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Restoration of Circa 1914 Hermann Schmidt Zither Education Institute Concert Zither



Completed by Ron Cook

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For Laura Esagui

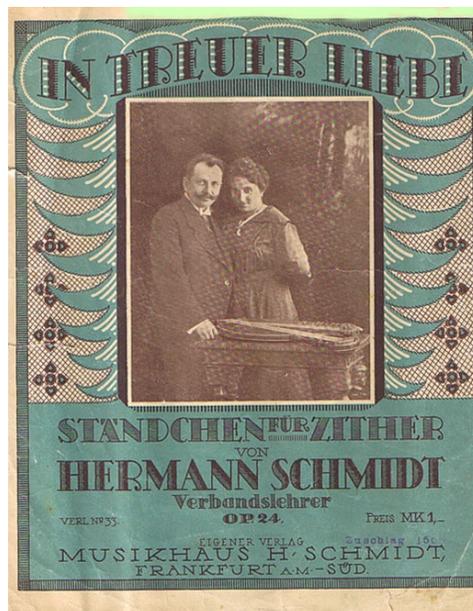
Background

Tens of thousands of concert zithers were manufactured in both Europe and the United States in the late 1800s and early 1900s. There were many shapes and styles, with the number of strings often ranging from 31 to 46.

Laura's zither is one of the most common styles and with 31 strings. The oval sound hole was used more often on German and Austrian instruments. Only a few U.S. made zithers had oval sound holes, and they were often decorated more ornately. Many zithers have lost their manufacturer labels, making it difficult to determine maker and place of origin. Sometimes there are signatures or stamped labels hidden inside, but not that often. Small differences in shape, tooling, styles of bracing, and types of woods used can sometimes give clues as to the maker, but that's a research area that requires many years of study. Museums, like the National Music Museum at the University of South Dakota, are better staffed and equipped to research instrument makers.

The label, with Hermann Schmidt's name and "zither-lehr-institut", is not a manufacturer's label. Hermann Schmidt ran a "zither educational institute" in Frankfurt, which evidently existed up to 1914. What information I could find is on the web site of a music store started by Schmidt that is still in his family in Germany. I translated and edited the music store's historical information as follows:

In the early days of the 20th century, Hermann Schmidt trained as a hairdresser, and early in his career had his own salon. His hobby at that time was playing the zither, and by 1914 he had a "zither-specialty business," with a teaching institution that also included music publishing. It lasted but a short while, and at the first outbreak of World War I his dreams were temporarily dashed. It was four years later, in 1918, at the end of the war, Hermann Schmidt opened Music-Schmidt, a music store still being run by relatives in Frankfurt.



Sheet Music by Hermann Schmidt ("In True Love")

His new little shop was at a local railway station, where he now sold dulcimers, guitars, sheet music, harmonicas, records, and gramophones, just about everything that had something to do with music. He continued his publishing company and also opened a harp and guitar school. He also became involved in the German zither Association. He initially worked alone in the business, but by 1924, his daughter Margaret, also an accomplished musician, was at the side.

Additional information on Hermann Schmidt pertains mainly to the history of his business up to the end of the 20th century and gives no more references to zithers.

As I mentioned, Laura's zither was not made by Schmidt. There are no identifying marks inside, but there is an interesting "logo", an S over a T, engraved on the tuning machine plate.



This could be a clue as to an as-not-yet-identified maker, but it could also be a custom engraving for someone with the S T initials. I found no historical references to any late 18th or early 19th century zither makers with those particular initials.

Valuation

Many similar zithers show up on online auction sites and prices vary according to condition, style of instrument, and amount (or lack) of decoration. I've seen zithers like Laura's go for under \$50, and sometimes for over \$300. Very ornate, larger zithers can go for \$1000 or more. Because of the number of instruments coming up for auction and the variation of prices, valuation is difficult. This zither has no decorative inlays or custom work and was probably sold as a standard model. The top cracked, not from string tension stress, but from wood shrinkage, which is a fairly common occurrence, since the top is a thin hardwood veneer over approximately 1/8" pine. Pine is susceptible to moisture, and if stored in a warm, dry area for a long time, the wood will dry and shrink. Fortunately, all glue joints are intact and the frame appears to be in good condition. The fingerboard shows normal wear from extensive playing.

Day 1: Assessment



On the first day, I always look over an instrument to see how much work is needed to repair or restore it. From the initial photos I received from the customer, the zither appeared to be in decent condition. When I unpacked it, I first noticed that it had been repaired before, but not very well. There was a shrinkage crack on the top that had been filled with glue and a large curved piece of plywood glued under the crack at the soundhole and screwed in place with four screws directly through the top. The screws were recessed a little and covered with wood dough. A thick shellac had been brushed on the top and sides, and the brush marks were very visible. The top had not been polished. The fingerboard didn't show much wear, but there was a shrinkage crack running part of the length of the fingerboard that needed touching up.

Some strings were missing, and the customer agreed to have me install a new set of strings.

Day 2: Removing Strings & Gears



On Day 2 I took the strings off and explored the zither inside and out for any additional problems that might show themselves. The external glue joints looked solid. I used my new fiber-optic endoscope inspection device to look around inside and could not find any maker's marks, and, fortunately, all the bracing looked intact.

I removed all the tuning pins and the tuning gears and plate and set aside for cleaning.

Days 3: Resetting Screws, Patching, Cleaning



I did several things today. I first removed the four screws from the top, cleaned them and the holes, and reset the screws a little deeper so I could apply wood dough with coloring that better matched the wood. With various stains and a little faux grain painting, I was able to make the patches almost disappear.

