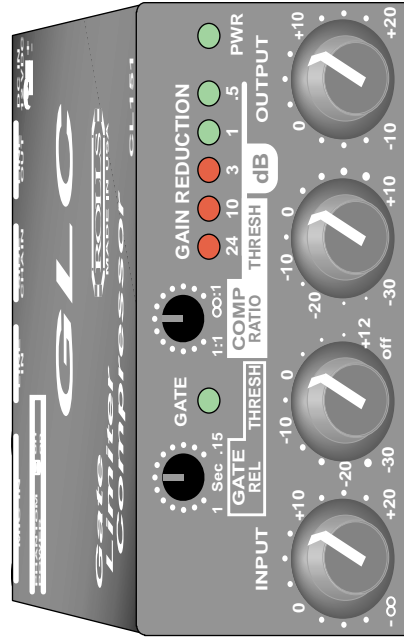


# CL151 GLC

## Gate Compressor Limiter



Owners Manual

### 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.

## CL151 GLC Compressor/Limiter/Gate

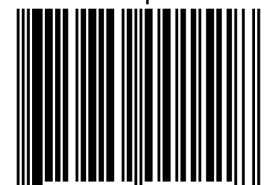
The CL151 is a unique compressor/limiter and noise gate, it adds the flexibility of a mic preamp with phantom power.

- Soft-knee Compressor / Limiter
- Noise Gate with Threshold and Release
- Microphone preamp with Phantom Power
- Side Chain for detector circuit access
- Balanced inputs and outputs



Rolls Corporation  
Salt Lake City, UT  
3/01

CL151 Comp/Lim/Gate



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## INTRODUCTION

Thank you for your purchase of the CL151 GLC Gate Compressor Limiter. This unit provides smooth, soft-knee compression and limiting with a gate. Gain reduction is indicated via a front panel 5-segment LED bargraph. Plus, the unit has a mic preamp input with 12 volts phantom power available.

## INSPECTION

1. Unpack and inspect the CL151 GLC box and package. 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.

## FRONT PANEL



**INPUT:** Adjusts the amount of input signal to the CL151, from no signal to +20 dB.

**GATE REL:** This control adjusts the amount of time taken for the gate circuitry to "close" or mute the output, after the signal level has dropped below the gate Threshold level.

**THRESH:** Sets the point at which the input signal must surpass to "open" the gate circuitry or allow signal to pass to the output.

**GATE LED:** When lit, indicates that the gate is "closed" or the output is muted.

**COMP RATIO:** This control sets the signal to compression ratio. This ratio relates to the amount of increase of input compared to output signal. Thus, at a 1:1 ratio, a 1 dB increase of input signal will result in a 1 dB increase of output signal. At 2:1, a 2 dB increase of input signal will result in only 1 dB increase of output signal. At 8:1, an 8 dB increase of input signal will result in a 1dB increase of output signal.

