

**Glück Pipe Organs, New York, New York  
Mayflower Congregational United Church of Christ, Oklahoma City, Oklahoma**

**An essay in determination**

The quest to replace a six-stop unit organ in Oklahoma City became a study in considered choices made by a fully involved group who gave to the future an instrument that serves worship, choral programs, solo recitals, and orchestral concerts. The organ committee at Mayflower Congregational United Church of Christ, in cooperation with their pastorate and director of music Richard Jobe, worked with consultant Scott Riedel of Milwaukee to develop an architectural, acoustical, and musical plan. They enthusiastically educated themselves, traveled the nation to see and hear instruments, and selected their architects, contractors, and organbuilder.

Living with a mid-twentieth century stock-design instrument, the church was moving from a position of extreme limitation to one of enormous freedom—and its attendant responsibility. It was known from the outset that the stoplist would evolve; omissions would be reinstated, new ideas would be raised and abandoned. That is how pipe organs are refined toward their final design once the builder is selected, a process that at times both disappoints and elates during the pursuit of cleverness.

There was no focus upon an idiom that would back the organ into a stylistic or nationalistic corner. Mayflower's instrument is by all means an American pipe organ, from its geographic location to the fact that its components were built by Americans in selected shops throughout this nation. Nonetheless, the term "American Classic" never entered our thoughts or vocabulary. That era remains a crucial and brilliant transition, to be acknowledged for its contributions, but it was dotted with obstacles to the full understanding of organ literature and history. Many of its lessons still apply, but should its templates?

**Architectural placement**

The spatial arrangement of pipe organs has been under discussion for centuries, as evidenced by myriad cyclical catchphrases—"mixing chamber," "line-of-sight," "functional display," "high and encased," "tone chute," and "entombed."

All incarnations present compelling effects, from jumping between main and dorsal cases in a North European organ, to the roaring, shuttered reeds scraping at the triforium of an English cathedral. The choice at Mayflower UCC was an arrangement that addressed the new chancel and choir area as if it were a concert hall, surrounding the proceedings with four well-engineered, highly effective chambers that were proximate enough to cooperate without losing individuality. Rigid walls, properly shaped ceilings, and thick, tightly fitting shutter blades make for an enormous range of amplitude.

**Tonal development**

Traditional structure—independent Principal forces for at least two manuals and the Pedal—anchors the organ in terraced levels of open tone at 16' for the Pedal, 8' for the Great, and 4' for the Swell. The Pedal has no chorus, *per se*, but a dedicated, extended rank retained from the previous instrument, voiced so that *movement* of the pedal line is heard. An additional 8' Open Diapason, extended up from this Pedal stop, is enclosed with the Choir division. There was no room in the Swell for a desirable 8' Principal, but this voice serves as an English Second Diapason, as well as a solo under expression to be accompanied by other divisions.

The Pedal 16' Contra Bass is not intended to be a 16' Principal, but to add definition through distinct tone and a substantial degree of independence from the unit rank. Making evident the motion of the pedal line was the goal, and it works as well under full forces as it does under the two undulants during introspective passages. Pedal power comes from the 16' Sub Bass, the 16' Trombone, and the harmonic complexity of duplexed mezzo-forte voices from the compound Great/Choir section.

The mixtures are kept to an even number of ranks for harmonic balance, and achieve different effects. The Great Mixture is unenclosed, speaks directly down the nave, sits at the front of the soundboard, breaks successively lower, and keeps its quints two scale diameters smaller than the unisons, resulting in a fuller treble. While I am personally disinclined toward the guttural infusion of a bold twelfth entering the chorus too far down the compass, it was eased in carefully during tonal finishing, avoiding the "pull," and in this case, actually appears



The new organ in the rebuilt chancel. The left chamber houses the Swell division and the Pedal 16' Trombone, with the right chamber accommodating the Choir, Great II, and Pedal flues. Behind the façades that flank the central window is the unenclosed Great I; the bottom octave of the division and the Haskelled Pedal 16' Contra Bass are behind the speaking façade on the left, and the main windchest is behind the non-speaking façade on the right.

to strengthen the alto voice in the middle and soprano octaves. The Swell mixture breaks less frequently, maintaining a slightly higher aggregate pitch in the contrapuntal range, the shimmer enhanced by power parity between harmonic components. Toward the top of the compass, a larger-scaled 8' pitch enters to fortify the unison line in the absence of an independent 8' Principal.