While I had the screws out, I sanded with fine grit sandpaper and 0000 steel wool the entire surface, sides, and fingerboard to remove all the brush strokes. I also filled the fingerboard crack with an ebony touch-up stick.

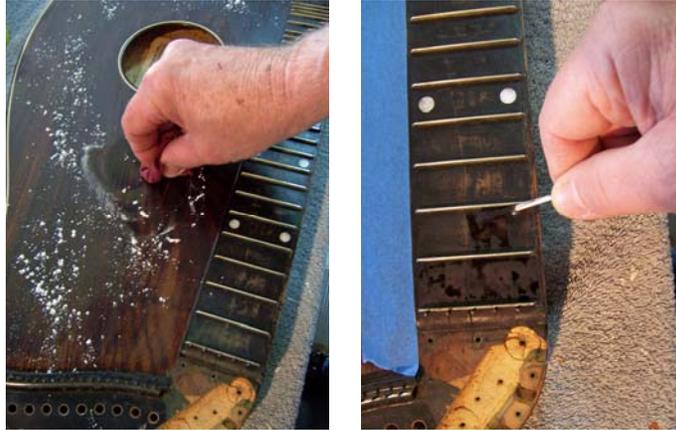
Next I took some water with a little liquid dish soap and cleaned the rest of the zither to remove the years of accumulated dust and dirt.

Days 4-7: Tung Oil Varnish



Now with the top and sides smoothed out, and the patches touched up, I spent several days applying a tung oil varnish. This type of finish can be applied only once a day. It needs to dry around 24 hours between coats. I applied four coats.

Day 8: Polish Top & Ebonize the Fingerboard



After the tung oil varnish dried and cured for a couple of days, I began the polishing process. Even after carefully wiping on the varnish, there's always a few dust specks and a streak or two that show up. I begin with pumice and rottenstone, applied with a soft, mineral oil impregnated pad, which rubs out any specks and streaks. Pumice is a very light abrasive powder, and rottenstone is an extremely light abrasive powder. Once this process was complete, I wiped the zither clean, then applied paste wax.

After polishing, I put painter's tape around the fingerboard and applied a black water-based stain to re-ebonized the fingerboard. Originally, the fingerboard is a hard wood, probably maple, that was stained to look like ebony. This was a common practice on zithers and other fretted instruments during the late 1800s and early 1900s, and is still done on modern, inexpensive guitars.

Day 9: Polishing Gear Plate



Today I spent about an hour cleaning and polishing the gear plate. It had some corrosion on the top, and quite a bit on the underside. I use an all-purpose type of metal cleaner and polisher.

After polishing the plate, I reinstalled the tuning gears to the plate and screwed it all back on to the zither.

Day 10: Reinstalling the Tuning Pins



When I started to reinstall the tuning pins, I noticed that they slipped in too easily. Loose fitting pins could easily slip when the strings are installed. To fix that, I use a special liquid that swells the wood. This liquid is usually used for fixing loose chair rungs and legs, but works quite well with tuning pins.

Once the liquid soaked in for a few hours, I began reinstalling all the tuning pins. They all fit much tighter now.

Day 11: Installing Strings



Finally, it was time to install the new strings. I had a partial set of Lenzner strings, and several weeks earlier I ordered more sets from Germany. Sometimes they come within two weeks after I order them, other times, it seems they get stuck in customs and take nearly a month to arrive. These took around three weeks.

As soon as they came, I started stringing up the zither and tuning it. I have a digital tuner that clips to the instrument and shows the notes as each string is plucked. I tuned this to the German “Munich” style of tuning. (Tuning chart is included at the end of this repair log.)

Day 12: Completion



I always enjoy the challenge of restoring or repairing zithers. Every instrument is different and it requires quite a bit of thought and research to complete the task. Even though the actual maker of this zither is unknown, this zither does have an interesting history, and the music store started by Hermann Schmidt in 1918 is still in existence.

I find it very satisfying to be able to keep antique and family heirloom musical instruments in working order for future generations to enjoy.

Concert Zither String Diagram Munich Tuning

There are two zither stringing formats in use today: Munich and Vienna. Munich is the most commonly used because it incorporates every note in the chromatic scale encompassed by the scope of the instrument. The stringing pattern on the fretboard is like the violin family, a fifth apart. The open strings are in the circle of fifths, broken between Eb and Ab and laid flat on the zither, similar to a accordion layout.

Fretboard
Munich Tuning

a-440 - tuning fork or digital tuner

Accompaniment Strings 1-12

1	2	3	4	5	6	7	8	9	10	11	12
eb	bb	f	c	g	d	a	e	b	f#	c#	g#

Bass Strings 13-24

13	14	15	16	17	18	19	20	21	22	23	24
Eb	Bb	F	C	G	D	A	E	B	F#	C#	G#

Contra Bass Strings 25-37

25	26	27	28	29	30	31	32	33	34	35	36	37
F	E	Eb	D	C#	C	B	Bb	A	G#	G	F#	FF

In addition to the basic 29 fretboard, accompaniment and bass strings, zithers may have 2, 3, 5, 7, 9 or 13 contra bass strings - the full harp zither has 42 strings (5 fretboard and 37 open strings). In some early versions, and on perfecta zithers, the contra basses were arranged in the same circle of fifths as the accompaniment and bass strings. Munich tuning was often expressed in treble clef (violin key, or similar to guitar clef) but today is mostly written in bass clef.
