

*The Zimmer Pipe Organ
First United Methodist Church
Forest City NC*

*Installed 1968
Modified 2002-2006*


*Notes prepared by
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Organist 1981 -*



*Console before renovation
Console after renovation*

The new Festival trumpet. The longest pipe is 8 feet in length. This is the only pipe rank added to the organ. The picture shows one half of the rank.



 One of the treasures of our church is its magnificent Zimmer Pipe Organ. Installed in 1967-68, it has served the church for close to 40 years—at least 2000 services. The original designers insisted that the instrument be one that could play the music of the masters and it has done just that. The artists who have performed concerts over the years have all been impressed with its sound. So , why did the organ undergo a renovation? Read on.

How It All Began

Early in the year 2000, the church decided to start a large project to improve our church building handicapped accessibility. Other major changes were concurrently proposed to modernize the church building. I was asked if the organ needed any improvements and we went from there.

Actually, the requests were modest at first. The pipe organ in 2000 was a fine instrument of 49 ranks and immensely satisfying to play. Concert artists of note included Robert Smith from Converse, Marilyn Mason from University of Michigan, and Austin Lovelace (native of Rutherford County and internationally known organist). The original design specifications were impressive indeed and left only a few deficiencies for an organ with this many pipe ranks.

However, after 30+ years of service, some potential aging problems developed. High humidity coupled with the extremes of Summer heat and Winter cold resulted in stuck keys and faulty switching. Stop tabs sometimes did not work (result - no sound) or even worse

sometimes air chest magnets activated by themselves (result -unwanted sound)

So, I proposed first the addition of two digital ranks to bring the deep bass pedal sounds more in balance with the rest of the organ. These were a 32' Untersatz and a 16' Principal. To reproduce the sounds using actual pipes would require 32 pipes beginning with a pipe 32 feet long (for the 32'rank) and another set of 32 pipes beginning with a pipe 16' in length (for the 16' rank).

Our contractor set forth some other needed improvements and presented these at a trustee meeting in 2001. Each proposal was assigned a category.

- 🔴 Critically needed
- 🟡 Would be nice to have
- 🟢 Dream on !

The decision (surprisingly) was to go for all proposed items with very few restrictions- the organ must be kept as predominantly pipe and the present console would be retained and modified as needed.

The contract specifications included the following major sections

- Convert to solid state switching replacing the aging electro-mechanical relay combination switching.
- Add five digital stops specifically: ' Untersatz, 32' , Principal 16' in the Pedal Organ; Flauto Dolce 8' . Flute Celeste 8' in the Positiv Organ; Gemshorn 8' - Great Organ
- Revoice the organ to tone down some of the more strident pipe stops and equalize timbre.
- Replace all three Keyboards and the Pedalboard
- Add Couplers to include Sw/Sw 16 , Sw/Sw 4' . Sw Unison Off
- Add couplers to include Sw/Pos16 Sw/Pos 4
- Add couplers to include Sw/Gt 16, Sw/Gt 4, Pos/Gt 16 and Pos/Gt 4
- Increase General Combination Number of Settings (at very little extra expense and no additional space, we went from 6 to 990!)
- Add two Midi stops to each of the four divisions

Construct and install a Festival Trumpet pipe rank to be playable from the Great organ , the Positiv organ and the Pedal organ. Rank must not couple to any Division.

The renovation was done by the Spearman Hawkinson Company -our primary maintenance and tuning contractors. The renovation spanned more than three full years because the contractor had many other church organs to tune, repair and maintain.

I would like to say that we had no problems during the long project, but we did.

The console was shipped to Charlotte to be gutted of the electromechanical relays and couplers and replaced by the solid state system along with the new Keyboards, Pedalboard and Stop Tabs. When it was returned, buttons called Reversibles did not work and later a circuit problem caused all the pipes to sound even though keys were not pressed.

- ✿ The keys were too sensitive with almost no pressure needed to make the pipes sound.
- ✿ One Sunday during a prayer, I had my fingers on the notes to begin the prayer response when the notes sounded. This prompted our pastor to add a new request during his prayer to make the organ behave itself !
- ✿ During a Maundy Thursday Service at a quiet time, a ghostly sound began quietly at first and then increased in volume until the organ had to be turned off. This was a faulty seal on the air chest for the new trumpet rank.

The last part of the overall renovation was a venture into the Midi world. Midi is an acronym for Musical Instrument Digital Interface.

Actually, the entire pipe organ switching operation uses Midi technology to route the electric current which turns on the magnets needed to open an airway to a pipe to make it sound on demand.

In (hopefully) simplified terms, each key on each of the three keyboards (183 in all) and each pedal key (32 in all) and each stop tab & coupler (about 50 in all) are sampled ("asked") 250 times a second to find out if they are on or off. If (for example), middle C on keyboard 2 (the middle keyboard) is found to be pressed (On) and it is further determined that the Stop Tab for Rohrflute 8' is also On, then an electric current will be transmitted to the magnet under the Flute pipe which, in turn, causes air to flow into the pipe and sound until a future sample finds that the key and/or the tab has been turned off.

The Midi Voices addition uses a sound module along with an audio system to provide additional organ voices.

We selected the Allen Ensemble Sound Module which has 243 voices any 8 of which can be selected and played very much like the other pipe and digital ranks of the organ. About 100 of the total

number of voices are useful additions for a classical organ. The other voices are a combination of percussive and romantic sounds.

The Midi ranks do not couple to any division other than the division programmed.

The Midi voices are created in the Allen Ensemble Sound Module and converted to audio signals which then are routed to a dual amplifier and two speakers specifically designed for organ sounds. The voices are adjustable in volume from both the swell Pedal and from the module. The Midi voices can be tuned (if needed) by a simple control.

All of us at First Methodist Forest City are deeply grateful to the original organ designers for the wonderful pipe organ instrument. We are equally grateful for the members and friends who made the renovation concept become a reality.

*Thanks for
reading!*

*Aubrey L.
Calton*



*View of Swell &
Positiv Organs
Great & Pedal Organs
Other Side
(Not shown here)*