Schober Organ Notes No. 93

October/November 2005

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

OVERTURE

Fall is here and I hope it will be a pleasant season for all of you. I'm in the middle of applying siding to my house and hope that the snow that I dread will stay away for a while. A friend lent me some scaffolding which makes the work safer than using a ladder, but it's still frightening to me to be above the second floor in the gables. I'm not fond of heights at all.

Harry Valentine sent me many great photos of his amazing organ which accompany his article. Unfortunately I can only publish a few of them in a relatively large size. The rest are in 'thumb nail' size and all are black & white. If anyone wants any of the photos in color, either 4 on one page or a large single page photo, please send the number of the photos you want and a SASE along with one stamp for each PAGE. For the set of schematics of Special Effects (7) one stamp and a SASE.

< E-mail subscribers, if you want a printed copy with black and white pictures send me a SASE and one extra loose stamp.>

THE VALENTINE SCHOBER

The full front of organ is shown on photo (IMG_0084.JPG). The front view showing the names of the different sections that have been added are shown on photo (IMG_0035.JPG). There are 2 Swell pedals. The right hand side one is for the 2 keyboards. The left side one for Pedals, Toy Counter, Special Effects, Rhythm Unit and Microphone.

To permit the speakers (2- 12" and 2- Piezo tweeters) to be mounted facing player on the front wall under the keyboards, the tone generators had to be shifted to the side of the console. On the stopboard I found 5 more stops could be added in the same space by decreasing the space between different sections, these being: Chimes, HV Effects, Crescendo, Accomp to Accomp. 4' and Traps (which isolates the pedal stop switches and only allows the Toy Counter sounds to operate).

With the method I was going to use for the presets, the stop switches were not going to physically operate and so to know which voices were in speaking mode, small red leds were mounted above all the stop switches and on all other switches controlling effects, etc. IMG_0114.JPG shows them mounted above Percussion stop switches. The stop switches now control small relays mounted above or adjacent to the filter pcb's.

There are 3 photos attached showing this: (IMG_0116.JPG), (IMG_0117.JPG) and (IMG_0118.JPG) The adjustable multi turn potentiometers for the voices can also be seen in these photos. The typical way the relays are connected is shown in schematic (IMG_0004.JPG)

For all the additional power required for my modifications a 0V to +12Volt supply was used. The relays are also operated by the preset system and when operated permit the voices to sound. Originally the stop switches used a normally closed contact to open when operated now I use a normally open contact. On the new stop switches that I made a very small micro switch was used to replace the gold wire contact.

So that the stopboard could be removed as required, the +12V supply rail to all the stop switches and the 0V common rail to all the red leds are plugged into sockets on the side of console. (photo IMG_0110.JPG) All the signal wiring from stop switches go back through a distribution board to the relays, and are plugged into 5-14pin dil plugs and sockets. (photo IMG_0109.JPG) The Solo and Accomp. keyboards are plugged in using "D" type connectors. (Photo IMG_0119.JPG)

Pedals have magnetic switches and are now polyphonic. They operate 2 pole 12Volt relays on a pcb which is mounted on the back of the front wall between the swell shoe housing and the tone generators. (photo IMG_0029.JPG) The relay supply is adjustable so it can be lowered to a value where they still operate but cannot be heard.

There used to be integrated circuits available that would generate the TOP OCTAVE, (IC 50240) one of which is available if necessary mounted on the swell shoe cover with instructions on how to install it. Seeing these integrated circuits are no longer readily available I have made my own up with a number of common integrated circuits. My dividers are the same as used in the integrated circuit. Pcb is mounted on the floor between the swell shoe cover and the tone generators. (IMG_0029.JPG) The input frequency varies depending if GLIDE or TRANSPOSE is selected, which comes from a pcb mounted on the side of tone generator pcb's frame. Also the 12 output tone frequencies are fed back to this pcb used for the TRANSPOSE function and by individual plugs and sockets to the 12 tone generators which are of my design. Every output has a level adjustment. The output of these tone generators for the various octaves are connected by 14 pin dil plugs with the sockets mounted on the side of the pcb's frame is shown on the above photo also. The frequency of the note "A" above middle "C" is also indicated on 3 seven segments display being "440". A trim potentiometer is also provided. (IMG_0098.JPG) (IMG_0059.JPG)

On the left hand side on top of the lid are the switches for a TOY COUNTER. (photo IMG_0079.JPG) For these to operate it was necessary to develop "key down detectors" which was done for Solo & Accomp. keyboards and Pedal board.

