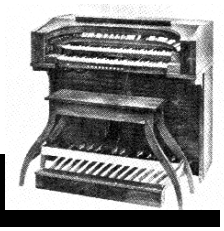
ORGAN NOTES



FOR SCHOBER ORPHANS AND FRIENDS

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

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

OVERTURE

It has been a while since the last Organ Notes and I hope that all of you have been well and have had a great holiday season.

A brief explanation is due … I moved to Vermont a year and a half ago and put most of my belongings in storage. They are still there as I still have not completed work on my house. I am living in a small guest cabin close to the house, but two miles out town. Getting around is difficult in the winter and several times a year I am without a car altogether. The "big" town is 30 miles away and that is where photocopies can be made. Lately Mailboxes Etc. closed where I used to make photocopies, Staples is usually so busy that you have to leave larger orders overnight, which means driving 60 miles again the next day … computer problems and getting to material that I need to write articles are problems too.

Now, however I have enough material for several issues.

Right after the last sentence above, my computer broke down. Had to take it to the big town (Brattleboro, Vermont) and wait for it to be fixed, so another delay.

In the last issue I had substitution charts for transistors and IC's used in Schober organs. I was going to do the same for other solid state parts, and will do so in a future issue. In this issue I am using material from our members who fortunately came through at a time when it is helping me out tremendously.

If you have anything of interest such as your own autobiography, or only the Schober part of your life story, or anything else you might think is of interest to our members, please send it to me.

Robert Elliston's article will be serialized. The same will take place with "The Schempp Organ Owner's Manual" or at least parts of it. A great bound description/history of Lloyd Schempp's Schober. AK

REPLACING GERMANIUM WITH SILICON TRANSISTORS in the Schober Theatre Organ

Phil Flach

I have been able to replace germanium transistors with silicon (low noise) transistors in the Theater stop filters, preamp-vibrato, and mixer compressor, with some bias transistor changes. Other boards don't contribute much to noise since they use high level signals (e.g., bus amplifiers, tone generators). In general, an emitter follower transistor, often used for the last transistor on a board, can be swapped for silicon with no resistor changes (these have no collector resistors).

The theater accompaniment stop filters (board 11235) bias resistor changes are R50 to 120K ohms and R51 to 4700 ohms. Solo stop filters R23 to 100K and R25 to 4700 ohms. All 6 transistors to 2N5086 (silicon). Note: looking at the bottom from the flat side, the pins go C B E. Bend B a little toward you, and C and E a little back and out to match the can transistor pattern (can tab is by E). You can clip the leads to 1/2 inch long (less chance for noise pickup, and neater) and fit them in the sockets (flat side toward Base pin).

Mixer compressor (MTC-1) R52 to 100K and R53 to 3700 ohms. Only replace transistors 36, 40, 55 and 57 with silicon; the compressor stages 5, 12, 18, 22 aren't in the signal path.

Preamp-Vibrato (PTR-4) changed R52 from 8200 to 12,000 ohms. Transistors 5 to 71 to silicon 2N5086. The swell shoe circuit with transistor 54 is tricky. I've done a Spice circuit simulation, and it's hard to converge in some cases I tried. I think it's basically a high gain op-amp, summing the pedals, keyboards (with or without vibrato) and the tone control and swell shoe feedback. A big job for one transistor.

You might leave transistor 54 and the R52 change to when you are in an experimenting mood. The other ones are not critical. The low frequency pedal signal is much larger than the keyboard signal and if the levels are too high the pedals can distort what previously sounded ok.

I also replaced Capacitor 60 with a 10 mic tantalum capacitor, since I didn't like the idea of a (possibly noisy) polarized electrolytic in this place where the polarity is not obvious. (I couldn't get a 5 mic.)

I also had a problem with the vibrato oscillator dying out. Changing Resistor 88 to 22 K and using a silicon for T90 fixed that.

Balky Theater tone generators can often be helped by plugging a silicon transistor into the 7R slot. Higher gain helps here.

Since Schober (theater) used a minus 30 volt power supply, any PNP transistor with a 50 volt breakdown rating can be tried. Resistors greater than 3.6K can't dissipate more than a quarter watt, even from power to ground so they can generally be used if they are easier to get than 1/2 watters. (Volts times Volts) / Resistance = Power (in watts).

