The 1930 Skinner Organ

In Sinclair Auditorium, Coe College

Cedar Rapids, Iowa

Site survey and visits: 7-11 August 2006
Report submitted: 8 September 2006
INTRODUCTION

This report comes at the request of Dr. Brett Wolgast. It comprises an historic overview, a survey the organ, a report of existing conditions, and recommendations for the immediate care and ultimate restoration of the Sinclair Auditorium organ. To prepare this document, Jeff Weiler and Jonathan Ambrosino spent August 6 to August 10, and the morning of August 11:

- playing the organ, inspecting the pipework, surveying mechanism and photo-documenting conditions;
- opening up windchests to determine the state of the internal leather;
- creating an inventory of pipes stored in the basement;
- removing the non-original Great Trumpet and reinstating the original First Open Diapason, formerly stored in the basement (the Trumpet stop was put into a storage box and arrayed in the basement storage area);
- through-tuning all 57 ranks;
- meeting with Brett Wolgast, Bill Carson and Dick Harmon to discuss the organ’s history, present and future.

This document is a prolonged snapshot of the organ over a week’s visit. Our impressions here blend with experience from other Skinner organs to appreciate and describe its present condition. By its nature, critical evaluation involves positive and negative observation. Comments are offered in fulfillment of the brief set forth: to determine the state of the organ and prescribe a plan for bringing it into the best possible condition. Where there is criticism, its intent is constructive.

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The organ contains thousands of pipes, most of metal but some of wood. These are in the Swell organ.
EXECUTIVE SUMMARY

The Skinner organ is historically significant. Built in 1930, it comes from the zenith period of the Skinner Company’s output, combining the best work of Ernest M. Skinner and G. Donald Harrison. The organ’s size and completeness enhance its status; the involvement of a prominent musician-consultant (Marshall Bidwell, a nationally respected performer in his day) lends notoriety.

Wise stewardship has kept this organ largely original. The organ’s excellence is matched by its rarity. Much like Victorian architecture, high romantic organs such as this were out of fashion from the 1940s to the early 1980s. During that period, many Skinner organs were either changed beyond recognition or discarded altogether. While minor changes have been made, the Coe organ retains most of its original musical character and all of its original mechanism. Moreover, it comes from a period many consider to be Skinner’s greatest: the æsthetic equivalent of a Tiffany window or a Steinway piano, only much more rare. Increasingly, the owners of Skinner organs are either restoring their unaltered instruments or seek to return them to the original configuration and tone.

The relocation from the Memorial Auditorium, coupled to layout and acoustics, prevent the organ from being as effective as it was intended. While the sound of the pipes gets out well from the organ chambers, the chambers themselves could be more hospitable to the tone and also the technician.

The organ has never had a systematic restoration. When it was moved to Sinclair in 1952, the organ was in excellent mechanical condition and required little if any mechanical overhaul. Since then, malfunctions have been handled on a patch-as-needed basis. The organ is now beyond the point of casual repair; it needs a full restoration.

Reliable operation isn’t a luxury but a necessity — particularly so in a college setting and this auditorium. Students and faculty require instruments in peak condition.

Recommendation:

• Restore the organ without mechanical alteration or modernization, returning every pipe to its original location, tonality and function.

• The organ is mechanically prepared for six stops; if appropriate vintage pipes could be acquired, they would only need to be placed into existing spaces. Completing these six stops would not compromise the organ’s historic status.
THE SKINNER ORGAN COMPANY

The Skinner Organ Company and its successor Æolian-Skinner are considered the foremost names in American organbuilding from 1900 to 1960. In operation from 1901 to 1971, the firm completed about 1,400 new instruments and hundreds of rebuilds.

After training with other Boston builders, Ernest M. Skinner (1866-1960) established his own business in 1901, intent on realizing an organ more modern in its control and more orchestral-sounding in its character. By 1910 he had secured many prestigious contracts, among them the new Cathedral of Saint John the Divine in New York. By the end of the First World War, with almost two hundred new organs to his credit, Skinner had made his the next name in American organbuilding. His Wagnerian style, with ethereal-sounding strings, lush-toned flutes, surprisingly faithful orchestral colors such as English and French horns, created a sonorous grandeur in step with early twentieth-century ears.

Skinner never stopped refining, and was constantly engaged in creating new effects. However, a trip to England in 1924 revived his interest in the stricter organ ensemble sound. In England, he heard instruments more brilliant than his own, due to telling stops known as “mixtures,” which incorporate groups of higher pitches. Upon returning home, Skinner began to introduce his own version of such mixture stops. In 1927 the Boston-London alliance was further solidified when G. Donald Harrison, a director of the English organbuilder Willis, immigrated to America and joined Skinner to assist with artistic development. Harrison infused the Skinner organ with sounds familiar to him from England, marking a distinct change in the Skinner instruments built between 1927 and 1931. Diplomatic and unpretentious, Harrison readily assimilated himself into the American organ culture. His praise of technological progress and deference to Ernest Skinner adroitly forged the groundwork for future development.

The timing was fortuitous. By the early 1920s, American organists had begun re-evaluating both their repertoire and their instruments. This younger generation started turning away from Wagnerian opulence, orchestral transcriptions and symphonic-style playing, favoring instead the music of J.S. Bach and his precursors. Baroque repertoire required clarity and transparency of tone that the orchestral type of organ was never intended to provide. The bright English-style choruses were one step toward a clearer result, and Mr. Harrison was welcomed as an agent of that tradition.

At first, Skinner admired Harrison and embraced his contributions. But each man’s fundamentally different musical goals soon made the situation untenable. Skinner sought brilliance as another ingredient in his opulent palette: the culmination of a style, not the path to a different one. Harrison was destined to become a reformer, and it became clear that he was headed in a new direction. By 1930, just three years after Harrison’s arrival, Skinner had cooled to the younger man’s views. By 1932, when the Æolian-Skinner merger occurred, Skinner had grown openly suspicious: Harrison’s work, not his own, was increasingly in demand, and it was ever more “classical” in its aspirations.

Those first years, however, were fruitful and happy ones, out of which came famous organs for Yale and Princeton, the Universities of Chicago, Michigan and Los Angeles (among others), Chicago’s Civic Opera House and the War Memorial Auditorium in Cedar Rapids. Ironically, the two men did some of their best work when together, and Skinner organs from this preeminent period of 1927-1933 are widely regarded as the firm’s best.
THE MEMORIAL AUDITORIUM SKINNER, OP. 771

Contracted in March of 1929, the Memorial Organ was originally scheduled for delivery before Christmas of that year. A few changes occurred in its design during its construction, and it did not arrive in Cedar Rapids until March of 1930. The instrument’s significance derives from several factors:

The trend of the municipal pipe organ: After the Civil War, the American public’s desire for music reached unprecedented levels. Families filled their homes with music and in the process bought pianos, reed organs and automatic instruments by the thousand. What they couldn’t play for themselves, the public were eager to absorb in the public sphere, through scores of concerts and recitals at churches, recital halls and the symphony. Even as recordings and radio gained prominence in the 1910s and ’20s, public music making and attendance remained high. However miraculous recorded or broadcast music might be, it was but a pale echo of the in-person tonal aura of live performance.

