

About Lock Bars on 2- or 3-Key Diatonic Autoharps

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The lock bar is a chord-bar anomaly that first appeared on Festival Diatonic Autoharps first manufactured by Oscar Schmidt-International (OSI) in 1983. With it, Ron Wall's 1975-vintage autoharping method, what I call *Chord and Release* (C&R; a.k.a. "open chording" or "open noting"), introduced O'Carolan harp tunes, note-y waltzes, jigs, reels, English country dance tunes and more to the autoharp's repertoire, all with a floating resonance too attractive to resist.

I owe much of my autoharping success since 1991 to C&R, enabled by lock bars on all of my 2- and 3-key diatonic autoharps. So imagine my surprise in May 2016 to learn that C&R, lock bars were unheard of. The diatonic autoharp had evolved away from C&R's luscious string tones to nothing more a louder autoharp. What more was there to playing an autoharp beyond depressing a chord bar to sound the strings? (Plenty!)

So before lock bars and C&R both become extinct (I hope not), let me explain what lock bars are, what they do, and they, with C&R, enhance and magnify autoharp sound.

What is a lock bar?

A lock bar looks like a normal aluminum (Figure 1) or wooden chord bar (Figure 3, next page), *except...*

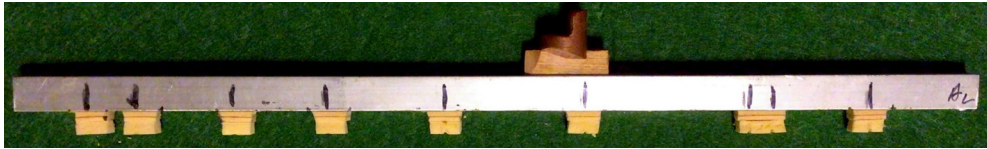


Figure 1 An aluminum, A-major lock bar on Orthey #163, with 8 pads and a lock-bar button in its "slot". The wide damper pad second from right damps a pair of strings tuned to the same pitch.

...a lock bar does not form a chord. Instead, it "locks down" temporarily at the player's will, to transform a 2- or 3-key diatonic tuning into a single-key tuning by which C&R (to be explained shortly) can wield its magic.

Each lock bar is outfitted with a mechanism that lodges the bar down so its dampers can silence selected strings. To my knowledge, four types of locking mechanisms have appeared on the diatonic-autoharp scene since 1983. The two most common are:

- an oddly shaped button atop a shank that sits in the "slot" at the center of an aluminum bar hidden under a chord-bar cover. The button's bottom portion fills the area of the hole in the cover. Its upper portion is a built-in "peg", used to lock and unlock the bar. To engage the lock bar, depress the button until the bottom portion sinks into the cover, then slide the peg to one side to lodge the button under the cover to lock the bar down (Figure 2, next page).
- a metal slide at each end of a wood lock bar (Figure 3).

Figure 2 Two “half-button” lock-bar buttons atop aluminum bars (under the chord-bar cover). Each bar “locks down” by depressing the button and sliding it to the left.

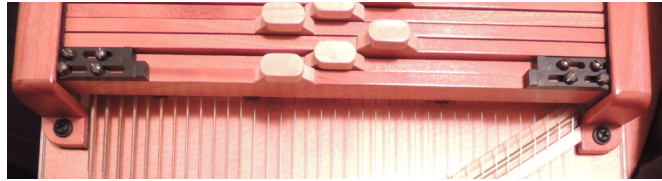


a) side view



b) top view; the locked, “half-button” portion barely exposes the depressed aluminum chord bar under the cover.

Figure 3 Black, metal slides on wooden lock bars. The lower lock bar is at rest. The upper lock bar is engaged, done by depressing each end and then pushing both slides outward, under the chord-bar holders.



Regardless of design, the amount of damping material applied to a lock bar’s underside is considerably less than that on a chord bar. (See Figure 1 again.) A lock bar generally damps 3-4 strings on a 2-key diatonic autoharp, or 6-9 strings on a 3-key diatonic autoharp. In contrast, the chord bars on my 37-string, GD diatonic autoharp damp 20-24 strings.

How do lock bars transform 2- and 3-key diatonic autoharps into a single key autoharps?

A lock bar damps strings to form a single-key scale rather than a chord. Here is how the lock bars on GD and GDA diatonic autoharps form major scales:

- GD, whose tuning includes the pitches G-A-B-C[♯]-C[♯]-D-E F[♯]:
The G lock bar damps all C[♯] strings; the tuning becomes G-A-B-C[♭]-D-E F[♯].
The D lock bar damps all C[♯] strings; the tuning becomes D-E-F[♯]-G-A-B-C[♯].
- GDA, whose tuning includes the pitches G-G[♯]-A-B-C-C[♯]-D-E F[♯]:
The G lock bar damps all C[♯] and G[♯] strings; the tuning becomes G-A-B-C[♭]-D-E F[♯].
The D lock bar damps all C[♯] and G[♯] strings; the tuning becomes D-E-F[♯]-G-A-B-C[♯].
The A lock bar damps all C[♯] and G[♯] strings; the tuning becomes A-B-C[♯]-D-E F[♯]-G[♯].

Now the magical sound of C&R autoharping can shine, via intricate fingerpicking or the easy *Swing Picking* technique (to be taught at the 2025 Phoenix Autoharp Retreat).