**The compound Great/Choir**

Between the wars, Mr. Skinner's three- and four-stop Choir divisions unintentionally opened a window onto Classicism for those Americans who had looked beyond the vested American *zeitgeist* during their overseas travels; in recent organs, I have followed his lead with very small third manuals that can make playable more of the literature with satisfying accuracy while enhancing the service of prayer.

I was determined not to make the Choir a garage for miscellanea at the expense of filling out the Great, and recommended to the consultant and the organ committee that we strip and re-leather Mayflower's original six-stop unit windchest to accommodate enclosed voices that could both embolden the Great and furnish a small Choir division. Four of the organ's seven

ranks were revoiced and incorporated, while the Clarinet and Harmonic Flute are new to the organ.

The key was to make certain that independent voices could be drawn at each pitch, and that if two stops on the same division were drawn from the same rank, we strive for a two-octave separation to minimize "missing pipe syndrome." The benefits are an elegant, clear third ensemble punctuated by the sparkle of the 1' Gemshorn, an historically dictated position for the Clarinet, and the nuance enabled by a second expression enclosure. The Great gained the indispensable 8' Harmonic Flute for the French literature and a solid 16' Bourdon to carry hymnody and undergird the plenum.

**The mutations**

For an instrument furnished with only one tierce combination, published works—both treatises and scores—from the 17th through 19th centuries provide guidance. Historically ensconced in the Choir or Positiv, the cylindrical half-length reed (here the Clarinet) cannot be roommates with the Tierce combination and perform the French dialogues of the Baroque (why deprive future organists of that option?), and it is well unwise



The console

**Glück Pipe Organs, Opus 14**

<b>GREAT I – Manual II, unenclosed</b>		<b>CHOIR – Manual I, enclosed</b>	
8' Open Diapason	50% tin	8' Solo Diapason* (Pedal 8' Princ)	
8' Holz Gedeckt	pine	8' Bourdon* (ext)	
4' Principal	50% tin	8' Gemshorn*	50% tin
2' Fifteenth	50% tin	8' Vox Angelica*	50% tin
Chorus Mixture IV	50% tin	4' Gemshorn* (ext)	
C 1 19 22 26 29		4' Harmonic Flute	pine
A#11 15 19 22 26		2' Principal* (ext, Ped 8' Princ)	
G#21 12 15 19 22		2' Recorder* (ext, Bourdon)	
F#31 8 12 15 19		1' Fife* (ext, Gemshorn)	
E41 1 8 12 15		8' Clarinet	30% tin
G#57 1 8		Tremulant	
8' Trumpet (Swell)		Chimes (25 tubes)	
Chimes		Zimbelstern (unenclosed with Gt I)	
Great I Silent		16' Choir to Choir	
		Choir Silent	
		4' Choir to Choir	
<b>GREAT II – Manual II, enclosed with Choir</b>			
16' Bourdon*	mahogany		
8' Harmonic Flute (Choir)			
C1–B12 from 16' Bourdon			
8' Gemshorn (Choir)			
8' Vox Angelica (Choir)			
4' Nason Flute (ext, Bourdon)			
8' Clarinet (Choir)			
Tremulant (duplicate control)			
4' Great II to Great			

