

Organ Information Session

Part I – Overview and basic organ terminology

Ranks – one set/row of pipes which are constructed in the same way. There is one pipe for each note of the keyboard within the rank. There are many ranks in the organ (this one has 30 ranks), all controlled by **stops**.

Mechanical action – this means that the keys are physically connected to valves under each pipe via a complex web of ‘trackers’ made of thin, flexible wood. Mechanical action is the system of choice nowadays for organists and builders, having been perfected over hundreds of years. In most cases, the pipes must be in a free-standing case, like our organ, for it to be mechanical.

Part II – The Mander Organ at Christ Church Pittsford – a timeline

Mid-late 1980s

Conversations take off about replacing the old organ, which was installed as a second-hand instrument in 1947, and was beginning to fail. An organ committee was formed, and they were guided by a reputable consultant. They conducted much research regarding the optimal organ for this church.

1990-91

This Mander organ was installed. It was custom-built for this space in London over a period of about two years, shipped to the U.S., and installed and voiced by Mander representatives.

1997-98

24 of the largest pipes in the façade were noticeably collapsing. Mander was contacted, and after acknowledging their error, they agreed to build new façade pipes and install them, which you still see.

2003

Conversations begin between the director of music and a local maintenance firm, Parsons, regarding existing issues. They were asked to provide a rough estimate of the replacement cost of this organ.

2006

Vestry request a formal report from Parsons on the condition of the organ. Nothing is done after receiving this report, which quotes the necessary work at around \$52,000

2011

Vestry ask Parsons to update their report – now estimated at \$135,000. Mander is contacted. After a long period of no response, he admits to some mistakes, but overall refuses to acknowledge the severity, and accuses Parsons of over-quoting. He does agree to replace some pipes for a cost, and a contract was drawn. Nothing ever came of this agreement for various reasons among both parties.

2018

Conditions continue to worsen; Parsons have trouble maintaining the instrument. Serious conversations about a permanent replacement and building renovation begin, with guidance from an organ committee.

2019

Representatives from Mander travel to Pittsford to produce a report of their own. This report was now honest and in line with Parsons’ observations from 13 years prior. Quotes included for proposed work.

2020-22

The Hauptwerk digital organ, which had been purchased just before, was used to produce livestreams.

2022

The Mander is listed for sale on Organ Clearing House in late 2022; to date, it was shown to about six prospective buyers, but received no offers. The choir remains located in the chancel with the digital organ.

A decision was made to resume using the Mander despite its condition. Work must now be done to discern its next steps as we prepare for a new rector.

Part III – Issues that exist today (not a comprehensive list)

1. **Collapsing pipes** – This is due to many different factors, but there are two main ones:
 - When Mander made the pipes, they used an experimental mixture of metals, which has since proved to be too soft to withstand the pipes' own weight. Mander recognized this defect only a year or two after they built this instrument, so their other instruments do not have this problem.
 - Many of the small pipes use an unusual system of tuning. In this method, the pipes are stamped with a tool that resembles a candle snuffer to manipulate their tuning. Years of this stamping has caused most of the smallest pipes to collapse so that they cannot speak anymore, and each tuning makes them more susceptible to damage. This system can be successful only if the pipe metal is strong enough.
2. **Poor temperature regulation and tuning issues**
 - The organ's placement in the building means it is constantly exposed to vastly fluctuating temperatures, and this makes it very difficult to keep in tune, requiring more tuning visit and exacerbating the issue above. The air intake is in the tower, which is not insulated at all. The narthex door allows bursts of cold air to enter the sanctuary during the winter. The organ is also built on two levels (this was to avoid covering up the side windows, and was not recommended by Mander, but was demanded by the church), so the higher level is always several degrees warmer than the lower level. The building is of course not air-conditioned. Fluctuations in temperature cause swelling/shrinking of small delicate wooden parts, which leads to stuck keys and notes. These issues always require immediate attention from a technician.
3. **Tonal palette and poor support of choir and congregation**
 - This instrument was designed and voiced in such a way that many of the ranks are out of balance with one another or are simply not useable in instances when they should be. Many of the ranks that are designed to be able to support the choir are simply too soft or too high up in the case, whereas those that would be expected to comfortably support congregational singing can easily overwhelm, leading to a loud and aggressive tone. Much of the voicing is either very timid, or far too aggressive, with almost nothing in the middle. Little thought was apparently given to the voicing of the pipes, which is the single most important factor in the actual tonal success of an organ (more so than number of ranks or specification, in most instances). Voicing is something which can be improved to a miraculous degree by an expert, even using the same pipes, though it would be recommended to replace certain ranks entirely.