In a churchgoing era, the organ had nothing of its present day “churchly” stigma. Rather, it was viewed as “ennobling” and “uplifting”, lending a dignity, solemnity and grandeur to civic meeting places and public gatherings. In the early 20th century, it would have been unthinkable to build any theatre, auditorium or lodge hall without an organ. The reasons were both musical and practical. An organist could provide music far more cheaply than an orchestra, band or chorus. Moreover, all by itself the organ could lead throngs in song, as necessary, or provide an entire concert of appealing music, often in transcription from orchestral or vocal works. Despite an initial costly outlay, an organ almost immediately paid dividends both musical and practical.

Consultant involvement: Marshall S. Bidwell, a faculty member of Coe College from 1919-1932, figures prominently in the story of this organ. With his fine education and prominent position as Organist at First Presbyterian Church, Bidwell was clearly the dean of organists in town, and thus a logical consultant for the Memorial Commission for the acquisition of its Skinner organ. Many of the instrument’s features derive from the 1925 Skinner Bidwell played at First Presbyterian, varying slightly from standard Skinner practice. In 1932 Bidwell left Iowa to take up residence at the Carnegie Institute of Pittsburgh (where in 1933 he had the large 1918 Skinner organ enlarged and modified, along the lines of Op. 711), leaving Cedar Rapids without a Municipal Organist of note. When the organ was moved to Coe in 1952 by the Freeport Organ Co., of Freeport, Illinois, Bidwell advised on various tonal changes and came to play the rededictory concert. Afterward, Bidwell continued to write to Eleanor Taylor about various ways to refine the organ’s tone to its new surroundings.

Progressive tonal design: At first glance, the organ’s stoplist resembles other large Skinner organs of the period. The initial scheme was worked out between the Skinner Company and Bidwell in March 1929, with a few changes made during the progress of construction. The singing diapasons, sweet-sounding mixtures, brassy high-pressure Swell reeds, and bold Pedal organ are all typical of this era’s best: the stamp of Mr. Harrison. On the more atmospheric side, Mr. Skinner’s famous voices are present in abundance: the beautiful string voices, the ethereal Flute Celeste, and his famous Corno di Bassetto, English Horn and French Horn (the latter specially patented).
CHRONOLOGY
Since its installation and dedication in 1930, Op. 771 has had quite a history.

- **1929**
  March 9: $35,000 contract signed for new 38-stop organ in the Memorial Auditorium, with electrical/console preparations for nineteen additional registers, for which full mechanical preparation was given for six registers

- **1930**
  January 30: Voicing of organ complete in Skinner’s Boston factory
  April 2: Organ in place and dedicated in the Memorial Auditorium by Marshall Bidwell.

- **1932**
  Bidwell moves to Pittsburgh to assume post at Carnegie Institute (where he plays Skinner Op. 290 of 1918 and has it enlarged by Æolian-Skinner as their Op. 907 in 1933). Bidwell’s departure leaves Cedar Rapids without a Municipal Organist of national renown.

- **1950**
  December 2: Coe College petitions Memorial Commission to take the Skinner organ on loan and install it in Sinclair Auditorium.
  December 29: City Attorney gives blessing to the proposal.

- **1951**
  January 9: loan agreement executed, returned to the Memorial Commission January 12 with “an expression of sincere appreciation of the action of the Memorial Commission in making such constructive use of these facilities”.
  February 7: second agreement reached in which the College provided a Hammond 1B2 on loan; this agreement executed February 27.
  February 15: Memorial Commission agrees to the provision of the Hammond.

- **1952**
  Organ relocation is completed by Freeport Organ Company with several additions: the Great Mixture IV, Swell Nazard, Flautino and Plein Jeu III, each using new pipes and chests. No Skinner materials are disturbed or altered at this time, except for the elimination of the highest wind pressure and the almost certain revoicing of the Solo Harmonic Tuba and Pedal Ophecleide unit to speak on the lower pressure.
  October 22: Marshall Bidwell returns to Cedar Rapids to perform a concert of rededication
  October 30: letter from Marshall Bidwell to Eleanor Taylor, discussing “refinements” to organ:
  a. Directions on softening the Swell chorus reeds
  b. Proposal for making the Pedal “less muddy”
  c. Suggests the added Great Mixture could be louder yet “less shrill”
  October 30: letter from Bidwell to Owen Elliot, suggesting the softening of the Great Tromba, Swell and Pedal chorus reeds, Swell Nazard and Flautino. Bidwell also pleads for better acoustics: “Organ tone does not float; it stops dead.” He adds: “An organ of this size in your part of the country is bound to be shown off by first-rate organists, and therefore it is worth the College’s effort to put it in shape above too much criticism.”
• 1954
   April 27: Richard Dirksen of the Freeport Organ Company, “The organ installation was finished in the fall of 1952, all except for the low notes of the Swell 16ft Waldhorn. They were returned from Reuter in the spring of 1953.” (This relates to an engineering mistake original to 1930: the lowest six pipes are offset, and the little windchest was fed with 6-inch wind, not the 12-inch wind on which the pipes were voiced.)
   November 11: Reuter Organ Company to Richard Dirksen, responding to a request to canister-cap the wood-stoppered metal flutes (Swell Rohrflöte, Choir Flute [C]ouverte and Nazard). This work is never done.
   November 14: low-voltage DC generator removed, transformer rectifier installed in its place

• 1966
   August 18: Freeport Organ Company to Allan Kellar: (Larry Krusie now on company letterhead), reporting that the Great 16ft Open Diapason is beginning to give trouble (a sign that the organ, in its fortieth year, is beginning to experience the first signs of failure).
   December 12: Pipe organ maintenance contract entered into with Freeport Organ Company, $500 for four visits. Presumably the College had had such an agreement with Freeport ongoing since 1952, this one record having survived in the files.

• 1967
   August 6: Interdepartmental letter between College business manager and Dr. Allan D. Kellar, music department chair, saying that due to late date of budgeting, the 16ft “Spitzgedeckt” (Swell 16ft Bourdon), costing $2340 is out of the question, but new pedal keys and Choir 4ft Principal may be possible.
   August 7: Correspondence discussing the electrification of the Great 16ft Diapason offset chest.

• 1969
   May 17: Correspondence between Freeport and Eleanor Taylor discusses the addition of a Choir 4ft Principal, Swell 16ft Gedeckt, and new pedal key coverings. The keys were purchased, but not the pipework. $225 for pedal keys billed.
   October 23: Kellar to President McCabe: Difficulty of scheduling practice time, small practice organ upstairs is inadequate. Realizes the financial demands on the College are greater than usual, but a new practice organ would certainly be appreciated. This instrument would have been movable and used in both D-K and Sinclair.

