

Clavinet.Com presents:
The Hohner Clavinet FAQ
Version 1.6



By Aaron Kipness

Big thanks to David Berg for drafting the first version and prodding me to write this thing!

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Table of Contents

1. What is a clavinet?	4
1.1 How many were made?	4
2. Where can I get parts and information about the Hohner Clavinet?	4
3. What's the difference between the various models of clavinet?	4
4. Where can I buy a clavinet? How much should I pay for a used clavinet?	4
5. What's the best way to ship a clavinet?	4
6. What amp is a good choice for a clavinet?	4
What effects are good with a clavinet?	5
7. What electronic tuner should I use to tune a clavinet?	5
7.1 What can I use for a tuning key?	5
8. What do the switches do?	5
9. My AC to DC adapter is missing what can I use as a substitute?	5
10. My clavinet is TOO NOISY, how can I make it quieter?	6
11. I think I've got a problem with my pickups	6
11.1 I have a Clavinet/Pianet Duo with a bad pickup	6
12. I've got a problem with the Circuit Board	6
12.1 Can I just wire the pickups directly into the output jack and bypass the board?	6
12.2 What does that silver cylinder (transformer) attached to the board do?	7
12.2.1 This transformer is no longer working, where can I find a replacement?	7
12.3 Where can I find replacements for those two chokes on the circuit board?	7
13. I've got a bad contact on one of the switches	7
14. My keys make a "clicking", "thunking", or "popping" sound!	7
14.1 Your Hammer Tips are bad	7
14.1.1 How do I remove my old hammer tips?	7
14.1.2 I replaced my hammer tips, but its still "thunking" or "popping"!	7
15. My keys are making an off-pitch sound, a snapping sound, a muted sound or no sound at all!	8
15.1 The keybed frame is not positioned correctly on the harp	8
15.2 The mute bar is out of adjustment and sitting on some of the strings (D6, E7, DUO)	8
15.2.1 Adjusting the mute bar	8
15.3 Your hammers are out of alignment	8
15.3.1 Removing a key from the keybed frame	8
15.3.2 Examining the hammer anvil action	8
15.4 Restoring the angled keytab	9
15.4.1 Aligning the hammer holder arm	9
16. My keys are getting stuck down!	9
16.1 Your rubber key grommet is bad	9

17. My keys have no sustain!	10
17.1 Replace your strings.....	10
18. What kind of yarn should I use for the damper?.....	10
19. How do I get the Stevie Wonder "Superstition" sound?	10
20. When is the first time the clavinet was heard in a recording?.....	10
21. Give me a small sample of Recording Artists that have used the clavinet	11
22. What's the best electronic imitation of a clavinet?.....	11

1. What is a clavinet?

The clavinet is an electric guitar controlled by a piano keyboard. The instrument was manufactured by the Hohner corporation from the 1960's to roughly 1982. It contains 60 strings of various lengths and gauges and two "active pickups", powered by a 9volt battery.

1.1 How many were made?

We're not exactly sure. We estimate several thousand.

2. Where can I get parts and information about the Hohner Clavinet?

Most of the people directly related to the manufacture, development and sale of the clavinet at Hohner have either retired or they have passed on. Hohner corporation wants absolutely NOTHING to do with the clavinet and is directing all clavinet-related inquiries to Clavinet.Com. In Early 2000, Hohner U.S.A. sold all of its remaining clavinet inventory to Clavinet.Com, who developed replacement clavinet hammer tips, strings and pickups to restore these instruments to their former glory.

[Gert Prix](#) at the Keyboard Museum in Austria has a wealth of information on the history of the Hohner Clavinet. He knows Ernst Zacharias (the inventor of the clavinet) and has a large archive of Clavinet memorabilia, including rare models and the first clavinet prototype.

3. What's the difference between the various models of clavinet?

DAVID BERG: These are various models that have been introduced over time. For a history of the clavinet, refer to clavinet.com.

4. Where can I buy a clavinet? How much should I pay for a used clavinet?

DAVID BERG: Sometimes used clavinet appear on the clavinet.com message board. There are usually one or two clavinet up for auction on EBAY. There are classified ads posted at some websites for musicians – e.g. Harmony Central.

Pay as much as you think it is worth it to have that awesome funky sound! Seriously ... although the price has been escalating since the mid-nineties, some recent average prices have ranged from about \$400 - \$1950 depending on the model, and condition. Expect to pay at least \$800-1200 + for a good to excellent condition D6 or E7 – even more for a mint condition instrument.