If playing music in a single key seems like a limitation (to a certain extent, it is), C&R’s harmonic and technical advantages outweigh it, as will be seen in the tutorial on the next page.

Tutorial: C&R autoharping, with (and unfortunately without) a lock bar

A five-note, G-major scale demonstrates the basics of C&R: a button-hand strategy that simultaneously augments and diversifies string-hand technique.

To understand C&R, we need to look first at how the autoharp is generally played today. Chromatic autoharps and diatonic autoharps without lock bars invite playing the scale via what I call *Continuous Chording* (CC), i.e., depressing a chord bar to sound every melody note/string. A “p” beneath each scale tone indicates (to me, anyway) that the melody note and a low bass string are *pinched simultaneously*. All tones sounded by the thumb form a bouncing bass line (not shown) under the scale’s smooth up-and-down shape.

CC: — — — — — — — — — — — — — — — — — —

— = depressed chord-bar / button

①

p p p p p p p p p p p p p p p p p p

p = pinch

The results of CC playing are these:

- Three chords are needed: I-IV-V, or G-C-D.
- CC means accessing scale tones with endless, quick chord changes by the button fingers.
- Thumbing a bass string with every melody string produces an energetic bass line, one that might be too energetic for slow, lilting tunes.
- Each melody string stops ringing when the *next* chord bar is depressed. The note values we see on the staff represent exactly what we hear.

Engaging the G lock bar on a GD or GDA diatonic enables playing the scale with C&R, i.e., “pumping” a chord bar to play a pinch-pluck (p-k) sequence: pinch when the chord bar goes down (Chord!), and pluck when the chord bar goes up (Release! each circled note). Yes, *one* string is sounded every time *all* the dampers are *off* the strings! (My “R” clarity improved markedly after a week of voracious playing—while on vacation! I was extremely motivated.)

C&R: — ■ — ■ — ■ — ■ — ■ — ■ — ■ — ■ — ■ — ■ —

— = depress (Chord!) ■ = & Release!

②

string-hand fingering [i m i m r m i m i m i m r m i m i]

(p k p k p k p k p k p k p k p)

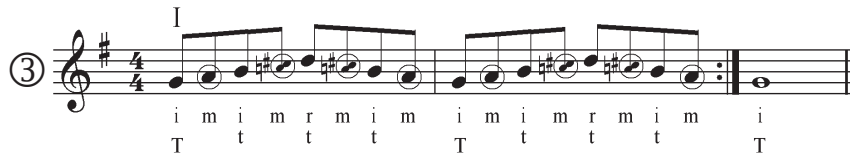
i/m/r = index/middle/ring
 T = low thumb string
 t = higher thumb string
 p = pinch k = pluck

Note: To Swing Pick the scale (a “strummed” C&R technique), exchange every “p” for a downstroke (toward the floor) and every “k” for an upstroke (toward the ceiling).

The results of C&R with a lock bar engaged are:

- Only the I chord (G) is needed.
- A bass tone is sounded with every *other* melody note.
- All bass tones (as I play) *overlap*: each *T* rings *all the way* to the next *T*, while each *t* sounds a higher bass string that rings to the next *t* or *T* or longer.
- All melody notes marked by “—” ring longer than the notes values we see, so they overlap, too. Our short scale and many C&R melodies *float over orchestral* accompaniment.

Mastering “unchorded” plucks is enough of a challenge *with* lock bars, let alone playing a C&R scale *without* them. The G major scale sounds like this without a lock bar:



Every C# delivers a mess because the C# string is right next door to the C string. Sounding C# by itself is hit-or-miss, mostly miss. I don’t even want to *think* about justifying such a clash (“oh, my autoharp just does that”—yikes!) when a lock bar so easily eliminates it before it has a chance to sound. I can C&R faster (and slower) and more accurately with a lock bar engaged than I can without lock bars.

So I hope you will join me in keeping lock bars and C&R alive and well for generations of autoharpists to come. If your diatonic autoharp already has lock bars, keep them and learn to play C&R so you can use them frequently. (By the way, I teach C&R. Contact me to get started.) And if your diatonic autoharp doesn’t have lock bars, get them. Ordering a custom diatonic autoharp? Ask to have lock bars installed, and toss in a “side order” of 2-3 ready-to-cut, felted chord bars that you can swap in when you need them.

I hope you love playing the diatonic autoharp all the more once all your fingers find the dance of C&R, leading to amazing music enabled by the simple lock bar. In my mind, C&R is the most fun any autoharpist can have playing an autoharp.

Sound good,

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Got a question? Email Lucille at: [thedulcimerlady at juno dot com](mailto:thedulcimerlady@juno.com)

Lucille’s lock-bar/C&R playing can be heard on her solo CD, All in a Garden Green, available at www.thedulcimerlady.com

A postscript, because you may be wondering: Can a chromatic autoharp be outfitted with lock bars for C&R playing? Back in 1991, luthier George Orthey patented a lock bar for chromatic autoharps (US patent #5,052,259). Unfortunately, these lock bars damp so many strings between open strings in the chromatic tuning that it’s too easy to “sound” damped strings! When it comes to lock bars, 2- and 3-key diatonic is the way to go.