

# ORGAN NOTES



## FOR SCHOBBER ORPHANS AND FRIENDS

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Fred Henn Founder & Headmaster Emeritus

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EDITOR Alex Kruedener  
kruedener@juno.com

FORMATTING George Hoye:  
ghoye@msn.com

EMAIL Jack D. Gildar  
JDgildar@juno.com

**Schober Organ Orphans' Page:** <http://www.users.cloud9.net/~pastark/schober.html>

### OVERTURE

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

Have a great 4<sup>th</sup> of July!

I hope you are all well.

In this issue is a chart of "Other Solid State Devices" that gives the Schober part number, the function and value of the part and generic replacements (p. 4). It supplements the Transistor and IC charts published in issue 107-108. In future issues I'll have charts for other Schober parts (resistors, capacitors, inductors, etc). If anyone needs the value or replacement information of a Schober part that has not been listed, please get in touch with me. If you happen to know the generic value of a part listed where I was not able to give one, or find any errors, please let me know.

Part two of Robert Elliston's Schober Recital article is continued in this issue. This Recital was originally built by R.A.B. Tarrant the Australian Schober Representative in 1971.

The Schempp Organ Owners Manual will also be published in a future issue.

There were no ads submitted for this issue.

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### **ROBERT ELLISTON'S SCHOBBER RECITAL (Part 2) (continued from ON 109) by Robert Elliston**

Schober appeared on the scene for me in around 1968. But I didn't have the wherewithal in those days to pursue that dream, but I certainly guarded the Demonstration disc that everyone knows. About 5 years ago, I had a ring from a lady about 20 miles away saying that her husband had just died and that he had two electronic organs which didn't work and could I advise her what to do with them. One was an old Baldwin valve-job, and the other was a Schober Recital model. She gave me the Recital simply to get rid of it. It was very sick, keys displaced and boxes of unknown bits

and pieces. I took it because I knew from the past what it could be like.

### **RESURRECTION**

I knew I was a madman, because I knew what was in for me at home. I knew almost nothing about Schobbers, and less about electronics. The lady said her husband was a physicist and spent hours on the thing and never heard it make any sound. That rocked me to the core. But I've already described my personality, so there was only one thing to do and that was get on with it.

To cut a very long story short, I put it together (after the lady very kindly went to no end of trouble producing all of the Instruction Sheets, after a trip to Sidney), and switched it on with fear and trembling. No smoke, no smells, no sound, no nothing! She was right about her story! First casualty, main power supply. I could see that this was electronic-pre-history, and went about unearthing a system more modern, and able to use the nucleus of the old Power-supply. That was some years ago. It was an incredible success and it is so long since I've seen it I forget what it looks like. I gave Alex Kruedener a Wiring Diagram, which he still has.

The Schober apparently was susceptible to hum. It must have originated from the Power-supply because the organ is so silent now that several times I've gone to bed at night and left it on, - all night. If you put your ear up to the speakers, you can just hear that it is on. There is just the slightest white-noise like a true pipe-organ with the wind on, way out in Siberia somewhere.

### **TRANSISTORS AND CONTACTS**

With the new power-supply everything came to life. But what a mess. Some things worked, but a lot of things didn't. It was a process of one tree in the forest at a time. Fix this, spend hours tracing that, find new transistors that worked, put them in places that didn't matter and pinch the old ones that did work and put them in where it did matter. Contacts were a nightmare. The thing had been near the sea, and guess what that does to contacts at audio voltages?

No I didn't throw out tone-generators, contacts or anything other than the power-supply. I read Organ Notes, and shook my head. I tried cleaning the contacts, I tried rubbing them onto the busbars; you name it I tried it. Better certainly, but go to play music and out some of them dropped. You all know the story. One day in total frustration I went down to the local Electronics Store, looked at all their magic

spray-can potions, read every label and detail and came home with one. I wasn't game to use it! I had been told terrible stories about gunk on electronic organ contacts, but I had to. I can't play this organ! So, with all the Dutch-courage, I gave it the works, the full works. With the whole thing still totally intact. You can't get things apart anyway; they are permanently soldered and wired in. Swell contacts, Great contacts, Pedal contacts. The whole lot, in a thick spray like fly spray, all over everything. Everything Gold, shone like gold.