**THRESH:** Sets the point that the input signal must reach for compression to begin.

**GAIN REDUCTION LEDs:** This LED ladder indicates the amount of signal compression, or gain reduction.

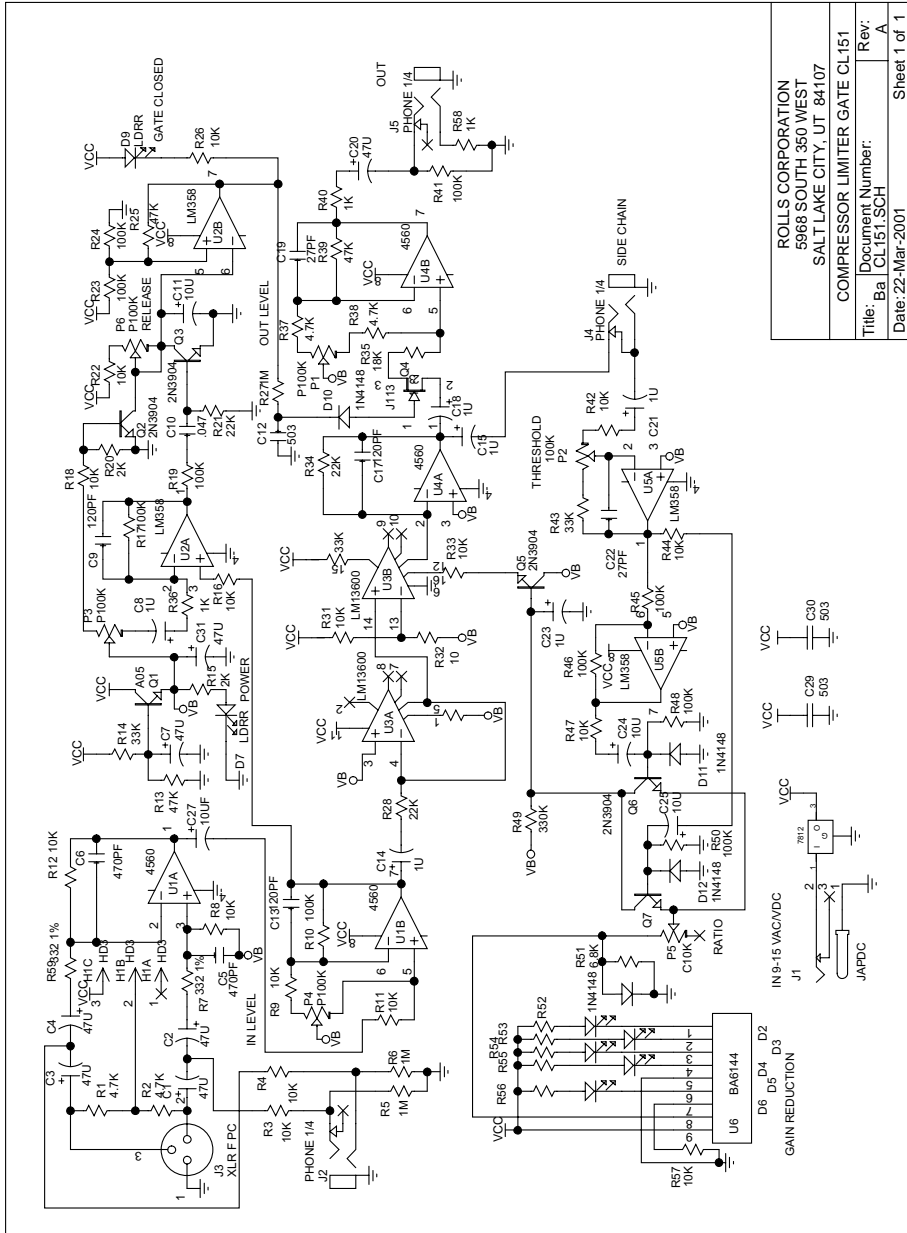
**OUTPUT:** Adjusts the amount of overall output signal from the CL151.

**PWR:** Indicates that the CL151 is connected to the power source, and the unit is on.

## SPECIFICATIONS

Max Input:	XLR: -10 dBm Balanced 1/4": +14 dBV Balanced
Max Out:	+14 dBV Balanced
Noise Floor:	-72 dBV, Out Level Min, Gate Off
Phantom Power:	12 VDC
Frequency Response:	10 Hz - 30 kHz, +0 -3 dB
Gate Release Time:	150 mS - 1 S
Gate Attack Time:	5 mS
Comp Attack Time:	5 mS
Comp Release Time:	800 mS
Power:	12 VDC 150 mA adapter (center negative)
Weight:	1 lbs. (.45 Kg)
Size:	4.15" x 2.46" x 1.55"

# SCHEMATIC



ROLLS CORPORATION  
5968 SOUTH 350 WEST  
SALT LAKE CITY, UT 84107

COMPRESSOR LIMITER GATE CL151  
Title: Ba CL151.SCH Rev: A  
Date: 22-Mar-2001 Sheet 1 of 1

# REAR PANEL

**MIC IN:** Balanced XLR jack, for connection to any standard dynamic or condenser microphone.

**LINE IN:** Balanced 1/4" TRS jack for connection to balanced or unbalanced line level signals.

**SIDE CHAIN:** 1/4" TRS jack for connection via TRS insert cable to a device such as an equalizer or other device, for direct access to the CL151 detector circuitry.

