

*Bellari*

LA120  
Tube  
Compressor/Limiter



OWNERS MANUAL

*Bellari*

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## OPERATION

The compressor is one of the most important tools you can have in the studio-- It keeps things even. In live settings, you have a huge dynamic range to work with, but it's quite the opposite in recording. You try to keep optimum levels high enough to get a good signal to noise ratio (in analog) and low enough that the sound doesn't distort (clip if in digital). The compressor keeps things nice and level--it boosts the quiet things and attenuates (lowers the gain) the louder signals. The LA120 uses an automatic ratio mode where it follows the mix and sets the attack and release rates for you.

The LA120 utilizes "soft knee" compression. This means that it starts compressing a signal that goes over the threshold at a gradual, smooth rate. This sounds very natural on guitars, basses, vocals, whole mixes, and similar sounds.

## COMPRESSION VS LIMITING

Compression and limiting are often confused because they have very similar characteristics. Compression is said to have a ratio of between 2:1 to 20:1, and Limiters are thought to have a ratio of 20:1 to infinity:1. In easier terms, limiting means that once the output level reaches a certain point, it can get no louder.

Use Compression for vocals, guitars, wind instruments, keyboards, and other instruments where you only want small to medium amounts of gain reduction.

Use Limiting for slapping bass guitars and drums or where you want a real noticeable effect, or where you want to set the maximum amount of signal allowed out of the LA120.

## SPECIFICATIONS

Frequency Response	20 Hz - 40 kHz
Input Impedance	10K $\Omega$ balanced 1M $\Omega$ unbalanced
THD + Noise	<0.1% typical
S/N Ratio	90 dB
Indicators	1: Active LED 1: Analog Meter
Input/Output jacks	XLR balanced 1/4" unbalanced
Size (WxHxD):	7.6 x 1.6 x 5.4 (194mm x 40mm x 135mm)
Weight:	2.5 lbs (1.135 kg)
Power:	12 VAC 300ma (Adapter included in U.S. models)

Congratulations on choosing the Bellari LA120 Tube Compressor/Limiter. We recommend that you take a moment and read this manual as it provides information that will help you in using your unit to its fullest potential. The LA120 provides smooth, natural compression and clear sonic quality and performance for the working musician, studio operator or anyone who needs a comp/limiter with the warm, smooth, analog sound. The unit uses one *Bellari* premium 7025 tube in a unique configuration to give superior signal control. The unit has both XLR and 1/4" inputs and outputs. Plus it has a Side Chain input and output for each channel, for direct access to the detector circuits.

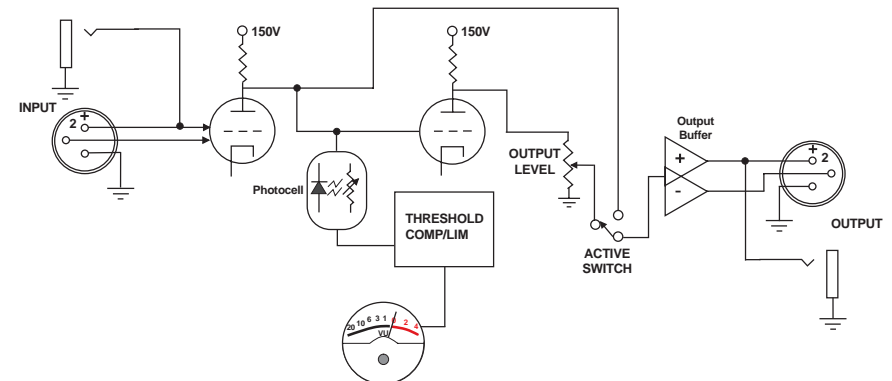
## INSPECTION

### 1. Unpack and Inspect the LA120 package

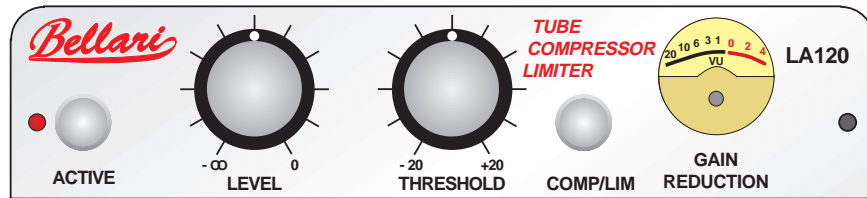
Your LA120 was carefully packed at the factory in a protective carton. Nonetheless, be sure to examine the unit and the carton for any signs of damage that may have occurred during shipping. If obvious physical damage is noticed, contact the carrier immediately to make a damage claim. We suggest saving the shipping carton and packing materials for safely transporting the unit in the future.

2. Please complete the Warranty Registration Card and return it to the factory.

## BLOCK DIAGRAM



## FRONT PANEL DESCRIPTION



**ACTIVE Switch:** Engages and disengages the compression.

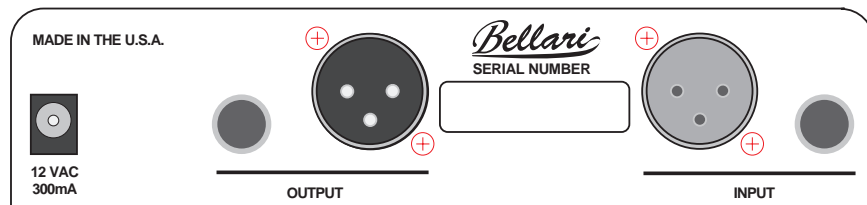
**LEVEL:** Varies the overall signal level from the LA120.