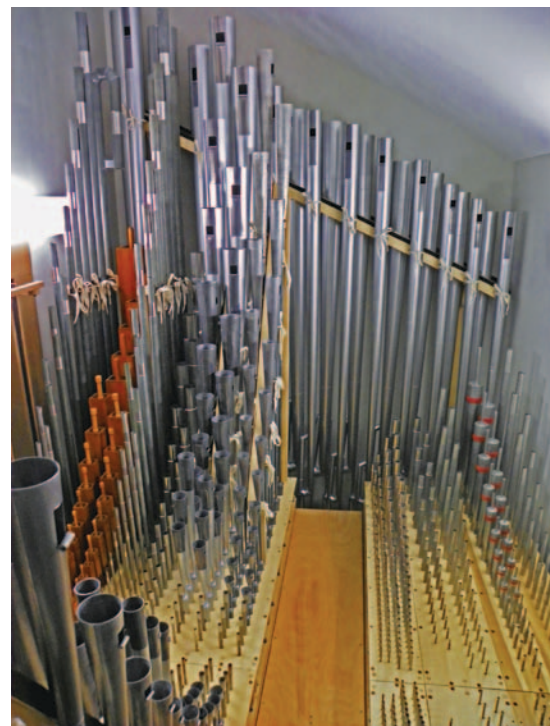




The Swell soundboard nearest the expression shutters (left to right): 8' *Violo de Gambe*, 8' *Stopped Diapason*, 8' *Voix Céleste*, 4' *Principal*, 8' *Trumpet* (with harmonic resonators), 8' *Oboe d'Amore*



The compound Pedal/Great/Choir (left to right): Pedal 16' *Sub Bass* (painted Portland blue), 8' *Bourdon*, 8' *Pedal/Choir Open Diapason*, 4' *Harmonic Flute*, 8' *Clarinet*, 8' *Vox Angelica*, 8' *Gemshorn*, expression shutters. The 16' *Bourdon* extension stands in the background.



Panoramic view of the Swell division. In the background, mitered to follow the roof line, stands the 16' *Bassoon*, with the Pedal 16' *Trombone* behind. The angled ceiling and heavily braced walls enhance the tone's blend and clear projection into the sanctuary.

to lock up two of the most pungent solo effects on the same manual. The Nazard and Tierce (originally conceived as a Cornet II until funds made it possible to separate them), reside in the Swell, benefiting from the recombinant capabilities of the fully independent flute choir, and where they can engage with the reeds for the fiery *Grand Jeu*, an effect unique in the world of music.

### The undulants

The Choir Gemshorn and GG-compass *Vox Angelica* are the source for gentle tone with more slowly tuned undulation. They were well-made pipes that the church already owned, and with revoicing and tonal finishing, they serve well in services of prayer; sacrificed were the likes of an English Horn and a bit more Choir independence, both of which had been on the "wish list." By contrast, the Swell strings are authentically brilliant, cutting, shimmering, and unapologetically orchestral, taking the vibrantly tuned undulant all the way down to 8' CC. This type of tone, desired and characteristic during the fourth quarter of the 19th century and well into

the last, is vital to the performance of the literature and should not be diluted.

### The three reed stops

The reed allotment challenge in a small organ is one of both color and pitch. The three historically primary colors (Trumpet, Clarinet, Oboe), and relative unison pitches (8' for the manuals, 16' for the pedal) jockey for position, and the balance tips inevitably when one is limited to a single rank of Trumpets that is hoped might fulfill the needs of the Great, Swell, and Pedal departments. The dilemma of rationed budget and space is not new, and Americans have faced it for decades. It is for this reason that I chose to place the organ's three reed stops on individual electro-pneumatic valve actions and present a candid acknowledgement of the available assets. Tonal directors choose sleights of scaling and make accommodation in the voicing so that musicians might take their cues from the resulting resources. If the conservative builder or designer chooses not to sustain the compromise, the clients and their successors must manage without.

Carrying the chorus reed burden of the entire organ, the Mayflower Trumpet is large, bold, brilliant, and must be handled with care. Fortunately, it could be scaled and voiced with abandon as it descends into the Pedal 16' Trombone extension where it needs not serve two masters. Part of the rank's success is that it grows toward the bass in the French tradition, and there is no 4' Clarion extension to pierce and fragment the grandeur.

The Swell 8' Oboe d'Amore, extended to 16' as the Bassoon, is firm, full, and warm, avoiding nasal tone in favor of a plump, round voice that is essential to the *fonds d'huit*. The richness achieved with full-length resonators facilitates blend when introducing milder reed tone into ensembles for textural buildup or choral accompaniment. In the American tradition of the last century, it is duplexed into the Pedal at 16' and 8' pitch.

