Schoenstein & Co., Benicia, California
First-Plymouth Congregational Church, Lincoln, Nebraska
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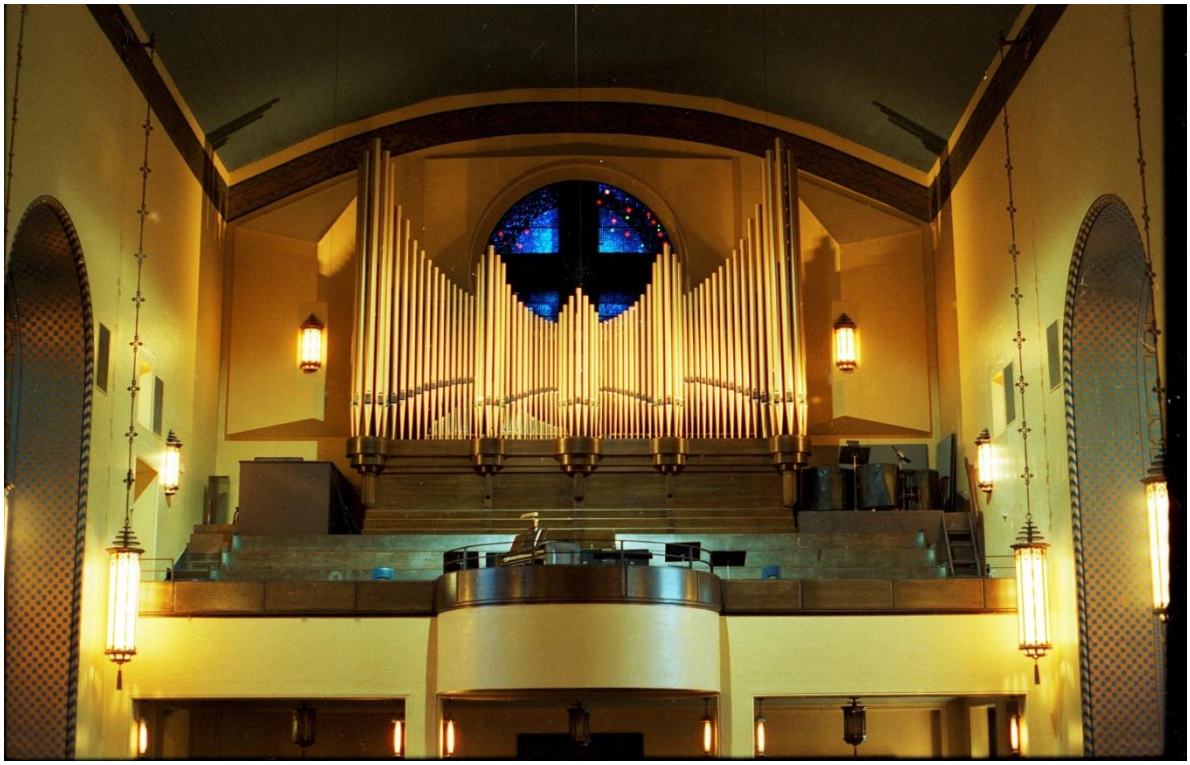

Gallery organ. The façade mirrors the chancel façade and is also made of quarter-sawn white oak with Art Deco details. (photo: Lou Hurst)

This is the fourth in a series of large instruments in our "American Romantic" style with tonal variety and dynamic range of symphonic proportions. It is also the "Magnum Opus" to date in our 121 years of organ-building. In an interesting way, this instrument both reviews that history and looks forward to the next century. Its design draws upon the great traditions of Romantic organ-building, which had taken hold at the time of our company's founding, and incorporates them into a modern framework with the resources necessary for a multifaceted, contemporary church music program. The design is based on the conviction that the organ can and should have the same kind of expressiveness as the symphony orchestra. Given the organ's many advantages, including pitch and dynamic range, tonal variety, and unlimited sustain, all under the control of one artist, the organ should be able to eclipse the orchestra in accompanimental versatility and musical expression. In fact, it must do so if it is to be the foundation of mainstream church music in the future.

