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ßeta 76

LIMITING AMPLIFIER

User manual

EN

The art of sound

WesAudio

Thank You for purchasing **WesAudio beta76**.

WesAudio**Beta76**

·- a single channel transformer balanced FET compressor/limiter

With kind regards,

Radoslaw Wesolowski

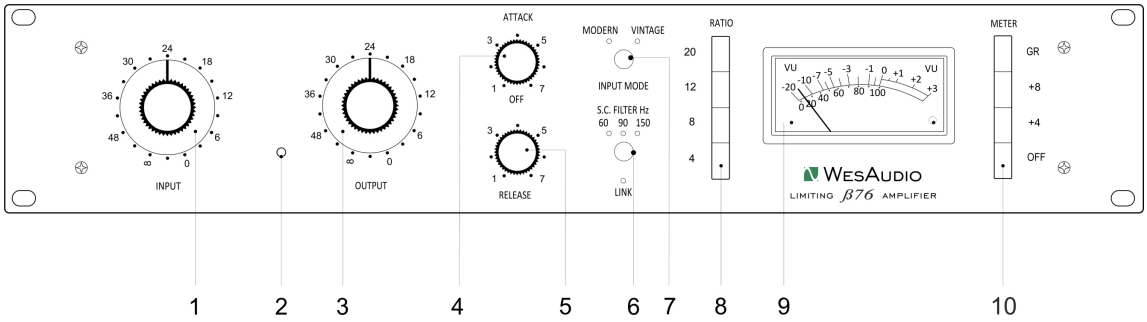
WesAudio Beta76 is a continuation of WesAudio 1176 compressor. The introduction of several significant structural improved the original version. One of the most important changes is two mode switch - Modern / Vintage - deciding on the circuit of the desymmetrization of the input signal.

Modern Mode
- is an electronic circuit, exactly the same as the previous version of the compressor and the Vintage mode - it's a Carnhill input transformer. The result is a universal device with two different sound possibilities.

A True Bypass switch was introduced, as well as a high-pass filter in the Compressor's Side Chain path.There are three cutoff frequencies - 60, 90, 150 Hz - thanks to which Beta76 is less sensitive to low frequencies. The filter is particularly beneficial to the operation of two compressors in a stereo pair, which are easily connected with a prepared Jack-Jack cable.

The entire system operates in class A. The element responsible for the gain reduction is a FET transistor, giving the effect of rapid and pure compression. There is a high quality Carnhill audio transformer on the output favourably affecting the final sound of the compressor. The housing is made from high quality brushed stainless steel, whereas the panel is 4mm brushed aluminium.

Front Panel



1 **Input** – Determines the level of the input signal entering the 1176, as well as the threshold. Higher settings will increase amounts of compression or limiting.

2 **"0" Adjust** – Screwdriver adjustment accessible through a hole. For property adjustment see page 3.

3 **Output –** Determines the level of the output signal leaving the 1176. It is used to recover compression lost signal.

4 **Attack –** It sets the Attack time from 20 microseconds to 800 microseconds. The attack time is fastest when the Attack knob is in fully clockwise position, and it's slowest when it's in its fully counterclockwise position. Pulling the knob will activate "stereo link function".

5 **Release –** It sets the Release time from 50 millisecond to 1100 milliseconds. The release time is fastest when Release knob is in its fully clockwise position, and is slowest when it is in its fully counterclockwise

6 **SC Filter/Link –** this button determine three side-chain hi-pass filter frequency (60Hz,90Hz,150Hz) and also activate/deactivate Link function by pressing it for 2sec.

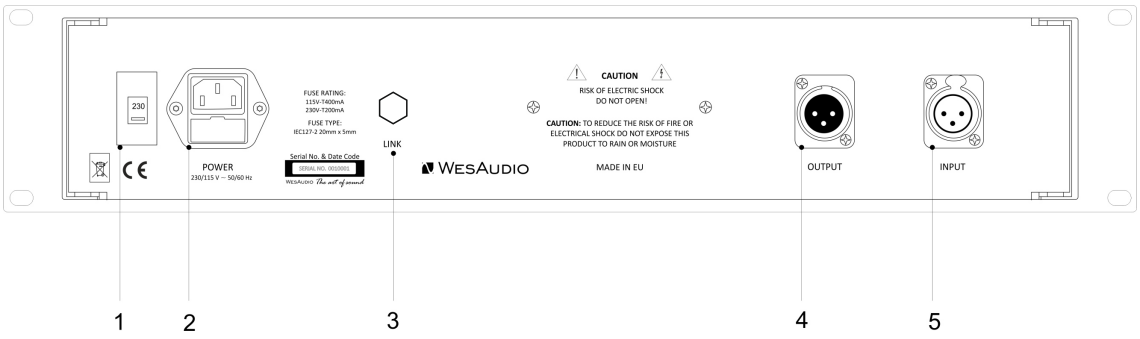
7 **Input mode** – pressing this button you can switch between two input circuits : Vintage – transformer balanced input, Modern – IC based input circuit.

