Schober Organ Notes No. 68

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Disclaimer: We accept no responsibility for any unfavorable consequences resulting from following our advice

OVERTURE

In this issue the self-portraits of Charles E. Witherell and Captain David Casteel conclude. I will again postpone the information on the three manual Schober as (fortunately) I have so much material that there is no space in this issue.

Our Message Board in a different format is back, thank you Pete Stark!

INFORMATION ABOUT SPEAKERS AND A COMPLIMENT

Our member Richard McBeth writes: "Greetings: The stories in "Notes" have been really interesting. If anyone is interested in learning more about speaker and speaker systems have them visit partsexpress.com. These folks have all kinds of speakers and accessories for the DYS hobbyist. Regards, Mac"

SELF PORTRAIT of Charles E. Witherell (Conclusion)

Poor Electrical Contacts

Another problem that has been quite troublesome on the Schober organ, practically ever since it was first built and has persisted until fairly recently, is poor/intermittent electrical contact between the small gold-plated springs and the gold-plated busbars. This occurs on all key contacts and stop tab contacts, manuals and pedals. Infrequent use (several-day intervals or longer) would aggravate the problem. These are low-voltage point contacts and there is apparently insufficient voltage to maintain a clean debris-free and oxide-free surface. It probably does not require much of a film or contamination at these contact points to insulate the contacting members from one another. Wiping the busbars with a Q-Tip soaked in various contact cleaners was of little or no use. Besides, limited physical access to the manual key contacts not only made it virtually impossible to clean the right place, but also carried the hazard of damaging something in the process. Frequent playing of the organ seemed to be the only practical way of maintaining good electrical contact; and even then, it could not be counted on as a reliable method of maintaining electrical contact wherever needed.

It was only recently (within the last 3-5 years) that I learned of "Deoxit" (manufactured by Caig Laboratories, San Diego, CA) and available at many of the larger electronics supply outlets. After spraying the Schober organ contacts liberally (not really dripping wet though) and playing as many potentially affected contacts as possible soon after the application (as recommended), intermittent contact problems have virtually vanished. This is a very significant accomplishment considering that the organ has been around for 33+ years, not always closed (not completely covered and the back sometimes off for weeks at a time), characteristically dusty all over the interior, and located in some of the worst atmospheric conditions around (damp basement-area

family rooms, industrial areas, fluctuating humidity and temperatures, etc.). Whatever this product is (message on the can says: "improves conductivity, deoxidizes, seals and protects conductors and contacts"), it seems ideally suited for Schober organs, and probably other electronic organs, as well. It is great stuff!

It may be of passing interest to note that the electrical (12 volt, D.C.) contacts in the 1935 Moller pipe organ are simple thin flexible leaf contacts (of German silver, I think) that wipe across busbar-like rods of a similar alloy composition. In my opinion, the critical feature here is in the wiping mode of contact, which tends to clean the contact surfaces whenever contact is made. When we were installing the pipe organ, I observed what appeared to be heavy deposits of dirt and dust, and probably oxide, on all metal contacts (keys and stop tabs). Accordingly, I suspected major problems down the road and therefore obtained a good supply of Deoxit thinking it would be indispensable to get that organ playing. To my great surprise, not a drop was ever needed -- never had a contact problem! I attribute it to the wiping nature of those contacts.

Reverbatape Unit

Another perennial problem that was experienced during the early life of the Schober organ had to do with the Reverbatape unit. From practically the beginning (as noted in my correspondence with R. Avedon and others at Schober, copies of which I still have) we experienced a noticeable "thump" as the joint in the "endless" magnetic tape would traverse one of the several pickup magnets of the mechanism. New tapes, adjustments of all kinds, and many other "fixes," some suggested by Schober, did little or nothing to solve this problem.

If tuned back (reverberation level decreased) the "thump" was not quite so noticeable, but still there. After Schober closed, my stock of useable tapes dwindled to zero. Attempts to fabricate my own worked for a time but the product had an unacceptably short life, and the "thump" was always there. To provide the necessary reverberation effect and to bypass the Reverbatape unit, I purchased in about 1973 a commercial solid-state Pioneer reverberation unit (Model SR-202W) and installed it in the Schober organ in place of the Reverbatape unit. I have used it ever since (it sits atop the organ console) and it responds well. It can be noisy though if the console is struck with a foot or something that rattles the element inside the units.

Stop Tablet Assembly

Over time, there has been a deterioration of the plastic baseboard assembly where the stop tablet pivots are mounted. Usually, only one of the pivot bearings or mounting points breaks, resulting in the stop tablet moving over to one side. It still works the stop switching mechanism but the plastic stop tablet becomes misaligned. If/when both pivots break, the stop tablet is no longer useable but comes apart. It is difficult to repair this because of accessibility restrictions. I usually live with the problem if only one of the pivots on a stop tab break because of the difficulty in repairing the thing.

