

# CARL MARTIN

## Manual



Thank you for purchasing the Carl Martin Compressor/Limiter! We believe this unit to be the most musically useful guitar dynamics processor on the market. It has been developed to incorporate the same features, sonic clarity, quietness, and performance of the best studio compressor/limiters. Spend a little time with us here in the manual and you can learn some of the basics of compression and limiting, and how to get the most out of your pedal.

Simply put, compression and limiting may be defined as the active control or modification of the dynamics of an audio signal.

Dynamics may be described as the loudness characteristic of an instrument: the way the note begins, sustains, and ends. Every instrument has dynamics; for example, a guitar has a very strong initial attack and a smooth decay,

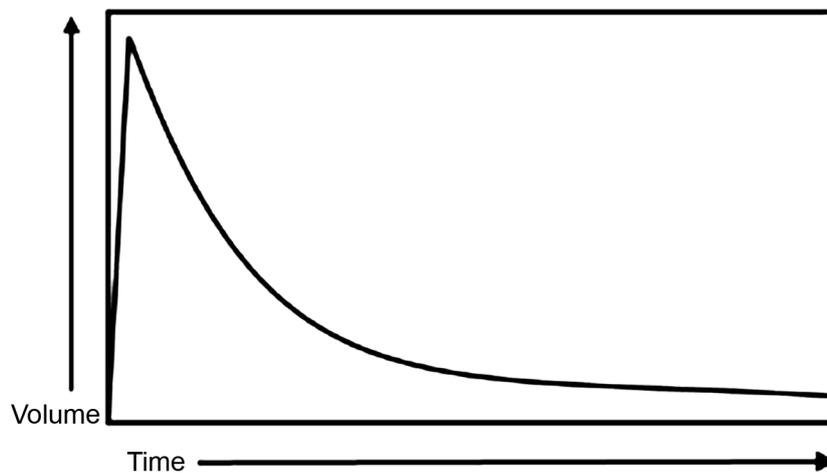


Fig. 1

while a violin has a generally slower attack and will sustain a note as long as you keep bowing the strings. A compressor allows you to change the character of a guitar's natural dynamics. The result ranges from a subtle fattening of the tone to radical singing violin effects, and many useful variations in between.

To begin with, be aware that in any compressor/limiter the controls are interactive, and one control may function somewhat differently when the other controls are set in various positions. Reading this manual, and spending a little time familiarizing yourself with the controls will generally produce the best results.

The four controls on the Compressor/Limiter are:

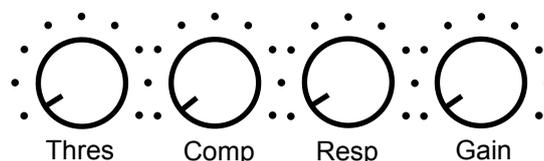
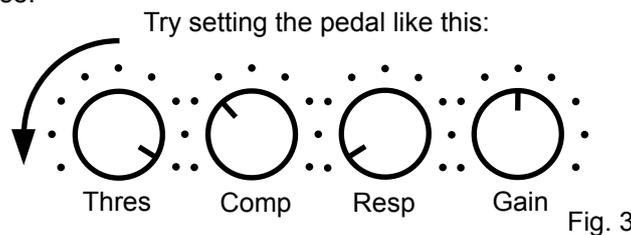


Fig. 2

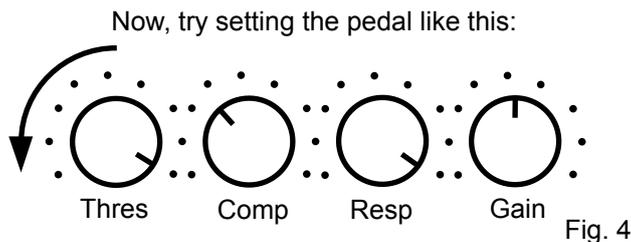
THRES, or Threshold, sets the level at which the compression starts to take effect. The higher (clockwise) you set this control, the harder you must play before compression starts to occur. The lower (counterclockwise) you set this control, the sooner compression starts to occur, and can be audible even when playing softly.

