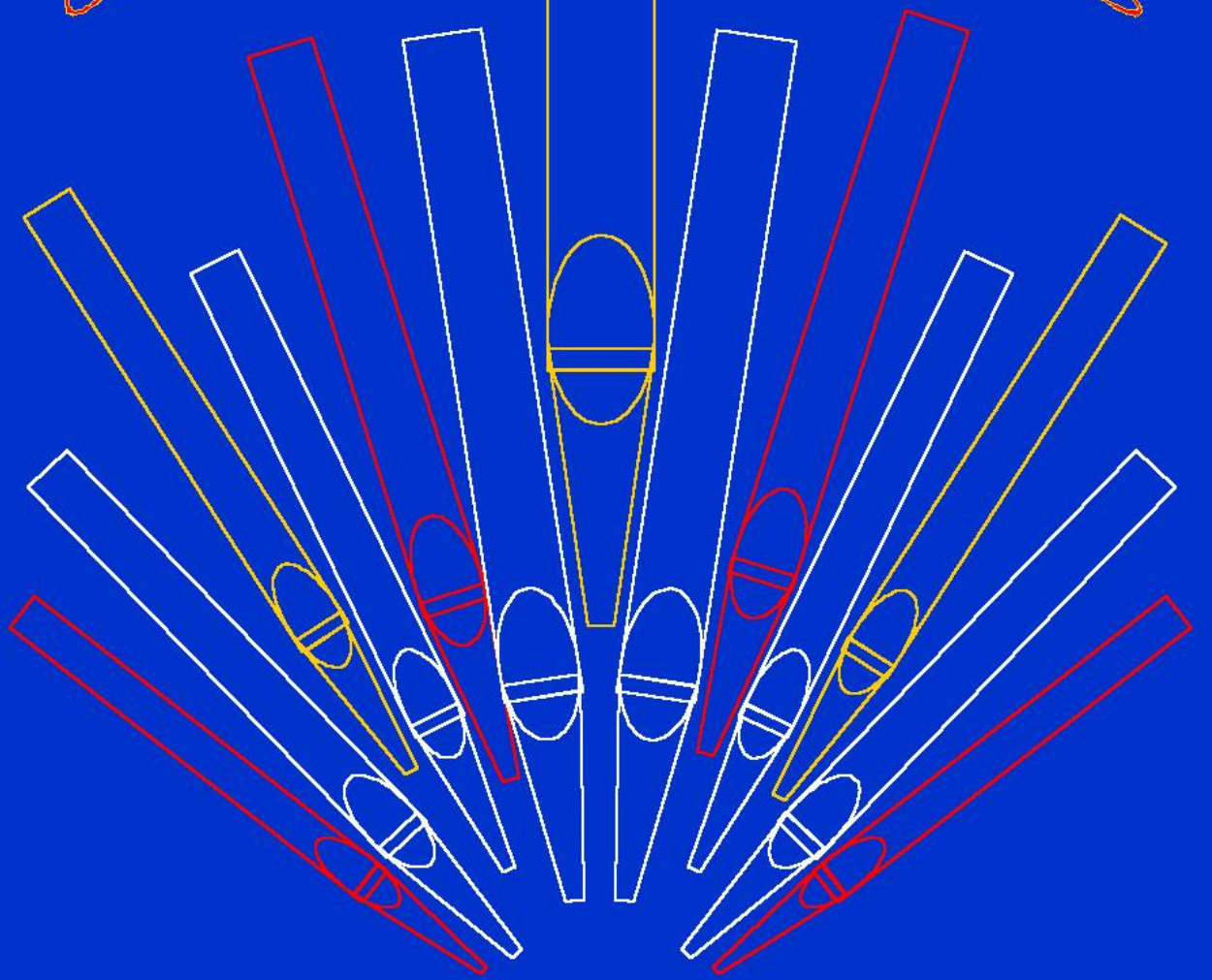


A Handbook
for
Organ Committees



Marcia van Oyen

A HANDBOOK FOR ORGAN COMMITTEES

Marcia Van Oyen

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Introduction

This book is designed to help you execute an organ project that will run smoothly and be well-received by your congregation, culminating in the excitement of having a new pipe organ that can be enjoyed and celebrated for years to come. My focus is on providing a framework for the process of purchasing a pipe organ, offering a step-by-step approach with ideas and suggestions. Several pages (so designated) may be reproduced in order to provide convenient templates for evaluating instruments and providing publicity. While the book is specifically aimed at committees interested in new organs, much of the information here also applies to projects involving rebuilding or expanding an existing instrument.

A note about the section on "Pipe Organ Basics" - the information offered there is not intended to be exhaustive, but is tailored to organ committee members who don't have a lot of time to read lengthy books. There are many other in-depth resources available, some of which are listed throughout the text.

I wish to thank

Tom Aldrich and Don Clark, co-chairs of the Glenview Community Church organ committee, for their vision and commitment to excellence.

The many organbuilders of my acquaintance, who have patiently answered questions and submitted to interviews, for teaching me about their art.

Mark Van Oyen, my husband, for proof-reading this manuscript, offering technical assistance and moral support, and for his patience through the ups and downs of my organ projects, listening to countless organs and discussions about organ building, and spending many evenings alone while I attended organ committee meetings.

Best wishes!

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What is a successful organ project?

There were among us musicians and tin ears, zealots convinced that we needed a new pipe organ, recalcitrants who believed fervently that we could survive well without any organ at all, and more than a few doubting Thomases ... a dozen folks thrust together with a charge to study the old [organ], determine what to do, how to do it and, most importantly, how to pay for it -- the Organ Renewal Committee.

Over a period of two years, we interviewed organists and organbuilders, traveled to many churches around the state, and listened to many inspiring instruments. We learned from [our organist] all about the history of pipe organs, how they work, and how they lead worship. We met, we deliberated, we argued, we prayed.

Then we encountered [our organbuilder] and heard an extraordinary pipe organ that he had built. That watershed experience brought our committee into harmonic concert. From that day forward, we dedicated ourselves to obtaining a "WOW" instrument for our church -- one that could summon up the sweet soft sounds of angels' wings and also send thunderous peals of power and joy resonating through the sanctuary.

We sat in your living rooms and asked you for large sums of money with little more than our faith and our enthusiasm as collateral. Then a miracle occurred. You shared our vision, dug deep into your pockets and your hearts and came forth with thousands upon thousands of dollars. With your help and God's our dream has become reality.

Now we and our children and grandchildren will be blessed with the joyful noise of the new organ for years to come. Through the gifts of [our organbuilder] and [organist] we can be still, feel the pulse and listen to the very voice of God.

- Written by Thomas L. Aldrich for an organ dedication booklet

The testimony provided above dovetails with my definition of a successful organ project. The definition consists of four guidelines:

- **Exercising good stewardship in the long and short term**
- **A congregation involved in the project and happy with the outcome**
- **An instrument that serves the needs of the music program and congregation**
- **A project appropriate to the financial resources of the church**

A pipe organ is a legacy to the present and future congregation. Purchasing a pipe organ involves a huge investment of resources and is most likely a once-in-a-lifetime experience for the people involved, if not for the particular church. Good stewardship in the long term is choosing an instrument designed for longevity and ease of maintenance. Good stewardship in the short term is taking the time in the present to thoroughly explore the options and make an informed decision.

Stories of failed or problematic organ projects abound. Because purchasing an organ involves a large investment of a church's resources, the project has the potential to create division in the congregation. One of the most common reasons organ projects fail is lack of appropriate and effective communication. The intricacies of a pipe organ lie well outside the general knowledge most people have, even most musicians. People need to be well informed and feel ownership of the project in order to be motivated to support the cause. Make the intent of having a new pipe organ clear in a language that people can understand - as my senior pastor put it - "a definite need, clearly stated." In addition, understand and respect the traditions and priorities of your church members. Are they conservative and satisfied with the utilitarian, or are they visionary, ready to stretch to make something exciting a reality? Earn the trust and respect of your congregation by getting to know them so you can propose a project that truly matches their characteristics and whose outcome will provide joy for years to come.

I. Getting Started

A. Identify the motivation for investigating the purchase of a pipe organ.

- The church doesn't have a pipe organ and/or a new sanctuary is being built.
- The present instrument is in need of major repair and/or restoration.
- The present instrument does not serve the church's needs.

If you are considering purchasing an organ for a new space or the first organ for a church, congratulations! You have a relatively clean slate with which to work. When working with an existing building, it is necessary to consider whether it is possible to use the space in its present form or if a new configuration is needed to accommodate the organ. In either case, the organbuilder and architect must work together to ensure a favorable environment for the new instrument. With new construction in particular, the architect must consider ceiling height, materials used for walls and ceiling, the shape of the room and other factors in order to create an acoustically live environment.