• 1970
   May 28: “The static reservoirs are in desperate need of releathering.” Probably this failure is due from age; there is no specific mention of the steam failure that would later cause serious problems.
   October 21: Vandalism in the organ chambers results in pipe damage. In a second break-in, two loudspeakers were stolen. After the three locks are changed, there is no further incident.
• 1971

February 21: Handwritten letter from Miss Taylor to Larry Krusie regarding how certain ranks from the 1925 Skinner (Op. #486) at First Presbyterian Church might be reused in the Coe organ, scheming out the first draft of eventual tonal changes. Miss Taylor copies the letter to Allan Keller. By this time, the only other tonal change has been the removal and storage of the Great 8ft First Diapason.

March 11: Formal proposal from Larry Krusie for changes:
  i. #486 Swell 16ft Gedeckt in place of #771 Swell 16ft Contra Gamba
  ii. #486 Swell 8ft Tromba on existing #771 Great 8ft First Diapason
  iii. #486 Swell 8ft Diapason as a 4ft Principal on #771 prepared position for Choir 8ft Gamba
  iv. #486 Swell 2ft Piccolo as a Tierce on Choir $\frac{3}{5}$ft prepared position (in fact, pipes from the #486 Solo Gross Gamba and #486 Great IV Mixture were used).
  v. #486 Great 8 Second Diapason in place of #771 Pedal 16ft Diapason, notes 13-44. Original pipes removed to basement storage.
  vi. #476 Great 4ft Octave as new Pedal 4-2ft Super Octave/Principal on #486 bass chest and #771 Great 8ft Tromba unit chest. Tromba pipes removed to basement storage.
  vii. #486 Great IV Mixture notes 1-32 used as a new Pedal IV Mixture, also on Tromba chest.

“This proposal to be completed by January 1, 1972 at a cost not to exceed $1,200.

March 26: Letter from Miss Taylor to President Leo Nussbaum, commending the tonal changes and sharing details of the plan.

April 14: Proposal accepted.

• 1972

February 21: Letter from Miss Taylor to Dean Carson Veach, complaining about children’s theater encroaching on practice time.

• 1973

September 10: Letter from Allan Kellar to Dean Carson Veach, leak above organ chamber, “we had ‘for the nth time’ leaked above organ components and ‘for the nth time’ we had to replace the leathers in the organ chest.” This was probably the Swell 16ft flue chest.

• 1978

October 16: Letter from undergraduate Jeff Weiler to Dr. Thomas Slattery, music department chair, listing needed repairs.
  • Grille cloth cleaned or replaced
  • Organ should be through-tuned
  • Static reservoirs should be releathered
  • Resultant 32 and Cello 8 switch pneumatics releathered
  • Solo whiffletree leaks when furthest open
• Harp hammers need re-felting
• Various combination action repairs
• Sforzando action
• Cleaning of key and stopknob contacts
• Clean dirty reed pipes
• General cleaning of chambers
• Replace tuning wires of Great Trumpet 8ft and re-voice

• 1979
  January 6: Larry Krusie to Dean Slattery: confirming organ’s generally good condition. “In the coming years you will have to consider the complete releathering … some $18,000-$25,000 total on releathering…it is also true that parts of the organ have to be releathered…I would like to replace at least four sets of reed stops. During this month, we will releather one static reservoir and clean all console key contacts. This is all the organ needs, except for tuning as necessary.”
  September 28: Long list of problems generated by David Jenkins, an organ instructor

• 1981
  January 28: Dean M. Karns, Music department Chair to Larry Krusie: “a leak developed last week in the steam pipe in the blower room. We shut off the main switch, but haven’t turned on the organ. Can you come as soon as possible?”
  March 2: Krusie to Dean Karns, showing estimate of reservoir repairs at $3,500. Insurance claim submitted for same amount.
  June 24 through November 24: Ray Adams, organ instructor, submits another list of problems with the organ.

• 1986: Organ Historical Society visits Coe College on its Annual National Convention; local O.H.S. Chapter awards the organ a citation to “Encourage the Care and Preservation of this Historic Organ”. Citation mounted on wall above console.

• 1991: Brett Wolgast named College Organist.
• 1995: Brett Wolgast writes summary of organ, its background, and its current need; solicits restoration proposal from Quimby Pipe Organs of Warrensburg, Missouri.


DESCRIPTION AND VALUATION
When new, Skinner Op. 771 contained 38 registers, 44 ranks and 2,950 pipes — an organ of average size, perhaps even under-sized for the large Memorial Auditorium. Preparations were in place for two 32ft pedal registers (deep bass) and 19 additional stops — filling out the plan into a comprehensive concert instrument. After the 1952 and 1971 campaigns of tonal change, the organ has grown to its present 45 registers, 59 ranks and 3,708 pipes.
In strict terms, the organ consists of three basic elements:

- the blower in the basement, including two of the three original static reservoirs. The blower provides wind to both organ chambers and to the console;
- the organ chambers to either side of the proscenium, containing all the pipes and their associated mechanisms;
- the console, with its keys, stops and controls.

The organ’s value is important in determining maintenance budget, replacement cost and insurance value.

In this regard, it should first be recalled that Coe College does not own the organ. Title rests with the Memorial Commission, and the loan agreement of 1951 is still very much in force. In essence, this makes Coe both trustee and beneficiary of the instrument, never having paid for the instrument, but being charged with its care and benefiting from its availability. Dr. Wolgast relates that in recent communication with the Memorial Commission, they are reluctant to sign over title. Perhaps, then, they are willing to contribute to the upkeep of their property?

Meanwhile, since the organ is clearly the College’s responsibility and resides on College property, it is important to understand something about the organ’s value in monetary terms. A Skinner was the best money could buy in 1929, and as expensive as any make. Purchasing an organ of this size today from one of the country’s best builders would cost between $1.3 and $1.5 million. These figures do not take into account costs usually borne by the purchaser in the acquisition of any pipe organ, which generally include (but are not limited to) shipping, hoisting, insurance and site preparation costs. Therefore, we recommend the instrument be insured at a minimum of $1.5 million.

The cultural and historic value of the organ is incalculable. The Skinner Organ Company built about 750 organs before merging with Æolian to form Æolian-Skinner in 1932. Most of have been either altered or discarded. When restored, the Coe Skinner can take its place among the rare breed of slightly more than a hundred Skinners in original, unaltered condition. Since many are smaller than this one, the Coe Skinner falls into an elite sub-category.

**MECHANICAL CONDITION**

1. General

Despite their size and complexity, pipes organs actually have few visible moving parts.
Elements move through perishable materials such as leather, felt and rubberized cloth. In the renewal of such elements lies an organ’s potential for longevity: if engineered for ready rebuilding (as this one is), the instrument can be renewed indefinitely. In this fashion, the great European organs have lasted for centuries, and even in America there are 200-year-old instruments still in excellent condition and giving regular service.

Being perishable, the leather, felt and rubbercloth elements wear out with age and use, just as brake linings, roof slate and tuck-pointing. An organ’s decay extends beyond the merely mechanical; as pipes age and become dirty, their tone deteriorates. Therefore, every forty to sixty years, it is necessary to restore or rebuild organs, regardless of their style of manufacture, to give them a fresh generation of usefulness.

