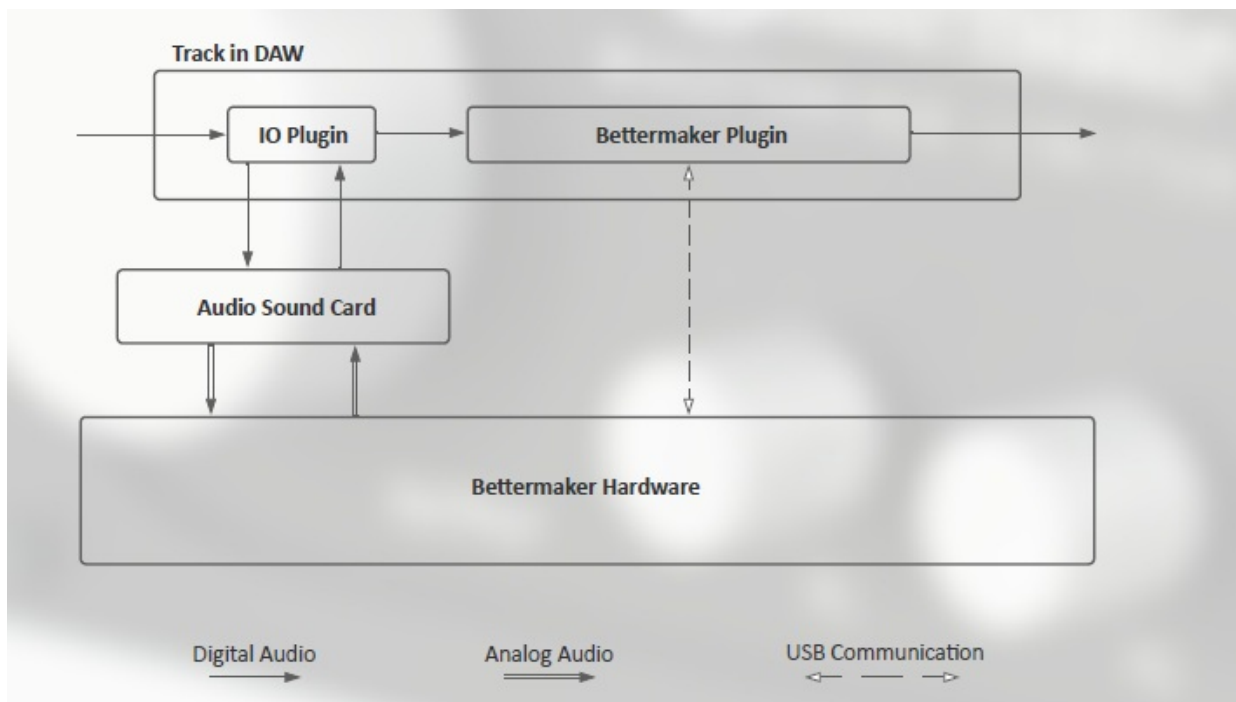
## COLOUR SCREEN



**\*NOTE:** COLOR A can generate ODD harmonics only. For COLOR B you can choose between ODD and EVEN.

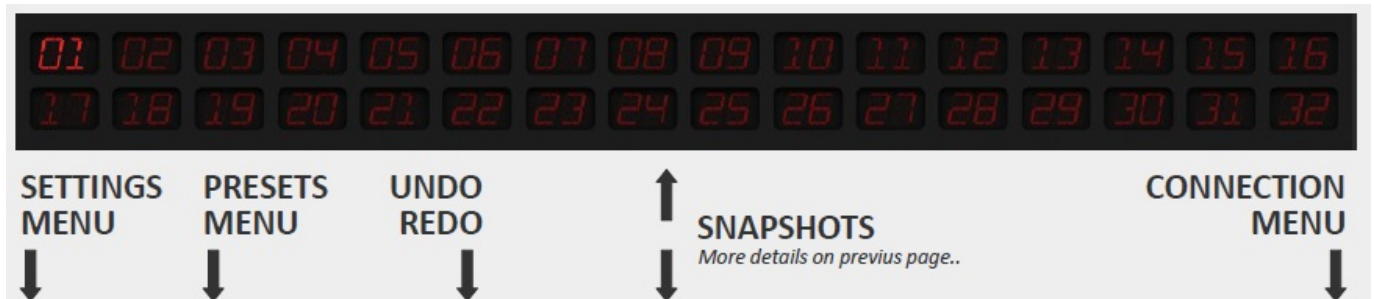
## DAW PLUGIN CONNECTION WITH HARDWARE

- If you want to use Bettermaker Mastering Limiter 2.0 full potential, please follow the signal & data flow diagram showed bellow.
- The connection with Mastering Limiter 2.0 plugin should be established automatically. Once the hardware locks with the software, USB icon on the menu bar turns blue.
- In case of multiple Mastering Limiter 2.0 units connected, select correct one from the list.



## SNAPSHOT EXPLAINED

- When the Snapshot button is pressed, new panel will appear. Press the button again to hide it.