5. What's the best way to ship a clavinet?

DAVID BERG: Many have successfully used UPS or USPS but be aware of the potential for damage caused from rough handling of a heavy package – over 70 lbs. A clavinet is fairly rugged and can take some bumps but if you are really concerned and want the best handling of your vintage keyboard it is my humble opinion that using a dedicated piano moving company such as Keyboard Carriage is your best move. You will pay more than UPS or USPS and it will take longer but you are pretty much guaranteed that your precious cargo will arrive in good shape, as it will be handled by professionals who are used to moving \$50,000 grand pianos without damage. Other shipping alternatives that I have heard people using are: 1. Amtrak – requires that you put certain heavy items on a pallet, 2. various moving companies may be able to include your shipment in the same truck along with other jobs.

6. What amp is a good choice for a clavinet?

DAVID BERG: The general consensus among clavinet aficionados is that a tube amp is your best choice. One of the most popular amps used for a classic clavinet sound (as well as for the classic Fender Rhodes sound) may be the Fender Twin Reverb.

What effects are good with a clavinet?

DAVID BERG: Experiment with anything you have. Probably the most common effect is a wah-wah pedal. An envelope follower is also good. In fact, thoughtful use of a wah or envelope filter with a clavinet will result in instant concentrated funk indeed! In addition, Phase shifter, flanger, echo, reverb, compression etc. can all be put to effective use under the right circumstances. Use any of the above-mentioned effects alone or in various and sundry combinations for literally (in the words of the famous late astronomer, Carl Sagen) billions upon billions of wonderful and different sounds!

7. What electronic tuner should I use to tune a clavinet?

Back in the old days, it was quite a laborious task to tune a Hohner Clavinet. With the advent of new technology, namely, the pocket chromatic guitar tuner, this job can be done in less than 10 minutes.

7.1 What can I use for a tuning key?

The Clavinet D6 came with a special "tuning key" from Hohner. Clavinet.com manufactures a Clavinet Tuning Key. A flat-head screwdriver can also be used.

8. What do the switches do?

DAVID BERG: The four switches found on the D6, E7 and duo models labeled Brilliant, Treble, Medium and Soft are tone controls – sort of like course Bass/Treble controls – their names more or less describe the sound quality one can expect when they are selected. At least one of these switches needs to be depressed for any sound to be produced.

The A/B C/D switches select the configuration for the two pickups. You can choose to have either a single pickup on or have both pickups on at once. The C/D switch selects between the single pickup mode and the dual pickups mode. Therefore, when C is depressed only one pickup will be on and the A/B switch will select between the upper and the lower pickup. When D is depressed, both pickups are on and the A/B switch selects whether they are in phase or out of phase with one another. The table below (edited from Don Tillman's website) summarizes the available configurations.

Left switch (C/D)	Right switch (A/B)	Pickup function
C depressed	A depressed	"Lower" pickup; a warm sound.
C depressed	B depressed	"Upper" pickup; a bright brash sound.
D depressed	A depressed	Both pickups; a very full sound.
D depressed	B depressed	Both pickups on, out of phase; the fundamental cancels somewhat and you're left with a pretty thin sound.

9. My AC to DC adapter is missing what can I use as a substitute?

The Clavinet uses a 9V DC Center Negative Power Supply with 150ma to 300ma of current. A regulated power supply is best to keep the noise floor at a minimum. Using a 9V battery will always yield the lowest noise floor.

10. My clavinet is TOO NOISY, how can I make it quieter?

The noise of the clavinet can be mostly attributed to its single-coil pickups. Since the clavinet is UN-SHIELDED in this area, and can never be, due to its inherent design, there are only a few things one can do to lower the noise level.

- Refurbish the preamp with new components (available at Clavinet.com)
- To reduce feedback, keep the amp away from the clavinet and NEVER keep your amp at chair-level so that the speaker is parallel to the keyboard.
- By keeping the volume low on the clavinet and high on the amplifier, you may reduce some “hiss”.
- Make sure that the ground wire is connected to the harp (its near the upper pickup).
- Keep the clavinet AWAY from any fluorescent lighting or beer signs.
- Use a 9 volt battery instead of wall-wart power.