For this organ to have passed its seventy-fifth birthday without any major mechanical work is a testament to the high quality of original craftsmanship and materials. At this point, the instrument is on borrowed time: several reservoirs have been repaired, allowing the organ to continue in operation, and various other items have been addressed on a minor, only-as-needed basis. But the organ is nearing a crisis point when many things will fail simultaneously. Moreover, the pipes are filthy from dirt and terribly out of regulation, making the present musical effect a pale reflection of its true potential. The time has come for systematic restoration.

2. Blower and Blower Room

The health of any pipe organ begins with clean air. If the instrument is allowed to draw in dirty air or be exposed
to extremes of climate (too damp, too dry, too hot, too cold), inevitably the mechanism will suffer. Moreover, if the blower room houses non-organ items, neglect, dirt and poor treatment usually follow.

The blower room at Coe is one of the worst imaginable.

- Unfiltered air is drawn through an outside door, along with considerable dirt. Because that dirt gets drawn through the blower, the organ is filled with dust and grime inside and out. The damp leaves and rotting rags gathered in the corner are a further indication of the room’s unsuitability to its rôle.

- The steam equipment generates tremendous heat and humidity: exactly the wrong thing for the wood, glue and leather of the two static reservoirs, as well as the air drawn through the blower and into the organ. Failure of the steam equipment has twice caused major damage, requiring repair of the static reservoirs.

- When the water damage settled on the floor, it entirely rotted out the thick jute padding on which the blower sits. As a result, the machinery does not sit level and does not have proper mechanical isolation.

- The blower motor appears to be properly lubricated and runs smoothly. When the organ is silent, and no wind is being processed, such motors generally idle at a cool temperature. This motor warms quickly, since the organ’s many leaks force the blower to process a considerable amount of wind even when no pipe is sounding.
The organ originally had two blowers. The pipes require wind at low-, mid- and high-pressures. The present blower supplies the low (5- and 6-inch) and mid (12-inch) pressures: a small step-up blower, now gone, boosted the mid pressure up to high (20-inch) for the Tuba Mirabilis and Pedal Ophecleide. The present room shows no evidence of the electrical hook-up or ductwork associated with the second blower, so it probably wasn’t brought over from the Memorial Auditorium. However, the high-pressure static reservoir was brought over; being stored on the blower room floor, it took the worst water damage in the steam leakage.

The Tuba and Ophecleide now speak on the mid-pressure, and the pipes were revoiced to suit these new conditions. In a restoration, one decision will be whether to re-instate the 20-inch wind pressure and revoice back to their original, louder tonality.

The Blower Room is not the only problem in the Sinclair basement. Certainly the dry wood chairs and props containing fabric constitute a fire hazard. Ideally these materials would be stored elsewhere.

**Recommendation:** It would be unfortunate to restore the organ and have the blower remain in this environment. It would be ideal to reconfigure the basement, store the props somewhere else, and create a new, centrally-located blower room directly underneath the stage, properly soundproofed and fed with a filtered, climate-controlled air supply (see Climate, below).

3. Organ Chambers

The organ — its wind system, pipes and related mechanisms — resides in two chambers to either side of the proscenium. With a few exceptions, the organ’s layout in Sinclair follows the arrangement in the Memorial Auditorium, the principal difference being that the two sides were reversed and turned 90 degrees. It seems probable that an awareness of the organ existed during the construction of Sinclair, to facilitate the transplant. Evidence inside the chamber further suggests, however, that the space was a modification to the original plan, possibly even mid-construction, not considered at the outset.
• The chambers are well positioned for organ tone to get out, but not ideal, in that the space is somewhat inhospitable. Raw concrete provides good mass for the reflection of tone, but its rough surface diffuses rather than projects tone, while tending to trap and exude dirt.

• Just as important, the chambers have no real ceilings, only thin Masonite panels on frames. The tone loses focus as it wafts up into the attic rather than projecting solidly into the auditorium.

• There is evidence of considerable water damage in these chambers, particularly on the East side proscenium wall.

• Access to the chambers is excellent on the left side, through large double-doors. On the right, one crawls from the Chapel floor through a tiny square hatch. A proper door would be nice.

• Technicians cannot fix and tune what cannot be seen and reached. These chambers are poorly lit with just a few bare bulbs. As a result, moving about the interior of the organ can be treacherous. A first-class service lighting system is essential; besides, it limits liability exposure.

Recommendation: Some organs can be restored by removing only the pipes and components that require refurbishing, while the rest is cleaned in situ. In this case, the only way to improve the chamber, access and lighting is to remove the entire organ.

Above: The righthand chamber is entered through this two-foot-wall hatch worthy of “Alice in Wonderland.”

Middle: Raw concrete block provides mass for good sound reflection of bass tone but can hinder the diffusion of treble tone and traps dirt.

Right: The chamber has no ceiling, only thin sheets of Masonite™ arranged along wood strips. The plastic sheeting was put up in an attempt to divert water leakage away from the organ.
4. Wind System

Upon leaving the Blower Room, the wind system conveys and manages wind. Ducts convey the wind; additional reservoirs fine-regulate it; and tremolos impart vibrato.

DUCTS: In the removal, re-engineering and re-installation of the organ, the goal appears to have been to reuse as much old ductwork as possible, both for efficiency's and history's sake. Thus, most of the metal ducts are original to 1930 and in good shape. All of it can be preserved, cleaned and re-used in the restoration. In a few instances, flexible hose has been employed; this can be replaced with new metal duct in the style of the original.

FLANGES: Flanges link the ends of ducts to other components. Since flanges must be removed to gain access to other components, their good condition is an essential ingredient to ready service work. Flanges are gasketed in leather. As they often bear the brunt of the seasonal climatic shifts, they become a source of wind leakage. Normally in a restoration, flange surfaces are renewed and re-gasketed, broken ones replaced, and the screws fitted with compression springs to help the unit remain tight through seasonal change. This organ’s flanges are in average to poor condition, and should be renewed or replaced in the course of restoration.

RESERVOIRS: Of the twelve reservoirs, nine have received restorative repairs and are in adequate shape. Three are presently failing — Great, Choir and Pedal Bourdon — and are the primary source of the organ’s considerable wind leakage. Either these need to be repaired at once or these respective departments shut down. If one of these reservoirs were to rupture, a tornado of dirt would be unleashed in the chamber, getting into the mechanism and pipes and eroding the organ’s present delicate state of reliability.

TREMOLOS: Tremolos impart vibrato to the tone by introducing a recurring undulation in the wind supply. Beautiful tremolos are an essential element of an organ’s expressive capability, and particularly a Skinner.

Op. #711 has four tremolos. The Swell low-pressure tremolo works beautifully. The Choir’s is poor, primarily because of the failing Choir reservoir. The Solo’s is disconnected, as it has not been restored. The Swell high-pressure reed tremolo can be operated from...
inside the organ, and the effect is attractive. However, the leather on the starter device has completely rotted away, and thus this tremolo cannot be engaged at the console.