Over a period of 25 years, Jack Levick, minister of music and fine arts, has built one of the most respected music programs in the country. In addition to everything expected in a church that serves one of America's largest Protestant congregations, First-Plymouth has a resident professional brass ensemble of ten players, and sponsors Abend-musik, Lincoln's premier subscription concert series, which presents both well-known and seldom-heard choral works with organ and orchestra in the tradition of the great oratorio societies, and organ/orchestra solo works, as well as internationally known guest artists. The church provides an ideal setting with an acoustic that reminds one of the great town halls of England and their counterparts in America, such as Boston's Symphony Hall. With its rich resonance, smooth frequency response, and even distribution of sound, it possesses the rare ability to satisfy instrumentalists, singers, and organists in all kinds of musical contexts with its absolute clarity combined with warmth and grandeur.

Our commission from Jack Levick was to build an instrument worth of this setting and able to pay its way as the foundation for his big music program. This required both a greater than normal amount of accompanimental stops and the power of a symphony hall concert organ. Hence, a fully developed symphonic instrument.

The Symphonic Idea

What are the musical qualities that a pipe organ must possess to be considered symphonic? First, clarity, so that compositional form and harmonic structure are obvious. Second, tonal variety to express the widest spectrum of musical moods by including all the members of each tonal family, so that the organist has the same registrational flexibility as does the symphonic orchestrator. Third, a wide dynamic range with precise control to provide terraced, continuous, or suddenly accented changes. Fourth, a tonal structure that allows the artist to achieve pitch and dynamic balance in all kinds of registrations from the most delicate to the most dramatic. Fifth, action and wind systems that aid in rhythm and phrasing. Only with steady wind of adequate capacity and a lightning-fast action on both attack and release can one achieve the finest nuance of phrasing, presenting with accuracy note values and articulation, accents of varying degree, and rhythm both strict and rubato. These five points may be summarized by one word—flexibility. All instrumentalists strive for the flexibility of the human voice, why shouldn't organists be able to? Note that imitative voices are not on this list. They are nice but not necessary. It is the musical expressive power of the symphonic medium we are after, not an imitation of the orchestra.

Many of the ways in which we have attempted to address these five musical requirements are clear in the stoplist; however, several points of innovation require explanation. (Some of these will be found in our description of the organ at St. Paul's, Washington, D.C., TAO, Jan. 1997.) To start, it helps to know how the organ is laid out. The church is a wonderful example of 1930s modernism with some traces of the style now known as Art Deco. This was the inspiration for the façade and consoles by our design director, Chuck Primich. The main case is divided into three sections. To the right is the Great on two levels. The center contains the Choir in two expression boxes, flues below, reeds and offsets above. The Swell is in a similar arrangement to the left. We made use of the organ chambers built at each side of the chancel for the original Kimball organ, which was replaced many years ago. The left chamber houses the Pedal division with a triple shade front 22 feet tall. The Solo is on the right with the inner celestial box above the rear section of Solo pipes. Thus, all chorus reeds are on the same level for tuning stability. A triple turbine 16-horsepower blowing plant provides wind through 30 individual regulators for absolute stability; high pressure is employed to achieve smoothness of reed tone and other tonal advantages—not loudness. Our electric-pneumatic action system with individual valve windchests is used throughout.