For the Pedals there is "BASS DRUM","BASS DRUM ROLL","SNARE DRUM","SNARE DRUM ROLL", "CYMBAL TAP","CYMBAL ROLL","CYMBAL CRASH" & "TAMBORINE". For the Accomp. there is "SNARE DRUM", "TOM", "HI HAT" & "TAMBORINE". When selected they are operated from the key down detectors on the pedal board or accomp. keyboard.

The key down detectors are also used for:

(a) From either keyboard to open up the amplifier for the analogue signal from pre amp PTR5.

(b) From the Accomp. keyboard to start the Rhythm unit if selected to be started by it.

(c) From either keyboard to operate, with Solo taking preference over Accomp, for wah options in HV effects.

On top of the lid after the TOY COUNTER is the TONE POTS. (photo IMG_0051.JPG) I should have called them the Tibia Pots as I have used the Tibia filter for them. Too late now. It consists of 9 potentiometers and seven segment displays and a switch to have them in or out of service. When operated the potentiometers indicate from 0 to 7 on the displays which is the strength of the analogue signal being used. The first 2 starting from the left are PEDAL 16' & 8'. The next 2 are the ACCOMP. 8' 4'. and the last 5 are SOLO 16', 8', 4', 2' &1'. Their input comes from the output of the Bus Amplifier. When there switch is turned on the only stop switches that work are the Percussion. The effects such as Vibrato and HV Effects still work. In other words they work like drawbars do on Hammond organ. One can get a great variety of sounds from

them including a very loud Tibia.

In the centre of the console on top of the lid are the:- Swell and Crescendo pedals position indication and the number of the Preset selected or "C" for cancel. (photo IMG_0054.JPG) There is also a dot that indicates whether you can add other stop switches to the presets or not. To the right of these are the SPECIAL EFFECTS switches. (photo IMG_0108.JPG) Included in each switch is a red led.

Above and in the centre of these switches is another red led which is operated from a foot switch which is mounted on the front wall and to the left of the Swell pedals, it is of the push ON, push OFF type. Both a switch and the foot switch red leds must be on for the sound to operate. The sounds are:- SIREN 1, SIREN 2, AUTO, AERO, SHIP, TRAIN, BELL & BIRD. Next on the right hand end of the lid are the HV EFFECTS. (photo IMG_0114,JPG) They are for the Solo and Accomp. keyboards. From the left the first switch selects the SOLO to the effects. The second switch selects the ACCOMP. to the effects. As mentioned earlier in the key down section, the effects will operate from either but if both down they operate from the Solo keyboard.

The next switch is MAN WAH. Its effect can be varied by the potentiometer next to it. (makes a considerable difference to the sound of stop or stops operated)

As we progress to the right with the next 4 switches the previous switch is overruled and its red led is turned off.

The next switch is called WAH 1. With this switch the sound of the wah becomes stronger. The speed at which it does this is also controlled by the previous mentioned potentiometer.

The next switch is called WAH 2. With this switch the wah starts from strong and becomes less and the speed is also controlled by the potentiometer.

The next switch is called WAH 3. With this switch the wah is continuous up and down with speed controlled by the potentiometer.

The next switch is called BRASS. With his switch the sound is more pronounced. This is the last switch in the line where the previous is overruled. These switches are mainly for the brass stops.

The next 4 switches are HEV1 to HEV4. They produce a Leslie effect. There are 4 rotation speeds and if a second switch is turned on, the speed of the first switch is maintained but has a deeper effect.

