Dedication
of the
Charles M. Ruggles Organ
opus 22

Hillsborough Reformed Church at Millstone
Millstone, New Jersey
Sunday, April 7, 1991, 7:00 pm
A Message from the Pastor

When I see and hear our new pipe organ, I think of all the people who have made it possible for our church to offer this magnificent instrument for the worship of God: over two hundred members and friends contributed money, generous gifts were presented in memory of loved ones, dozens of people helped make the many decisions that were required over the past five years, youth group members held flea markets, skilled hands fashioned crafts for sale, carpenters, electricians and volunteer painters offered their skills, people served dinners and breakfasts and sold T-shirts and greeting cards. It was truly a united and uniting effort. Our church family came together in a marvelous way to make this pipe organ much more than a pipe dream.

Now that our new organ has been put into service, I appreciate what it is doing to lead our congregation in music and worship. As the many pipes and several ranks each do their part to complement one another and to speak alongside each other, I see a vision for this church where the many voices and colors that God has given us may come together to fulfill the English poet Gerard Manley Hopkins’ definition of praise as “giving beauty back to God.”

My prayer is that this gift to our church on the occasion of the 225th anniversary of its founding may inspire God’s sons and daughters for generations to come to serve God and one another in peace and love.

Soli Deo Gloria

Allen G. Buurma
Rev. Allen G. Buurma

A Brief History of Our Church and Its Organs

The Dutch Reformed congregation at Millstone was established in the summer of 1766, and thus is celebrating its 225th anniversary in the year 1991. Dutch families living in the area of what is now Millstone had, in the mid-eighteenth century, found it difficult to attend worship services regularly, since in order to do so they had to travel to churches that were not especially near by. Seventy such families petitioned, in July of 1766, to be allowed to withdraw from the churches that they had been attending and to establish their own church nearer to home. Parish boundaries were worked out during the winter of 1766-7, and an arrangement was made with the pastors of several existing churches for them to preach in turn at the new church.

The first church building, on the present site, was completed in early 1768. It contained 66 pews, and separate seating in the balcony for slaves. The church called Rev. Christian Frederick Foering as its first pastor in 1773. He arrived in 1774 and took up residence at the newly purchased parsonage farm to the north-east of the church. The church received a royal charter in 1775, as the Reformed Protestant Dutch Church of Hillsborough.

Church membership grew significantly during the early nineteenth century: so much so that it was decided, in May of 1827, that a new building was needed. This building, the present church, was dedicated on the Sunday before Christmas, 1828. Alterations have been made to the building on several occasions over the years. The most important of these was the construction, in 1892, of an addition behind the pulpit area, and the excavation of a basement for the church in 1957. The 1892 addition is the site of the present organ. The oak pews date from the first decade of this century. At about that same time the church acquired the lecture and concert hall which had been built in 1860 on the northern edge of the church property, and which has been known since as Memorial Hall.

The Church has had sixteen pastors after Rev. Foering, who died in 1779. The most recent have been Rev. Henry Hotaling (1926-1943 and 1946-58), Rev. Daniel Smith (1960-1968), Rev. Thomas Harris (1968-1978) and Rev. Allen G. Buurma, who has been pastor of the church since 1979.

The first mention of an organ in Hillsborough Reformed Church records occurs in the year 1879, when the year’s budget included $25 for the organist and 5 for someone to work the bellows. Nothing is known about this organ. The church acquired a new organ in 1893, and it was placed in the new addition behind the pulpit, blocking the windows in the far wall of the addition. This organ served the church for seventy years. Although it received extensive refurbishing in late 1961, its condition deteriorated during the winter of 1962-3 — at least in part because of a malfunction in the church heating system — and it was decided to replace the instrument. In the summer of 1963 the church purchased a used E.M. Skinner organ which had been removed from Christ Episcopal Church in Ridgewood, NJ. This instrument was rebuilt, and combined with some of the pipes from the old organ by Kenneth Smith of Livingston, NJ. For reasons of space, the pedal pipes of the Skinner organ were not used, and in fact the new instrument was given a fully electronic pedal division. Sixteen ranks of pipes were distributed, with considerable borrowing, over three manual divisions. The instrument was installed in the existing organ chamber with the existing facade pipes.