If you are proposing replacing or re-vamping an existing instrument, your task is a bit more difficult. People will not be able to understand readily why a new instrument or significant changes are needed, particularly if those changes are tonal. Bear this caveat in mind: Honor the present organ that your tenure at the church may be long and your supporters many. If you tell people the old organ is a piece of pathetic junk, don't expect them to respond with enthusiasm. Many people in the congregation have heard that organ for years and have developed a sentimental attachment to its sound as idiosyncratic as it may be. Many of them may have helped to pay for the present organ. Describe the reasons the organ needs to be replaced or reworked, sticking with facts and avoiding opinions. Be honest, but be careful what you say, how you say it, and to whom.

B. Form a committee or working group.

When forming an organ committee, consider the variety of tasks this committee will need to undertake and recruit people with skills in those areas. You may want to include people with expertise in publicity, graphic arts, public speaking, architecture, contracts, fund raising, and writing. Engineers or mechanics easily grasp the intricate mechanisms of a pipe organ. You will, of course, want to include your organist and/or music director and a few musicians in the group, but the presence of non-musicians on the committee is important for developing credibility and a broad base of support. Since the project is large in scope, recruit people who are highly respected and trusted by the congregation. The committee's chairperson, in particular, must be someone in whom people have

confidence. You might even consider including someone who is opposed to the project. Such a person can provide valuable insight into questions and concerns that members of the congregation will raise.

Being involved in an organ project is a rewarding but time-consuming responsibility. Organ committee members must have the availability and the motivation to spend many hours in meetings, traveling to hear other organs, publicizing the project, educating themselves and the congregation, and raising funds. Be sure committee members are informed of the time commitment from the outset.

C. Do your homework.

A surprising number of organ committees skip this important step. Believe me, it is crucial.

- Evaluate your present instrument and situation and put that evaluation in writing.
- If you are replacing or re-vamping an existing instrument, get at least one unbiased professional opinion in writing. This evaluation should not be from someone who wants to bid on the project.
- Evaluate your musical needs and goals - e.g. providing for service music and hymn singing for worship services, weddings and funerals, accompaniment for choirs and soloists, strong solo stops for outlining hymn melodies, concert series, expansion of the music program, etc.
- Visit other churches to listen to their pipe organs and form ideas of what type of organ would be appropriate for your church.
- Consult with others who have done organ projects and ask for their advice.
- Educate yourself about pipe organs - how they work, what they cost and why. Consult section XI for pipe organ basics.
- Educate yourself about electronic organs - how they work, what they cost and why. See section XI, page 43.

D. Lay the groundwork.

- Consider how much funding can be made available based on the tolerance/vision/resources of your congregation. Don't be afraid to dream big, but be realistic about how much support can be generated.
- Educate the congregation about pipe organs - how they work, what they cost and why. The biggest obstacle for an organ committee is the congregation's sticker shock upon finding out how much pipe organs cost. Remember, a pipe organ's price tag is probably more than the cost of the homes or value of the stock portfolios of many people in the congregation. Give people plenty of time to get used to that fact.
- Identify people/groups that already demonstrate support and enthusiasm for the project. Write down their names - are they potential donors of funding? Can they help in other ways?
- Establish a budget for travel and other project-related expenses.

Resources

Organizations

The American Guild of Organists, National Headquarters, 475 Riverside Drive, Suite 1260, New York, NY, 10115, phone 212/870-2310, fax 212/870-2163, web site: www.agohq.org

The Associated Pipe Organ Builders of America, P.O. Box 155, Chicago Ridge, IL 60415, phone 800.473.5270, web site: www.apoba.com

The Organ Historical Society, P.O. Box 26811, Richmond, VA 23261, phone 804.353.9226, fax 804.353.9266, web site: www.organsociety.org

Books

[A Guide to the Pipe Organ for Composers and Others](#) by Sandra Soderlund
Wayne Leupold Editions, Inc., WL800003, ECS Publishing, Boston, MA

[A Young Person's Guide to the Pipe Organ](#) by Sandra Soderlund
available from The American Guild of Organists

[Buying an Organ](#) by John Ogasapian and Carlton Russell
a pamphlet available from the American Guild of Organists

[Church Organs: A Guide to Selection and Purchase](#) by John K. Ogasapian
available from the American Guild of Organists and the Organ Historical Society

[Making Music on the Organ](#) by Peter Hurford
Oxford University Press, New York
available from the Organ Historical Society

[Planning Space for Pipe Organs, An Architect's Guide](#) published by the Associated Pipe Organ Builders of America
available from the Associated Pipe Organ Builders of America

[The King of Instruments: How Churches Came to Have Organs](#) by Peter Williams
Society for Promoting Christian Knowledge, London, England
available from the Organ Historical Society

[The Organ Handbook](#) by Hans Klotz, translated by Gerhard Krapf
available from the Organ Historical Society

[All the Stops – The Glorious Pipe Organ and Its American Masters](#) by Craig Whitney,
Public Affairs, New York. *Available in bookstores*

Videos

"Pulling Out All the Stops: The Pipe Organ in America"
available from the American Guild of Organists and the Organ Historical Society

"Voices in the Wind," broadcast on the PBS program "The Nature of Things"
available from the Organ Historical Society

Articles

"Pipe Dreams" by Donovan Webster. Smithsonian Magazine, July 1997.

"What Is the Price of a Pipe Organ?" by Lynn Dobson. The American Organist, September 1982.

Web Sites

Organ History: the Pipe Organ from its Origin through the 20th century
www.panther.bsc.edu/~jhcook/OrgHist/ *an extensive site, including detailed explanations of how the organ works with animated diagrams and video clips.*

Museum of Organs, www.orgel.com/vlm/mus-e.html

Peterson Electro-Musical Products, www.pipeorgans.com

Pipedreams: A Radio Program for the King of Instruments, www.pipedreams.org

The International Organ Foundation, www.aq.upm.es/organ/iof.htm

The Organ Clearing House, www.organclearinghouse.com/

The Pipe Organ Education Project, nersp.nerdc.ufl.edu/~bodine/

II. Get the publicity rolling.

Publicity is important every step of the way, but especially at the initial stages of the organ project. Use your publicity resources to educate people about pipe organs, demystifying the instrument and how it works in very basic terms. Keep the congregation informed about the organ committee's activities and plans. Think in terms of sound bites - short explanations and phrases people can remember.

- Provide documentation of the committee's goals and information collected. Pamphlets, posters, church newsletter articles, photos and other tangible visual aids help spread the word.
- Communicate in a variety of styles - visual, aural, musical, etc. - in order to reach the diverse people of your congregation.
- Have organ committee members on hand at congregational meetings, coffee hours, church suppers and other events. They should be prepared to patiently answer lots of questions.
- Identify and create opportunities to spread the word. Call upon supporters previously identified who can help with publicity.
- Pray for your enemies, smile at those who persecute you. Pay attention to concerns that are raised and address them in your publicity.
- Keep the publicity machine running smoothly. You'll need it for the life of the project.

III. Do You Need a Consultant?

Before you begin actually shopping for a pipe organ, determine whether or not your organ committee would benefit from the services of an organ consultant. You will need a resource person who understands pipe organs well and is able to talk to organbuilders about stoplists and tonal issues. Your church organist may have sufficient knowledge and expertise to serve as your consultant, but may or may not have adequate time to devote to the project. If your organist opts not to play an advisory role in the project, a good consultant can be very helpful. He or she knows what organs you should hear, can recommend organbuilders best suited to your situation and contact them, can set up visits to other churches for you, and can help you determine what sort of pipe organ you need. An added benefit is a consultant's experience with organ projects.

In theory, a consultant should give you an impartial opinion about your present instrument, a suitable new instrument, and recommended organbuilders to contact, presenting several options. In reality, most consultants are not impartial. Most of them have favorite organbuilders and styles of organs, so it is prudent to determine whether or not the consultant's preferences are in line with your goals before you hire him or her. Also, be aware that funding will be needed to pay a consultant's fees. Organ consultants generally work for an hourly rate or a percentage of the organ's purchase price. A consultant can work with you for the whole project, give you some initial guidance to put you on the right track, or work with you on an "as needed" basis.

