

Schober Organ Notes No. 92

August / September 2005

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

OVERTURE

I hope that all of you had a great summer. I had a great deal to do here in Vermont and made some progress on getting my house ready for occupancy next year. Fortunately I have more material for Organ Notes than I can fit into one issue so that a very interesting article Harry Valentine wrote about his Schober Theatre organ repair and extensive modification with lots of photos will appear in Issue 93. Below is his first letter to our group.

A LETTER FROM HARRY VALENTINE

Hi, My name is Harry Valentine. I live in Ballarat, Victoria, 3350, Australia. EMAIL: valentineh@vic.chariot.net.au

I retired here from Melbourne in 1988. For a number of years I maintained a Compton Theatre Organ in HER MAJESTIES THEATRE. Due to health reasons I had to resign from the maintenance. At the time there was a lot of young kids learning to play it and it was having a lot of use. I even produced drawings how it was wired up.

I bought a Schober Theatre Organ in July 1996. It wasn't in very good condition, had been on a dirt floor in a garage for I don't know how long. Both feet were broken on the case and it had a panel with the speakers mounted on it at the back of the organ. The case had been locally made, I understand, and had been stained a very dark flat walnut, and wasn't very inviting looking.

After repairing the case and cleaning it down I added a Queensland Maple veneer, stained it Golden Oak with three coats of clear Estapol. I have considerably modified the original electronics and added numerous items to it, so much so that I have modified the name to "VALENTINE SCHOBBER". Items that I have modified and added are listed below.

- KEYBOARDS – removable now plug in.
- TAB RAIL – removable now plug in.
- All PCB's removable either plug in or and screw terminals.
- All VOICES on SOLO, ACCOMPANIMENT and PEDAL are now adjustable for loudness.
- ALL STOP SWITCHES and other SWITCHES have red led indication when operated.
- PEDALS are now polyphonic and have magnetic switches.
- TOP OCTAVE GENERATOR with glide.
- NEW TONE GENERATORS
- Indication of "A" above mid "C" 440Hz with trimming adjustment.
- TOY COUNTER
- EXPRESSION PEDALS – position indication.
- CRESCENDO – added with position indication.
- EIGHT SPECIAL EFFECTS – (Sirens, car horn, train etc.)
- HV EFFECTS – "WAH" 4 types. "BRASS"
- "4 SPEED – ROTARY SPEAKER" each with 2 levels.
- TONE POTS – Tibia sound with 0 to 7 levels of adjustment with indication of position for all footages on Solo, Accompaniment and Pedals.

- RHYTHM UNIT
- MICROPHONE
- CLOCK

There could be other things but that is all I can think of at the moment. I will try to add a picture of the organ as an attachment. Have not done it before. -- Harry

“HOW DO I FIND A NEW OWNER FOR A SCHOBER?”

Jack Gildar and I often have this question posed to us. Here is Jack's response to this question posed by Maryanne Mondrosch after the passing of her husband John.

"My sincerest condolences to you and all of John's family and friends. I am sure that Alex Kruedener and all of the group also extend their sympathy. We will do all we can to assist you in disposing of the organ, but this is not easy. The organs utilize technology from a past era, and although they were excellent values in their day and are still worthy musical instruments, they are not in demand. They were built mostly by those of us of your husband's generation, and naturally many of us are passing these days. Many times the situation is the same as yours, and consequently there is a steady supply of them available. Thus, due to the law of supply and demand, you would have to be very lucky to sell it, and lucky to be able to give it away to a good home. First you should contact Alex Kruedener directly at Kruedener@juno.com and tell him all you can about the organ. What model is it? That would be either a Consolette II, Recital, Theatre or Spinet. If you know, has it been upgraded, retrofitted or otherwise modified since the initial construction was completed? (Some of them have had the original tone generators replaced with Devtronix tone generators, some may have had MIDI added, etc.) The Schober Organs had no amplifiers and speakers as standard equipment. They were supposed to utilize the amplifier and speaker(s) of the owner's high fidelity audio system. If you did not have a hi-fi, you could buy a suitable amplifier and/or speaker(s) from Schober as optional equipment, and thus have a complete instrument. So you want to tell Alex all you can about the hi-fi. Is that included with the organ, or does the organ have the optional Schober supplied amp and speaker (s)? If you know how, you could also put it up for auction on eBay. If you don't know how, you may be able to hire an assistant who would do it for you. They would take a cut in addition to the percentage eBay charges if it sold. You might also call local churches and ask if they would accept it as a donation. They would not use it as the main organ, but sometimes churches have an extra organ or piano in the basement for practice. If you itemize deductions, you might get a bit of good out of it on your income tax. You could call some music teachers and ask if any of their students would like to have it. Unless you just keep it, someone will have to transport it, even if it goes to a landfill. I hope either you or the recipient have a good friend(s) with a truck. Thank you for the email and the kind words in it. Best wishes, Jack Gildar."