- You can program up to 32 snapshots for Mastering Limiter 2.0 state that can be triggered by DAW's automation. Use left and right arrows to navigate through snapshots.
- Copy and Paste buttons are helpful if you want to use one snapshot as a starting point for another one.





## SUPPORTED PLUGIN FORMATS

AAX Native, AU, VST3

## PLUGIN MODIFIER KEYS

- **AU**

Fine Control Shift

Set to default Option

- **VST3**

Fine Control Shift

Set to default Command (Mac), Ctrl (Win)

- **AAX**

Fine Control Command (Mac), Ctrl (Win)

Set to default Option (Mac), Alt (Win)

## SUPPORTED OPERATING SYSTEMS

- **Mac**

MacOS 10.13 or above, native M1

Intel, or Apple Silicon architecture

- **PC**

Windows 11 down to Windows 8

x64-compatible CPU

## SYSTEM REQUIREMENTS

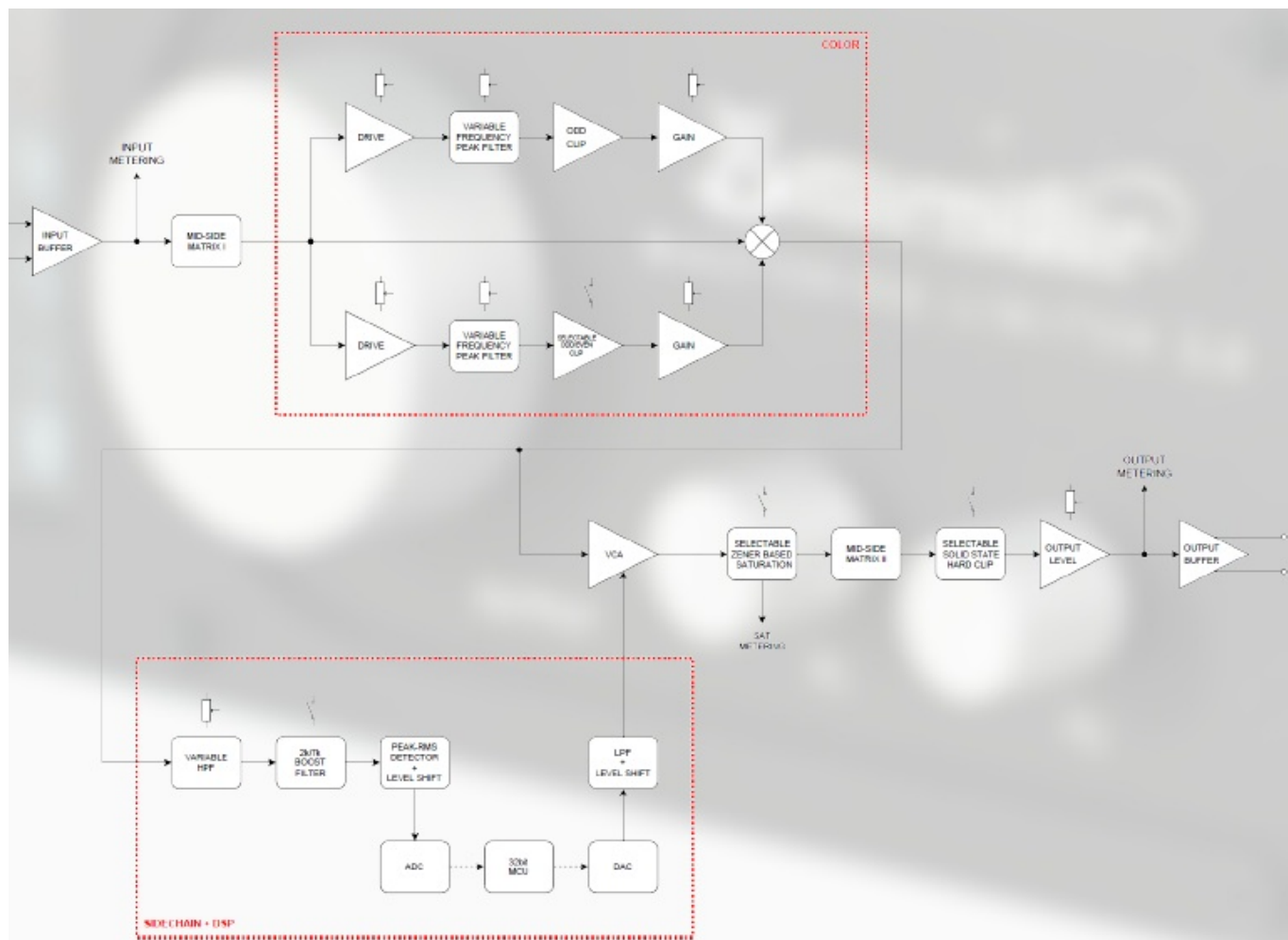
- **Display resolution:** 1440 × 900px or 1280 × 960px or higher
- **Memory:** 2 GB RAM