The console is made of quarter-sawn white oak, walnut, and Karelian birch burl veneer, with polished bone and ebony manual key coverings, polished ebony and cherry drawknobs on brass shanks, and cast brass expression shoes. (photo: Dennis Anderson)

Diapason Choruses

It is a common misconception that the symphonic organ concentrates on celestes, imitative voices, tubas, and wooly diapasons, giving choruses short shrift. Nothing could be further from the truth. The diapason chorus is to the symphonic organ as the string section is to the orchestra. It is the foundation and the signature of the organ. The Lincoln organ has a wealth of diapason tone and a symphonic approach to the upperwork. The Open Diapasons of the Great and the Gallery are of normal scale and tone and approximately equal in volume. The Large Open Diapason is on high pressure with very narrow mouths, and is intended strictly for added weight near the conclusion of the Great buildup or as a solo stop. The Small Open Diapason has the narrow slots of a French Romantic Montre. The Swell Open Diapason and Choir Dulciana are of normal slotted construction, the Dulciana being the smallest diapason in the organ. The upperwork is a coloring agent rather than a parallel structure of higher unisons and quints. In general, scales (and mouth widths) decrease at each pitch level. For example, a 2' rank in a mixture will be much smaller in scale and lighter in tone than its 8' foundation stop. All of the mixtures are at the same, relatively low, pitch level. This is to keep the tonal center of gravity at 8' pitch in all divisions. In the Great and Swell, a second mixture is provided for dynamic variety, not to add higher pitches. In our experience, organists are often frustrated in their attempts to find just the right mixture balance for different combinations. One solution is putting the mixture under separate expression. The other, employed here, is to provide mixtures of similar tonal quality and pitch but at different dynamic levels. The contrast in volume in the Swell is the most extreme, the large mixture being intended for use only when chorus reeds are drawn. The Cornet in the Great is of principal tone with volume equal to the Fifteenth so that it may be used with that stop or with the *forte* Mixture. The Tierce Mixture in the Celestial division has turned out to be more versatile than we had expected. It not only works well with the Tuba chorus, but is quite effective when coupled at different volumes to large Great combinations. The Choir includes a complete chorus of mild, but bright, unison and mutation pitches through 1'. When drawn together, they make a convincing chorus. (Parallel to this is a cornet decomposé through Tierce of relatively mild flute voices and a robust French-style mounted Cornet.)

Great

Because of the marvelous efficiency of sound transmission and clarity of the acoustic, we wanted a large, unenclosed Great with a wealth of 16', 8', and 4' stops. Since the Great had to be on two levels, we placed all of the *mezzo forte* voices on the upper level, making them separately coupleable as an Echo Great. These stops can be used as a separate division counterposed to the Swell and Choir, or to the Swell and Great. Nine 8' and four 4' flues make possible a Great buildup of kaleidoscopic color without need of an expression box.

Every family of tone is represented at two dynamic levels. These colors appear also in the enclosed divisions. This means that an interdivisional terraced registration or continuous buildup can be achieved by starting with enclosed material, then moving to stops of a similar character on the Echo Great, then back to the enclosed stops with the box more open, merging finally with the Great.

Swell

The Swell is a compact division but is capable of a flawless, English-style “full swell” buildup by virtue of two design points. First, the Cor Seraphique and Vox Angelique are borrowed independently at 8' and 4' pitches from the Celestial division. These stops are strongly tapered hybrids with a very bright flute tone, bordering on a string quality, particularly when the Celeste is drawn. Under double expression, they introduce and add smoothness to the Swell buildup. Second, one might think that having two oboes in the Swell is redundant; however, this has proved to be one of the most valuable attributes of the division. The capped English Oboe is softer and mellower than the French Oboe with its piquant quality. These can be drawn at various points, providing a smooth prelude to both flue upperwork and chorus reeds. By the way, the other member of the oboe family (an uncapped Oboe in the Gallery) and its cousins the Flügel Horn and English Horn are in constant use in both accompaniment and solo roles. The Swell Vox Humana has a tremulant control that increases the pulse to a high rate suitable for French Romantic registrations.

Solo—Celestial

This section (and the Gallery) employs our double expression system, wherein an auxiliary expression box is located inside the main expression box, thus doubling dynamic control. We generally place the loudest and softest voices of a division under double expression, thereby extending the volume range on both ends of the spectrum. The expressive range of this division is further increased at the extremes by placing the Vox Humana in a third enclosure adjustable at the console, and leaving the biggest Tuba unenclosed at the top of the main case. When the double expression system is not in use, the interior shades are automatically set at a point of normal balance.