**LINE OUT:** Balanced 1/4" TRS jack for connection to a mixer's line input or to an amplifier.

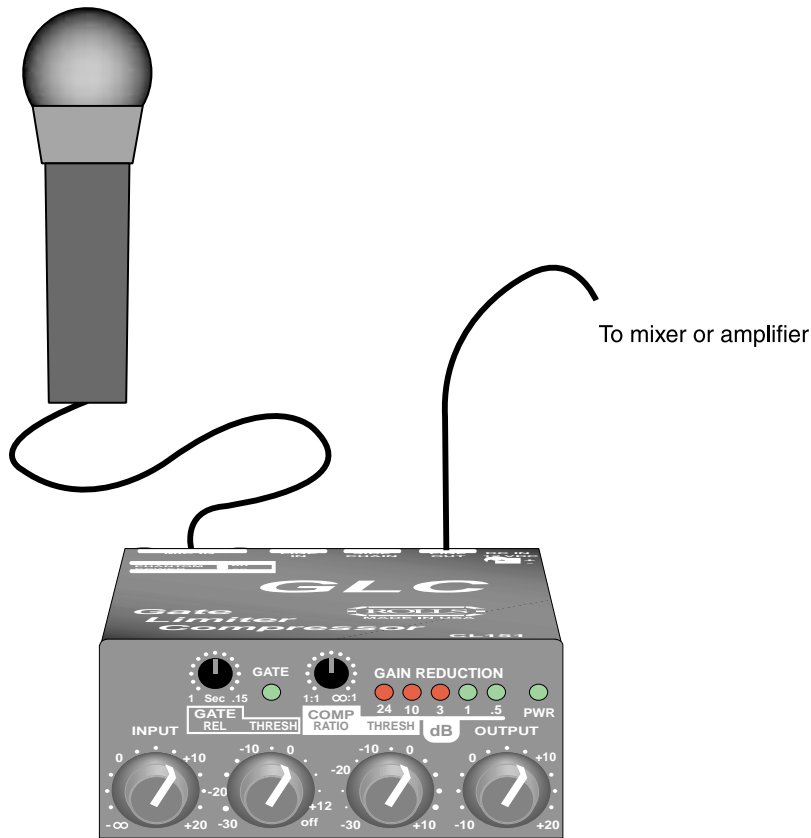
**DC IN:** For connection to the Rolls PS27 12 VDC, 150 mA power supply; outside of the barrel is positive.

# SIDE PANEL

**PHANTOM POWER:** Jumper header for connecting 12 VDC phantom power to the XLR Mic Input. Phantom power is engaged by carefully removing the jumper, and reconnecting it to the pins toward the CL151 controls.



## CONNECTION AND OPERATION



The example above shows connection of a microphone. If the microphone requires phantom power, make sure the Phantom Power jumper is connecting the two pins closest to the front panel. Connect the output of the CL151 via a balanced or unbalanced 1/4" plug to the input of a mixer or amplifier.

Begin adjustments by setting the INPUT and OUTPUT levels at 0 (about 10 O'clock). This setting is for "unity gain". Set the gate THRESH for "off", the COMP RATIO for 1:1, and the compressor THRESH for +10. These initial settings essentially bypass the gate and compressor circuits.

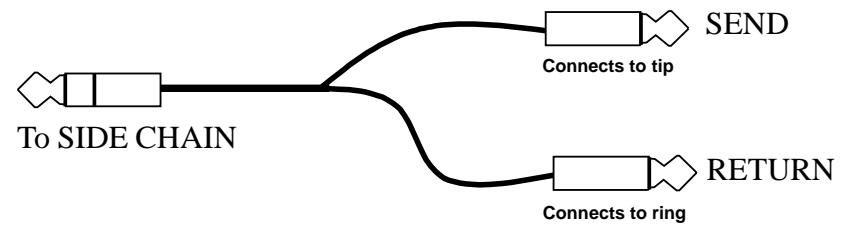
The compressor RATIO and THRESH controls work together to control the amount of compression, and the point at which compression begins respectively. Decreasing the THRESH control lowers the amount of signal required to begin compression - so it compresses sooner. This works with the RATIO control which, when increased, increases the amount of compression.

The gate THRESH control, after being turned slightly counterclockwise from the "off" position, goes to its maximum level. This means it requires a higher signal level to "open" the gate. As the gate THRESH control is turned counterclockwise, a lower and lower signal is required to open the gate.

The gate REL (release time) control sets the amount of time taken for the gate to "close" after the signal drops below the THRESH level. For example, the CL151 will continue passing a sustaining note until the level drops below the THRESH level, and the REL time has passed.

## USING THE SIDE CHAIN

To access the compressor detector circuit directly, Rolls has included a Side Chain jack. The Side Chain works somewhat like an effects loop, with a send and return point. A 1/4" Tip-Ring-Sleeve "Insert Cable" is required to utilize the Side Chain. See the picture below.



The plug connected to the Tip is the "Send" which will connect to the Input of the signal processing device, and the Ring is the "Return" which connects directly to the detector (compression control) circuit.

Side Chain circuits are often used in "ducking". Ducking is momentarily lowering one signal under another signal. For example, you may wish to automatically lower a music signal under a paging microphone signal, then have the music return to normal level after the page is over. This would be accomplished by running the music into the compressor, and having the page signal connect into the Side Chain return. The page signal must also be connected to the main mixer or amplifier as well. When the paging signal begins, its signal goes to the main mixer and the Side Chain circuitry. The music is compressed or "ducked" under the page.