Now what happens? Abracadabra, 'Open Sesame', Voilà! Everything works, everything! But for how long? Well folks that was over a year ago and I have never had one dead note since. It was a miracle! Now what's the name of this magic brew? Here it is; I have the can in front of me. "CRC Switch Cleaner Lubricant, Code 2001". Manufactured by CRC INDUSTRIES (Aust.) Pty Limited Sydney, Australia. It says 'Cleans, protects, lubricates sensitive switches and contacts.' End of story. I used it once. It's still over half full and the organ has never needed another dose since. Don't tell me nothing good comes from Australia. By the way, how many intact original Recital pristine condition, organs exist in the U.S.? Or anywhere else for that matter. Well there's one here, just out of the showroom!

## CONSOLE CABINET

This very handsome piece of furniture was in very good condition. It is American Walnut, but it had not had enough coats of polish and was tired and dry and hungry looking. So a coat of polyurethane varnish made the whole thing sparkle. A dose on the pedal-board and organ-bench did its magic, and was all well worth the effort. It all looks fresh and new. Also, at this time the pedal-board was missing its end cheeks, if it ever had them; and as good fortune would have it, I had some American Walnut ply unused in my workshop. It was quite common in this country 40 years ago. So I soon had new end cheeks fitted, and the whole console now looks complete. Speaking of Pedal-boards, the key drop was far too deep, so foam rubber blocks were cut and glued onto the toe-board above the keys, to lessen the key-drop to the correct 3/8". Anything greater than that makes clean pedaling difficult, due to also playing adjacent notes. Contacts have to be readjusted of course.

This being my business, I fitted a line of thick green organ felt over the stop-tabs and red name-rail felt over the keyboards. The former is 3/16" thick, protruding 1/16", and the latter is 1/16" thick, protruding 1/16". To get it straight, use a touch of white PVA over the green felt over the stops and push it back with a long stick while the glue is still wet. Leave the stops up and keep it in place overnight. And then tomorrow readjust all the stop-buttons to line them up straight in their off positions. To make a professional job of the name-rail over the keys, cut the red felt strips too wide and glue them with app. 1/8" protruding. Lift the Console lid, and lift the Stop-action over the Swell keys enough to slip a piece of chip-board or timber under the felt when dry, to act as a cutting-board. When the glue is dry, take a piece of metal app. 1/16" thick and use it against the key-slip as a straightedge, and with a very sharp knife, and I mean very sharp, use it as a spacer and guide, to gently cut through the felt with several strokes rather than attempting heavy cuts. Take out the key-slip over the Great keys altogether, and use the same system, and cutting board for it too. Cut the felt underneath to keyboard lengths (not extended over the key-blocks), and you will finish up with a very professional red felt strip just like the new piano, over the keys.

Being a later model Recital organ the music-desk was of clear Perspex, rather than timber. That deals with the Cabinet.

## STOPS AND FILTERS

Again being a later model Recital, the voicing has some of the newer 'Baroque Voicing' filter cards. Now don't all get excited and think this in total, is the final answer to Schober Organ Voicing. It can be, but 'it ain't necessarily so'. Let it be clearly understood from one who is a pipe-organ voicer, that Richard Dorf's concept of a good organ, and good organ tone was of a very high order indeed. Most often things going wrong in organ-voicing, are more attributable to novices who think they know better, than to the original designer's 'inadequacies'. Main point, LEAVE IT ALONE! Richard Dorf says, "To install the standard stops and after playing the organ for several weeks, only then will you be in a position to make intelligent decisions about what (if anything) you would like to try in extra voicing". Take it from me, he is 100% correct. One needs a very great understanding of pipe-organ tonal architecture to know what to do without spoiling things.

So what has been altered in this particular organ? Not much! The Pedal open is up in power. So is the Pedal Bombarde. This stop now has a real growl and pedal snore. The rest of the pedal is original. On the Swell, the Cello 16" has been taken out and replaced with a Richard Dorf family of Strings 16', 8', 4'. This is one of the most beautiful and useful stops on the organ. String Diapason is untouched. Stopped Flute is now doubled in power. It too is a beautiful stop. Salicional is actually the later 'Baroque Gamba' and is a lovely sound. Trompette 16' is 'Baroque' but I raised its power. It is now a fiery reed which is thrilling with either the lovely original Oboe, or the Trumpet which again is of 'Baroque' voicing.