8 **Ratio -** This buttons determines deepness of the compression and limiting. A ratio 4:1 is the smaller possible value of compression, while 20:1 is larger value of limiting. 8:1 is the last button when compression occur, after that, is only limiting. Pressing all four buttons simultaneously, will activate 'slam' mode, which is extreme hard form of limiting.

9 **Meter –** A standard VU meter that displays either the amount of gain reduction, or output level, depending upon the setting of the Meter Function switch.

10 **Meter Function –** Pressing the off button will disable entire 1176. Another three buttons determine what the 1176 front panel VU meter displays: GR – gain reduction or +8 or +4 – output level that corresponds to the value '0' on the VU meter.

Rear panel



1 Voltage switch selector 115V/230V

Warning! Choosing the wrong voltage can damage compressor!
Before connecting, make sure the correct voltage has been selected!

2 Mains power inlet connector and fuse holder

3 **LINK** - stereo mode compressors connector
(special cable is needed for this operation, see page 6)

4 XLR Balanced audio output connector

5 XLR Balanced audio input connector

Zero Set

The 1176LN meter may occasionally need to be calibrated. This is accomplished by adjusting the Zero Set potentiometer, located through a small hole on the front panel between the Input and Output

The procedure for adjusting the meter is as follows:

1. Power on the beta76 and wait 15min.
2. Press the Meter GR pushbutton.
3. Set the Input control fully off (turn the knob fully counterclockwise).
4. Use a small screwdriver to slowly adjust the Zero Set potentiometer so that the meter reads 0 dB. Watch how the meter settles before completing the calibration.

Linking compressors

To link two compressors to work in stereo mode you need special Jack-Jack cable.
You can purchase it at WesAudio or you can do it yourself as it is shown below:

Link connection

Installation

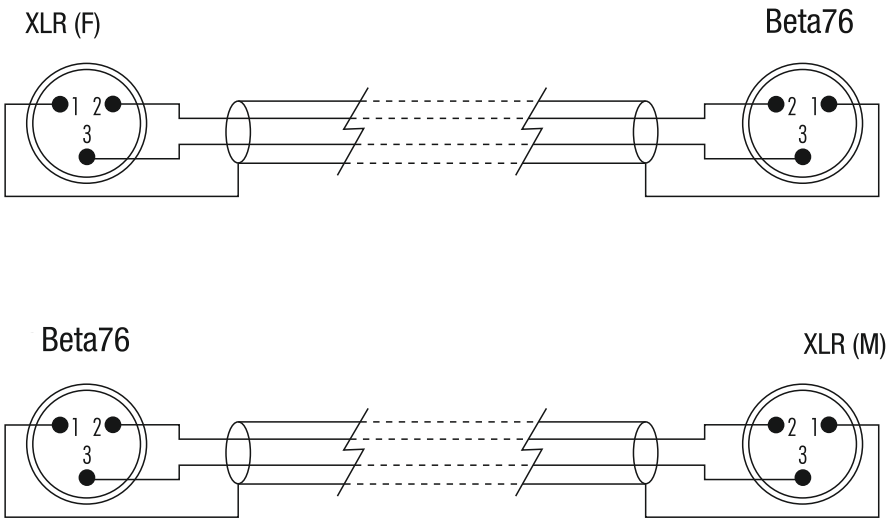
It is recommended to switch on device at least 5 min before operating to ensures best parameters.

NOTE! The device should be connected only to a ground outlet and proper voltage
Always replace the fuse with the type and value recommended by manufacturer.