Before you hire a consultant, consider talking with university professors, organ technicians, respected organists, and others who've successfully completed projects similar to yours. They all can be very good sources of information, some of which may be given free of charge. They may have recommendations for consultants. An organbuilder or sales representative who is interested in bidding on your project should not be relied upon for advice at this stage. Many organ committees have been given misinformation and led astray by such a person.

If your organist will serve as consultant, consider what level of involvement will be politically acceptable to your congregation. Some people may view the organist's influence on the project as self-serving and inappropriate. On the other hand, your organist will rely upon the new instrument to fulfill his or her job responsibilities and, therefore, should be given the opportunity for significant input in the project. Clarify what his or her role will be based on what will work best for your situation.

IV. What about Electronic Organs?

A pipe organ is not the only choice for churches looking for a versatile worship instrument, but for many reasons, it is the best choice. Nevertheless, some people will advocate the purchase of an electronic substitute. Purchasing an electronic organ involves a smaller financial investment than purchasing a pipe organ, and consequently, this option is attractive to church members who claim they cannot tell the difference between the sound of a pipe organ and that of an electronic organ. For some churches, the cost of a pipe organ is simply an insurmountable obstacle.

As with a pipe organ, become educated about exactly what you are considering purchasing.

What an electronic substitute for a pipe organ is:

- Electronic substitutes for pipe organs take the centuries of artistry and skill developed by pipe organ builders and borrow the results, using recorded pipe organ sounds sampled and played back through speakers.
- When you purchase an electronic substitute, basically you are purchasing a computer, a console, and speakers.
- To truly reproduce the spatial sound field of a pipe organ, an electronic instrument would need a separate sound sample and speaker for each note of each stop. An electronic organ with five stops would require 305 speakers (each keyboard typically has 61 notes). Even with today's sophisticated electronic technology, electronic instruments typically channel sound through relatively few speakers. Electronic signals generated from digital sound samples are mixed to create one composite signal that can be transmitted through loudspeakers.
- A few manufacturers of electronic substitutes use 20-bit sampling precision, and some randomly loop their sound samples to give the illusion of attack, decay, and the subtle variation in sound that a pipe organ has.
- At least one maker of electronic substitutes for pipe organs uses computer simulation to create a facsimile of pipe organ tone, using "real-time sampling" to achieve some of the randomness of sound wave forms that gives pipe organs their characteristic tone.
- Although electronic substitutes are in many respects a mass-produced item, some manufacturers are adding more custom elements to their products.

Consider these remarks from manufacturers of electronically-produced sounds:

“I love the sound of a pipe organ more than anything – nothing is like it. What we’re doing is imitation. It’s very good and getting better, but not the same. What makes the pipe organ live for hundreds of years? The pipe organ appeals to the senses more than any other instrument. You feel it, you feel the 32’ sounds, you can feel it in your chest. The overall grandeur of the pipe organ is going to last.”

(Robert Walker of Walker Technical Company, Zionsville, Pennsylvania, manufacturer of digitally produced pipe organ sounds, quoted in The Diapason, September 2001)

“Organ pipes create a sound that is far more complex than what appears to be a steady tone accented by an initial attack or "chiff". In reality, organ pipes create a very complex and rather unstable waveform that is constantly changing and interacting with numerous outside variables such as flux in wind chest pressure, sympathetic vibrations from other pipes, and influences as subtle as air moving in the room. When carefully listening to a pipe organ, these nuances are noticeable and recognized as part of what defines the organ's unique and individual sound.”

(from <http://churchorgansales.com/info/voicing.htm>, accessed on 30 May 2003)

Some other points to consider:

- What is your church's philosophy of worship music? Church music is an offering of human art and skill to glorify God, proclaim God's word and help the congregation worship. The artistry involved in building a pipe organ is an extension of the artistry involved in playing the organ, or singing in a choir. Would you replace your resident flautist with an electronic flute sound?
- Many manufacturers of electronic substitutes focus heavily on technological gadgets such as the ability for the player to change the tonal disposition of stops. Emphasis on music making can get lost as the player tinkers with electronic toys, many of which are technology for technology's sake.
- Some organists may not be interested in positions at churches with electronic organs.
- Without pipe organs, electronic substitutes couldn't exist. The sound samples the manufacturers of electronic instruments use come from recordings of pipe organs. Pipe organ builders are artisans who create sound; manufacturers of electronic instruments borrow this sound, manipulate it, and reproduce it with technology.

Our music and all the details of religious establishments as well as the more important matter of our liturgy itself should possess a degree of merit and excellence unattained to in things designed merely for our own uses and gratifications.

- Samuel Sebastian Wesley

What about instruments that combine pipes and electronic sounds?

Combining sounds produced by organ pipes and those produced electronically is a controversial issue. The Associated Pipe Organ Builders of America have strict guidelines for the use of electronic sounds in pipe organs, and the organization's members must adhere to these guidelines. They limit the use of electronically generated sounds to low-pitched pedal stops, percussion effects, and MIDI applications. At the other end of the spectrum are manufacturers of electronic instruments that provide a rank or two of pipes to make their instruments look like pipe organs. Many interpretations of how and in what proportions to combine organ pipes and digital sounds populate the remainder of the spectrum between its two outer poles.

Technology and Pipe Organs

Although the basic design of a pipe organ hasn't changed in over three hundred years, pipe organ builders employ state of the art technology to provide technical conveniences to the organist. The combination of traditional craftsmanship – including pipe making and voicing and wood-working among other skills - and modern technology creates an instrument that is both incredibly beautiful and user-friendly.

- Many pipe organs have elaborate multi-level memory systems, piston sequencers, and other programmable devices that allow the organist to customize the operation of the organ's stops.
- MIDI equipment can be installed in pipe organs, allowing other electronic instruments to be played from their keyboards, or allowing the organist to record a performance and have the organ play it back. A pipe organ (if it has electro-pneumatic or electric slider action) can include an electronic transposing device.
- Sophisticated expression shutter motors allow subtle gradations in the volume of pipes enclosed in expression boxes (louvers that open and close like Venetian blinds).

Resources

“Digitally Replicated Pipe Voices: What They Are and What They Aren’t” by Thomas Wood, *The American Organist*, July 1998.

The Associated Pipe Organ Builders guidelines for usage of electronically-produced sounds
www.apoba.com/PositionPaper_ElectronicSounds.htm

V. Shopping for a Pipe Organ

A. Listen to pipe organs at other churches and evaluate them.

Once an organ is installed at your church, you'll be listening to it every Sunday. When you hear other pipe organs, consider whether a similar instrument would work well in your church.

- Go to church services so you can hear how the organ functions during worship.
- When visiting at other times, have a standard program of repertoire played at each location for ease of comparison.
- Observe the organ's location and configuration of sanctuary.
- For specific guidelines, refer to the listening guide on the next page.
- Pay attention to the acoustical environment. Beware: resonant acoustics can cover a multitude of sins! If the room is very resonant, listen to the organ from close to the pipes, if possible.

B. Evaluate your sanctuary's acoustics.

Charles-Marie Widor supposedly once said, "Acoustics are the most important stop on the organ." Prior to the installation of a new organ is a good time to evaluate and improve upon a sanctuary's acoustics. During the initial stages of an organ project, gather information about what would be involved to improve your sanctuary's acoustics and what the cost would be. You can then consult with the organbuilders you contact and get their input before you make a final decision. In addition to benefiting an organ's sound, resonant acoustics encourage and enhance congregational singing. Furthermore, it is unwise to plan on changing the acoustics significantly after the organ is installed, because this will disturb the intricate work your organbuilder has done to voice the organ appropriately for the room's acoustics. Re-voicing of the organ may be required if the acoustics change appreciably.

C. Decide what type of instrument makes sense for your church with respect to use and maintenance.

Consider the following questions and form some general ideas:

- Is flexibility important? Is a movable console desirable?
- What type of action do we prefer?
- What space is available? Is space at a premium?
- Will major construction be required to accommodate a new organ?
- What maintenance will be required for the new organ in the long and short term?
- What basic tonal style do we prefer?

A FIELD GUIDE FOR OBSERVING PIPE ORGANS

LISTEN

- Clarity - do the stops speak clearly or is the sound muddy?
- Color - are there distinctive tone colors or is the sound bland?
- Does the organ's tone have warmth and beauty?
- Is the sound brilliant without being piercing?
- Does the sound have fullness and depth without harshness?
- Does the sound project throughout the room or is it buried in the organ chamber or case?
- Would this type of sound work in our church?

LOOK

- Is the design of the organ visually attractive?
- Does the design mesh with the architecture and style of the sanctuary?
- Does the workmanship appear to be high quality? Look especially at the console.
- Look at the stoplist. Are the divisions complete with all families of sound represented in each?
- Is the organ's location sensible with respect to location of the choir, altar, etc.?