11. I think I've got a problem with my pickups

Original Hohner Clavinet Pickups are housed in plastic and sealed in an epoxy, this makes them A. Easily breakable and B. Impossible to repair. Clavinet.com successfully created a direct replacement for original pickups in a HUMBUCKING form, which greatly reduces the noise level inherent in the clavinet. They sound nearly identical to the originals

11.1 I have a Clavinet/Pianet Duo with a bad pickup

One of the main features of the Clavinet/Pianet Duo is the ability to “split” the keyboard into a pianet section and a clavinet section. This is accomplished by switching “off” one side of either one or both pickups. The pickups in a DUO have an additional connection in the middle of the pickup to “tap” either half, while keeping the output of the other half silent. If you have a Duo with a cracked pickup, you can order a replacement humbucker from clavinet.com, but you will lose most of your ability to “split” the keyboard into a pianet and clavinet section. I will explain further... The AB/CD switches on the clavinet enable you to use either the upper pickup, the lower pickup or both. If one of the duo pickups is replaced with a humbucker, you will still be able to “split” the keyboard, but only if you configure the AB/CD switches to use ONLY the original remaining pickup.

12. I've got a problem with the Circuit Board

All the schematics are located at clavinet.com. The circuit for the clavinet is pretty simple; it boosts the signal of the pickups using a 9 volt power source, and adds tone filter and pickups switching options. The D6 used two different versions of the circuit board:

- Version A: The circuit board was soldered directly to the switches, and mounted directly to the switch assembly.
- Version B: The circuit board was mounted on the clavinet floor and a couple of wires ran to the switches (which were all wired together in one big mess).

Note: Clavinet.com offers an improved "Ultra-Preamp" for the owners of Version B.

12.1 Can I just wire the pickups directly into the output jack and bypass the board?

Although the clavinet pickups look like ordinary pickups, they are not. The output of each clavinet pickup is extremely weak, and they need to be “boosted” before their signals reach the output jack. That’s why I say the clavinet has “active” pickups. An “active” pickup needs a “boost” (typically a 9volt battery). This is one of the jobs of the circuit board.

12.2 What does that silver cylinder (transformer) attached to the board do?

That silver cylinder is the HEART of the clavinet sound. It is a high-quality microphone input transformer made by Beyer Dynamics, for use in studio applications. The schematic lists this part as the “Ubertrager” which means “Transformer” in German. Hohner used this high-quality transformer to “boost” the weak signal of the pickups.

12.2.1 This transformer is no longer working, where can I find a replacement?

Original Beyer Dynamics transformers are available from

12.3 Where can I find replacements for those two chokes on the circuit board?

Clavinet.com manufactures replacement chokes.

13. I've got a bad contact on one of the switches

The clavinet switches were proprietary and made only for the Hohner Clavinet. Clavinet.Com has a limited supply of these, but it is unlikely you will need to replace them unless they crack. The first thing to do if you think you have a bad switch is to spray the inside of the switch with contact cleaner. The switches are very prone to collect dirt and dust over the years. All of the switches on the clavinet are DPDT, however, only the two pickup switches (AB & CD) actually use the full capability of the DPDT switch, the other four only use HALF the switch. We surmise that Hohner saved money by purchasing the same type of switch in bulk for all the controls. This is a good thing for us, because if one of your switch contacts go bad, simply remove it from the switch bracket, remove the switch cover, FLIP IT AROUND and re-install it. You can now use the other, unused half of the switch. If you have a bad pickup switch, simply locate the half that is working and swap it with a tone switch. That way, you can “steal” a DPDT switch from a tone switch that will only need to use the “good” half of the bad pickup switch. You dig?

14. My keys make a “clicking”, “thunking”, or “popping” sound!

14.1 Your Hammer Tips are bad

DAVID BERG: You need to replace the old orange hammer tips. Over the last 20-30 years, the original tips have degraded and become sticky. When a key with a degraded tip is depressed and released, it sticks to the string briefly and causes an “after-thunk” or a “popping” sound.

Order new tips from clavinet.com

14.1.1 How do I remove my old hammer tips?

Since most old orange hammer tips have turned to a gooey substance, you are most likely going to have to use a miniature flat-head “eyeglass” screwdriver to dig them out.

14.1.2 I replaced my hammer tips, but its still “thunking” or “popping”!

You didn't remove any residual goo left over from the old tips that may be adhering to the strings and/or anvils. When you replace hammer tips, use rubbing alcohol to clean the strings and anvils. Also, make sure all your hammer tips are properly seated in their respective hammer holders, as far as they can go. Continue to the next section if you are still having difficulty.