By the mid-1980’s the organ had deteriorated badly. The cost of repairing it was found to be very high, and the decision was made instead to purchase a new instrument. The committee entrusted with this undertaking came to the conclusion that a free-standing tracker organ would best serve the needs of the church, and, after a careful comparison of the work of several builders, asked Charles Ruggles to design and build the instrument. Since the new organ is smaller in size than its two immediate predecessors, it has been possible to restore the windows at the back of the organ chamber to use, more than a century after they were sealed off.
From the Builder

The organ has the longest continuing history of any musical instrument. In a form called the "hydraulis," it was heard in pre-Christian times at pagan festivals and sports events. Of greater interest to us is its use as the principal musical instrument of the Christian Church for over a thousand years. As early as 940 A.D. the Cathedral in Winchester, England is reported to have had an organ containing 400 pipes. By the late middle ages organs were quite common in churches all over England and Western Europe.

During the 16th century the organ came to have the characteristics that we associate with the instrument today, and the musical needs of the various branches of the Christian Church gave rise to several national styles of organ building. In northern Europe the 17th century saw great development of congregational participation, hymn singing, and liturgical music. This Reformation tradition of church music led to the line of such great composers as Sweelinck, Buxtehude and J. S. Bach. The finest organ builders of the 16th through 18th centuries created instruments which we now consider as belonging to "The Golden Age of the Organ." The principles of design and construction that they used remained basically unchanged until the middle of the nineteenth century. These mechanical action organs, or "tracker organs," were then the only type of pipe organ. Faithfully and effectively they served composers and performers. Today, having survived a series of experimental departures from its tradition, the tracker organ is being rediscovered. It has been recognized as the best system of key action because of its responsiveness to the performer and its ability to function virtually maintenance-free for many years.

The organ we have built for Hillsborough Reformed Church is a tracker organ and its concept derives from the tonal ideas and building practices of the 16th-18th centuries of northern Europe, especially those found in the many Reformed churches in Holland that I visited. It is the outgrowth of over three years of thought, research, planning and meticulous craftsmanship. The overall conception and design of the organ and its case is by Charles Ruggles. The tonal design was worked out with the help of Sara Burden-McClure, the organist/director at the time of contracting. We hope that it will not only serve to enrich the musical experience of the worshipping people of Hillsborough Reformed Church, but that it will be a stimulus to the musical and artistic life of the entire community and surrounding communities.

The large solid wood cabinet, or case, houses the pipes and playing mechanism of the organ. Of the 18 stops, only the pipes of the most important one, the Principal 8', are visible. These form the entire facade of the instrument. The rest of the pipes of the GREAT division stand behind these principal pipes in rows following the same order. This means that all of the pipes playable from a given key stand in a line from front to back. There is a valve under the windchest for each key and a complete set of pipes above for each stopknob. This age-old arrangement has proven to have countless advantages for the tone and tuning of the instrument.

The pipes for the second keyboard, or SWELL, are located in the lower case behind the keyboards. Their sound emanates through the carved panels above and to the sides of the keyboards. The single pedal above the pedal keyboard controls a set of shutters which allows some dynamic control of the SWELL pipes.

The pipes of the PEDAL division stand near the floor on either side of the SWELL, with some pipes reaching nearly to the roof of the case. Only the blower and bellows are not inside of the case. They reside in a specially built pit to the left of the organ.

The case, bench, pedalboard and carvings were constructed of white oak, which was hand-planed and oiled. My brother-in-law, Martin Pasi, designed and executed the carvings utilizing the dogwood motif. The keyboard naturals are cow leg bones and the sharps are Brenadil, an African wood. Stopknobs are Brazilian Rosewood. Other woods used for windchests, bellows and action parts include poplar, sugar pine, Honduras mahogany, redwood, ash, maple and walnut. Most of the pipes were made by myself or my associates. The GREAT Trumpet 8' and the SWELL Dulcian 8' were made to order by Jacques Stinkens Organ Pipe Makers in Zeist, Holland.