**THRESHOLD:** Sets the level at which the income signal must overcome in order for the LA120 to begin compressing.

**COMP/LIM Switch:** Switches the LA120 from Compression mode, to Limiting mode (explained in the Operation section of this manual).  
NOTE: When switched *in*, the LA120 is in Compression mode; when switched *out*, the LA120 is in Limiting mode.

**VU Meter:** Indicates the amount of gain reduction.

## REAR PANEL DESCRIPTION



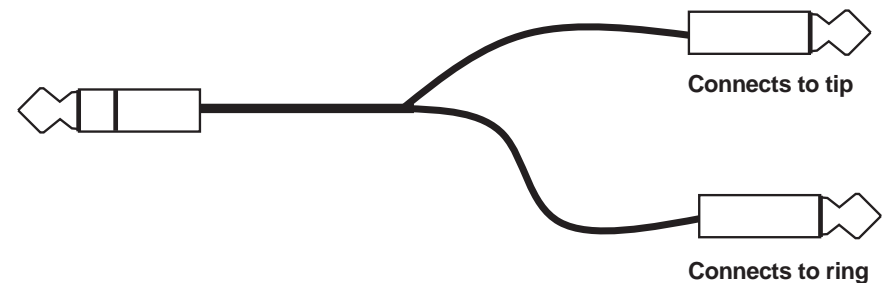
**INPUT:** XLR balanced and 1/4" unbalanced connectors for connecting line level signals to the LA120.

**OUTPUT:** XLR balanced and 1/4" unbalanced connectors for connecting the LA120 to a mixer or other line level input.

## CONNECTION

Connect the Input of your LA120 to either a mixing board's channel insert (explained below), or to the output of a preamplifier. Connect the Output of the LA120 to an equalizer or another piece of signal processing equipment, then to an amplifier or recording device.

Many mixing boards have tip-ring-sleeve type inserts. The tip being the "send" and the ring being the "return". If this is the case with your mixer, use an insert cable, like the one shown below, and connect the "tip" cable to the LA120 Input, and the "ring" cable to the LA120 Output.



For recording, the LA120 should be connected in a channel's insert. If this is not possible, try to get the LA120 connected between the microphone (or instrument) preamp, and the mixing board channel. Do not plug a microphone directly into the LA120 because it is not a preamplifier. If you are using the LA120 with an instrument, place it after your preamp and before your effects.

## SAMPLE SETTINGS

Note: The examples given are starting suggestions only.

For light compression such as vocals or program compression, set the THRESHOLD control at approximately 1 O'clock and press the COMP/LIM switch in for compression. For more applications requiring more compression such as instruments, decrease the THRESHOLD to 10 to 12 O'clock.

For dramatic compression or limiting, set the COMP/LIM switch to the out position, adjust the THRESHOLD control for the desired amount of compression. Notice that at low Threshold settings, the output signal will remain quite constant.

For all the above settings, adjust the LEVEL control for a comfortable output level, press in the ACTIVE button, and watch the GAIN REDUCTION meter carefully.

## TABLE OF CONTENTS

Introduction	1
Inspection	1
Block Diagram	1
Front Panel Description	2
Rear Panel Description	2
Connection	3
Sample Settings	3
Operation	4
Specifications	4
Warranty	5



Bellari is an innovative audio electronics company devoted to providing quality tube-based signal processors and amplifiers. We carefully hand manufacture and test all of our products to ensure that these products meet our most exacting high standards. If you find a defect in this product, promptly contact your dealer for return/repair/replace-ment instructions.

## LIMITED WARRANTY

This product is warranted to the original consumer purchaser to be free from defects in materials and workmanship under normal installation, use and service for a period of one (1) year from the date of purchase as shown on the purchaser's receipt.

The obligation of Rolls Corporation under this warranty shall be limited to repair or replacement (at our option), during the warranty period of any part which proves defective in material or workmanship under normal installation, use and service, provided the product is returned to Rolls Corporation, **TRANSPORTATION CHARGES PREPAID**. Products returned to us or to an authorized Service Center must be accompanied by a copy of the purchase receipt. In the absence of such purchase receipt, the warranty period shall be one (1) year from the date of manufacture.

This warranty shall be invalid if the product is damaged as a result of defacement, misuse, abuse, neglect, accident, destruction or alteration of the serial number, improper electrical voltages or currents, repair, alteration or maintenance by any person or party other than our own service facility or an authorized Service Center, or any use violative of instructions furnished by us.

This one-year warranty is in lieu of all expressed warranties, obligations or liabilities. **ANY IMPLIED WARRANTIES, OBLIGATIONS, OR LIABILITIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED IN DURATION TO THE ONE YEAR DURATION OF THIS WRITTEN LIMITED WARRANTY.** Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

**IN NO EVENT SHALL WE BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, WHATSOEVER.** Some states do not allow the exclusion or limitation of special, incidental or consequential damages so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.