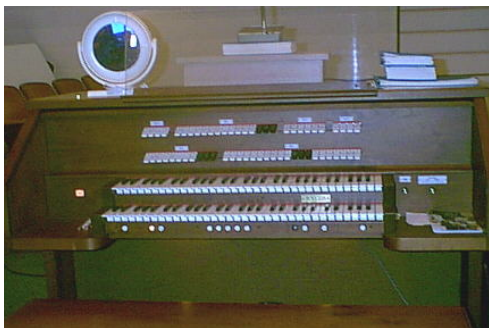


## PAUL SOULEK ADDS PIPES TO ELECTRONIC ORGAN



In 1985, Bethel Lutheran Church of Round Lake, Minnesota purchased a 1984-model Rodgers 650A organ to replace an aged tube-model organ.

The organ was left virtually untouched since 1985, when, about Christmastime, the organ was rotated 90°.

Prior to this, the organists sat with their back to the pastor, depending on mirrors for a view.

In late 2001, organist Paul Soulek a young collegian with an effective music ministry there, was given the opportunity to build a one rank pipe addition by Charles Hendrickson as a "Christmas bonus."

The Rodgers was built so it could control pipes, so all that was needed was a driver board (circuit board), and a power supply.

At a January 2002 Voters' Meeting, the congregation unanimously approved the project, and voted to pay for the circuit board and power supply. A donor stepped in, and paid for the project in memory of her late husband.

Installing the pipes required some modification to the balcony floorplan; a row of seats at the rear of the balcony was removed, and a frame structure was built to support the pipes.

Busy at his exciting new project, Paul designed, created and built the frame structure and a windchest 8' long by 11" wide.

In the near future, the frame will be enclosed with a case of finished wood. Visible below, left to right, is the blower, which supplies air for the pipes, and the reservoir, which helps to maintain a constant pressure.



### AN UPDATE ... February 2003

A wooden flute rank was partially installed in early January 2003. It was first used in worship January 19th, 2003.

The current configuration contains the upper 58 pipes of a 73 note 8' rank. An additional chest for the lowest 15 pipes is being constructed.

In late February the change to reservoir springs instead of inertial weight maintained a better control for wind stability.

The push was on in late February when our congregation found out that our pastor would be taking a call to a church in Illinois, and would be leaving after Easter Sunday.

That left around a month to build the chest and install the pipes. Without an unusually wintery March (with many snow days) the project would have never been finished on time. The chest and pipes were brought to the church and installed on March 20th.

When everything was hooked up, the organ didn't work. After many long hours at the church, Dennis Bucholz discovered that a loose fuse was to blame.

The metal clips that held the fuse in place were loose, therefore not allowing current to flow through the fuse and leaving an open circuit. After this problem was fixed on Thursday night, the organ worked just like it should have.

A new set of pipes was added on April 5th, and first used on April 7th.

A sound sample of the new organ, using the pipes, is available by clicking [here](#).

The sound clip takes about one minute to download on a normal modem.

That sound clip is of "Thy Strong Word", a hymn found in our *Lutheran Worship* hymnal, number 328.

The hymn is played through using the full principal chorus of the electronic organ, and the pipes operating at 8' & 4'.

At the end of the hymn, a short clip is played using the electronics only, so you can hear what a difference the pipes make.

The sound clip was recorded in the middle of the sanctuary using a video camera microphone, so the sound quality is not the best.

Other problems have been encountered and fixed along the way. One problem was that when the organ was turned on, some pipes would "squeal" immediately.

Some modification to the pipes fixed this problem. Another problem was sagging wind; when more pipes were played, there wasn't enough wind to support this.

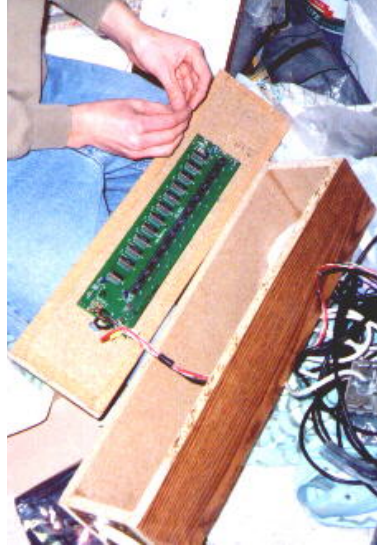
To fix this problem, more weight was placed on the reservoir, causing a higher pressure and more stable wind.

The organ works great now, and everyone at the church really enjoys it.

I hope to have some re-voicing done on the pipes to get the best sound possible

---this time I'm going to have it professionally done :-)

***This is a view of the circuitboard***



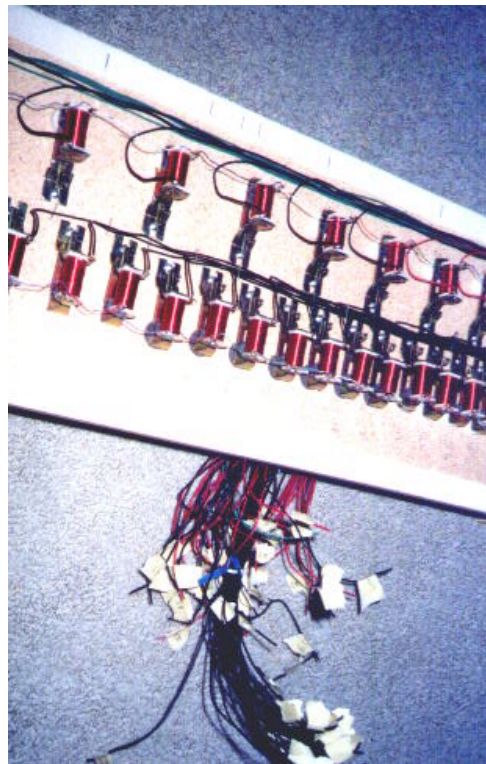
This is the circuit board that the chest magnets were wired to. Every pipe has a magnet under it that controls the supply of air to the pipe.

Each chest magnet (there are 73 total on the chest) has one wire coming to the circuit board.

A "common" wire is also connected to the circuit board.

Each magnet covers up a hole in the pipe chest

When the magnet is energized by the pipe driver circuit board that receives a signal from the key an organist presses on the organ console, the magnet opens and allows air to travel from the pressurized pipechest into the pipe that sits over that particular hole



***This is a view of the chest magnets.***