The tuning system we used on this organ was proposed in 1978 and 1980 by H. A. Kellner, as a J. S. Bach temperament which he derived from a study of musico-theological spirituality of the Baroque, from a study of Bach's numerology, and from an interpretation of the design of Bach's signet ring. It is really a development from Werckmeister III in that the Pythagorean comma is spread equally over five fifths instead of four. It is an unrestricted temperament in which music can be played in all keys.

It is our hope, as the builders of this instrument, that it will glorify God and enrich the congregation and the community in which it stands. We are thankful to the many people of the church who have supported us while the organ was being planned and constructed with hospitality, thoughts, ideas and good wishes. I am thankful to all those kind people who prepared such fine dinners for us and shared their fellowship with us. I am especially thankful to Allen and Linda Buurma, Janet and Mark Singley, and Jean and Earl Thomas for their fine hospitality in housing my staff and myself.

Charles M. Ruggles

Charles M. Ruggles is a native of Cleveland Heights, Ohio, and a graduate of Oberlin College where he studied organ with David Boe and Fenner Douglass. In 1969 he won the National Scholarship Competition sponsored by the Cleveland Chapter of The American Guild of Organists. During the year 1971-72 Mr. Ruggles served as assistant organist of Trinity Cathedral, Cleveland. In the summer of 1972 he attended the Summer Academy for organists in Haarlem, Holland, where he studied with Anton Heiller and Luigi Tagliavini. He has also studied organ with Robert Fort, J. Heywood Alexander, William Tinker and Donald Willing.

Mr. Ruggles learned organbuilding with John Brombaugh in Middletown, Ohio. In 1972 he studied extensively the old organs and organbuilding traditions in Holland, Germany, France, Switzerland and Austria. Since September of 1975 he has been building mechanical action organs under his own name in his workshop in Cleveland Heights. In September 1981 he moved his workshop and residence to Olmsted Falls, Ohio. Mr. Ruggles is a member of The American Institute of Organbuilders and the International Society of Organbuilders. In addition to designing and building new instruments, Ruggles Pipe Organs is engaged in selective rebuilding and restoration of 19th century mechanical action organs.
Specification
of the
Charles M. Ruggles Organ
opus 22, 1990

GREAT
Principal 8'
Rohrflote 8'
Octave 4'
Octave 2'
Mixture III-V
Trumpet 8'

SWELL
Gedackt 8'
Principal 4'
Rohrflote 4'
Nasard 2-2/3'
Blockflote 2'
Tierce 1-3/5'
Scharf III-IV
Dulcian 8'

PEDAL
Subbass 16'
Octave 8'
Trombone 16'
Trumpet 8'
couplers:
Great to Pedal
Swell to Pedal
Swell to Great

manual compass: 56 notes, c - g""n
pedal compass: 30 notes, C - f'
suspended mechanical key action
mechanical stop action
tuned in "Bach" temperament, H. A. Kellner, 1978
1206 pipes

Most of the pipes of the organ are made of an
alloy containing 96% lead. The Principal 8',
however, is 75% tin. The Gedackt 8' is made of
walnut and maple. The Subbass 16' and the lowest
12 pipes of the Trombone 16' are made of poplar.
The Trombone 16' and both Trumpets have full
length conical resonators. The Pedal Trumpet is an
octave extension of the Trombone 16'. The lowest
twelve notes of the Pedal Octave 8' are taken from
the Great Principal 8'. The Swell division is
enclosed, with swell shutters operated mechanically
by foot pedal. The organ case is of hand-planed
oiled white oak. The instrument is supplied with
wind from a single wedge-shaped bellows which is
fed by a 3/4 horsepower electric blower.

Charles M. Ruggles
The Program

Praeludium in E major, Bux WV 141
Dietrich Buxtehude (1637-1707)

Greeting and Litany of Dedication
Rev. Allen G. Buurma

Hymn #1: Praise Ye the Lord, the Almighty, the King of Creation

Concerto in G major
arranged for organ by J. S. Bach

Allegro
Grave
Presto

Prince Johann Ernst (1696-1715)

from the Suite du Premier Ton

Grand plein Jeu
Duo
Trio
Basse et Dessus de Trompette

Louis-Nicolas Clerambault (1676-1749)

Cancion para la Corneta con el Eco

anonymous (Spanish, 17th c.)