The Choir 8' Clarinet makes no concessions, free to be gutsy, woody, and forthrightly characteristic. Highly identifiable to the "non-organ" ear (the target audience of the future?), the evocative, orchestral style of Clarinet fulfills the needs of both the solo and

anthem literature in lieu of a caricature voice that might elicit questions of taste or judgment. The Clarinet is made available in the enclosed Great II section so that it can be accompanied by stops from its own department, and appears in the Pedal as a *cantus firmus* voice.

### The 32' stops

The new acoustic at Mayflower could support gently balanced 32' tone, but there was no available space for the pipes. Resultant basses almost never work effectively in American organs, although they appear to be standard equipment, false hope in the form of a switch. They succeed in brief ranges, with certain scales, and with pipes of particular tonalities, but only if carefully placed in relationship to their neighbors and to the physical structure that houses them. The failure rate is compounded by the assumption that any stopped flute will suffice and that physics will intuitively provide a musical effect. Fortunately, the Mayflower 16' Sub Bass is of the scale, cutup, voicing, and positioning that it produces an unobtrusive and pervading 32' tone without muddying the waters.

Now that weight had been achieved, something unusual had to be introduced. What would prove to be most interesting? Resultant 32' Dulcianas date back at least to Hilborne Roosevelt's 1879–1883 double organ at the Cathedral of the Incarnation in Long Island City. The concept resurfaced in 1922 in Casavant's tonal recasting of the 1902 Hook & Hastings built for Temple Beth-El in Detroit, but the Mayflower 16' open metal proved too incisive and exposed to achieve such an effect with the desired subtlety, so I opted for a hint of spectacle. Cavallé-Coll's 1880 organ for La Cathédrale Saint Croix in Orléans sports a clamorous 10% Bombarde, breaking to 32' at C13, labeled Contre Bombarde. While such noise would be utterly inappropriate at Mayflower UCC, the transfer of this effect to the Bassoon is telling but unobtrusive.

### The console

The keydesk was inspired by the Aeolian organs for the homes of the aristocracy during the nation's Progressive Era, and further informed by later Hook & Hastings consoles. The balanced tablets on side jambs permit the musician to "read" the specification quickly and clearly; each

## Mayflower Congregational United Church of Christ, Oklahoma City, Oklahoma

SWELL – Manual III, enclosed		
8' <i>Violo de Gambe</i> (slotted)	90% tin	
8' <i>Voix Céleste</i> (slotted)	90% tin	
8' <i>Stopped Diapason</i>	pine	
4' <i>Principal</i>	50% tin	
4' <i>Chimney Flute</i>	50% tin	
2½' <i>Nazard</i>	50% tin	
2' <i>Piccolo</i>	50% tin	
1½' <i>Tierce</i> (breaks to 4' at F54)	50% tin	
Mixture IV	50% tin	
C 1	19	22 26 29
C13	15	19 22 26
C25	12	15 19 22
C37	8	12 15 19
A46	1	8 12 15
G#57	1	8
16' <i>Bassoon</i> (ext)	30% tin	
8' <i>Trumpet</i>	30% tin	
8' <i>Oboe d'Amore</i>	30% tin	
Tremulant		
16' <i>Swell to Swell</i>		
<i>Swell Silent</i>		
4' <i>Swell to Swell</i>		

PEDAL – enclosed except for 16' <i>Contra Bass</i>		
32' <i>Infrabass</i> §		
16' <i>Contra Bass</i> † (ext)	zinc	
16' <i>Sub Bass</i>	pine	
16' <i>Bourdon</i> (Great)		
8' <i>Principal</i> °	50% tin	
8' <i>Gemshorn</i> (Choir)		
8' <i>Bourdon</i> (Great)		
4' <i>Fifteenth</i> ° (ext)		
4' <i>Flute</i> (Great)		
2' <i>Choral Bass</i> ° (ext)		
32' <i>Contrabassoon</i> §§		
16' <i>Trombone</i> (ext)	zinc	
16' <i>Bassoon</i> (Swell)		
8' <i>Trumpet</i> (Swell)		
8' <i>Bassoon</i> (Swell)		
4' <i>Clarinet</i> (Choir)		
<i>Chimes</i>		