CONSIDER

- Do I enjoy listening to this instrument?
- Is the sound exciting and beautiful? Would it help me worship?
- Would I want to hear this sound every Sunday?
- Would I recommend an organ like this for our church?

WHEN OBSERVING AND LISTENING DURING A CHURCH SERVICE

consider all of the above, but also play close attention to how the organ functions in the service.

- Does the sound give adequate support for congregational singing?
- Does the organ's sound encourage you to sing?
- Does the organ function well with the choir?
- Are the location and style of the console convenient for director-accompanist communication or directing the choir from the console? Can the organist see the ushers, pastor, the choir processing, etc. when necessary? Is the set-up at all flexible, e.g. is the console movable?

Whenever you go to listen to other pipe organs, ask questions of the resident musician(s), church members, and/or clergy. How do they like the organ?

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Resources

"Acoustics and Organs" by George Taylor
The Diapason Magazine, October 1995

Acoustics for Liturgy (Meeting House Essays, No. 2) published by the Hymn Society
available from the Organ Historical Society

"Acoustics in Worship Spaces"
available from the American Guild of Organists

Acoustics in the Worship Space by Scott Riedel
Concordia Publishing House, St. Louis, MO

VI. Choosing an Organbuilder

Influential organbuilder Charles Fisk was known to describe organ building as a disease for which there is no antidote. This statement is actually helpful in understanding who organbuilders are. At some point in their lives, organbuilders became so intensely fascinated with pipe organs that they decided to learn to build them. They are completely devoted to their art, and certainly have not chosen the career to make a lot of money. Pipe organs are expensive, but organbuilders don't assess a high price to make a big profit. The price simply reflects the high quality craftsmanship and materials involved in building a pipe organ, unlike the price of an electronic organ, which often is marked up considerably. In addition, many organbuilders have deep attachments to the church and its music. Indeed, if he's going to build a church organ, your builder must have a good understanding of the church and its milieu. When you contact organbuilders, ask them how their designs relate to hymn singing and choral accompaniment.

Based on your experiences listening to pipe organs at other churches, choose two or three builders whose work you admire the most. Contact those builders. Request information about their work and inform them as to the organ committee's preferred type of action and/or tonal style. The builders will likely provide you with brochures and a CD or two. Inform them as to the general type of instrument you're looking for and find out if their musical goals mesh well with what you've outlined. Find out what the timeline would be for delivery of a new instrument.

In order to answer specific questions and suggest design ideas, an organbuilder must see your sanctuary and experience its acoustical environment. Once you've decided to pursue working with a particular builder, invite him to your church. Ask him what sort of organ he would recommend for the space, perhaps asking him to outline his ideas in a follow-up letter. Let him know you will very likely want a proposal from him, but don't request a formal proposal yet. Pay attention to whether he's enthusiastic about your project. Consider whether this is a person or company your committee would be comfortable working with for the next several years as decisions are made, a contract is negotiated, and the organ is installed.

Bear in mind that a visit to your church will involve time and expense for the organbuilder, so restrict your invitations to builders from whom you would like to request bids. If you can, pay the organbuilder's travel expenses, recalling that the organ building industry works on a small profit margin and the builder(s) who are not awarded a contract will simply be out money for the visit otherwise. Some builders may assess a fee for a site visit.

Resources

The American Institute of Organbuilders, P.O. Box 130982, Houston, TX 77219,
phone 713.529.2212, web site: www.pipeorgan.org

The Associated Pipe Organbuilders of America, P.O. Box 155, Chicago Ridge, IL 60415,
phone 800.473.5270, web site: www.apoba.com

"How to Select an Organbuilder" by Jack Bethards
The American Organist Magazine, March 1984, pp. 62-65

The Organ Clearing House, P.O. Box 219, Lexington, MA, 02420-0219
Phone (toll-free) 866.827.3055, phone 781.862.9004 fax 781.862.1842, web site:
www.organclearinghouse.com

This organization rescues older pipe organs, publishes listings of used pipe organs for sale, offers dismantling, packing and shipping services, and can recommend qualified builders for restoration, rebuilding and installation.

VII. Soliciting and Evaluating Proposals

A. Before requesting a proposal:

- Review the needs and goals of your music program - keep them in mind.
- Listen more, traveling if necessary, to hear the builder's instruments. If it is feasible, visit the organbuilder's shop.

B. Request a formal proposal.

- Compare the ideas you've gathered from the builders you've interviewed. The proposals should be for roughly equivalent instruments. If one builder has radically different ideas than the others, find out the reason(s) before you proceed.
- When requesting proposals, be specific about the type of organ you seek, but leave the design to the organbuilder. Negotiation and consideration of changes should happen in connection with preparing to sign a contract.
- The proposal may or may not include a concept drawing. Some builders will automatically include a drawing while some may expect a fee for providing a drawing at this stage. Recall that if you are designing a new space or reconfiguring an existing one, it is important that the organbuilder work with the architect from the earliest stages of the project so that his design can be appropriate for the space.

C. Once you've received proposals, evaluate them carefully.

- Is this instrument an appropriate match for the needs of our music program?
- Will it be able to handle the musical demands of various worship services?
- Is the tonal style appropriate for our sanctuary's acoustics?
- Does the design mesh with the sanctuary architecturally?
- Is the price in line with what we were expecting? Is it all-inclusive?
- Are high-quality materials proposed?
- Is it consistent with our ideas about good stewardship?
- Is the instrument designed in a classic style, intended for longevity rather than being trendy?
- Which proposal best matches our criteria for a new organ?

VIII. Fund Raising

If you feel quite confident that the organ project will go forward, or in order to get a better idea of how much support is available, it is wise to get a head start on fund raising and/or making preparations for how you will approach the task. In order to sign a contract for a pipe organ, a down payment of ten to thirty percent of the organ's cost is usually required. The sooner you sign a contract, the sooner your project will be in the builder's production schedule, and the sooner you will have your new instrument. Therefore, don't leave funding arrangements to the last minute at the risk of delaying the contract signing.

In addition to citing the required down payment, the organ contract will specify a schedule that divides the total cost of the organ into several payments to be made over the life of the project. These payments may be tied to calendar dates or to stages in the process of building the organ. As is the case with other contractors, organbuilders need cash up front and at certain points during the construction process in order to purchase materials. The final payment is due after the organ is completed. This payment schedule is a helpful guideline for planning a time-line and setting goals for your fund raising campaign. If you haven't requested a contract yet, an organbuilder should be willing to tell you what his typical payment schedule is.

Before you begin fund raising, be certain to consult with the church leadership as to what your plans are and what type of solicitation is permitted. Fund raising for a new organ should not interfere with the church's stewardship campaign or fund raising being done for other projects. Tell the church leadership what your plans for solicitation will be, including a timeline.

Once again, publicity is important here. If you have generated interest by educating people about the motivation for the project, pipe organ basics, and how a new organ will benefit the church, you are well on your way. Now is a good time to reiterate those facts, stressing the long-term picture - a pipe organ as a legacy to the congregation and a sound investment. Once the general fund raising campaign begins, it is advisable to host an open informational session with organ committee members on hand at the coffee hour (or at another church event) to address questions and concerns.

Generating Initial Funding

The prospect of a new pipe organ will initially appeal to a specific slice of your congregation, and it is important to identify who those people are. They comprise your first tier of support, generally having one or more of the following characteristics:

- An interest in making a significant contribution to a highly visible project and/or giving for something that will last a long time.
- A love for music, participation in the music program, or readiness to donate to music causes.
- A demonstrated interest in and support for the project since its inception (you should have made a note of these names).
- Significant financial resources, possibly the ability to make a leadership gift that will launch the fund raising campaign and encourage others to give as well.
- Consistent generous giving to the church (your pastor(s) or stewardship committee may be able to help with suggestions).

Make a list and contact these people personally - a phone call or face-to-face conversation is best. To undertake this task, choose one or two people from the organ committee whose communication skills and enthusiasm for the project can motivate donors. Request a personal visit with potential major donors to tell them about the organ project and why it is exciting and beneficial for the church. Come equipped with visual aids - photos, drawings, etc. - if you can.

Alternatively, the organ committee might host a special event for potential major donors, perhaps a dinner, at which guests are told about the project and identified as people who are crucial to its success.

Organizations or businesses with ties to the church may be funding sources. Some organizations offer grants for certain types of projects. Such possibilities are well worth investigating.