15. My keys are making an off-pitch sound, a snapping sound, a muted sound or no sound at all!

15.1 The keybed frame is not positioned correctly on the harp

Remove the castle-nuts attaching the keybed frame to the harp. You will notice the keybed frame is sitting on four studs. In some instances, you can move the frame slightly in a couple of directions while its sitting on these studs. Try to position the unit on so that it alleviates the problem. Tighten the nuts down.

15.2 The mute bar is out of adjustment and sitting on some of the strings (D6, E7, DUO)

Remove the mute slider panel, and lift the mute bar with your finger and play the keyboard. If this remedy alleviates the problem, then you must adjust the mute bar.

15.2.1 Adjusting the mute bar

Locate the mute bar bracket that is attached to the mute bar. You will notice an adjustable screw on the bracket that adjusts the angle of the bracket. Use a screwdriver to adjust accordingly so that the mute bar no longer rests upon the strings in the "UN-MUTED" position.

15.3 Your hammers are out of alignment

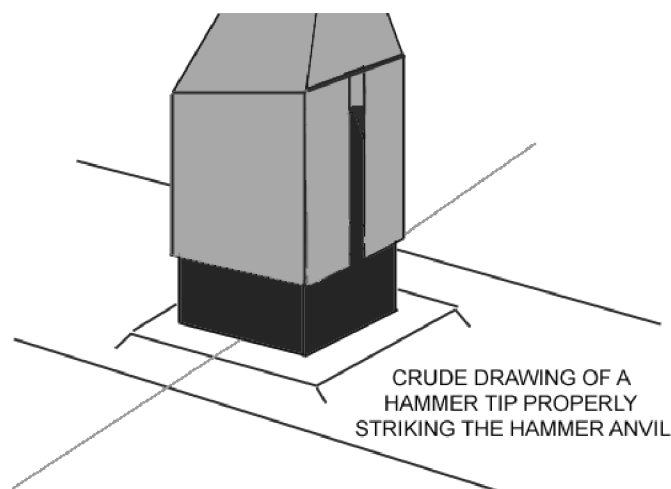
Clavinet.com offers a Clavinet Hammer Alignment Template. Find the offending note on your keyboard and mark the key. Once you have located it, remove the keybed frame from the instrument. Remove the key DIRECTLY BESIDE your marked key. Follow these instructions to remove the key:

15.3.1 Removing a key from the keybed frame

1. Face the rear of the keybed frame.
2. Using a flat-head screwdriver, locate the desired key and slide the keyspring off the back of the keyframe. Push the metal part of the key up from underneath and slide it towards the front of the keybed frame.
3. Once you have removed the key, you will notice a rubber grommet sitting on an angled keytab. Do not lose it.

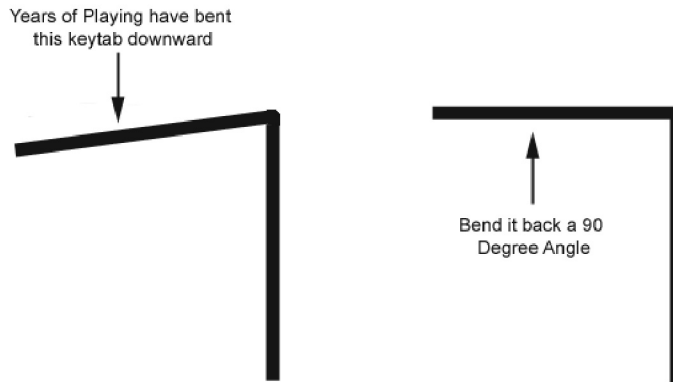
15.3.2 Examining the hammer anvil action

Place the keybed frame on the keyboard and play the offending key. Now that you have removed the key beside it, you should be able to observe the offensive hammer hitting the hammer anvil. If the hammer tip is not striking the hammer tip anvil properly, remove the offending key and examine its angled keytab.




15.4 Restoring the angled keytab

Mark the position of the rubber grommet and remove it from the keytab. The keytab should be bent at a 90 degree right angle. Because of the many years of constant downward abuse, the keytab may be bent downward. Using a pair of pliers, restore the keytab back to a 90 degree angle.



Gently clean the rubber grommet with soap and water and lubricate it with silicon spray before placing it back on the keytab. Place the key back on the keyframe and observe the hammer anvil action, if it is still not positioned correctly, you must adjust the hammer holder arm.

15.4.1 Aligning the hammer holder arm

 This procedure is performed at your own risk, and we assume no responsibility for any damage incurred. If you have followed all of the procedures above, and the hammer holder is still not striking the hammer anvil squarely, you must GENTLY bend the hammer holder arm using a pair of pliers, until the hammer makes square contact with the hammer holder.