Interdivisional Couplers		
8' <i>Great I</i> to Pedal		
8' <i>Swell</i> to Pedal		
8' <i>Choir</i> to Pedal		
16' <i>Swell</i> to Great		
8' <i>Swell</i> to Great		
4' <i>Swell</i> to Great		
16' <i>Choir</i> to Great		
8' <i>Choir</i> to Great		
4' <i>Choir</i> to Great		
8' <i>Great II</i> to Swell		
8' <i>Swell</i> to Choir		
8' <i>Great</i> and Choir Reversed		

### Wind pressures

Pedal Trombone and Swell: 5 inches  
Remainder of the organ: 4 inches

° Four ranks of pipes revoiced from the original organ  
† C1 through G8 with Haskell re-entrant tubes, extension of Great 8' Open Diapason  
§ C1–B12 resultant from Sub Bass; 32' Sub Bass at C13  
§§ C1–B12 resultant from Bassoon; 32' Bassoon at C13





Sebastian M. Glück, artistic and tonal director; Albert Jensen-Moulton, general manager; Robert Rast, senior technician (photograph by Robert Rast)

field of stop controls is in the same location that it would be if drawknobs had been used. It glides less than half an inch above the floor with the gentle push of a hand as it is repositioned for its many uses in association with Mayflower's ministries. As with all Glück consoles, it is equipped with a high-capacity combination action, MIDI interface, and record and playback capabilities, yet the clutter of gadgetry is kept to a tasteful minimum.

**The visual design**

When developing organ cases, I call upon my university training as a preservation architect to develop visual statements that take their cues from their surroundings. Ornamentally and proportionally, this firm's new instruments appear as though they had always been in the buildings they serve. A relaxed presence and aesthetic harmony are achieved through the use of sympathetic materials and elegantly adapted details that are meaningful to the community. The classical arcuated pediment of the central window, the visual focus of the church since its construction in 1957, served as my guide. Where there were once two blank, sheer walls now stands a pair of pendant cases that echo the ceiling vault and the central window in order to accommodate the unenclosed Great I and Pedal Contra Bass.

**Putting it all together**

Pipe organs are made real by teams of people, and this firm's lean business model benefits from collegial cooperation. The staff at Glück Pipe Organs, including Joseph DiSalle, Albert Jensen-Moulton (general manager), and Robert Rast

(chief technician), was supplemented by students from the American Organ Institute at the University of Oklahoma and volunteers from Mayflower Congregational Church during the removal of the church's original pipe organ and the installation of the new one. Along with the trusted American suppliers with whom this firm has worked for over a quarter of a century, they liberated me to focus upon the design, scaling, voicing, and tonal finishing, with a view toward the artistic and musical outcome.

Scott Riedel, working with both Glück Pipe Organs and Steve Matthews, principal and project manager at Architectural Design Group, made it clear that consultants do not choose pipe organ builders, but guide institutions toward educated decisions—not hopeful guesses. The joy with which this project came together is heard in the sound of the pipes, and we are thankful to have been chosen by this growing church, educational center, and outreaching community unique in Oklahoma City.

**Videos and compact discs**

A short documentary on the Mayflower organ, a time-lapse film of its installation, and videos of other recent Glück pipe organs may be viewed at <http://www.youtube.com/user/GluckPipeOrgans/videos>. Four compact discs are available of Glück organs directly from the builder's website: <http://www.gluckpipeorgans.com>.

—Sebastian Matthäus Glück

Cover photo by Robert Rast.  
All other photographs are by Sebastian M. Glück, unless otherwise noted.

**Scott Smith Pipe Organs, Lansing, Michigan  
Newman Residence, Clio, Michigan**

When the builder was first approached about this project, the concept was merely to combine two identical three-rank Wicks organs into a single instrument. By the end of the initial meeting, and with a little arm-twisting, the owner became convinced that with a few changes, a much more musically satisfying outcome was possible.