When concerns about a pipe organ's cost are raised, consider this Biblical passage:

While he was in Bethany, reclining at the table in the home of a man known as Simon the Leper, a woman came with an alabaster jar of very expensive perfume, made of pure nard. She broke the jar and poured the perfume on his head. Some of those present were saying indignantly to one another, "Why this waste of perfume? It could have been sold for more than a year's wages and the money given to the poor." And they rebuked her harshly. "Leave her alone," said Jesus. "Why are you bothering her? She has done a beautiful thing to me. The poor you will always have with you, and you can help them any time you want. But you will not always have me. She did what she could. She poured perfume on my body beforehand to prepare for my burial. I tell you the truth, wherever the gospel is preached throughout the world, what she has done will also be told, in memory of her."

Mark 14:4-9

Approaching the Congregation

Once you have received an initial round of gifts or one leadership gift (or pledges from donors), it's time to approach the congregation as a whole. Provide detailed information about the organ project in tangible form - a pamphlet accompanied by a letter from the committee chair or clergy as well as an article in the church newsletter.

- Some people will respond with little prompting, perhaps simply an announcement.
- Some people will respond specifically to the thorough research contained in your publicity.
- Some people will desire to honor a loved one through a memorial gift.
- Some people may wish to make a significant gift, but will need to do so by giving portions over time.
- Some people need personal attention - a conversation with someone on the organ committee perhaps to air questions or concerns - before they will feel comfortable giving.
- Some people will give when they see that others have given, or a certain proportion of the goal has been reached.
- Some people will wait until the end. More money often comes in once the organ is installed, or after people see pipes in place.

Remember that there are all kinds of givers, so continue various forms of publicity in order to reach as many as possible. Give everybody the opportunity to participate whether the donation will be large or small (think of the example of the widow's offering, Luke 21:1-4). A broad base of support gives a greater feeling of ownership and will foster pride in the new instrument. Be sure to keep everybody updated on the fund raising progress.

Before you request donations, think about how you will recognize the donors.

- Will there be a plaque?
- Will donor's names be listed in the dedication service bulletin or recital program?
- Will each donor receive a thank you letter?
- How will memorial gifts be recognized?

In addition, decide whether or not you will specify levels of giving. Some churches have chosen to give people the opportunity to buy (or adopt) a pipe, fund a certain stop or portion of the organ - e.g. the console, or designate contribution levels with organ stop names. Specifics about donor recognition and giving levels should be included in the publicity.

In some cases, there is one donor who is willing and able to fully fund the organ project. If one gift covers the organ's cost, considering launching a related project to which the members of the congregation can contribute - sponsoring a guest artist for a recital, establishing a concert series, commissioning a new organ work, or commissioning a recording of the new organ.

IX. Getting ready to sign a contract

By this point, you should have selected an organbuilder, collected funds for a downpayment, and gotten a good handle on the general fund raising scenario. In addition, you should have collected fairly detailed information about any required construction or acoustical improvements and their related costs. Three important tasks remain before the contract is signed:

A. Review the proposal you've chosen with your organbuilder and request a formal contract.

- Your organist, consultant, and/or designated liaison should contact the organbuilder and discuss any amendments to the proposal - e.g. addition/deletion of stops, console equipment.
- Request a concept drawing if you don't already have one.
- Once the contract is received, review all of its details very carefully. You may want to consult a lawyer at this stage. Contact your organbuilder regarding points needing negotiation.
- Consider requesting a credit report on the organ company and/or purchasing a performance bond. Organ-building firms are generally financially sound, but there have been unfortunate exceptions.

B. Publicize your plan and all its pertinent details to the congregation.

- Post the concept drawing in a prominent place, along with the stoplist and organbuilder's name.
- Create a flyer or pamphlet with more details - information about your organbuilder, the approximate installation timeline, construction to take place, the organ's price, how much money has been raised, how the organ will benefit your church and music program.
- If your builder has installed an organ which influenced your choice in the immediate area, consider organizing a field trip to hear it so people can have an idea of how the new organ will sound.

C. Get the approval necessary to proceed with contract signing.

Approval may consist of a congregational vote, permission from the trustees, etc., depending on your church's form of government.

D. Sign the contract and celebrate.

Now that you're ready to sign the contract, plan a party. Invite your organbuilder. Get the contract signed and celebrate! Congratulations! You've just taken a huge step forward.

X. Once the contract is signed ...

A. What do we do with the old organ?

- Sell or dispose of the old organ, or specific parts of it, if some components will be used for the new organ. Determine when the organ needs to be removed. (Refer to page 18 for information about the Organ Clearing House, an organization that can provide assistance with selling and/or removing the old organ.)
- If the old organ isn't saleable, consider offering its pipes for sale as mementos. Such a plan can be a component of your fund raising campaign. Recall that people may have sentimental attachments to the old organ. Consider holding a "farewell to the old organ" concert, or at the very least, notify people of the last time they will hear the old organ.

B. What instrument(s) will be used in worship while we're without an organ?

- During the time between removing the old organ and the completion of the new one your church will be without an organ. Your music director and music staff will be responsible for making arrangements for dealing with this transitional period. Be certain to provide them with accurate information as to removal of the old organ and installation of the new one.
- A church's main need will be how to lead congregational singing without an organ. Preludes, postludes, and accompaniments can be performed on piano and/or other instruments. Use this time as an opportunity to discover the resources in your congregation. Instrumental ensembles can be developed to help in the transition and will be a long-term benefit to the music program. If you'll need an orchestra to accommodate the needs of Easter or Christmas services, budget for that now.
- In many cases, a piano can be adequate to lead the congregational singing, perhaps with some amplification. People will appreciate the new organ even more if they spend a period of time without organ sound. If the piano will be your main resource, be sure to write a thank you letter to the piano donor!

C. Launch the general fund raising campaign - refer to section VII.

D. Provide information about the organ building/installation/completion process.

- Publicize the project timeline.
- Let people know what's happening at the organ shop - plan a visit, if feasible.
- Prepare people for disruptions in worship logistics or building use during the organ's installation and other related construction.

E. Execute construction related to the organ project.

- Solicit bids and make arrangements with contractors needed to work on acoustics, organ space preparation and/or reconfiguration. Get these tasks done well in advance of the organ's installation.
- Hire a structural engineer to check the integrity of the floor which will hold the organ, if necessary.

F. Determine costs for the maintenance of the new instrument.

- Budget for annual tunings and routine maintenance.
- Make arrangements to provide for long term major maintenance.
- Add the new organ to the church's insurance policy at the appropriate time.

Keep the publicity going! Don't let the organ project disappear from view.

GUIDELINES FOR A SUCCESSFUL ORGAN PROJECT

SUCCESS = Exercising good stewardship in the long and short term
A congregation involved in the project and happy with the outcome
An instrument that serves the needs of the church's music program
A project appropriate to the funding capabilities of the church

- 1. Evaluate the current situation and educate the congregation about it.**
 - What are the church's musical needs and goals? Are we hoping to expand those?
 - Document the condition of the present organ, if there is one.
 - What is the motivation for purchasing a new pipe organ?

- 2. Educate yourself about pipe organs.**
 - Learn about their construction.
 - Investigate the full spectrum of what is available.
 - Contact experts outside of your church for help.
 - Find out how much organs cost and why.

- 3. Listen. Visit churches with instruments which have qualities that you seek.**
 - A certain tonal style
 - Similar in size
 - Work by organbuilders that you are interested in contacting
 - Congregations/musicians that are happy with the instrument

- 4. Consider your funding scenario and generate support before you solicit bids.**
 - How much can we reasonably ask our congregation to give for this project?
 - Is there the possibility of a significant leadership gift or bequest to kick off the project? What other sources of funding are available?
 - Are there church members who are skilled at fund raising?

- 5. Contact builders and get their ideas. Listen to their work and solicit proposals.**
 - Be specific about the type of organ you seek, but leave the design to the organbuilder.
 - Evaluate proposals with respect to compability with your music program's needs.

- 6. Keep the church leadership and congregation informed of the organ committee's activities throughout the project.**
 - Educate the congregation about pipe organs and the organ-building process.
 - Plan special events to publicize and generate good will towards the project.

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XI. Introducing the New Instrument

The acquisition of a new pipe organ is a once-in-a-lifetime experience for most churches, so celebrate accordingly. Churches commonly hold a service of dedication and a dedication recital, with receptions afterward, although there are many possibilities for special events celebrating the new instrument.