A MIDI CONVERSION AND CONTROL SYSTEM

(This is the system that Charles Witherell used in updating his Schober, see ON91)

In this era of keyboard musical instruments, MIDI stands at the forefront. From synthesizers to samplers to full electronic organs and pianos, they are all MIDI related.

And yet, there are many analog organs built in the heyday of organs (the 60s and 70s) that are still excellent instruments. The one thing they lack is the ability to interface to the many MIDI devices that exist in the market place; devices that would enhance their musical capability.

For that reason, we, at Artisan Instruments, Inc. decided to develop an economical MIDI Conversion system that would allow the owners of older, analog organs to upgrade them to current industry technology. The objective was to design a minimal amount of modular

hardware, interconnected as simple as possible to convert contact closures to a MIDI form of data. There are just three items of hardware that are needed for most organs: an Input Board, a Micro MIDI Board, and a Magnet Driver Board. And even the third one is not required if the organ at hand does not have dual-magnetic stop actions or require any sort of combination action.

The Input Board makes provision for the connection of up to 64 discrete contacts. Organs with either positive or negative keying voltages can be connected to an Input Board. Being controlled by a microprocessor, it also has the capability of accepting analog voltage inputs – such as those generated from a swell shoe or crescendo shoe. That means that positions 62, 63, and 64 can be used for potentiometric control, if so desired.

In the picture shown, the 64 inputs are connected to the dual-tier screw down connectors, which means that no soldering is required.

Note the two RJ-11 receptacles at the end of the board. [See Photo 1, page 4] One is shown as IN, and the other as NEXT. The IN receptacle is connected via 6-wire phone cable to the input of a Micro MIDI Board. The NEXT can be connected to a second Input Board in daisy-chain fashion to the 2nd Input Board's IN receptacle. Up to 3 or 4 Input Boards can be daisy-chained in this manner.

The Micro-MIDI Board becomes interpreter, merger, controller, encoder – or kind of the “central command” of this system. It receives the bit data from the Input Boards and converts it into MIDI data. It can also simultaneously receive MIDI data and blend it with the data received from the Input Board(s).

The Micro-MIDI Board also contains a microprocessor that can accept a downloaded program that has been defined for the particular application. More on this, later.

Some complete systems require the use of multiple Micro-MIDI Boards. When two or more are used in a system, they are connected together from the MIDI OUT of one board to the MIDI IN of the next. [See Photo 2, page 4]

Along the top edge of the Micro-MIDI Board pictured here are three screw-down connectors. The 2-terminal connector is where a 5V power supply is connected. The middle 3-terminal screw-down connector is for an analog input, where a potentiometer's outer pins are connected to their respective + and – reference points, and the pot wiper is connected to the center terminal. Going even beyond that, the 3-terminal connector at the upper, left, can have three more analog inputs connected, using the + and – reference inputs of the center connector. The difference between these analog inputs and the ones on the Input Boards is that these are limited to the maximum supply voltage of 5V, whereas the Input Boards can have as much as 30 volts applied to a potentiometer.

Depending on the application involved, a definition is written in text form, using keywords and other prescribed syntax to describe the intended output of the combination of Input Boards and Micro-MIDI Boards. Following is a very basic situation that will convert a contact closure keyboard to have a MIDI output. [See Photo 3, Page 4]

Here is the definition that will convert the discrete switch keyboard into a MIDI Output:

```
*umidi_module
*hv64
*division=great
*bits=1,61
*midi_channel=1
```

```
*midi_note=36  
*end
```

It describes the hierarchy of information that will allow the Micro-MIDI module to understand what is needed to provide a coherent MIDI output.

All definitions begin with the keyword `*umidi_module`. Additional information becomes subsidiary.

The next item shown as the `hv64` tells the `umidi_module` that there is bit information (and possibly analog information) coming from an Input Board.

Then, more keywords are listed to tell the Micro-MIDI Board that:

- the input bits from an Input Board represent an organ division that will be called Great.
- that the first bit is designated as 1, followed by 61 contiguous bits representing the complete keyboard.
- then, the Micro-MIDI Board is told that the output from this keyboard will be sent on Midi Channel # 1.
- and finally, that the first note will be MIDI Note # 36, which is the lowest C on a standard organ keyboard.

A second, or even a third Input Board could be added to the above definition, with the only difference being the name of the `*division` and the designated `*midi_channel` number.