Fantasia in a minor

Orlando Gibbons (1583-1625)

Trio Sonata nr. 4 in e minor BWV 528
Adagio-Vivace
Andante
Un poc’ allegro

J. S. Bach (1685-1750)

— INTERMISSION —

Remarks by George Miklowic, chairman of the Organ Transplant Committee

Voluntary nr. 1 in D major

William Boyce (1711-1779)

five short chorale preludes:

Psalm 36 - Des boosdoenders wille seer quaeet
Gott sei gelobet und gebenedeiet
Dies sind den heiligen zehn Gebot, BWV 679
Komm heiliger Geist Herre Gott, BuxWV 199
Jesus Christus unser Heiland

Jan Pieterszoon Sweelinck (1562-1621)
Heinrich Scheidemann (1595-1663)
J.S. Bach
Dietrich Buxtehude
Johann Pachelbel (1653-1706)

Hymn #84 (first tune): I Sing the Almighty Power of God

Passacaglia in c minor, BWV 582

J. S. Bach

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Gavin Black and Charles Ruggles
organ

Charles Ruggles will play the hymn “Praise Ye the Lord”, the Ernst/Bach Concerto and the Boyce Voluntary.
Gavin Black will play the remainder of the program.
The Organ In History and An Organ For Our Church

an organist's view

As Charles Ruggles has pointed out, the organ is one of the most ancient of musical instruments. Small organs using pipes essentially similar to those of today's pipe organs were to be found in the ancient Greek and Roman world, at least three hundred years before the birth of Christ, and well over a thousand years before the composition of any of the music that we perform and enjoy today. Large and complex organs with keyboards and multiple ranks of pipes are known to have existed in the Middle Ages, and some examples from the late Middle Ages still stand in European churches. Organ music still exists from the beginning of the fourteenth century, and thus the organist of today has access to a repertoire which spans nearly seven hundred years: at least twice the time covered by the repertory of any other instrument except the human voice.

Over the course of these seven hundred years — the years which essentially define what we mean by "the organ" today — some things about the organ have tended to remain constant, while many things have changed. One of the most striking constants, as Charles Ruggles has also pointed out, has been the relationship of the organ to the church. The vast majority of organs built have been built for churches, and thus most of the organ music written has been written with the expectation that it would be played in church. This connection has remained in force even under unlikely circumstances: for about the first hundred years after the Reformation in the Netherlands, organ music was actually forbidden in church services, but there was none the less a strong tradition of organ building, and many churches contained organs which were among the finest of any era. These organs were used exclusively for concerts, which were central to the musical life of their communities.

Changes in the organ over time, and also variations from place to place, have concerned aspects of the mechanism — the key action, the stop action, and, especially, the winding system, aspects of the layout and visual design, and, most important of all, aspects of the sound itself. Just as the Renaissance consort differs from the Baroque chamber ensemble, just as the Classical-period orchestra differs from the late nineteenth century orchestra, and just as the harpsichord of 1750 differs from the piano of 1850, or from the synthesizer of the 1970's, so do organs of different times and places differ from one another in the kinds of sounds they were designed to produce. In general — and in a drastic oversimplification — medieval organs were rather brash or strident, renaissance organs tended towards a singing quality, with both clarity and warmth, later baroque organs were colorful, dark, and powerful, and the organs of the nineteenth century produced a warm, thick, smooth sound, with an emphasis on depth and richness rather than clarity.

For most of the recorded history of the organ, organ builders were expected to produce instruments that were up to date: that is, instruments that took advantage of the latest technologies, instruments that fit in visually with the current architectural styles, and instruments that produced sounds that were in keeping with the most up to date musical idioms. Thus the sounds of the Renaissance organ have a great deal in common with the sounds of recorders, lutes, viols, and krumhorns, and the sounds of the late nineteenth century organ with the massed strings and winds of the symphony orchestra. Organists were expected to play music that was up to date: perhaps avant-garde, perhaps mainstream, perhaps somewhat conservative, but drawn from the contemporary musical scene.