My approach to repair has been to clamp the broken pieces in alignment as good as possible using modified hemostats, then applying fast-curing epoxy at and around the fracture using the tip of a toothpick. This requires plenty of light, a steady hand, and a lot of patience. For some locations, it is necessary to remove a nearby wire bundle or two to merely gain access. It is important here to avoid dropping epoxy onto adjacent components or even getting too much on the item being repaired. The epoxy does not really adhere well to the plastic either, so it is not an altogether satisfactory repair. I have also experimented with a commercial adhesive marketed for cementing sub floor panels in building construction and other construction uses, and it does adhere to the plastic better. But this adhesive comes in large tubes for use in caulking guns, making it a challenge to get just a pinhead-sized amount out of the tube and onto the broken organ part. Besides, it starts to cure the moment it comes out of the tube, requiring the repairer

to move quickly.

These are finicky time-consuming repairs to make and are not entirely satisfactory either as there is a question about their long-term survival. I have had repaired pivots break again later. From perusal of organ component supply catalogs, stop tablet assemblies are readily available and would probably work, with the right modifications, in the Schober Recital organ. This application for any organ is the same as Schober; the only consideration is fitting the assembly in there behind the wire bundles with everything all assembled. For us, it is not an immediately urgent requirement, and I am not looking forward to removing the whole stop tablet assembly (three assemblies, actually) and trying to make another one from another organ fit. Sooner or later, though, these original assemblies will have to be removed and new ones from another organ modified to fit.

Tuning

Tuning the organ's 13 oscillators using the Autotuner (stroboscopic principle) was useable for only a short time, as the tuner mechanism itself needed frequent repair and gradually became troublesome to use. I presently use a battery-operated self-contained portable electronic tuner box ("Korg Auto Chromatic Tuner") purchased for about $70 at a local music store. It is intended for guitar tuning but works very well with the Schober organ. There are no connections to make; just turn it on, play the note, and you see the lamp light on either the high side or the low side of the right frequency.

I do have one oscillator (D) that drifts significantly if the organ is not played regularly. Once the oscillator is retuned with the electronic tuner box, it stays on pitch for a given playing session (up to a few hours or so) but is usually off again when the organ is turned on the next day. Not being an electronic genius makes me reluctant to try to troubleshoot an intermittent oscillator drift problem. So, unless it becomes excessive or gives out entirely, I am inclined to live with it. That is, unless another "orphan" has had the problem and knows how to cure it.

Noise

There have been occasional hums and buzzes that defy their isolation and fix, but installing ground wires and sheet metal shields have generally kept these annoying noises to within a tolerable range. A fluorescent music lamp on the rack on top of the console was particularly troublesome in this respect, but the installation of a grounded galvanized sheet metal formed shield run along and screwed to the entire underside of the console top has just about eliminated this problem.

Combination Action Unit

As mentioned before, I had the combination action device (CRM-1) for some time before installing it. Its installation and use has not been trouble-free, unfortunately. The thin and odd U-shaped retainer springs that defy refitting in their proper location tend to tinkle out and down into the organ's innards from time to time, making life difficult. This unit is presently operating more or less tolerably, but certainly not flawlessly. The keyboard buttons, with the exception of one or two, tend to function, but about half of the toe studs do not work. I believe this is due to broken wire connections as the routing of the wires is not ideal.

Because of the delicate nature of the whole combination action (primarily the ever-present threat of dislodging one of those wretched spring retainer clip thingys), my wife has just about refused to use it. By way of comparison, the combination action on the Moller pipe organ is not trouble-free by any means either. Of course, its design is based on how things were done in the 1920s and it has been doing it since then. It is presently finicky, at best. When "properly" adjusted it tends to set OK and thereafter move the stop tablets as desired. But the adjustment is delicate

and ordinarily inaccessible, requiring complete removal of the tambour top from the organ console, among other things. This is an application where I believe the electronic versions that are currently being used on new-generation electronic and pipe organ retrofits are practically indispensable if a combination action is desired.

Stop Filters

The stop filter cards (small printed circuit boards, Schober Part No. 11231) have developed problems occasionally. Rather than attempt to troubleshoot these circuits, I have usually simply replaced them with newly-wired Radio Shack components and some spare circuit boards supplied with Schober's "Library of Stops" kit.

The boards are simple enough that they could probably be duplicated using the do-it-yourself printed circuit kits sold in electronic parts supply stores. I have made a layout from an unused card using my computer scanner. A blow-up on appropriately-dimensioned high-contrast film (as used in graphic arts work) would provide the negative for making the printer circuit exposure. I still have an unused circuit board or two to work with before I try to make one following this approach.