The lower noise was a 1000 percent improvement (so far) and I have been practicing more, and getting a bit better, I think.

Aside: My first transistor cost $4.00 in the late 1950's, a Texas Instrument flat can, I can't remember the number (it may be in the basement in a parts cabinet somewhere). Used it per a magazine project to amplify a (selenium) solar cell to drive a sensitive relay.

HARRY VALENTINE on YouTube

Harry's fabulous Schober Theatre organ, which he restored and expanded over a 10 year time span, was featured in Organ Notes #93 October/November 2005 and #95, February/March 2006. Now you can see and hear it on YouTube. It can be accessed on: Google YouTube.com NYLMED SCHOBER. There are four parts describing the organ, also listen to Harry play various pieces on his Schober. There are many! What a Guy!

Richard McBeth writes:

You'll enjoy this, watch for "flying fingers" at the end. Turn up the old amplifier.
http://www.youtube.com/watch?v=adgXZffH6q0

Harold M. Whipps Sr writes:

I enjoyed reading about the invention of the transistor*. I have been in several heated debates about the date. As for the CK722, I still have mine and it still functions. Took several weeks wages to buy one. I was in High School and worked in a Theatre. My father was part owner of a TV repair shop, so getting a few resistors and capacitors was not that hard. Two years later I joined the Navy and became an Electronics Technician. Thanks,

*ON 107/108

QUESTION

"Kevin Salmon" <kevsalmon@internode.on.net> writes:
Hello Alex,
Just a enquiry from dad. Is there anyone you know of, that has some knowledge on a Schober Auto Tuner for use in a 50hz system rather than a US 60hz system.
Regards, Kevin Salmon

ROBERT ELLISTON'S SHOBER RECITAL (Part 1)
Foreword:

THE ORGAN, was bought as a kit from Alan Tarrant of SCHOBER ORGANS (AUSTRALIA), in app. Feb. 1971 and construction took 4 months of carefully recorded hours of work. The owner, so far as I can ascertain, was a Mr. C. A. Lamb of New South Wales, who was a careful and methodical constructor. The lady to whom I referred was the wife of the next owner, a Nuclear Technologist whose untimely death brought me into the picture as described. The rest you have before you. This instrument is as I have described, is performing FAULTLESSLY in its largely original condition. Some .5mfd capacitors have been replaced, and I suppose about 20 transistors. And that's it apart from the power-supply which you know about.*

*Robert modernized the Recital/Consolette II power supply. He uses the original transformer and rectifiers, replaced the other parts with a few easily available parts. See ON 68 pg 3. You can get a copy of the schematic by sending me a SASE and an extra stamp.

[ARTICLE STARTS ON PAGE 3]

ADS

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

WERSI Gamma DX 500S, in Harmony Twp., NJ 08865. Now listed on eBay, ID 290302447626. You can also reach Paul & Peggy Ehrhardt at:
Email: ppnyc@earthlink.net
Phone: 212-486-6797

***SCHOBER Consolette II organ, FREE.** Available for parts or restoration. In the Florida panhandle. Works, some damage to console. Includes Reverbatape.
Contact: David Corkum
Email: corkum@embarqmail.com

***SCHOBER Recital KIT!!!. Includes TR-3 Amplifier, Devtronix TG. No speaker.**
Contact: Ken or Dianne Wise
Email: jawiwike@yahoo.com
Cell: 828-388-8065

***Baldwin SCHOBER Organ, FREE in Los Angeles.**
Good physical shape but one of the keys is broken, most stops do not work.
Contact: Ryan; Email: Oduluth@aol.com

SCHOBER Consolette, best offer.
Contact: Don DeFreese; Email: don.defreese@gmail.com

*May be somewhat dated.