Over the last sixty years or so this has changed. Performers and audiences in all spheres of music have become increasingly interested in the music of a wide ranging past. This is in part a consequence of the growing distance that music lovers have felt from contemporary music since the time of the atonal and serial revolutions of the early 20th century. (It is to be hoped, however, that it is also an expression of an expansion of cultural horizons and of a growth in cultural open-mindedness which can embrace not only music from the past but also human cultural communications from around the whole world of today.) Organists today expect to play music from several centuries and from many different nations. This means that they will play music that was originally conceived for many different kinds of organ sound.

This has created a new situation for organ builders. There is no kind of organ, or kind of organ sound, that is uniquely proper to the late twentieth century, as there were organs proper to earlier eras. Instead, organ builders seek to create instruments that serve the music of at least some of the past as well as possible, that are also valid tools for the creation and performance of at least some kinds of modern music, that are beautiful and flexible enough to inspire singing, and that meet the relatively unchanging requirements for reliability and stability. (It is interesting to note that builders of other instruments — especially harpsichords and wind instruments — face a similar situation, but with competing demands from many fewer centuries than confront organ builders.)

This approach to the creation of new instruments raises several interesting questions, none of which has a definitive answer, and which each builder approaches in his or her own way. Some of these questions are: Should a new instrument be clearly grounded in one historical style, or should it be some sort of hybrid? Should hybridization, if desired, be achieved by including different stops from different historical styles — that is, by building in effect two or more different organs side by side in the same case, played from the same keyboards — or by designing and voicing individual stops as compromises among different styles? If an instrument is understood as being grounded in one historical style, should it be made to imitate as closely as possible existing examples of that style, or can it differ from existing examples to about the same degree that they differ from one another? Can a modern builder working historically learn to exercise the same discretion and judgement within a given style that the contemporary builders within that style would have exercised? Is there a conflict between the state of mind necessary to engage in any act of historical copying and the state of mind necessary to create a vivid and exciting new work of art in the form of a musical instrument? If so, how is it possible to resolve that conflict, or at least to deal with it creatively? What are the unchanging musical values — if any — that underlie diverse schools of organ design? What, if anything, can give an organ intrinsic artistic integrity outside the dictates of particular historical considerations?

These — and many others — are questions with which builders must grapple on a daily basis, but they are also of concern to organists who strive to evoke the greatest expressive and rhetorical potential from the instruments with which they work. I myself have tentative answers to some of them: answers which I hope will evolve as my range of experience expands. Two factors strike me
have tentative answers to some of them: answers which I hope will evolve as my range of experience expands. Two factors strike me as being essential to the artistic integrity of any organ. First, stops should blend with one another. That is, when two or more stops are drawn on the same keyboard the result should be one sound, different from the sound of any of the stops drawn by itself, not two or more sounds occurring simultaneously but audibly separate from one another. Second, the sounds of individual ranks of pipes — especially of the eight-foot stops — should seem, to an attentive listener, to have some kind of intrinsic emotional force or meaning, outside of any musical context. That is, even when played in individual notes the sounds should engage the emotions of the listener. This, of course, is impossible to prove or measure, and can only be experienced — or not.

Both of these attributes can be found in great instruments from any historical period or style, but to me they both also argue against the likely success of any very far-reaching attempt at hybridization in organ design. Stops which stem from common aesthetic principles are far more likely to blend with one another than stops which do not. On the Hillsborough organ, for example, the Dulcian 8' on the swell division blends effectively with the other stops on the division in almost any combination. Thus it provides the performer with over one hundred musically useful sounds — all of them colorful and interesting, all of them audibly different. A different reed stop, drawn from a slightly different organ style — say a French cromhorne in the late 18th century manner — would probably blend with fewer of the other available sounds on the division. A very different stop — a 20th century American oboe, for example — might blend with none of the other stops on the division, and thus make available only one sound, that of the stop drawn by itself. Paradoxically, the increased blending possibilities created by fidelity to a particular style can enhance, at least a little bit, the versatility of an instrument in playing music outside the style for which it was designed. Of the over one hundred Dulcian-based sounds, a few will probably mimic fairly closely sounds from other organ styles, especially with the possible aid of the swell-box and tremulant. The hypothetical American oboe still provides only its one sound.