This organ has four tubas at 15" wind pressure. The unenclosed tuba has a smooth, sonorous quality. The tuba chorus in the Celestial is of bright timbre and is available as Tuben (III), which yields three 8' unison tones by borrowing the 16' voice up an octave and the 4' voice down an octave. (The French Horn and Tuba Magna can be added to darken the sound.) In the Solo the same device is used to create a unison chorus of clarinet tone. One of the most appealing sounds in instrumental writing is unison clarinets and we wanted to make this available to the organist. The 8' Corno di Bassetto is a full-throated solo clarinet. The Bass Clarinet is of a lighter quality. The 4' Cor Sopranino is an Estey Haskell labial clarinet. It has a haunting quality, somewhat like a German Romantic free reed, which has proved to be immensely popular with organists. These three voices in unison make a wonderfully rich and new color. The French Clarinet, which is a Cavaillé-Coll model, is borrowed on this manual to add a fourth member to this ensemble.

The Böhm Flute is a further refinement of our Symphonic Flute introduced at St. Paul's in Washington, D.C. It is the result of several years of development to capture the character of the family of orchestral traverse flutes. It employs five different pipe structures throughout its compass, including harmonic, double-mouth harmonic, and double-mouth double harmonic. The tone changes from very intense, powerful piccolo and flute tones in the treble to a lighter more reedy character in the middle to a string-like tone in the bass. This stop is especially beguiling when used with the Variable Tremulant wherein the organist controls the speed and depth of the tremolo from a swell shoe assigned to that purpose.

Sforzando Couplers

Jack Levick was especially interested in finding a way for the organ to make a convincing *sforzando* or *forte-piano*. Second-touch keyboards were considered, but we were concerned about maintaining uniformity of touch among the manuals. We devised a Sforzando Coupler—an extremely simple and inexpensive solution. It simply routes a Swell to Great or Solo to Great coupler through a momentary touch toe lever. When these couplers are drawn they are silent until activated by the touch of the toe lever. By drawing a more powerful combination on the Swell or Solo, an accent on the Great may be achieved in exactly the same way that an orchestrator adds brass to highlight a downbeat.

Gallery Organ

The Gallery organ is more than an Antiphonal or Echo division. It has its own two-manual console and served as the church's only instrument during installation of the Chancel organ. The Gallery organ is still used independently for many occasions and for large works requiring two organs. Although it only has twelve voices, the double-expression system, which contains a very bright, piquant string celeste and a powerful, harmonically rich trumpet combined with a robust Pedal including an open wood, offers a remarkable musical scope. The Harmonic Trumpet is also an excellent foil to the Tuba Magna across the room in the Chancel case.

Dedication

The Gallery organ was dedicated on February 3, 1997, in a recital by John Scott of St. Paul's Cathedral, London. The Chancel organ was dedicated the week of October 11, 1998, with Thomas Murray accompanying the service and playing two solo recitals. Todd Wilson was at the console on October 27 with the Omaha Symphony Orchestra and the combined choirs of First-Plymouth, Westminster Presbyterian Church, and Nebraska Wesleyan University under the direction of Jack Levick. Todd Wilson also accompanied the silent film, *The Phantom of the Opera*, on October 30. All of these events drew a total audience of over 6,000 people. Honored at the events were Christina Hixon, trustee of the Lied Foundation, and Ruth Marie Amen, the two major donors.

The organ was built under the supervision of Schoenstein's vice president and technical director, Robert Rhoads. Department heads and voicers included Vicente Guerrero, Mark Hotsenpiller, Fred Lake, and Chet Spencer.

JACK M. BETHARDS
President and Tonal Director
Schoenstein & Co.