Of course, more information is required in a definition as more Micro-MIDI modules, Input Boards, and possibly Output (Magnet Driver) Boards are added to the system. It can be seen that this is a very modular system, where hardware is added as needed to perform the required functions of developing MIDI data for external devices.

In order to cover all of the hardware, the third item, or Magnet Driver Board is shown in the picture, below.

If the organ already has (or will have) dual-magnetic stop actions, then a combination of Micro-MIDI Boards and Magnet Driver Boards – plus, of course, piston inputs to an Input Board will all work together to become a combination action for the organ. Note, however, that it is possible to have a Blind Combination Action in an organ that does not have dual magnetic stop actions. All that is required are the thumb or toe piston inputs to an Input Board, and the appropriate syntax that is used to describe them. In either case, multiple registrations can be captured and placed into memory for instant recovery at the push of a thumb or toe piston. [See Photo 4, Page 4]

Depending upon how many stops there are on the organ will, in turn, determine how many Magnet Driver Board/Micro-MIDI Board hardware items are needed. Generally, a Magnet Driver Board will have 64 outputs, which means that it will control the ON and OFF magnets of 32 stops. And, each Magnet Driver Board requires a Micro-MIDI Board in combination with it.

Although the Magnet Driver Boards are usually associated with stop actions and a combo action, they can also be used to drive other magnet devices – such as the chest magnets of wind blown pipes.

But basically, the Micro_MIDI Control System is intended to either add to, or completely renovate older analog organs to have MIDI capability. Once that it achieved, now the world is open to a wide variety of MIDI devices that can be controlled from the newly “midified” organ. Other products available from Artisan that are MIDI controlled include Sound Engines that

contain sampled theater or classic pipe organ voices, or Stop Boxes and a Sound Engine that becomes an add-on to the existing organ.

In all, the Micro-MIDI system is quite versatile in converting contact closures or analog inputs into MIDI data for the use with external MIDI devices. More detailed information can be found on our web site, <http://www.artisan-instruments.com>. Once there, select Micro MIDI Control System, and then review the documents shown in blue, which can be downloaded and printed.

Questions about the system can be answered either by Red Carlson at Sales@artisan-instruments.com or by contacting Mark Andersen at EmarkA@mac.com.

ADS

Keyboard Parts and Electronic Instrument Repair

Peter B. Miller writes:

I found your "Schober Organ Notes No. 56" and found it to be very informative. I work on old Musical instruments here in California. I started working on Hammond and Kimbal products in the early '70s. Now I own an Electronic Musical Instrument repair company near San Francisco. We deal in the music synthesizers and electric piano. As a side line to repairing these older instruments, I have found the need to make parts for old products that are not made anymore.

A new product is the spring contact described in the service note here for the Pratt Read keyboard. I had to make 2000. I have used these in the Mini Moog (Model D) and they work like new. I also have the Key Guide Grommet (not shown in the drawing)

Please let me know if anyone needs these contacts. Take a look at our web site at www.caesound.com.

Best wishes, Peter B. Miller, CAE Sound, Telephone: 650-348-2737 -- Email: peter@caesound.com, Web site at: www.caesound.com

CONSOLETTESCHOBERS 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 -- Telephone: 706-569-6105; Email: slonfarm@att.net

RECITALSCHOBERS, FREE

Bob Webb is offering his Recital for free. It is located in Carmel, CA -- Telephone: 831 624-7797; Email: Wwobsrvtry@aol.com

RECITAL CONSOLE PLUS

This ad is better explained if I publish the letter I received.

Don't know if you can be of any help, but want to share this with you. My father built a Schober Theater Organ back in the early 70's with two custom walnut speaker cabinets. After completing it and having it a few years he decided to build a Devtronix Theater Organ. As you may know they were very costly and he was buying it in stages and working on it for several years. It got to the point that Devtronix updated the entire electronics so he stopped building the Devtronix

and decided to gut the Schober and put the Devtronix electronics in the Schober. As it turned out, he never finished it I and I don't know enough about electronics to finish it. I know he was very close to completing. My parents divorced and my mom was to get the Schober, but it was never finished. Now my father has passed on and I am trying to figure out what to do with it other than take it to the local dump. The console and bench are beautiful and it would be a shame to scrap it. Unfortunately I think it would be too expensive to have someone finish wiring the Devtronix electronics or we would go that route. I believe all the Schober electronics were thrown away when it was gutted. I am also in the process of trying to contact the new owners of Devtronix as well. We also have the 3-manual Paramount Devtronix Console. I would appreciate if you could pass this along to any of your constituents and would like to hear any suggestions you or they may have. In case anyone is wondering, the organ is located in Georgia.

Best regards, -- Scott McKee -- awesomeaudio@mindspring.com"

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Fred Henn Founder & Headmaster Emeritus

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