STEADINESS: Skinner organs are not supposed to have unvarying, rock-steady wind (which tends to make organ tone sound cold and antiseptic). However, nervous jitters and unsteadiness are not a part of the aesthetic either. While most of the wind supply exhibits supple and steady behavior, the Great wind jiggles perhaps too much. Since the reservoir is leaking so much, it is hard to tell how it would behave in good working order.

**Recommendation:** All aspects of the wind system need to be restored.
5. Windchests

The windchests contain leather discs called pouches, which are situated under every pipe. The leather varies in thickness depending on the application, but is essentially that of ladies’ gloves. As the organ is played, the leather is constantly flexing. Even a short piece of music entails thousands of individual pouch movements. As the leather decays, it develops punctures, causing notes either to go dead or to sound continuously, called “ciphering.”

Since the late 1970s, research has shown that polluted air, more than dirt itself, plays the largest role in leather decay. Organs in urban areas seem prone to earlier failure than their rural counterparts. Similar research has yielded valuable information on which types of leather work best for organbuilding use. Leather quality took a precipitous dip in quality during the post-war years, meaning that some organs from the 1960s are just coming due for their first re-leathering alongside other organs from the 1930s. Some rurally located Skinner organs from the same vintage as Coe’s are only now needing their first releathering. Given the clean Iowa air, it is not surprising that the organ is still on its original leather, if barely hanging on.

Most pipes are placed upon pitman windchests, in which matrices of pneumatics play the bulk of the organ’s pipes. A windchest is a complicated mechanism, and its proper restoration involves more than merely replacing the most obviously failing perishable materials. A thorough restoration should properly integrate all those restorative tasks that contribute to the maximum longevity.

LEATHER: We examined the note leather of the C-side pouch-rail of the Great Second Diapason. The pouch leather and valves are original, and they all work; remarkable for seventy-six years. The pouches could fail at any moment or might last another several years. At this stage, there is simply no predicting what might happen. Elsewhere, the first true sign of failure has begun: just a few stops over, on the First Diapason, three notes are dead; tenor B of the Swell high-pressure reed chest primary has failed, silencing all pipes of

ABOVE: The Solo windchest, showing the pipes of the French Horn (left) and Violoncello (right). The gaps to either side of the Violoncello pipes represent windchest positions for prepared-for stops, the 4ft Concert Flute (left) and 8ft Flauto Mirabilis (right). BELOW: The leather pouches that play the Great 8ft Second Diapason.
that note on that chest; and many offset bass notes have failed. The time for releathering is now.

PITMANS: these are tiny pneumatic switches that determine whether a stop plays. These are original, and are customarily replaced in a restoration.

STOP-ACTIONS and KEY PRIMARIES: These units key the notes and stops of a given windchest; having all the same elements described above, they undergo similar restoration procedures, with two additions. Where the stop box attaches to the underside of the windchest, a leather-wrapped felt “pillow” gasket secures one mechanism to the other and prevents leakage. These are customarily renewed. The large lead tubes that connect the stop actions to the pitman rails run through heavy leather gaskets, which are also renewed.

CHEST GASKETING: The bottom panels of the windchests are gasketed for wind-tightness. Sometimes the cork is in very good condition and does not require replacement; restorers approach this on a case-by-case basis.

BLOW LEATHER: These strips are cleverly set against joints that cannot be otherwise gasketed; the organ’s wind pressure blows them into a position from which they prevent leakage. The one strip we saw looked original. These thin strips are customarily replaced in a restoration.

DOWEL-NUTTING: As the windchests age, the screws of the bottomboard access panel have less and less hold into the soft pine. As screws strip out, leakage increases. A recently developed technique is to insert a hardwood dowel crosswise into the connection point, thus giving an old screw new bite. Since it does no harm, and helps keep the organ wind tight in the long term, the Coe Skinner is an excellent candidate for this corrective measure.

ACTION MUFFLERS: These covers keep the sound of the magnets and valves from entering the auditorium. The felt in these covers is original; new is usually affixed in a restoration.
DEAD NOTES: The dead notes below are due to failing leather.

**GREAT**
- 8' First Diapason 56, 59, 61
- 8' Claribel Flute 1, 2, 5, 11, 12

**SWELL**
- 8' Open Diapason 2
- 8' Rohrflute 2
- 8' Voix Celeste II 3
- 8' Flute Celeste II 1, 2, 3
- 4' Flute Triangulaire 66 (pipe pulled, damaged)
- 8' Vox Humana 65, 66, 67, 68 (pipes missing)
- H.P. reed chest 24 primary dead

**CHOIR**
- No dead notes on Choir pipe stops.
- Harp 7, 10, 27, 36.

**SOLO**
- 8' Harmonic Tuba 63, 64, 73
- Chimes

Many actions are on the verge of failure, but all play. The actions are very out of regulation, hence the variety in volume.

**PEDAL**
- Bourdon, 16 was dead; we cleaned a dirty magnet armature
- 4/2’ Super Octave 37, 39

**Recommendation:** The windchests need restoration in their entirety.

6. **Expression**

Dynamic change in organ tone is achieved by louvers, called “swell shutters” opening and closing in front of certain groups of pipes, much as Venetian blinds admit or deny light (see photo, bottom of page 14). At Coe, there are three such enclosures around the Swell, Choir and Solo departments. The shutters are impressive: heavy, butcher-blocked, 2½-inch-thick pine shades intended to clamp down the tone when shut and provide a wide dynamic range. Properly restored, they will do just that. At present, however, the Swell shades do not close all the way, the Choir’s close, and the Solo’s are completely inoperative.

The original electro-pneumatic motors are in various states of failure. The Swell’s has been superseded by a modern servomotor device. The Choir machine is barely hanging on, and the Solo’s doesn’t work at all. The electro-pneumatic motors are readily rebuilt and work beautifully. They are mounted in hard-to-reach positions, however, and it may be possible to move them for

![The pneumatic motor that operates the Solo shutters; reaching it in midair is particularly difficulty.](image)
better service access. By all means they should be retained, restored and reused.

**Recommendation:** The expression system needs a complete restoration, at which time the servomotor can be removed.

7. Electrical System

Like automobiles and flashlights, electric-action organs work on low-voltage direct current. Depressing a key closes a simple electrical circuit, sending a signal to an electromagnet that acts as a pneumatic valve. From there the process is entirely pneumatic, signals of air collaborating through valves to make the pipes sound.

**ORGANIZATION:** In the original Skinner organ, the wiring would have been systematic, tidy and practically invisible. Cables would have run in a group from console to chamber, and would have been distributed around the chamber with all logic and simplicity. Much of the wiring is original, but in the relocation it probably wasn’t possible both to reuse the original cabling and make it as tidy as the 1930 installation.

**FUSING and CODE ISSUES:** If the organ is to be dismantled, it will require all new cables and fusing, in accordance with the National Electrical Code for Pipe Organs.

**MAGNETS:** The magnets convert the electrical signal into puffs of air, converting the “electro” to the “pneumatic” of electro-pneumatic action. Nearly all the Bakelite magnets in this organ are original, and are in good shape; a few failed magnets have been replaced with modern equivalents. Although it is now customary in much rebuilding work to replace magnets, there is no reason to do so in this case; these are excellent units that will last a very long time, and require only re-gasketing and re-plating of the armatures. Besides, replacing any aspect goes against the grain of real restoration.