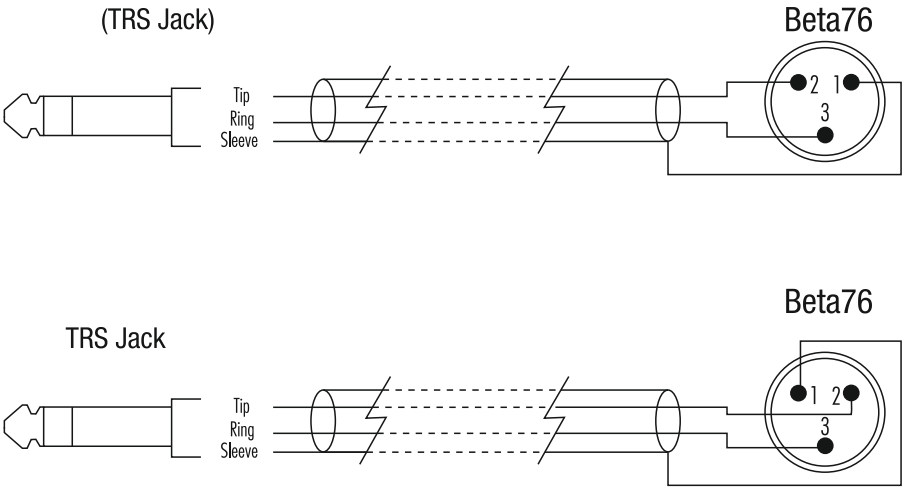
230V - IEC 127 20x5mm T315mA
115V - IEC 127 20x5mm T630mA

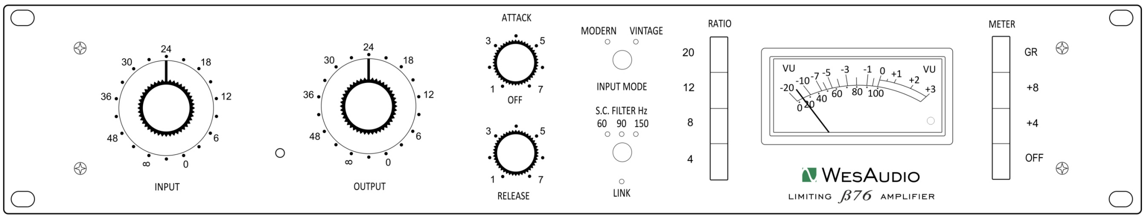
Warning! High voltage inside ! To reduce the risk of electrical shock do not open the unit.

Balanced XLR connection



Balanced Jack-XLR connection




ATTACK
MODERN VINTAGE
RATIO
METER
INPUT MODE
S.C. FILTER Hz
60 90 150
LINK
RELEASE
OFF
INPUT
OUTPUT
GR
+8
+4
OFF
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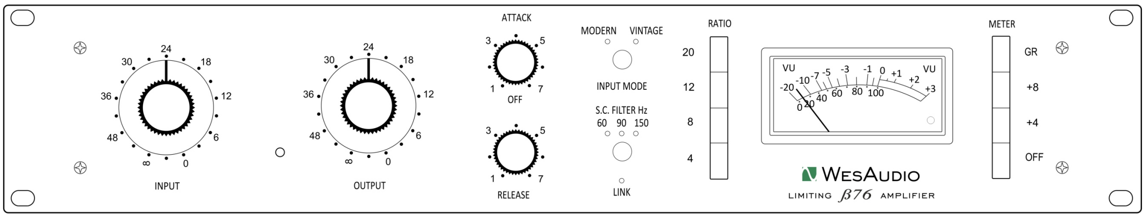
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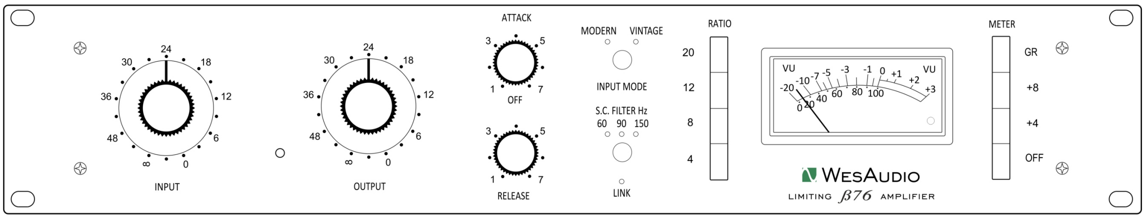
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Specifications:

Input impedance :	2,4 Kohm
Output impedance :	600ohm
Frequency response:	20Hz do 20kHz: (+/-1dB)
THD+N :	⩽ 1 %
SNR :	> 83dB
Gain:	43dB
AC mains	230V AC / 115 V
Fuse:	Time-lag 315 mA/230V (630mA/115V)
Case :	Rack 2U
Weight :	6kg
Dimensions :	88 x 483 x 235 mm
Warranty :	3 years

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