It is wise to allow a period of time for the new organ to settle in before special events featuring the organ are held. Fine adjustments may be required as use of the organ begins. In addition, there is a learning curve both for the organist playing the new organ and the congregation hearing it. The organist needs to become familiar with the new console and appropriate use of the organ's resources, while the congregation may need a number of weeks to adjust to the new organ's sound. In particular, if the new organ is much larger (and therefore, louder) than the former organ, introduce the organ's full sound gradually so people aren't overwhelmed by it. The first worship service with the new organ need not include musical acrobatics - a fairly standard worship service is quite adequate. If the organ committee has made a wise choice, people will readily recognize the benefits of the new organ.

As part of your planning for the dedication events, make preparations to thank the donors publicly (according to the decisions you made while fund raising), unless they wish to remain anonymous. Arrange for someone to recognize and thank the organ committee members. Invite your organbuilder to the service and recital, and thank him as well. You may wish to give him the opportunity to speak at the event(s).

The Dedication Service

The purpose of the dedication service is to liturgically consecrate the organ as an instrument of worship according to the beliefs and customs of your church. Now is the time to plan for extra special music, highlighting the organ's resources, the best efforts of the church's musicians, and themes related to music, service, and thanksgiving. Sometimes a new organ work, anthem, or hymn is commissioned for the organ's dedication. The service may include a dedication litany, a children's message about the organ, and/or a sermon on music in worship. A sample service is included on pages 30-31.

The Dedication Recital

The dedication recital is a public event, one which people from the surrounding community, including local organists and other musicians, will attend. Therefore, it is important that the recital effectively display the resources of the new organ, skillfully handled by an experienced recitalist. Many churches engage a guest artist to play the dedication recital, although in some cases the church's organist or organ consultant is a capable performer. Repertoire should be selected to demonstrate the variety of sound available on the new organ, perhaps including music that will be familiar to the audience. A dedication booklet, including the recital program, list of donors, and detailed information about the instrument, is often prepared for distribution at the dedication recital.

Beyond the Dedication Service and Recital

In addition to the dedication service and recital, the organ committee may wish to promote other events to introduce the instrument to children or other special groups. An educational program describing and demonstrating the new organ in detail will especially interest certain members of your congregation and local organists. They could be invited to an "open console" session, offering an opportunity for attendees to play the new organ. Sometimes, the acquisition of a new pipe organ is the starting point for a continuing series of concerts featuring the new instrument. A group dedicated solely to promoting and organizing the series will be needed to make the concerts a success.

Finally, the organ committee can continue to promote the new organ by having a brochure about the organ printed and displayed in literature racks at the church, and/or by sending a press release to the local newspaper. Your organbuilder may feature the new instrument in his promotional material, or may arrange for it to be featured on the cover of a pipe organ journal. Wherever publicity about the new instrument appears, make copies available for the congregation to view.

Resources

Organ Demonstration Pieces

Variations on "This Is My Father's World," An Introduction to the Families of Organ Tone by Rudolf Zuiderveld, Morningstar Music MSM 10-881.

Rex, King of Instruments by Daniel Burton, introduction to the pipe organ for organ and narrator, Morningstar Music, MSM 10-938.

South of the Border by Dennis Janzer, published by Wayne Leopold.

Many more demonstration pieces are available on the Organ Historical Society catalog found on their web site – www.organsociety.org

Hymns

“With Pipes of Tin and Wood Make Known,” text by Thomas Troeger (text only published in *Borrowed Light*, a collection of Troeger's texts, Oxford University Press, New York)
Text set to the new tune, "Glenview," by Alfred V. Fedak, Selah Publishing.

“When the Morning Stars Together,” text by Albert F. Bayly, tune "Offering" as published in the *New Century Hymnal*. Also sings well to the tune "Hymn to Joy."

“New Songs of Celebration Render,” text by Erik Routley, tune "Rendez à Dieu," as published in the *Hymnal 1982*.

“All Nature Sings the Praise of God,” text by Henry Ware, set to the tune "Forest Green," in a concertato setting by Hal Hopson, Lorenz Corporation, AGC 009.

AN ORGAN DEDICATION SERVICE

Prelude: Hymn to Joy – arr. Michael Keller (organ and handbell choir)

Call to Worship Psalm 100 (read responsively)

Make a joyful noise to the Lord, all the earth.

Worship the Lord with gladness; come into his presence with singing.

Know that the Lord is God. It is he that made us, and we are his;

We are his people, and the sheep of his pasture.

Enter his gates with thanksgiving, and his courts with praise.

Give thanks to him, bless his name.

For the Lord is good; his steadfast love endures forever,

And his faithfulness to all generations.

Processional Hymn: Now Thank We All Our God No. 29

Prayer of Invocation

A Time for Children: Psalm 150 and the Sounds of the Organ
(using "Variations on This Is My Father's World" by R. Zuiderveld)

Hymn: With Pipes of Tin and Wood Make Known
text by Thomas Troeger, setting by Alfred V. Fedak
Verse 3 will be sung by the choir

Introduction of the Organ Committee and Organbuilder

Presentation of the Organ

Litany of Dedication

ONE: Praise the Lord. Praise God in this holy place. To the glory of
God, Creator, Redeemer, and Sustainer,

ALL: We dedicate this organ, an instrument of praise.

ONE: In gratitude to God for the gift of creativity as manifested so
richly in the beauty of this organ and the majesty of its tone,

ALL: We dedicate this organ, an instrument of praise.

ONE: To kindle the flame of devotion, that all who assemble here
May worship you, O God, in spirit and in truth,

ALL: We dedicate this organ, an instrument of praise.

ONE: For the healing of life's discords and for the sounds and
Harmonies that express feelings deep within us,

ALL: We dedicate this organ, an instrument of praise.

ONE: For the comfort of the sorrowing and the lifting of
the depressed,

ALL: We dedicate this organ, an instrument of praise.

ONE: For the humbling of our hearts before eternal mysteries and
the stirring of our sensitivities to abiding beauty and joy,

ALL: We dedicate this organ, an instrument of praise.

ONE: For this organ, now set apart for use in this church and for
The joy and enrichment of the larger community; for
its material components; for those who conceived and built
it; for those who will bring its sounds to life and release the
music it was made to give; for those who will hear and let it
add new dimension to their lives,

ALL: We give you thanks, O Lord.

ONE: May this organ, as a part of our worship, played alone or in
concert with other instruments and voices, contribute to our
higher resolve to go forth from this place always to do your
will and serve your human family.

**ALL: May it please you, O gracious God, to receive and bless this
organ which we dedicate to your glory through Jesus Christ
our Lord. Amen.**

Anthem: I Was Glad (Psalm 122) – C. H. H. Parry

Scripture Psalm 98

Sermon

Prayers

Offertory Anthem: O How Amiable – Ralph Vaughan Williams

Offertory Hymn: All Nature Sings the Praise of God (tune: Forest Green)

*Great God, to you our thanks abound for voices and our skill,
We bid the pealing organ sound to praise your holy will.
Lord, while the music round us floats, may joy fill earth and sky.
O grant that all our swelling notes may lift our souls on high.*

Prayer of Dedication

Hymn: The Old Hundredth Psalm Tune – R. Vaughan Williams

Verses 3 and 4 will be sung by the choir

Benediction

Postlude: Now Thank We All Our God - Egil Hovland

-- Permission is given to reproduce all or portions of this service. --

XI. Pipe Organ Basics

A Bit of History

The pipe organ was invented around 250 B.C. by a Greek engineer name Ktesibios. This early instrument had only a few pipes and was called the "hydraulus" because its pressurized wind supply was created with water pressure. Five hundred years later, "dry" organs with bellows were being built in the Byzantine Empire. Over the next several centuries, historical evidence documents the presence of simple pipe organs throughout western Europe. By Bach's time (1685-1750), pipe organs in Germany and the Netherlands had multiple keyboards and a pedal board, similar to organs built today. Spain, France, and England, other important centers of organbuilding, gradually followed suit. Prior to the industrial revolution, the pipe organ was one of the most sophisticated devices invented, perhaps leading Mozart to make this famous statement, "In my eyes and ears the organ will ever be the King of Instruments," giving the pipe organ an enduring nickname. There are, in fact, pipe organs in Europe built at Mozart's time (1756-1791) and earlier that are still in good working condition.

Precisely how pipe organs became standard church instruments isn't known, however, historians believe it happened in the time period 750 - 1100 A.D. The earliest organs were popular in Rome for providing entertainment at feasts and gladiator fights. As time went on, monasteries were often sites of organ building activity, due to their emphasis on education and skilled craftsmanship. Historians speculate that organs began to be used in alternation with sung verses of Psalms, from there gradually expanding their role in music for worship.