To say that organist and choir director Richard Newman is a devoted music lover is an understatement. His ever-evolving music room contains three reproducing grand pianos, one upright, two Victrolas, a disk-type music box, and at least two harmoniums in addition to the pipe organ. Elsewhere in the house are two more reproducing grands, several other harmoniums, and more music boxes. The space, a converted three-car garage open to the rafters, has been expertly finished by the owner in a manner compatible with the historic 1860s farmhouse to which it is attached, replete with beveled glass entry doors, stained-glass windows, custom-milled paneling, and period furnishings. Acoustics are good, and the organ fills the room well, without being either mousy or overwhelming.

The two original instruments, built ten years apart, were identical in some ways, and quite different in others. Both began life with similar two-manual consoles and choice of ranks: 16'-2' Stopped Flute, 8' (T.C.) Open Diapason, and 8'-4' (GG) Violen. The comparative scalings of the Violen and the Stopped Flutes were somewhat similar, but oddly, it was the later instrument that contained the larger-scale Open

Diapason. The older instrument, Opus 1743 (1935) from Sacred Heart Catholic Church in nearby Flint, offered a typically simple but handsome case for the Wicks Sonata line, which became the Great division. The other instrument, from the mid-1940s, was originally installed in an unknown church in Ohio, and forms the basis for the Swell.

The original Bourdon bass in the Great was a rather demure, almost inaudible set, and was replaced by another Wicks Bourdon originally installed in an unknown Flint church. In an ironic twist, this orphan Bourdon was picked up rather coincidentally by the builder during an acquisition trip in Wisconsin, and has now returned to the other side of "The Lake" to a location near where it played for many years. Being of larger scale, the Bourdon now resides outside the case, and the holes that previously held the original Bourdon now contain an orphan 8' Diapason bass; something it never had before, and as we found it, remarkably mitred to fit inside the case perfectly. The Great Violen was moved to the Swell to become the celeste for the matching set there, and replaced by a Wicks Dulciana, whose overall tonal characteristic is similar to that of a small Diapason. The middle portion of the Stopped Flute was removed and replaced with a wooden Harmonic Flute from a 1916 Aeolian residence organ in Grand Rapids. The large Open Diapason was moved to the Great, displacing the smaller set to the Swell.

Builders who worked on the project include Joe Granger, Scott Smith, with assistance from Richard Newman. Many thanks to Richard Swanson of Grand Ledge, whose advice and parts proved to be invaluable.

—Scott Smith

**Scott Smith Pipe Organs**

Newman Residence, Clio, Michigan

**Summary**

- 16' Harmonic Flute (97 pipes, 1-24 stopped; 1-18 exposed)
- 16' Stopped Flute (97 pipes, 1-61 stopped)
- 8' Open Diapason (73 pipes)
- 8' Geigen Diapason (TC, 61 pipes)
- 8' Violen (GG, 78 pipes)
- 8' Violen Celeste (TC, 49 pipes)
- 8' Dulciana (GG, 78 pipes)

**GREAT**

- 16' Bourdon
- 8' Open Diapason
- 8' Melodia
- 8' Dulciana
- 4' Octave
- 4' Flute
- 4' Dulciana
- 2' Piccolo
- 2' Dulciana
- Tremolo
- Swell to Great

**SWELL**

- 16' Bourdon
- 8' Violin Diapason
- 8' Stopped Flute
- 8' Quintadena (derived)
- 8' Viola
- 8' Voix Celeste
- 4' Octave
- 4' Flute d'Amour
- 4' Violina
- 2 3/4' Nazard
- 2' Piccolo
- 1 3/4' Tierce
- Tremolo

**PEDAL**

- 16' Subbass
- 16' Lieblich Bourdon
- 8' Gedeckt
- 8' Bass Flute
- Swell to Pedal
- Great to Pedal

Two manuals, seven ranks  
Expression: Swell & Great  
Action: Electro-mechanical

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