SELF PORTRAIT of Captain David Casteel (Conclusion)

Musically, I have been singing in church choirs for 54 years (since I was 9) and ringing handbells for about 10 or 12 years. My Recital organ has, unfortunately, not been in constant use during the last decade or more and has fallen into disrepair. Most of the problems are associated with the tone generators not being stable any more and not holding a tune, so I decided I would look into going to a more modern tone generation scheme and remembered that Schober had come out with an IC driven single generator board in the 1970s, but when I wrote to them in the 80s I found that they had gone belly up and the new generator was not available--that is when the organ went dormant. A few years ago I discovered the Schober Organ Orphans web site and that has rekindled my desire to restore my Recital Model to full functionality again. Since the single-board tone generator kits are not available and I did not know of any suitable substitutes, I have formulated a plan to attempt making a sort of "hybrid" approach to digital tone generation whereby a crystal oscillator drives a top-octave synthesizer (TOS) chip and the 12 tones so generated are fed into the existing 12 generator boards at a point past their original oscillator/amplifier stages. The additional pitches needed would be generated by the existing divide-by-2 flip-flop stages and the sawtooth waveshapes would be formed by the attendant integrator circuits on those boards. The real beauty of this approach (if it works) is that I will not have to disconnect all the 85 signal wires from the original 12 tone generator boards and reconnect them to a new board--I will only have to make simple alterations in the 12 boards and connect 12 signal wires to them from the 2-chip TOS circuit. I also don't have to build that huge resistor network on the single-board generator which creates the pseudo-sawtooth waveshapes. Being basically lazy, this is of great interest to me. I have most of the parts in hand and some preliminary work under way for this project, but I don't have enough done to really report back on it. I have had some excellent advice from Richard McBeth (another "orphan") concerning how to marry the new signal sources into the older boards and I am hoping to get the work completed soon. When I have something tangible to report, I will write it up and send it along for possible inclusion in the Notes.

Other side issues about me are that I have been a motorcyclist (until a bad accident 12 years ago) and a Harley-Davidson rider--not an outlaw, though! I greatly enjoy scenic photography and pistol shooting and have done both for many years.

MODERN POWER SUPPLY

Our Australian member Robert W. Elliston modernized the Recital/Consolette II power supply. He uses the original transformer and rectifiers, replaces the other electrical components with a few easily available parts including two LM350T voltage regulators. Bob concludes that the reason his Recital's background noise is virtually nil is the performance of this power supply. More about Bob's recital in the next issue. For a schematic/parts list, send me a SASE.

ADS

Disclaimer: Any deals, making of payments, receipt of payments or verifications are strictly your responsibility.

Consolette II Available

Member Dick Thompson writes: "I feel the same as Ray Hoag who wrote in your last newsletter, I don't want to just 'throw it away'. Let's try again to give my Consolette II a new home. It works beautifully, just make me an offer. Nuf said". Contact him at: 403 E. Smith Street, Bay City, MI 48706, Phone 989-684-1076

Theatre Schober For Sale

Built in 1977, last played in 1993. Swell pedal scratchy and some scuff marks and scratches. In Champaign, IL, about 3 hours from Chicago, Indianapolis and St Louis. Contact (non-member). Ernie Noa, Software Department Director, 1607 North Market Street, P.O. Box 5076, Champaign, IL 61825-5076. Phone: 217-351-5076 Ext. 2371. Fax: 217-351-2674. Email: erniesoft@hkusa.com.

Consolette II Available for Free

"I have a Consolette II which I assembled back in the early sixties. Changes were made to the circuitry and knowledge of electronics will be necessary to undo them and fix others. Cabinet is in good shape", writes our member Harold Taylor. Email: hwinburn@acmenet.net. Phone 518-765-4222 (answering machine but I pick up when home).

Reverbatape and Time-Delay Available for Free

A Reverbatape and a Time-Delay set which needs to be rewired is available, contact our member: Harold Taylor. Email: hwinburn@acmenet.net. Phone: 518-765-4222 (answering machine but I pick up when home)

Recital Available for Free

Member Michael James has a Schober Recital organ available for free. It is pretty complete, including Schober's combination action, "percussion" sounds and Reverbatape (needs new tape). The original amplifier is also included but no speakers. The organ is available to anyone who can come and get it. Located in Lansing, Michigan. Contact Michael James: Email: mjames5173@aol.com. Phone 517-394-1243 leave a message.

Wanted

Reverbatape parts or working models. Contact (non member) Greg Schlachter: Phone: 403-509-4240, Email: gschlachter@slb.com

String Tone Samples Needed

John DiPaolo writes: "Right now I am collecting organ pipe samples from the internet. I have enough Flute, Diapason, Reed and Percussion samples to get started, but there seems to be a real shortage of good quality organ String tone samples. Do you know where I might find good String tone samples, either on the internet or on a commercial CD?" If you can help Joght now I am collecting organ pipe samples from the internet. I have enough Flute, Diapason, Reed and Percussion samples to get started, but there seems to be a real shortage of good quality organ String tone samples. Do you know where I might find good String tone samples, either on the internet or on a commercial CD?" If you can help John, please send him an e-mail at: jeanjohnd@enter.net, or contact me and I will forward the information.

That's it, Folks ...

.. for another issue. Address all correspondence to the "Head Honcho": Alexander Kruedener, 161 East 89 Street, Apt. 4E, New York, NY 10128, (212) 831-0662, Kruedener@juno.com