THE LIED ORGAN
FIRST PLYMOUTH CONGREGATIONAL CHURCH
LINCOLN, NEBRASKA
SCHOENSTEIN & CO.
SAN FRANCISCO, CALIFORNIA

GREAT (*3¾" and 4" Wind*)

16'	**Double Open Diapason**	61	Pipes
16'	**Contra Gamba**	12	"
16'	**Lieblich Bourdon** (*Chim. Flute Treble*)	12	"
8'	**Large Open Diapason** (*6½" Wind*)	61	"
8'	**Open Diapason**	61	"
8'	**Small Open Diapason**†	61	"
8'	**Gamba**	61	"
8'	**Harmonic Flute**	61	"
8'	**Corno Flute** (*Wood, Harm. Flute Bass*)†	49	"
8'	**Chimney Flute**	61	"
8'	**Quintadena**†	61	"
8'	**Erzähler**†	61	"
4'	**Principal**	61	"
4'	**Gambette**†	61	"
4'	**Spire Flute**†	61	"
4'	**Fernflöte** (*Stopped Metal*)†	61	"
2'	**Fifteenth**	61	"
$2^2/_3$'	**Cornet** II (TC)	84	"
2'	**Mixture** *mf* III	173	"
2'	**Mixture** *f* IV	217	"
8'	**Posaune**†	61	"
	Tremulant†		
	Choir Reeds on Great		
16'	**Bass Horn**		
8'	**Trumpet**		
4'	**Clarion** (*Celestial Reeds on Great*)		
16'	**Ophicleide**		
8'	**Tuba**		
4'	**Tuba Clarion**		

†*Stops on Echo Great Chest (3½" Wind*)

SWELL (*Enclosed - 4" Wind*)

16'	**Bourdon** (*Wood*)	12	Pipes
8'	**Open Diapason**	61	"
8'	**Bourdon** (*Wood*)	61	"
8'	**Gamba**	68	"
8'	**Voix Céleste** (FF)	63	"
8'	**Cor Seraphique** (*Celestial*)		
8'	**Voix Angelique** (*Celestial*)		
4'	**Gemshorn**	61	"
4'	**Harmonic Flute**	61	"
4'	**Cor Seraphique** (*Celestial*)		
4'	**Voix Angelique** (*Celestial*)		
2'	**Flageolet**	61	"
2'	**Mixture** *mf* III	161	"
2'	**Mixture** *ff* III-V	269	"
16'	**Bassoon**	61	"
8'	**French Trumpet**	61	"
8'	**French Oboe** (*Bassoon Bass*)	37	"
8'	**English Oboe**	61	"
8'	**Vox Humana** (*Variable Tremulant*)	61	"
8'	**Vox Humana** (*Celestial*)		
4'	**Clarion**	61	"
	Tremulant		
	Gallery Solo Stops on Swell		
8'	**Open Diapason**		
8'	**Harmonic Flute**		
8'	**Oboe**		
8'	**Harmonic Trumpet**		

CHOIR (*Enclosed - 4" Wind*)

16'	**Éolienne**	12	Pipes
8'	**Dulciana**	61	"
8'	**Concert Flute** (*Wood – Lieb. Ged. Bass*)	49	"
8'	**Lieblich Gedeckt** (*Wood & Metal*)	61	"
8'	**Éolienne**	68	"
8'	**Éolienne Céleste** (GG)	61	"
4'	**Fugara**	61	"
4'	**Forest Flute** (*Open Metal*)	61	"
$2^2/_3$'	**Twelfth** (TC)	49	"
$2^2/_3$'	**Nazard** (*Chimneyed*)	61	"
2'	**Salicet**	61	"
2'	**Harmonic Piccolo**	61	"
$1^3/_5$'	**Tierce** (TC)	42	"
$1^1/_3$'	**Nineteenth** (TC)	42	"
1'	**Twenty-Second**	49	"
8'	**French Cornet** V (TC - 5½" wind)	210	"
16'	**Bass Horn**	12	"
8'	**Trumpet** (*5½" Wind*)	61	"
8'	**Flügel Horn**	61	"
8'	**French Clarinet**	61	"
4'	**Clarion** (*5½" Wind*)	61	"
	Tremulant		
8'	**Tuba Magna** (*Solo*)		
4'	**Tuba Magna** (*Solo*)		