**SWITCHING and PEDAL RELAY:** Small electrical stations throughout the organ manage the transmission of electrical signals from the console to the various windchests. This very simple electro-pneumatic circuitry is restored just like all the other pneumatic components, and can last indefinitely as a result. Although it is customary to replace such machinery with solid-state, the organ’s rarity, coupled to the excellence of the original technology, recommends a complete restoration approach that embraces all aspects of

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**The electric servo motor that has been installed in place of the original Swell pneumatic swell shutter motor.**

**The pot metal magnets at the right are replacements for failed original bakelite magnets as those installed at the left.**

**Each pedal key activates this metal plate, which makes contact with dozens of metal contact fingers to operate the various pedal windchests. This marvelous original technology is easily restorable and can last indefinitely.**
the instrument, including its early electric technology.

At present, many station switches have been forced to remain in the “on” position making all primary actions for a given note fire when a key is depressed. Not only does this contribute to action noise, it needlessly overloads electrical contacts.

**Recommendation:** The electrical system should be restored in its entirety without alteration.

8. Console and Combination Action

Skinner consoles are among the most elegant in 20th-century American organ-building. Solid oak cabinetry, French-polished stop jambs and key frames, and solid ivory hardware for the natural keys, stopknobs, tilting tablets, thumb pistons and indicator tags all promote an environment of timeless elegance. Although thoroughly worn out at this point, Op. 771’s console retains all of its original appearance and elegance, and some of its feel.

a. the keyboards are completely shot and need complete rebushing and refurbishing. The good news here is that the ivory key coverings are in remarkably good condition, with only one chipped surface on the Solo. They will look and feel beautiful when restored.

b. The original ivory drawknobs and coupler tablets are in excellent condition. Several ivory drawknobs were removed and inexpensive plastic knobs substituted in the early 70s additions. In a restoration, these would be removed, and ivory replacements returned.

c. The pedalboard likewise needs complete rebuilding, including bumper felt.
new maple natural key coverings, and new ebony sharps.

d. The expression pedals are showing signs of wear, both on the tread and in the main bearings. They too could use a complete overhaul.

e. The electro-pneumatic machinery that recalls the combination memories and moves the stopknobs operates adequately. The setter pneumatics and various piston contacts work less reliably, and sometimes a combination has to be set repeatedly in order to gain the entire combination.

f. The sill of the music desk is non-original. It first contained a fluorescent tube, later changed to two small incandescent lamps. The lip now protrudes further than the original, obscuring the coupler rail. This is especially true in the case of taller organists.

g. Skinner benches were furnished with a backrest. Although the backrest for the console at Coe was once stored in the West organ chamber, it has now disappeared. Dick Harmon has provided that from the console of Skinner Op. #486, which can be fitted to the Coe Skinner bench if desired.

For the greatest cost efficiency and minimal intrusion into the music program, the console is a job best done all at once.

It must be said that since the advent of solid-state technology, many electro-pneumatic consoles have been modernized, with the original machinery substituted with solenoids to move the knobs and tablets, and solid-state circuitry to replace the electro-pneumatic switchgear. Certainly there is an undeniable convenience in additional levels of combination memory, but at a heavy historical price for an organ so otherwise original. Some Skinner

One of the plastic replacement drawknob heads amidst the original ivory ones.

The lip of the music desk has been fitted with crude lighting.

The console rolltop is normally completely backed in canvas. After being stepped on, the roll top was taken apart and rebuilt with simple canvas strips.
consoles can be modernized with minimal intrusion into the historical mechanism; this is not one of them. Either one retains the console entirely as it is, or submits to a complete modernization.

Historic organs are more than just their sound. From the feel of the keys and pedals to the responsiveness of the console, it is a complete experience, to which all mechanics, including the console, are integral. For Coe the real opportunity seems to be in having an entirely authentic Skinner organ of the best period, right down to every detail. Pursuing an authentic restoration may also have a funding advantage (see “Costs and Funding” below).

The console pit presents a disadvantage for performer and audience alike. It puts the console too low for good visibility from the audience, but not low enough to keep out of harm’s way. People have mistaken the delicate rolltop for a hard surface, and at least once it has been stepped on and repaired. It’s a miracle someone didn’t fall through and cause considerable damage to keys and stopknobs.

**Recommendation:** The console should be restored in its entirety without alteration. At the same time a console elevator should be installed, lowering the console below stage level for protection during certain theatrical presentations, while allowing it to be raised for good audience visibility.

**9. Pipes and Racking**

Racking holds the pipes in place, both at the base and, for the larger pipes, at the top as well. The racking is in very good shape generally, both original and modified sets. While each...
stop is dealt with specifically in the next section, two mechanical issues can be mentioned here:

a. The twill ties securing the large bass pipes should be addressed, since all are original and rotting. If even one pipe were to fall over, it could damage countless others that lie in its path.

b. Thus far, this instrument has come through without losing any of its original reed tongues. While it has sometimes been customary in the past to replace tongues while reconditioning reed stops, this should absolutely not be done here.

10. Percussions

HARP: The Harp effect is produced by a percussion instrument with hammers striking metal bars. The tone is similar to the orchestral celesta (as in “Dance of the Sugar Plum Fairies” from Tchaikovsky’s Nutcracker Suite); the few notes that work suggest that this instrument could be as beautiful as any Skinner harp, if completely restored. For reference, treble C is an ideal example of tone and lack of mechanical noise, while tenor B reflects an action that still works but with a hardened hammer. The tone suffers.

CHIMES: Twenty-five metal tubes produce these tones. Although all the notes play, many are on the verge of failure. The action needs restoration along the lines of the other mechanisms.
MUSICAL CONDITION
AND STOPLIST REVIEW

To the casual listener, the Coe College Skinner retains its general majesty and suave elegance. Upon closer inspection — certainly to organists, members of the music faculty and other musicians — the organ will sound tired. Beautiful tone is still unquestionably present, but not a single stop is even in tone or volume throughout its compass.

Fully restored, the organ would handily address any task that might be put before it. It is the best sort of organ to deal with a chambered position, having considerable fundamental strength and a power more mellow than brilliant. It has the potential to lead an assembly with great delicacy and sophistication. Still, it will be a revelation to even its most dedicated admirers just how much more polished, alive and beautiful the sound will be once the pipes are fully cleaned and reconditioned.

GREAT (unenclosed, right).
Voiced on 5-inch wind pressure
Pressure recorded at 5 inches exactly, c#13, Claribel Flute

16’ Open Diapason 61 pipes original condition, original chest position.
16’ Bourdon Ped. From Pedal, original borrow.
8’ First Diapason 61 pipes original condition, original chest position. before 1971: stored.
1971: #486 Great Tromba installed in this position.
2006: Tromba removed, stored; First Diapason reinstalled.
8’ Second Diapason 61 pipes original condition, original chest position.
[8’ Third Diapason] Unengraved stopknob preparation only, no pipes or chest.
[8’ Erzähler] Unengraved stopknob preparation only, no pipes or chest.
GREAT (continued)

8' Claribel Flute  61 pipes, original condition, original chest position. (The stop is a misnomer; from tenor C, this is in fact a standard Skinner “Great type” spotted metal harmonic flute, and not an open wood flute as the name implies.)