16. My keys are getting stuck down!

First, see *Your Hammer Tips are bad 14.1*. If that does not alleviate the problem, see *Removing a key from the keybed frame 15.3.1* and follow the instructions for removing the offending key. If the keyspring is still intact and not mangled beyond recognition, then the spring is not causing the problem. If it is, contact clavinet.com and order a new spring. Otherwise, see *Restoring the angled keytab 15.4* and follow the instructions. If this does not alleviate the problem, then remove the rubber grommet from the keytab.

16.1 Your rubber key grommet is bad

The most common cause of a sticking key is a bad RUBBER GROMMET. Gently clean the rubber grommet with soap and water and lubricate it with silicon spray. Place the grommet back on the keytab in its original position. If this does not alleviate the problem, flip the grommet around until you find a position that the key no longer sticks. If this does not work, you may swap grommets from another key. If you need to order a new grommet, contact clavinet.com.

17. My keys have no sustain!

First, see *Your Hammer Tips are bad* 14.1, and *The mute bar is out of adjustment and sitting on some of the strings* (D6, E7, DUO) 15.2. If this does not alleviate the problem. replace your strings.

17.1 Replace your strings

Clavinet strings are like guitar strings, after a period of time, they become oxidized and begin to sound dull and lifeless. Clavinet.Com was the first aftermarket supplier of Clavinet strings, however there are several brands to choose from.

18. What kind of yarn should I use for the damper?

Caron International makes the brand we use. It is sold under the name of "Aunt Lydia's Craft & Rug Yarn". It is 100% polyester, 3 ply and is available at the "Rag Shop" chain of craft stores in the U.S.A. Pick out a color you like best.

19. How do I get the Stevie Wonder "Superstition" sound?

DAVID BERG: Be Stevie.

This has been a hotly debated topic for years. Stevie used a clavinet model C for this recording. One thing that I have heard is that the clavinet sound on Superstition is not just from one clavinet being played but is the result of overdubbing in addition to the judicious use of key effects and brilliant playing.

20. When is the first time the clavinet was heard in a recording?

DAVID BERG: This is another controversial topic that has been discussed at length. Some of the earliest contenders are:

Stevie Wonder on Shoobee-doo-bee-do-da-day 1966.
Stevie Wonder on You Met Your Match (1968) and
I Thank You by Sam and Dave – 1968
The Band's "Up On Cripple Creek – 1969 may be the first use of a wah-wah on a clavinet.

21. Give me a small sample of Recording Artists that have used the clavinet

DAVID BERG:

The Who
Led Zeppelin
Rolling Stones
T-Rex
Stevie Wonder
The JB's
James Brown
Bounty Killa
Steely Dan
Herbie Hancock
Bernie Worrel
Billy Preston
Les Mccann
Chick Corea
Max Middleton
Terry Adams (NRBQ)
Art Neville
Bill Payne – Little Feat
Richard Wright
Jerry Corbetta
Quincy Jones
Sly Stone
Merl Saunders
John Medeski – Medeski Martin and Wood
Page Mcconnell
Kyle Hollingsworth
Mike Weitman
Sun Ra
Jackie Mittoo
DEVO
Peter Hammill - Van der Graaf Generator
Robert Webb. prog rock band, England
Syd Barrett
Keith Emerson E.L. & P.
Todd Rundgren

Bee Gees
Harry Nilsson
Jeff Lorber
Forever Amber
The Cyrkle or even later recordings of The Zombies
Seth Justman – J. Giels Band
Scott Chasolen – Ulu
The Herbaliser
Bob Marley & the Wailers
Richard Vogel – Galactic
George Duke
Eddie Jobson
David Stone – Rainbow
Benny Andersson from ABBA
Lenny Kravitz
Lenny Kravitz
Juke Joint
Pocket Dwellers
Moses Mayes and the Family Funk Orchestra
Remy Shand
Jamiroquai
Beck
The Greyboy Allstars
Robert Walter (from Greyboy)
East Bay Rhythm
Ben Folds
Jellystone
N-Sync

22. What's the best electronic imitation of a clavinet?

DAVID BERG: This is a very subjective topic area and will elicit many opinions. I do not have any first hand experience but several folks have recommended that the Clavia Nord Electro is very good but still not perfect.

AARON KIPNESS: Nothing beats the real thing!