The Rhythm Unit is mounted on the right hand side sitting at the organ under the keyboards. It uses 7 voices of the Toy Counter being: BASS DRUM, SNARE DRUM, SNARE DRUM ROLL, TOM DRUM, TAMBORINE, HIHAT and CYMBAL. Buttons are provided for them so that they can be operated manually at any time. All buttons have incorporated in them a Red Led to indicate which is operating. The Stop button Red Led also indicates the Tempo. Rhythms can be started by a Start button, or if button called SYNC is operated, by operation of any key on the Accomp. keyboard. The Rhythm buttons are: TWIST, SWING, ROCK, MARCH-1, MARCH-2, TANGO, RUMBA, SAMBA, WALTZ-1 and WALTZ-2. One Rhythm button can be used or any other button or buttons can also be operated to vary the Rhythm. (photo IMG_0102.JPG) A Microphone is provided on the right hand side. Its volume is controlled by the left hand Swell pedal. (photo IMG_0080.JPG) It is often the case that an organist has to play only for a certain time so a clock has been provided. (photo IMG_0054.JPG)

There are 12 PRESETS under the Accomp. keyboard. Also 2 Cancel buttons, 1 at each end of

the 12 buttons. Another button at the far right end of the mounting board that is of push on push off type, that allows or disallows STOP switch voices to be added to the preset. There is an electronic Reverb giving 3 levels by 2 switches. One switch level 1, other switch level 2 and both switches for level 3. To the Accomp. stop switches an Accomp. to Accomp. 4' has been added. The small pcb for this has been added to the coupler board and on (photo IMG_0118.JPG) it can be seen on top left side of coupler pcb. Provision for a Cassette recorder has been provided. It can either record or play back through the organ amplifiers and speakers. It sits on top and on right hand side of lid.

FREE ORGAN SOFTWARE

A message from Craig Browning (b3bopjazz@mailstation.com):

There is a website called www.virtualorgan.com where you can get a free download of the MIDItzer virtual theater organ software and the Cinema Organ sound font.

I noodled with this on someone else's computer (I don't have computer on line). I wasn't able to get the Cinema Organ audio font to work but was able to sort of make it work on the computer sound card. If anyone has more on this, I'd be interested.

MIDI MUSINGS QUESTIONS AND ANSWERS

By Jack Gildar

First off, let me say that I am not a MIDI expert and what I have to share may be naive, unsophisticated or in error. The Schober Group has members who are far more knowledgeable than I, and they should be consulted once we identify who they are. I went to the American Theatre Organ Society (ATOS) National Convention, he did not. I know him by sight, he is a member of the same ATOS Chapter that I belong to. I don't know how he got wind of this, since he wasn't at the convention, but at the convention the Virtual Organ people had a demo room. I stopped in and checked into it. They had a desktop computer hooked up to speakers and a keyboard (a musical keyboard, not QWERTY), a mouse, monitor and maybe another box. My memory is not too clear of the details, and maybe I wasn't too clear about the concept at the time. The exhibitors of this stuff were busy talking to other attendees. So my knowledge of the subject is limited to what I overheard, saw, read and heard. In other words, my knowledge of this is spotty and unreliable.

The reason they call it cinema organ rather than theatre organ is that this comes to us from Canada.

My idea is that the keyboard sends MIDI signals to the computer telling the computer what notes to play. The sound card in the computer has the usual 126 or so sounds of instruments they call "General MIDI" although some manufacturers may have some proprietary systems which include and/or augment "General MIDI." The 126 sounds include a wide variety of musical instrument imitations as well as some sound effects, for example one of them is the sound of a helicopter. None of the sounds are very pretty or convincing to me. The General MIDI standard has a few pianos, guitars and many other instruments, but when it comes to organ, you get a choice of 4, if I remember correctly. They are "Church Organ", "Jazz Organ (probably supposed to be something like a Hammond)" "Rock Organ" (whatever that is) and I forget the other one at this moment. It is as if the "virtual organ" software kicks the General MIDI out of the sound card, and replaces that with real theatre organ ranks, and you have the mouse and monitor to register voices and control things. Like any software, you have to mind System Requirements. If you try to run software for MAC on a PC or vis-a-versa, or if you try to run something that is supported by Windows 98SE, 2000, ME, or XP on a computer where you have Windows 95, it won't work right. And you have to have appropriate processor speed,

memory and hard drive space. Maybe he didn't have all the requirements. Probably the sound card that came in your computer is a Soundblaster. There are other brands of sound cards that are supposed to be better, and you could replace the Soundblaster with one of them. The sound would still go through the computer amp and speakers.