SOLO (*Enclosed - 10" Wind*)

8'	**Stentor Gamba** (*Flared, slotted*)	68	Pipes
8'	**Gamba Celeste** (*Flared, slotted*)	68	"
8'	**Böhm Flute**	61	"
8'	**French Cornet** (*Choir*)		
16'	**Bass Clarinet** (*5½" Wind*)	61	"
8'	**English Horn**	61	"
8'	**French Horn** (*15" Wind*)	61	"
8'	**French Clarinet** (*Choir*)		
8'	**Corno di Bassetto** (*5½" Wind*)	61	"
4'	**Cor Sopranino** (*5½" Wind*)	61	"
8'	**Clarinetti** III		
	Tremulant (*Variable Speed*)		
8'	**Tuba Magna** (*AA-Unenclosed-15" Wind*)	44	"

CELESTIAL (*Enclosed - 15" Wind*)

In separate enclosure inside Solo box

16'	**Ophicleide** (*Hooded*)	61	Pipes
8'	**Tuba** (*Hooded*)	61	"
4'	**Tuba Clarion** (*Hooded*)	61	"
8'	**Tuben** III		
8'	**Cor Séraphique** (*5½" Wind*)	68	"
8'	**Voix Angelique** (*AA - 5½" Wind*)	59	"
8'	**Vox Humana**† (*5½" Wind*)	61	"
2'	**Tierce Mixture** IV-VI (TC - *5½" Wind*)	258	"

†*In separate enclosure inside Celestial box*

GALLERY (*Enclosed - 4" Wind*)

16'	**Stopped Bass** (*Wood*)	12	Pipes
8'	**Open Diapason** (*Unenclosed*)	61	"
8'	**Stopped Diapason** (*Wood*)	61	"
8'	**Harmonic Flute** (*Bass unenclosed*)	61	"
8'	**Salicional**	61	"
4'	**Principal**	61	"
4'	**Chimney Flute** (GG)	54	"
4'	**Salicet**	12	"
$2^2/_3$'	**Nazard** (*From Chimney Flute*)		
2'	**Fifteenth**	12	"
2'	**Mixture** (IV)	244	"
16'	**Contra Oboe**	12	"
8'	**Oboe**	61	"
	Tremulant		

ETHEREAL (*Enclosed - 4" Wind*)

In separate enclosure inside Gallery box

8'	**Voix Sérénissime** II	127	Pipes
8'	**Harmonic Trumpet** (*7½" Wind*)	61	"

GALLERY PEDAL (*4" Wind*)

16'	**Contra Bass** (*Wood*)	12	Pipes
16'	**Stopped Bass** (*Gallery*)		
8'	**Bass**	32	"
8'	**Stopped Diapason** (*Gallery*)		
4'	**Octave Bass**	12	"
16'	**Contra Oboe** (*Gallery*)		

PEDAL (*Enclosed - 7" Wind*)