How Pipe Organs Work

The pipe organ is a wind instrument played from one or more keyboards. It consists of a series of pipes placed on a wind chest. Imagine a large box with many holes drilled in its top; the pipes rest in these holes. Inside the wind chest, in line with each hole (and therefore under each pipe) are pallets or valves which allow air into the pipes when a key on the keyboard is depressed. An electric blower provides a constant supply of air that is blown into a reservoir. The reservoir maintains a steady pressure of wind that is then delivered to the wind chest through a wind trunk.

Two actions are required in order for a pipe to produce sound:

1. Pull the desired stop knob, which admits the wind under that rank of pipes.
2. Press a key, causing the pallet or valve to open and admit air to the pipe.

A modern pipe organ contains many sets or ranks of pipes of varying sound qualities and pitches. Except in mixtures and a few other specialized stops, there is one pipe for each key on the keyboard. In the earliest organs, all ranks of pipes played at once. Keys controlling the pallets under the pipes were developed in the thirteenth century. During the fifteenth century, ranks of pipes began to be controlled by knobs or tablets called "stops." The knobs originally were used to stop ranks of pipes from sounding, but the name has stuck, despite the fact that stop knobs now help allow pipes to make sound.

An organ may consist of one keyboard or as many as five or six keyboards (in rare cases, even more). A standard manual keyboard has a compass of sixty-one notes while a standard pedal board has thirty-two notes. The compass of the organ, however, is much greater than that of its keyboards. Stops sound as much as two octaves below and three octaves above the unison or piano pitch, giving the instrument a full compass of over nine octaves.

A stop of unison pitch is identified as eight-foot (8'). This designation was derived from the fact that the low C (the lowest note on the keyboard) of an open pipe is approximately eight feet long. If the low C pipe is 16 feet long, the entire stop will sound one octave lower than the 8-foot pitch. Similarly, stops marked as 4', 2' or 1' will sound one octave, two octaves, and three octaves, respectively, above the unison pitch of the note played.

In addition to the various unison and octave pitches, there are stops known as mutations whose pitches correspond to the off-unison partials of the harmonic series. Stops of 2 2/3', 1 3/5', 1 1/3' pitch sound respectively 12, 17 and 19 notes above the unison pitch of the note played. Mixture stops are made up of several ranks of pipes of unison and off-unison pitches. When combined with stops of 16', 8' and 4' pitch, mixtures give the tone color that many people identify as the characteristic sound of the pipe organ - a sound often used for playing hymns.

Parameters of Pipe Organs

Console - the control center for the organ

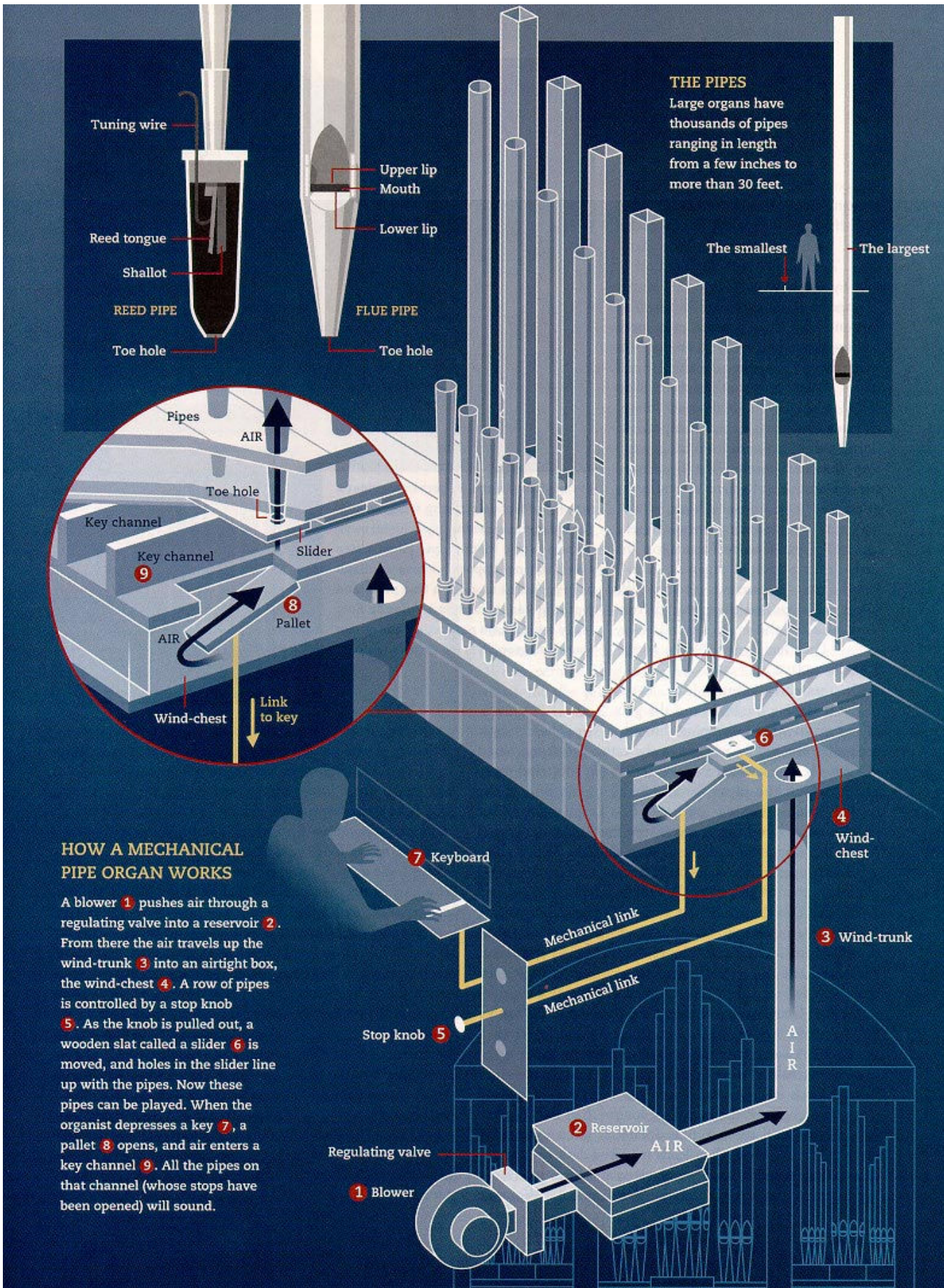
Division - a section of the organ, usually with its own keyboard and pipes
examples: Great, Swell, Choir, Solo, Pedal

Rank - a set of pipes of one tone color, one pipe for each note of the keyboard,
the number of ranks tells the size of the organ

Stop - a knob or tablet on the console which turns the air-flow to a rank (or
ranks) of pipes on or off

Manuals - the keyboards which are played with the hands

Couplers - a device that makes the pipes from one division sound on another
keyboard than its own, or at another octave



THE PIPES
 Large organs have thousands of pipes ranging in length from a few inches to more than 30 feet.

HOW A MECHANICAL PIPE ORGAN WORKS

A blower **1** pushes air through a regulating valve into a reservoir **2**. From there the air travels up the wind-trunk **3** into an airtight box, the wind-chest **4**. A row of pipes is controlled by a stop knob **5**. As the knob is pulled out, a wooden slat called a slider **6** is moved, and holes in the slider line up with the pipes. Now these pipes can be played. When the organist depresses a key **7**, a pallet **8** opens, and air enters a key channel **9**. All the pipes on that channel (whose stops have been opened) will sound.

Types of Organ Pipes

There are two basic types of organ pipes, distinguished by the way they produce sound: flue pipes and reed pipes.

Flue Pipes

The tone of flue pipes is produced by a column of air vibrating inside the pipe. The speaking length of the pipe determines its pitch. Flue pipes have three basic tone qualities: Principal, Flute, and String. Flue pipes are made of metal or wood, and vary in size from as small as a pencil to thirty-two feet long and a foot in diameter. Façade or front pipes, the pipes visible in the organ's case or chamber openings, are often made of polished tin or flamed or polished copper.

Reed Pipes

The sound of reed pipes is produced by a vibrating tongue or reed that sets up sympathetic vibrations in the air column within its resonator. The reed is enclosed in a cylindrical tube called a boot. The resonator is mounted on the boot. The tone quality of a reed pipe is determined by the shape and length of its resonator. A reed instrument such as the clarinet produces sound in much the same way as a reed pipe does. Reed pipes are generally made of metal, although they can be made of wood as well. Trumpet stops are sometimes made of decorative metal such as brass or copper and are mounted horizontally outside the organ's case or chamber.