I skipped that stage, and went to the next level. There instead of the computer, you connect a MIDI controller to a separate electronic box containing the voices called a Sound Module or MIDI expander. From the Sound Module the signal goes to a regular audio amp and maybe a reverb unit, and speakers. This can be more costly. I think I paid $1,200 for my Allen Expander II, and $2,400 for the Kurzweil Sampler. Even at that level it doesn't sound like a theatre pipe organ. And I still don't get to create my own registrations like you would on an organ. They might contain sounds (called samples) of one or two ranks, at any one setting, or ensembles they selected, etc., but not Tibia 8'. The Allen has 100 different instruments, half of them for classical organ, half for theatre organ, but no Tibias. The Kurzweil gives me choices like "1684WURLTIBVOX" or "MORTONFULBRAS", etc. There is an old Roland unit, no longer made, that costs much less, and can do better than those, in my opinion. The aforementioned equipment is older stuff and was limited to the memory and processor speed that existed then. But in the past few years computers have taken quantum leaps in power and speed, and Allen and Walker are now making organs that are (HERESY) as good as pipe organs, and can't be told from the sound of a Mighty WurlitZer (by me at least.) They go for upwards of $100,000 and are worth it, if you can spare the money. The sound I heard from the "virtual organ" was very close to Allen's George Wright Series or Walker Digital or WurlitZer Pipes. The quality seemed to me to be comparable to CDs. In short, great.

If I am not mistaken, you can construct your own registrations just as you would with a real organ: only the stops you want. You are not limited to one manual either. You could make a hell of a good organ with a few keyboards, this software, a modern computer, and amps, reverb units and speakers. Since the software is free, and the other things can be bought off the shelf anywhere, I am not sure how they make money. I don't know where you can get a MIDI controller in the shape of a full pedal clavier unless you can make one yourself. I think I have seen the short 13 stub pedal jobs like those you see on spinets that were MIDI controllers, but maybe you buy the pedals MIDI controller from Virtual Organ.

QUESTION ABOUT PRESETS

The electronic memory preset system on the last Schobers was the CRM-5 and CTM-5, (Recital and Theatre models). I think there was a model for the Consolette also, CCM-5. The circuit board number for the controller was 11318.

One of our members is wondering what the 18 circled letters, A through S (omitting Q) on that board signify. The letter A starts on pin 12 on IC 27 (74107). Does anyone know? Does anyone have any service/adjustment information on this preset system? Please let George Collins know. 26 Devon Street BOX HILL SOUTH VIC 3128 AUSTRALIA (susancollins@optusnet.com.au).

I would also appreciate any information (except assembly instructions) on the CRM-CTM-5 system. If you send it to me I will forward the information to George. AK

ADS

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

RECITAL

A Schober Recital with speaker and Leslie model 120 is available in Scranton PA. Please

submit your BEST OFFER to: Tom telephone: 570-961-8970 email: EUWOPUWO@aol.com

WIRE RECORDER

Does anyone have a copy of the OPERATING INSTRUCTIONS for a Webster-Chicago Wire Recorder model 180-1? I would appreciate a photocopy. AK

PARTS FOR YOUR SCHOBER

Every once in a while one of our members donates parts to our 'stock'. Is there anything anyone needs to fix your Schober? Let me know. Available to members for the shipping costs. AK

CONSOLETTE SCHOBER FOR SALE

Two full manuals and one pedal octave. Includes percussion board, power amp, and HD built-in speaker. Needs repair. Must be picked up in Columbus, GA. $200. Contact David F. Slonaker 2010 Central Church Rd. Midland, GA 31820 Phone 706-569-6105. slonfarm@att.net

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