Organs from all periods and styles display intrinsic emotional content in their sounds, but the nature of that content differs greatly from place to place and from time to time. In an organ designed as a hybrid the danger exists that the emotional and rhetorical meanings of different stops will conflict with one another in an unconstructive way, or will cancel one another out. In response to this danger a builder might feel constrained to minimize the emotional content of the stops, and thus end up creating a bland and uncommunicative instrument. Thoroughgoing hybrid, or eclectic, organs can often play Bach as well as they can play Widor, but they rarely move, challenge, or inspire the listener at the deepest levels.

The Hillsborough organ, as Charles Ruggles has pointed out, is grounded in the organ building practices of the Netherlands and northern Germany during what we usually call the Baroque era. This means several specific things. The key action is mechanical, so that the performer can have a clearly audible effect on the speech of the pipes, rendering a given set of stops now crispier, now smoother through variations in touch. It means that the ranks of pipes are balanced acoustically: no stop is either too loud or too soft to fill a role in blending with other stops. It means that the sounds are unfailingly crisp and clear, but also blooming and resonant: the articulate voicing prevents the resonant quality of the sound from turning into a muffled effect. It means that the sounds are colorful and bright, but, paradoxically, at the same time dark, with a potential for introspection.

It also means that the instrument is most closely suited to the music of the Baroque. It is with this music that the potential for a kind of mystical union between the sounds and possibilities of the instrument and the rhetorical meaning of the music itself exists most strongly. Perhaps in connection with any organ of strong character the whole repertoire — of music written and not yet written — can be thought of as a set of concentric circles. At the center is the music which this instrument plays as well as the imagination suggests it could be played. Next comes music with which the instrument is still clearly comfortable and which works quite well rather easily. After that comes music which at times tests what the instrument can do and, more importantly, tests the imagination and skill of the organist who wants to coax the instrument into doing it. Finally there comes music in connection with which the instrument teaches the organist that there are some things that it should not be asked to do. The organist should enjoy letting the instrument do what it does best, but should also enjoy the challenge of using the instrument in new, unexpected, and everchanging ways.

Gavin Black was born in New Haven, Connecticut in 1957. He began piano lessons with Lilian Silva in 1965 and also studied piano with Lois Lounsbery and Paul Klein. From 1967 to 1969 he was a boy soprano in the choir of Trinity Episcopal Church on the Green in New Haven. He began organ study with Wendell Piehler in 1972 and studied later with Paul Jordan and Eugene Roan. He has studied conducting with Jahja Ling and Otto-Werner Mueller. Gavin Black attended Princeton University, and graduated in 1979 with a degree in history. He was one of four student University Organists from 1977 to 1979. He also attended Westminster Choir College, from 1983 to 1985, and received the Master of Music degree in organ performance. Since 1985 he has been on the faculty of the Westminster Conservatory in Princeton, teaching organ and harpsichord, and coaching baroque chamber music. He is performing the complete organ music of J. S. Bach in a series of twelve concerts over three seasons, 1989-92, at Westminster Choir College. He has been organist and Senior Choir director of Hillsborough Reformed Church at Millstone since the summer of 1988.
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Pastor – Allen Buurma

Organ Builder – Charles M. Ruggles Pipe Organs
Berea, Ohio

The following is a list of all those who worked directly on the building of this organ:
Charles Ruggles: design, voicing, pipemaking, stop action, wind system, casework
Greg Sparks: wind chests, key action, wood pipes, casework
David Betts: pipemaking, key action, finishing, wind system
Martin Pasi: carvings, pipemaking
Larry Damico: casework
Roger Hornung: wood pipes, bench
Judy Fritts: metal pipes
Dana Hull: voicing
Kevin Fisher: voicing