4' Octave  61 pipes, original condition, original chest position.

[4' Principal]  Unengraved stopknob preparation only, no pipes or chest.

4' Harmonic Flute  61 pipes, original condition, original chest position.

2-2/3' Twelfth  61 pipes, original condition, original chest position.

2' Fifteenth  61 pipes, original condition, original chest position.

[V Harmonics]  Unengraved stopknob preparation only, no pipes or chest.

1952: new IV Mixture on new chest, elevated above Great on bearers for prepared additions.

19.22.26.29  18
15.19.22.26  12
12.15.19.22  12
8.12.15.19  12
1.8.12.15  7

[16' Trombone]  Unengraved stopknob preparation only, no pipes or chest.

8' Tromba  73 pipes, located with Solo/Choir/Pedal. Pipes stored in basement. Knob now blank. Single-stop unit chest appropriated for Pedal 4-2ft Principal, IV Mixture.

[4' Clarion]  Unengraved stopknob preparation only, no pipes or chest.

Chimes [Solo]  Solo Chimes at 4ft pitch, G-G.

[Snare Drum]  Unengraved stopknob preparation only.

[Xylophone]  Unengraved stopknob preparation only.

[Piano]  Unengraved stopknob preparation only.

Pipes of the Swell 16ft Contra Gamba stored in a corner of the righthand chamber.

Great First Open Diapason reinstated from storage; these 14 bass pipes stand on a separate chest.

The left ear from low CCC of the Great 16ft Open Diapason has come off.
SWELL (enclosed, right hand upper, two levels)
Voiced on 6-inch wind pressure (flues, Flügel Horn, Vox Humana),
12-inch wind pressure (Waldhorn, Cornopean, Clarion)
Pressures recorded: low, 6 inches (g#21 Flute Celeste); high, 11.5 inches (Clarion d15)

16’ Contra Gamba 73 pipes. Stored in basement and chamber.
1971: #486 Swell Bourdon installed in this position.

8’ Diapason 73 pipes, original condition, original chest position.

8’ Rohrflöte 73 pipes, original condition, original chest position.

8’ Gamba 73 pipes, original condition, original chest position.

8’ Voix Celeste (II) 146 pipes, original condition, original chest position.

8’ Flute Celeste (II) 134 pipes, original condition, original chest position. Celeste rank starts at tenor c.

4’ Octave 73 pipes, original condition, original chest position.

4’ Flûte Triangulaire 73 pipes, original condition, original chest position.

[4’ Violina] Unengraved stopknob preparation only, no pipes or chest.

[2’ Flautino] Unengraved stopknob preparation only, no pipes or chest.

[V Cornet] Unengraved stopknob preparation only, no pipes or chest.

1952: 2½’ Nazard, 61 pipes, new pipes on new chest.
2’ Flautino, 61 pipes, new pipes on new chest.
III Plein Jeu, 183 pipes, new pipes on new chest.

15.22.26 12
15.19.22 12
12.15.19 12
8.12.15 12
1.8.12 13
SWELL (continued)

V Mixture  305 pipes, original condition, original chest position.
15.19.22.26.2915
12.15.19.22.2612
8.12.15.19.22 12
5.8.12.15.19  12
1.5.8.12.15   10

16’ Waldhorn  73 pipes, original condition (basses repaired 1953, by Reuter).

1930: CCC-FFF wrongly wined on 6-inch pressure

8’ Cornopean  73 pipes, original condition, original chest position.
8’ Flügel Horn  73 pipes, original condition, original chest position.
8’ Vox Humana  73 pipes, original condition, original chest position.
4’ Clarion  73 pipes, original condition, original chest position.

Tremolo  Restored. Excellent in effect.

CHOIR

Voiced on 6-inch wind pressure

pressure recorded as 6.75 inches (Corno di Bassetto, a#35)

16’ Quintaton  73 pipes, original condition, original chest position.
[8’ Diapason]  Full mechanical preparation including rack; no pipes.
[8’ Gamba]  Full mechanical preparation including rack; no pipes.

1971: #486 Swell Diapason installed as 4ft Principal

8’ Orchestral Flute  73 pipes, original condition, original chest position.
8’ Dulciana  73 pipes, original condition, original chest position.
4’ Flute [Clouverte]  73 pipes, original condition, original chest position.
2³/₅’ Nazard  61 pipes, original condition, original chest position.
2’ Piccolo  61 pipes, original condition, original chest position.
[1³/₅’ Tierce]  Full mechanical preparation including rack; no pipes.

1971: #486 Solo Gross Gamba, #486 Great IV Mixture (random), installed at 1³/₅ pitch.

8’ Corno di Bassetto  73 pipes, original condition, original chest position. Weight missing on GG#, replaced with leather nut.

[8’ Orchestral Oboe]  Full mechanical preparation including rack; no pipes.

Tremolo  Unrestored. Poor effect.

A crushed treble pipe. Fortunately, this sort of damage is atypical.
SOLO

Voiced on 10-inch wind pressure, except Tuba on 20-inch
Main pressure recorded at 10.5 inches (English Horn, a#35); Tuba 12.375 inches (a#35)

8’ Violoncello 73 pipes. original condition, original chest position.
8’ Gamba Celeste 73 pipes. original condition, original chest position.
[8’ Flauto Mirabilis] Mechanical preparation, including rack, for notes 13-73; no pipes or bass chest for notes 1-12.
[4’ Concert Flute] Full mechanical preparation including rack; no pipes.
8’ English Horn 73 pipes, original condition, original chest position.
8’ French Horn 73 pipes, original condition, original chest position.
Tremolo Unrestored, non-functioning.
8’ Harmonic Tuba 73 pipes, original chest position. Pipes presumably revoiced (Reuter?) in 1952 on 12” wind, upon de-commissioning of third and highest pressure in the wind system.

[4’ Clarion] Unengraved stopknob preparation only, no pipes or chest.

Chimes 25 tubes
[Echo 8’ Cor de Nuit] Unengraved stopknob preparation only, no pipes or chest.
[Echo 8’ Voix Celeste II] Unengraved stopknob preparation only, no pipes or chest.
[Echo 8’ Vox Humana] Unengraved stopknob preparation only, no pipes or chest.
[Echo Tremolo] Unengraved stopknob preparation only.

PEDAL

[32’ Sub Bass] Knob preparation only, was to have been 5-note extension to GGGG of Bourdon.

16’ Open Diapason 56 pipes. 1-12 original condition, original chest position. 13-37 wood, in storage. 38-56 heavy open common metal, on original position. Presently plays only at 16 and 8 pitches.
PEDAL (continued)

[16' Contra Bass] Knob, relay preparation only. Was to have been narrower-scaled bearded open wood. Relay switch now in use for Pedal 4ft Super Octave.