COMP or Compression sets the ratio of compression that will be applied to your signal. The ratio, in conjunction with the THRES setting will determine how hard, or how gently, the compressor will affect your signal. Turning the COMP knob clockwise increases the ratio, giving you more compression, while turning it counterclockwise lowers the ratio, giving you a softer effect. There are no right or wrong settings for the ratio, or any other control on a compressor for that matter. It is entirely an artistic choice, based upon what you want to hear.

RESP or Response determines the way the compressor responds to your playing. In full clockwise position the unit acts as a peak-limiter, providing a simple "brick wall" attenuation (reduction of the signal) when the signal reaches the point you have set on the THRES knob. The more you turn the RESP knob counter clockwise, the more the unit acts as a modern compressor with signal-dependant attack and release times. In simple terms, If you like a more effected sound, where you can clearly hear the compressor actively shaping your sound, you want more of a compressor response (RESP more counter-clockwise), if you want a limiting function you want the RESP knob more clockwise.



This is set for a very active, signal-dependant compressor function. As you play, turn the THRES knob counter-clockwise, and you will see how quickly the compression starts to occur, and how strongly it interacts with your playing.



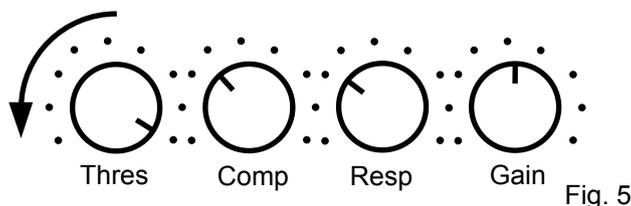
This is more of a fixed-point limiting function. As you play, turn the THRES knob counter clockwise, (you will have to turn it further than with the RESP knob set as in figure 3) and you will hear the unit start to effect the signal.

Spend some time playing with the THRES and RESP knobs in various places, leaving the other knobs alone for now, and you will see the different kinds of responsiveness available to you. As you become familiar with the pedal, you will find just the settings you are looking for. Of course, the COMP settings will make a difference in all cases, but to keep things simple, it's good to start with the COMP set as in figures 3 & 4.

GAIN is also called "make-up gain", and that is because the more you compress the levels, the softer the signal becomes and this control allows you to compensate for this. By the way, "Gain" is simply a more precise, scientific-term for "volume" or "level" so there is nothing mysterious about this control. Switch the pedal in and out with the footswitch and adjust this knob as needed. You can also use it to get a bit of boost for a solo. If you use single-coil pickups, you will notice that extreme compression settings will accentuate the hum and noise from these pickups. That is simply the nature of compression and single coil pickups, not a function of the pedal, and all compressors exhibit this trait. If you have humbuckers, or you stand where there isn't much hum pickup, you will quickly notice the extreme quietness of this pedal. It really does perform very much like a high-end studio unit.

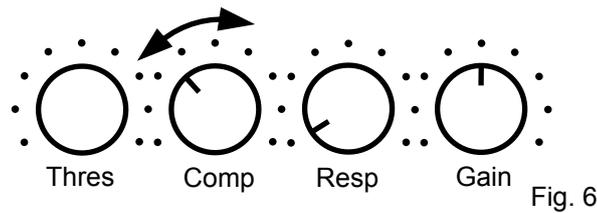
The "Busy Light" simply tells you how much compression is being applied to your signal. The brighter it gets, the more compression.

Ok, to start out, let's try a good, basic "fattening" sort of compression. This is what engineers often do to your signal in the studio, so you will generally find this a familiar and musically useful sound. To begin with, use these settings:



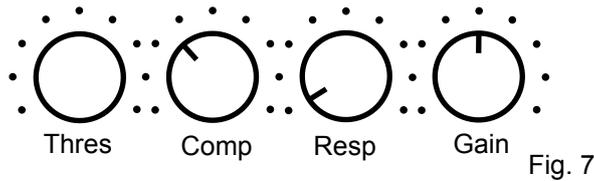
Adjust the THRES control counterclockwise until you start to hear the compression effect and the Busy light starts lighting up. Adjust the gain as needed.

Now, leaving the THRES control where you can hear the effect, start adjusting the COMP control:

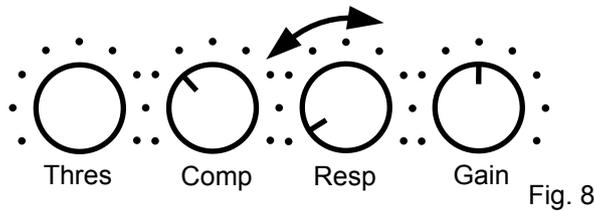


You will notice that the compression becomes harder and more abrupt, giving you more of a "squashed" sound.