## TECHNICAL SPECIFICATION

- **Maximum gain reduction:** 20 dB
- **Input adjust range:** 0..+20dB
- **Output adjust range:** -10..+12dB
- **Makeup gain:** automatic with trim (-/+8dB range; only available with clipper enabled)
- **Attack time:** 0.1 – 250ms (measured at 63% of 10dB GR)
- **Release time:** 1ms – 2s (measured at 63% of 10dB GR) + IREL (intelligent release)
- **Sidechain HPF:** off or 20-200Hz (2nd order)
- **Sidechain mid boost:** off or 8dB @ 2kHz or 7kHz
- **Metering ADC range:** 60dB
- Power saving mode available
- Mid/side mode available, true bypass (relays) available
- **Connection:** balanced XLR (audio), USB type B (PC/MAC), 5.5/2.1 center positive 12V only socket
- **Maximum input level:** +24 dBu (balanced with 48kΩ input impedance)
- **Maximum output level:** +27 dBu (balanced with 50Ω + 50Ω output impedance)
- **Nominal audio level:** +4 dBu
- **Frequency response:** 6 Hz – 27kHz (-0.5 dB, ISO-R40 sweep)
- **Frequency flatness:** +/- 0.1 dB (20Hz – 20kHz, ISO-R40 sweep)
- **Dynamic range:** 107 dB (20kHz bandwidth, +24dBu)
- **THD+N ratio:** 0.05 % (20kHz bandwidth, +4dBu, 1kHz)
- **THD ratio:** 0.03 % (+4dBu, 1kHz)
- **CMRR:** > 80dB (20Hz – 20kHz, IEC 60268-3)
- **Crosstalk:** > 76dB (20Hz – 20kHz, +18dBu, channel to channel)
- **AC power consumption:** max 25W (<2W in standby, with included 100-240VAC power adapter) 2U enclosure, 230mm deep
- **Shipping weight and size:** 5kg, 62x37x21cm

**NOTE:** all specifications are subject to change without notice.

## DETAILED SIGNAL FLOW DIAGRAM



- [www.bettermaker.com](http://www.bettermaker.com)
- [facebook.com/Bettermaker](https://facebook.com/Bettermaker)
- [instagram.com/bettermakerproaudio](https://instagram.com/bettermakerproaudio)
- [instagram.com/addictedtomusicstudios](https://instagram.com/addictedtomusicstudios)

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## Documents / Resources

	<p><a href="#">Bettermaker SPE Mastering Limiter 2.0</a> [pdf] User Manual  SPE, SPE Mastering Limiter 2.0, SPE, Mastering Limiter 2.0, Limiter 2.0, 2.0</p>
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## References

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