Families of Organ Tone and Some Typical Stop Names

Principals - diapason, montre, octave, super octave, fifteenth, plein jeu, mixture

Flutes - gedeckt, bourdon, harmonic flute, koppelflote, spitzflute, nazard, tierce

Strings - salicional, celeste, gamba, dulciana, unda maris

Reeds - trumpet, oboe, tuba, voix humaine, cromorne, fagott, bombarde

Tonal Styles of Pipe Organs

Since their invention, pipe organs have been built in a variety of tonal styles. A well-designed organ will have sounds that are appropriate in color and volume to the room the organ is in and the functions it needs to fulfill. Determining the precise color and nature of those sounds is the essence of organ building, separating the true artist from the dilettante. There are as many tonal styles as there are organbuilders, but three general stylistic tendencies exist which are helpful in making sense of the organ building world.

Baroque - This term, used to refer to western European music of the eighteenth century, denotes organ sound characterized by clarity and brilliance. Think about how the combination of instruments playing one of Bach's Brandenburg Concertos sounds.

Romantic - This tonal style's salient features are richness and warmth, emphasis on 8' foundation tone and powerful reeds. Romantic organs are designed to execute dramatic crescendos and decrescendos smoothly. Think of Beethoven's Ninth Symphony.

American Classic - As the term implies, this style is an American invention, begun by the work of G. Donald Harrison who served as tonal director of the Aeolian-Skinner organ company from 1927 - 1956. His idea was to combine tonal characteristics from various styles, particularly instruments in Germany, France, and England dating from the eighteenth and nineteenth centuries. His goal was to create instruments whose sounds are appropriate for playing repertoire of all time periods. Instruments such as this are often described as eclectic. Many people have heard one of the finest examples of the American Classic style - the large Aeolian Skinner organ at the Mormon Tabernacle in Salt Lake City, which has been featured in a weekly radio broadcast for many years.

Influential Movements in American Organbuilding

The two movements described below relate not only to the tonal styles of pipe organs, but also to their construction.

The Organ Reform Movement, which began in Germany (*Deutsche Orgelbewegung*), emphasized a return to classic practices of organbuilding, particularly the use of slider wind chests, low wind pressures, and mechanical key action. Two important ideas springing from the Organ Reform Movement are the concept that organs should be designed for the literature to be played and the idea that the tonal design should be developed according to the *Werk* principle - completeness of divisions and contrast between divisions. While these ideas were beneficial to organbuilding in general, in the United States in the 1960's and 70's some organbuilders interpretations of the Organ Reform principles went far beyond the original intentions of the principles. Instruments top-heavy with piercing mixture stops, inadequate foundational tone, narrow-scaled pipe work, and an abundance of "chiff" in the pipe's speech were an unfortunate over-reaction to the reform ideas. Many pipe organs were revamped to incorporate these exaggerated ideas. Too often, the modifications resulted in beautiful original pipe work of richer tone being discarded, or additions of overly brilliant stops that did not blend with the existing instrument's sound.

The **Historically-Inspired Organbuilding** trend of the 1980's brought organ design back to a more classic course based on in-depth research into the actual characteristics and pipe scales of historic European organs. Organs that replicated the designs and sounds of specific European archetypal instruments were built. These instruments offered American organists and organbuilders valuable insight into how to perform organ music of past centuries authentically and reiterated principles that are the essence of high-quality organ design. Although such instruments are most appropriate for universities or other educational settings, some churches did have historically-inspired instruments installed, in some cases at the expense of having an instrument which functioned as needed for worship music.

The desire for historic authenticity and artistic purity - manifest in historically-inspired organs and prized by the academic community, combined with the demand for variety and flexibility - manifest in the American Classic style and clamored for by performers and church musicians, has encouraged organ-builders to develop a new style of organ. They are responding to their client's demands by fusing the post-modern trends of the late twentieth-century with the eclecticism that has dominated American organ building for decades. These elements, combined with a desire to create instruments that serve the whole spectrum of organ literature, have motivated the creation of instruments of immense flexibility. Remaining true to the organ's nature as an ensemble instrument, espousing proportion and balance, and emphasizing tonal color, organbuilders are reconciling opposing stylistic elements by blending them with one another. Their efforts are resulting in a new style of organ that I have dubbed the **post-modern fusion style** (fully described in my article in the December 1999 issue of *The Diapason*, pages 18-21, "The Post-Modern Fusion Organ: Harbinger of 21st Century Directions").

Types of Wind Chests and Key Actions

Four types of wind chests are used in the construction of pipe organs:

Mechanical or Tracker Action - completely mechanical slider wind chests and key action. When a stop is pulled, a lever attached to a strip of wood called a slider causes the slider to move, lining up holes in the slider with holes in the top of the wind chest in which the pipes sit. When a key is pressed, a system of levers called "trackers" opens the pallet, admitting air into the pipe.

Electric Slider Action - Wind chests employ sliders as with mechanical action, but an electro-magnet rather than a tracker moves the slider when a stop is pulled; another electro-magnet opens the pallet under the pipe when a key is pressed.

Electro-Pneumatic Action - when a stop is pulled, an electro-magnet causes a leather exhaust pouch to snap open, causing the windway to be opened. The same process occurs to open the valve under a pipe when a key is pressed.

Electro-Pneumatic Slider Action - combines elements of electro-pneumatic and electric slider action, supposedly to achieve the benefits of both. Built by only a few companies.

Many organbuilders specialize in building one type of action while others are diverse in their methods. A decision as to type of action should be made with respect to the organ's location, maintenance, and the organist's preference. Most organists have a preference for one type of action over another. Many organists claim that tracker action is more sensitive than other types because the organist's touch opens the pallet. Conversely, some organists dislike mechanical action, particularly in larger instruments, because the key action can become heavy and cumbersome to play. Others claim slider wind chests give the organ better blend because the pipes of each rank sit on a common wind channel. Some say that electro-pneumatic action responds with lightning speed, making it easier to play passages of quick notes smoothly. There are possibly as many opinions as there are organists.

The organ's location may also affect the choice of action. Tracker action instruments are most often built in free-standing cases with many visible pipes artistically arranged as part of the design. Often, the key desk of a tracker organ is built into the case, however, it may be located in a straight line up to ten or twenty feet away from the center of the organ's case and still allow the trackers to function properly. Organs built with electric slider or electro-pneumatic action allow the console to be placed in a variety of locations, and in fact, the console may be designed to be movable for flexibility. Such instruments may be housed in an organ chamber or partial case that utilizes the building's structure for some or all of its enclosure. The front of the structure or chamber is often decorated with elaborate casework with visible pipes and/or a decorative grill.

Information on types of action and their maintenance requirements is on the next page.

Pipe Organ Costs

Investment

A pipe organ is a hand-crafted work of art involving the skilled labor of pipe-makers, wood workers, draftsmen, pipe voicers, and the inspiration and experience of a master organbuilder to create its tonal and visual design. A pipe organ is not an "off-the-shelf" product. Each instrument is custom built according to the customer's musical needs and the configuration of the church's sanctuary. The purchase of a pipe organ requires a significant financial investment, but it is an investment for the long term. A well-designed pipe organ will be functional and musically satisfying for generations. It is a legacy to your church.

Pipe organ prices are not marked up for retail nearly as much as is the case with most consumer goods. Consequently, the profit margin on a pipe organ is small, often less than ten percent. Nearly all of the cost of a pipe organ goes towards creation of the actual product. The cost of a pipe organ may be roughly divided into thirds with one third covering materials, one third for labor, and one third for overhead.

Maintenance

Pipe organs require tuning about twice a year. When a tuning is scheduled, the organ technician should also attend to small service items such as tightening the pedal board, or removing dirt from a pipe that isn't speaking properly. An organ technician can estimate the cost of a routine service contract for your new organ so you can budget accordingly. The heat in the sanctuary should be adjusted to worship temperature for the tuning, however, the heat doesn't have to be on all the time for the health of the organ. In fact, it is better that the heat be set low or turned off most of the time to avoid drying out the wood in the organ.

A tracker action instrument requires little maintenance beyond tuning, but it is often the most expensive type of action to build. Electric slider instruments also require little long-term maintenance. Over time, their electro-magnets and other electronic equipment may need replacement. Electro-pneumatic wind chests eventually will require re-leathering (replacement of the leather pouches in the wind chests) if the leather pouches become stiff and start to leak. Plan to provide for re-leathering in a long-term maintenance fund.