THE TWO MANUAL AND PEDAL ORGAN
by SCHOBER

Builder, R. A. B. Tarrant
Australian Representative, 1971

STOP-LIST

PEDAL ORGAN

1.	OPEN DIAPASON	16'
2.	BOURDAN	16'
3.	BASS FLUTE	8’
4.	CHORAL BASS	4'
5.	FLUTE	2'
6.	BP,BARDE	16'
7.	TUBA	8'
8.	SCHALMEI	
	SWELL TO PEDAL	
	GREAT TO PEDAL	

GREAT ORGAN

1.	GEMSHORN	16'
2.	OPEN DIAPASON	8'
3.	OPEN FLUTE	8'
4.	DULCIANA	8'
5.	OCTAVE	4'
6.	CHIMNEY FLUTE	4'
7.	TWELFTH	2-2/3'
8.	FIFTEENTH	2'
9.	MIXTURE	III
10.	TROMBA	8'
	SWELL TO GREAT	

SWELL ORGAN

1.	BOURDON	16'
2.	CELLO	16'
3.	STRING DIAPASON	8'
4.	STOPPED FLUTE	8"
5.	SALICIONAL	8'
6.	CONCERT FLUTE	4'
7.	PRINCIPAL	4'
8.	NAZARD	2-2/3'
9.	FLAUTINO	2'
10.	OBOE	8'
11.	CLARINET	8'
12.	TROMPETTE	16'
13.	TRUMPET	8'
14.	CORNET	4'
	VIBRATO	
	SWELL TO SWELL	16'
	SWELL TO SWELL	4'
	GREAT TO SWELL	

Reverbatape (deleted). No Thumb-pistons or Toe-studs

ACCESSORIES

2 X 12" Dual cone British Goodman speakers in 5 cub.ft. bass reflex speaker boxes, each 30 cps. (Hertz).
2 X 12" British Wharfdale Mid range and Tweeters in Wharfdale boxes.
Marantz 30w/30w Amplifier. Swell Left, Great Right.
All other console accessories as normal by Schober.

THE ORGAN

THE CONCEPT

It will be seen from the Stop-list that this organ is now 37 years old. In the time since the instrument was first designed by Richard Dorf, his brilliant concept and this particular organ have been through to Stugglesville and back. Today it stands along with King of Instruments, to assist the likes of me to practice the Art, and to be uplifted high above the mundane, and to experience the music of the Church and Cathedral, as would give the Composers of that very fine music great pleasure in knowing that their inspiration, is in fact today's music. O.K. so it's not a pipe-organ and never will be; but where do you get one of those in your home of the specification of the Schober, and how do you maintain it?

There are other Schobers around the world, alas silent, or deformed, so that what was once Richard Dorf's concept is now in serious trouble. It is not only that people cannot make them work in their original form, but then in getting them going, to then not have the ability to play the instrument as it was meant to be played.

Be in no doubt, the lifting of wires and junk into the realms of musical reality is an almost impossible dream. I have done it because I am unusual, determined, pig-headed, obstinate, difficult and at times a thoroughly impossible person. To sit and practice for long periods is maddening to my long-suffering wife. I disappear for hours on end, way down in my music room, or else have the place like a bomb-site with soldering irons, wires and undomestic junk all around me. Fortunately not so much now that the organ is a working, reliable and lovely instrument, but what the soldering iron gave up, the organ bench gained. As the saying goes, 'That's life'.

BACKGROUND

In the interests of short-circuiting other people's frustrations and disappointments, let's see if we can get their instruments going by telling them how I did it. First a bit of background. I go back to prehistoric days when the organ had pipes or reeds. O.K. the Hammond organ with its synchronous motor and tone-wheels existed, but basically that's how it was. Then there was movement afoot and my Company (that is where I worked), got the idea from you chaps over there, that you could make an organ using speakers and an amplifier. So the reeds, (several sets of them) went into brass shim lined boxes. Screws went to the tips of the reed tongues and 400 volts or so went to the plate of the first valve.

The sound was nothing like normal free reeds because the reed was simply a signal generator. In this primitive form it was very pleasant, and quite a number of organs were built using this system. Unlike the U.S. Everett Orgatron, the reeds were palleted to each key, and stop mute, with an electric blower to provide suction to the reeds. Now that is a primitive electronic church organ. None exist today to my knowledge.

[TO BE CONTINUED IN NEXT ISSUE]

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