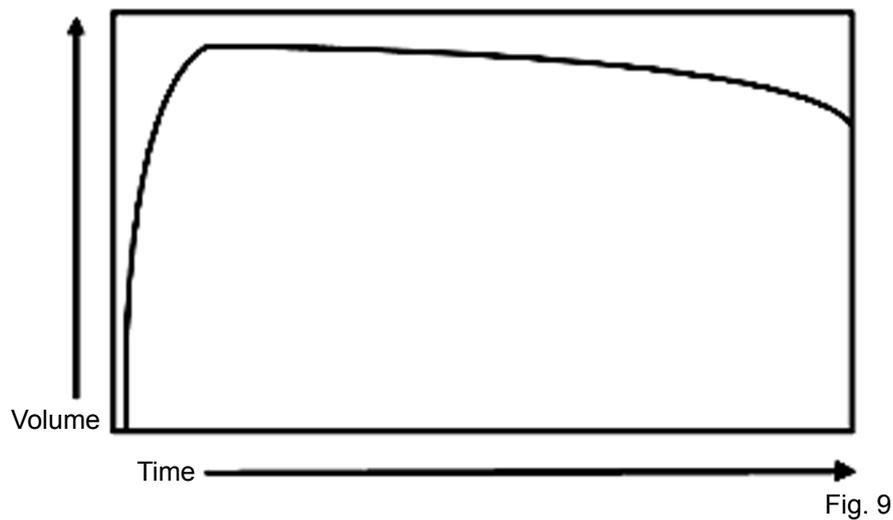
Now, leaving the COMP control about here, and the RESP control here:



and the threshold set where you can hear the compression working, start adjusting the RESP control. Here is where the long, singing, sustain sounds may be found.



By the time you have modified your dynamics to this extent, a plot of your signal would look something like this:



Remember, the more counter-clockwise the RESP setting is, the more active and compressor-like the dynamics control will be, so you may need to adjust the THRES a bit to get "out of the compressor" a little. With appropriate THRES settings, and the RESP set close to counter clockwise, some really nice funk and clean country "chicken-pickin" sounds may be found.

With all of these sounds, remember to keep trying different THRES settings, as this will make a big difference in how the effect works.

As you can see, this pedal is capable of many useful sounds. Now that you have the basics, experiment and see what other sounds you may find.

Remember, its all about making great music. We hope that this Carl Martin pedal will assist you in your musical goals!

**Power Requirements**

**Unit's built after January 2016** comes with the innovative Carl Martin DC/DC circuitry that delivers internally +-12V regulated.

Power consumption: max. 90 mA

Power supply: 9 V DC (regulated), 130 mA minimum, 2.1 mm female plug, center negative (-)

PLEASE NOTICE: It's not possible to use battery, only external power supply (not included)

ATTENTION: Please Use DC Power Supply Only! Failure to do so may damage the unit and void the warranty.

**Unit's built before January 2016** comes with a built in mains power supply either in 100 or 115 or 230 VAC 50/60 Hz, that deliver internally +-12V regulated Power consumption: 2,4Watts.

PLEASE NOTICE: If purchased in USA (115V) it cannot be used in country's where 230V is used, you will burn the built in transformer.

**Specifications**

Input.....	1M Ohm	Responce Range.....	from 125 mS to 12,5 mS
Output.....	200 Ohm	Gain Range.....	+20 dB
S/N Ratio.....	105 dB (clean out)	Dimensions .....	120 (W) x 95 (D) x 56 (H) mm
THD distortion.....	0,05%		4.72" (W) x 3.74" (D) x 2.2" (H)
Threshold Range.....	60 dB	Weight.....	625g / 1,38lbs
Compression Range.....	from 1:1 to 1:00		

**Warranty:** Carl Martin Research warrants the manufacturing, material and proper operation for a period of one year from date of purchase. Carl Martin will replace defective parts, make necessary repairs or replace the unit at the discession of our technicians. The warranty applies only to the original purchaser of this product, and excludes any damage or faulty operation resulting from misuse, neglect or unauthorized service.

HandMade in Denmark

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