16' Open Diapason Gr. From Great, original borrow.
16' Bourdon 61 pipes, in original condition and chest position.
16' Contra Gamba Sw. Original borrow, now plays Bourdon pipes on same position.
16' Quintaton Ch. Original, original borrow.
8' Octave From 16ft Open Diapason
8' Cello So. From Solo Violoncello
8' Flute From 16ft Bourdon
8' Gedeckt Ch. From Choir Quintaton
4' Super Octave From 16ft Open Diapason

1971: New stop using #486 Swell bass chest #4 for pipes 1-9, and #711 Tromba chest notes 33-67 for pipes 10-44.

4' Flute From 16ft Bourdon
1971: 2ft Principal extension from 1971 Super Octave, on knob for 32 Bombarde.

[V Harmonics] Knob, relay preparation only.
1971: IV Mixture made from #711 Tromba chest notes 1-32, and pipes from #486 Great Mixture IV.

[32’ Bombarde] Knob and relay preparation only.

16' Ophecleide 56 pipes. original chest position. Pipes revoiced in 1952 on 10” wind, upon loss of third and highest pressure in the wind system.

[16’ Trombone Gr.] Prepared borrow in relay, unengraved stopknob.
[10½’ Quint Trombone Gr.] Prepared borrow in relay, unengraved stopknob.

16' Waldhorn Sw. Original borrow
8' Tromba From 16ft Ophecleide
4' Clarion From 16ft Ophecleide
Chimes [Solo] Solo Chimes playing at 4ft pitch, G-G
ENVIRONMENTAL ISSUES

1. Acoustics

The Auditorium’s primary use is for theatrical conditions quite different than those ideal for organ tone. All music and speech would be improved, however, if the Auditorium had more natural resonance, and ambient noise from HVAC and other mechanical systems brought within acoustical standards set forth for performance spaces.

2. Climate

Stable temperature and humidity are critical factors in the health of any pipe organ. The organ pitch depends upon stable temperatures; good operating condition relies upon a comfortable range of relative humidity. Tuning should be carried out at the temperature established for performance occupancy. Having been so tuned, the organ should come to pitch when those conditions are re-attained. In a clean organ with good pipework, stable climate and humidity control, an organ should require only periodic tuning.

A summer visit doesn’t permit us to gain some understanding of what the heating season produces with regard to stability and stratification within the chambers. The temperature on our visit was a fairly constant 80 degrees. If the auditorium is to be air-conditioned in the future, several matters should be handled at the same time:

- Mechanical isolation of the HVAC system to keep noise out of the performance space
- Introducing HVAC into the organ chambers
- Supplying the (hopefully new) blower room with conditioned air.

3. Building Fabric

Of greatest concern to the organ is the water damage in the East chamber, which seems to have happened repeatedly, particularly where the sloping roof comes down to the wall between the organ and the Chapel. Appropriate steps need to be taken to ensure that no water can leak into the building.

THE FUTURE

In our opinion, the organ is deserving of an uncompromising, first-class restoration. The goal now is to bring that about:

1. Administration

- Establish that your insurance covers the recommended organ replacement value at $1,500,000.
- If the organ were in perfectly restored, the present $2,500 maintenance budget might be adequate to routine tuning and maintenance. But with all the problems, and the need to keep the organ going until its restoration, even a budget of $10,000 per year is hardly out of the question.

2. Immediate Organ Work

- The three reservoirs on the verge of failure (Great, Choir, Pedal Bourdon)
need to be patched as soon as possible. They are dangerously close to blowing out, and are taxing the blower.

- Certainly there is no harm in vacuum cleaning and damp-wiping the chamber.

3. Short Term Projects

- Reinstate the Pedal Diapason, Great Tromba, and Swell Contra Salicional now stored in the basement. These pipes are safest when they are in proper position in the organ. Their return to the organ would yield immediate musical satisfaction while plans for a complete restoration are developed.
- Non-original pipes can be sold or traded for appropriate Skinner pipework that will be required to complete the prepared stops.

4. Plan of Work

- Rebuild the many un-restored elements of the wind system for a leak-free result and satisfactory tremolos
- Complete the windchest restoration to assure perfect operation and a leak-free result
- Re-engineer the expression systems for ease of maintenance
- Tidy a few elements of the electrical system
- At the conclusion of all mechanical work, perform a complete tonal regulation, from a remote keyboard in the middle of the auditorium, capped by a final tuning.
- This survey may only scratch the surface of mechanical problems that, in both short and long term, deserve attention.

COSTS AND FUNDING

Generally speaking, straightforward restorations cost about half the replacement value, or in this case about $750,000. In a situation where the entire organ has to be removed, chamber renovations should take place, vintage pipes found, and perhaps some reconfigurations necessary, it is by no means extreme to establish a budget of about $1 million. At the same time, it would be good to create a maintenance endowment, so that the Music Department is not constantly petitioning the funds for normal tuning and repair work. Perhaps also a Performance and Education Endowment could assure the organ’s good use before the public for decades to come.

The task of securing funds for the restoration of the Coe College Skinner will be easier once the significance of the instrument is more widely understood, and the need is better defined. Therefore, this report is the first step in the fundraising process. Almost always, multiple sources of funding are involved in such projects, binding together the generosity of private donors, local foundations, alumni associations, and others. The fact that the Coe College Skinner organ still functions in its capacity as a municipal organ is unique, and this may be a distinct advantage to raising funds.

In addition, the Joseph G. Bradley Charitable Foundation of Bryn Mawr, Pennsylvania has contributed funds toward a number of strict historical restorations of Skinner organs.
MAINTENANCE AND TUNING

Once the organ is back in first-class condition, it will require maintenance as would any other complicated machine. As a part of high-quality service work, you should come to expect the following:

- Competent and regular tuning
- Regular vacuum cleaning inside the blower room and in the organ lofts
- Regular cleaning of console keys and pedalboard
- Checking the lubrication and condition of the Spencer blower
- Noting and informing the client in writing of any impending problems observed in the course of service calls
- Leave a written report as to precisely what work was accomplished on any given service call
- Keeping a record of all service, with dates visited

Yearly maintenance budgets are often determined as a percentage of replacement value. One might expect to pay somewhere between three-quarters and one and one-quarter percent of an organ’s replacement value for annual tuning, service, blower checking and cleaning work. As stated above, your current annual organ maintenance budget for this instrument alone should be no less than $10,000 and probably $15,000 — and even this is a rough guess, since the organ’s reliability is unpredictable in the next few years.

The role of the musician in this process is to record problems in clear terms, and to note in the maintenance log how problems have been addressed. Often it is easiest to diagnose long-term difficulties when they have been clearly and consistently documented.

* * * * *

Thank you for the opportunity to compile this survey. It was a pleasure to return to Coe, and spending time with the Skinner organ was like becoming reacquainted with an old friend. Please feel free to be in touch with any additional questions or thoughts.

Yours sincerely,

Jeffery L. Weiler
Jonathan E. Ambrosino