Part IV – next steps and probable solutions

- Insulation of the tower – This could make the single biggest improvement for the lowest price. Other research should be conducted to understand how to better climate control the sanctuary and prevent drastic fluctuations in temperature within the organ case.
- An organ committee should be regrouped to weigh the options of more significant, long-term repairs
- If the committee decides a renovation is feasible, a consultant should be hired who will know best how to address the underlying issues, and they will be able to guide us in the most practical way forward.
- It's not all bad news! Though collapsing pipes is a serious issue, they don't have to be scrapped! Ranks can be removed individually and repaired one-by-one, as well as stabilized with solder and metal plates to keep this from happening again. They can also be fitted with tuning sleeves to avoid the issue of cone-tuning. During this process, it would also be wise to address the voicing and balance of the pipes to allow for the greatest sonic possibilities they can produce. It is possible this work could be done gradually so that the entire organ would not be out of service for a long period of time, though it may need to be silenced to some extent while the work is carried out.

Frequently Asked Questions

- 1) It sounds fine, so why should we do anything about it?

This situation can be likened to a car's "check engine" light – though the car may continue to run, it is necessary to get it to a mechanic as soon as possible to avoid further problems. The earlier we can correct issues that will become more detrimental with time (and already have), the better, and it will ultimately save money further down the road, as the costs will grow with time as well. The actual sound is probably the least reliable indicator of the condition of an instrument, especially to 'inexperienced' ears.

- 2) Did the organ committee of the 1980s do something wrong?

Not at all! The organ committee at the time did everything in their power to research and consider their options, and Mander was certainly the best option they had at the time. I am thankful today for their thoroughness in researching and choosing a builder, and their courage to commission a new instrument, which requires massive amounts of planning and consideration.

- 3) Is it worth scrapping and starting over?

While this organ is admittedly problematic, it is ultimately a working, complex musical instrument which many people put money and effort into, and it has been a part of this church for thirty years. Any instrument can be made better, and this one is certainly not worthy of the scrapyard. While the idea of a new, more successful instrument is very exciting, it would require very large amounts of funding and a building renovation.

- 4) Why is it still listed for sale?

We are under contract to keep the organ listed for sale on Organ Clearing House until January 1, 2025. Following this, it is our decision to continue listing it or not. Since it was first listed in 2022, it has received no offers for purchase, though it has been shown to several interested clients.

- 5) Why has it only lasted 30 years, as opposed to 300?

You would be correct in observing that many organs around the world are centuries old, and that much of the marketing around this organ's installation was centered around the idea of using established historical methods of construction. It is rare for an organ to have problems this early on, but those listed above are testament to the poor quality of Mander's workmanship.

- 6) Why can't Mander do anything about this today?

Though they did express a willingness to help in 1998, our contract with them expired shortly after, and judging from correspondences from the early 2000s, they were reluctant to admit the extent of their mistakes, and certainly to do anything to help until 2019. The company went out of business in 2020.

- 7) How much would an extensive renovation cost?

It would be impossible to put a price tag on this without first speaking with experts and consultants, but the price tag would largely depend on the extent of the work. A basic renovation would be able to correct the current issues and prevent them from happening again. The important point to make is that the cost of a renovation, even a major one, be nowhere close to that of a new instrument because all the materials already exist – it would mainly cost in labor because the individual correction of thousands of pipes takes time and skill! This would be money well spent because it would ensure the success of this instrument for many years to come and would mean it would require less regular maintenance.



Ranks of the Great division



Small pipes damaged by cone tuning;
deformed/crushed tops and bending visible



A pipe which has been bent (mitered)
to fit in a small space, but which cannot
support its own weight.



This pipe's resonator width was not considered in the construction,
causing it to be cramped by the wooden brace next to it.



A photo of the complex web of very thin wooden
trackers that runs throughout the instrument to
connect every key to the pipes on two levels. This is
just one of many mechanical turns this system must
make to transfer energy from point to point.
Temperature changes negatively affect the
functioning of this system as the density of the wood
changes, causing them to bind to each other in warm
and humid weather. Mander's system of mechanical
action has proved inferior to others for a number of
reasons as this issue is not at all common in other
mechanical action instruments.