32'	**Major Bass** (*Resultant*)		
32'	**Contra Gamba** (*Unenclosed - 4" Wind*)	12	Pipes
32'	**Sub Bass** (*Resultant*)		
16'	**Open Wood**	32	"
16'	**Open Diapason** (*Great*)		
16'	**Gamba** (*Great*)		
16'	**Violone** (*Wood*)	32	"
16'	**Sub Bass** (*Wood - 15" Wind*)	32	"
16'	**Lieblich Bourdon** (*Great*)		
16'	**Éolienne** (*Choir*)		
16'	**Bourdon** (*Swell*)		
8'	**Open Bass**	12	"
8'	**Principal**	32	"
8'	**'Cello**	12	"
8'	**Flute** (*Great*)		
8'	**Stopped Bass** (*Wood - 15" Wind*)	12	"
8'	**Bourdon** (*Swell*)		
4'	**Octave**	12	"
4'	**Flute** (*Great*)		
32'	**Contra Trombone** (*15" Wind*)	12	"
16'	**Trombone** (*15" Wind*)	32	"
16'	**Bassoon** (*Swell*)		
16'	**Bass Clarinet** (*Solo*)		
16'	**Bass Horn** (*Choir*)		
8'	**Tromba** (*15" Wind*)	12	"
8'	**Posaune** (*Echo Great*)		
8'	**Corno di Bassetto** (*Solo*)		
4'	**Octave Tromba** (*15" Wind*)	12	"
4'	**French Clarinet** (*Choir*)		
8'	**Pizzicato Bass**†		

†*Draws 8' Open Bass through Pizzicato touch relay*

INTRAMANUAL COUPLERS

Great unison off
Swell 16', unison off, 4'
Choir 16', unison off, 4'
Solo 16', unison off, 4'
Gallery 16', 4'
Above couplers read through Intermanual Couplers

INTERMANUAL COUPLERS

Echo Great	to	Choir
Echo Great	off	Great
Great	to	Pedal
Swell	to	Pedal
Choir	to	Pedal
Solo	to	Pedal
Swell	to	Great
Choir	to	Great
Solo	to	Great
Choir	to	Swell
Solo	to	Swell
Great	to	Choir
Swell	to	Choir
Solo	to	Choir
Pedal	to	Choir
Gallery	to	Pedal
Gallery	to	Great
Gallery	to	Swell
Gallery	to	Choir
Gallery	to	Solo

SPECIAL COUPLERS

Swell to Great Sforzando
Solo to Great Sforzando
Above couplers activated by momentary touch toe lever

Pedal Divide

All Swells to Swell

MECHANICALS

Solid State Capture Combination Action with:
- 16 memories
- 80 pistons and toe studs
- programmable piston range for each memory level

15 reversibles including Full Organ
Expression shoe selector
Vox Humana expression and Tremulant speed selector
16 Crescendo and Full organ programs
Adjustable Bench
Separate two-manual console for Gallery Organ

MIXTURE COMPOSITIONS

GREAT III *mf*

C1	D15	D#52
15	12	
19	15	12
22	19	15

GREAT IV *f*

C1	D15	G#45	D#52
15	12		
19	15	12	
22	19	15	12
26	22	19	15

SWELL III *mf*

C1	A22	C#50
15	12	
19	15	12
22	19	15

SWELL III-IV *ff*

C1	D#16	A22	F#43	C#50
15	12	8	1	
19	15	12	8	5
22	19	15	12	8
	22	19	15	12
		22	19	15

CELESTIAL IV-VI

C13	E17	G#21	A46	C#50
15	12	8	5	
17	15	12	8	5
19	17	15	12	8
22	19	17	15	12
	22	19	17	15
		22	19	

GALLERY IV

C1	G#21	A#47	E53
15	12	8	1
19	15	12	8
22	19	15	12
26	22	19	15

TONAL ANALYSIS OF MANUAL VOICES

PITCH SUMMARY

16'	4	5%
8'	45	57%
4'	14	18%
$2^2/_3$'	3	4%
2'	10	12%
Above 2'	3	4%
	79	100%

TONAL FAMILIES

Diapason	25	32%
Open Flutes	11	14%
Stopped Flutes	8	10%
Hybrids	3	4%
Strings	9	11%
Chorus Reeds	11	14%
Color Reeds	12	15%
	79	100%

RECYCLED PIPES:
All pipes are new except:
Corno Flute—18—49—Modified Estey
Quintadena—1—61—Estey
Cor Sopranino—1—37—Estey
Open Wood—E.M. Skinner (389)
Violone—1—24—Austin (912)
Sub Bass—1—12—Wurlitzer