The Great has the original Open upped in power, same with the lovely Open Flute. The 4' Chimney Flute is a gorgeous gem. It has of course the original chuff so characteristic of Richard Dorf's untouched Recital organ. All the rest is original. The Dulciana is just one of the loveliest stops on the whole organ, either alone, or in chorus. As an exception, the Tromba is massively revoiced. I raised its power to Trumpet Réale and it sits on top of everything with stately power and fire. I play the organ with the Great swell-pedal permanently 'open'. That is true to prototype. Rarely will I use the left Great swell-pedal. The Pedal-organ is controlled by the right Swell swell-pedal, but speaks through all speakers.

It will be noted that there is no Reverbatape on this organ, nor any fake electronic 'acoustics' of any kind. In my room which is 25' X 20', heavily furnished, but brick-walled, reverberation is just about 'dead'. It doesn't matter a fig. If it was a pipe-organ,

exactly the same thing would apply. It all depends upon proper organ technique. The listener totally forgets that he is not in a 'Cathedral'. Indeed, intimacy is not such a bad thing!

To finish off, a word about tuning. I spoke of the Hammond organ earlier. The tuning on these instruments was locked in. It was 'perfectly' tuned. (I say 'perfectly' because we all have to allow for equal temperament.) The synchronous motor and tone wheels saw to that. And it sounded mechanical, and surgically antiseptic. That's **not** how it is with the real organ. Remember, I tune them! Some of the biggest in Australia! (And the smallest). And the pipe-organ is never perfectly in tune, and it sounds the better for it. My point is, don't be fooled into thinking that you are a failure if the 12 oscillators are not perfectly set. What do you think the Celeste does? I am deliberate, in NOT tuning the Schober perfectly. I will deliberately detune two or three of the oscillators. Not much, just a fraction, and that makes the instrument sound more like its prototype, because it is not now perfectly in tune.

So there you have it folks, you can forget the digital organ. Analogue has a subtlety about it which is hard to define. Its result is a rich warmth of tone, and a touch of old wine. Yes I've looked at the digitals. None, unless massively expensive, have the specifications of the Schober. Initially they present stunningly well, but for some reason they soon tire. Analogue LP's are coming back, and so are valves (tubes to you) so I still have my Schober. It is very very reliable, and I gain tremendous pleasure playing the music it was designed for, I wish you could hear this lovely instrument.

R.W.E.  
Ballarat, Victoria, Australia  
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**Publisher/Editor:**

Alexander Kruedener  
73 N. Lamphear Road  
Jamaica, VT 05343  
Phone: (802) 874-4894  
Email: [Kruedener@Juno.com](mailto:Kruedener@Juno.com)

OTHER SOLID STATE DEVICES

or \*Original Mfg. #

Schober	Device Type	Generic	NTE	DETAILS
04IR11B	Zener Diode			11V, 1 watt
04IR308	Zener Diode			30V, 1 watt
04IR13B	Zener Diode			13V, 1 watt
04IR12B	Zener Diode			12V, 1 watt
04IR22B	Zener Diode			22V, 1 watt
04IR051B	Zener Diode			5.1V, 20 ma
04IR056B	Zener Diode			5.6V, 20 ma
04S100	Silicon Rectifier	3A100	156	100V, 3A
04Z2025	Zener Diode	*EVR20B	5079A	20V, 1 watt
042A100	Silicon Rectifier	*2A-100	156	100V, 2A
04322R	Silicon Rectifier	IN3491R	5963	50V, 25A
04322	Silicon Rectifier	*M322		50V, 18A see 04322R upgrade
17309K	Voltage Reg.	LM309	309K	
019101	Varistor	*432BNR-35		Carborundum Co. 100,000 OHMS @ 10V (obsolete)
040200	Silicon Rectifier	D200		200V, 750 ma
041020	Silicon Rectifier Bridge	*SCBA2		200V, 10A
042250	Bridge Rectifier			50V, 1A
042326	Germanium Diode	IN2326		
042330	Silicon Diode			50V, 250 mw
042510	Rectifier Bridge Silicon	*solicitation K-775-1		100V, 25A
043050	Silicon Rectifier		116	300V, .5A
043754 (D-1300A)	Thermistor	IN3754	5801	100V, 3A
045060	Silicon/Controller Rectifier	2N5060	5400	25V, .8A
046050	Silicon Rectifier	*CEC6050	116	600V, .5A
402148	Silicon Diode	IN4148	519	
406012	Zener Diode	IN4742	142A	12V, 1 watt

Data for all charts compiled from Schober records, commercial data and substitution books. Not responsible for number changes, data changes or errors.