

Organs like most musical instruments are subject to dirt. We do not recommend the church or client clean any part of the organ or chambers as irreparable damage can result. When required the organ company should advise if the instrument requires to be cleaned and to what degree. Dirt can become clogged in pipes or valves and cause cyphering from time to time this can be a minor issue or become a major problem.

If the organ system or console's electrical system become worn out with age and use these components should be updated with newer solid state and digital systems. The organ company should keep the church updated on the condition of the console, organ and components.

TONAL REGULATION AND ADJUSTMENT

Church buildings as well as private institutions and homes come in all shapes and sizes. Obviously the most preferable pipe organ installations are in the balcony of a stone church or cathedral with high walls and ceilings free of padding and plush carpets. However, the reality is that some pipe organs are poorly placed and do not speak as perhaps as the builder had intended. Proper placement of the organ console and organ proper is as important as the placement of the instruments, choir and the organ console itself. For proper installation a building should have a good and balanced reverberation time. This is the time it takes from when the key is lifted and the sound dies away. Construction free of obstacles and padded materials with hard surfaces areas provide the best musical sound and support of choirs, singers and musical instruments. Hard wood or ceramic floors in choir and organ areas provide the best in sound production.

These matters relating to acoustical engineering have to be taken into account. Our company deals with both church organ installations and audio sound systems for churches. By building and installing acoustical quality materials for good musical sound often reduces the costs for audio sound systems and provides a good balanced sound as well as budget. What works for the spoken word does not necessarily work for musical sound of people or the musical instruments. Here a proper balance must be found.

The art of tonal regulation of organ pipes is often referred to as the art of voicing. This is a learned craft. Each pipe is adjusted to sound proper accordingly not only to it's palette but how it sounds in a certain building and location. Our company uses the same techniques when installing both our pipe organs as well as digital or combination pipe organs.

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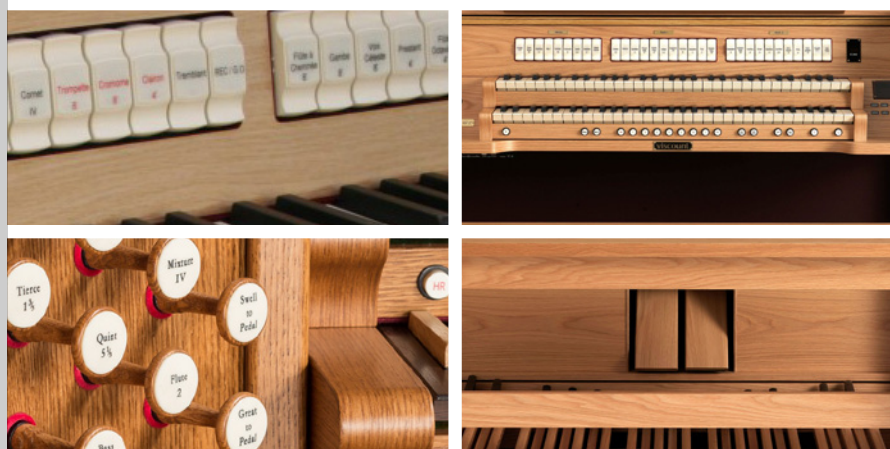
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CHURCH ORGANS by VISCOUNT INTERNATIONAL

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CARE AND MAINTENANCE OF PIPE ORGANS



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CARE AND MAINTENANCE OF PIPE ORGANS

A COMFORTABLE ENVIRONMENT

Pipe Organs like people prefer to have a comfortable environment to live in. Temperature and relative humidity affect the vital components and pipe work which are manufactured of various types of wood and metal. Regular tuning and maintenance keeps the organ in top performance as well as keeps the client up to date of any repairs or general maintenance required. Just like the finest automobiles pipe organs are a large investment and need proper care and maintenance to prevent costly repairs.

RECOMMENDED TEMPERATURE AND RELATIVE HUMIDITY

It is preferable to maintain a balanced temperature and humidity at all times. However, we realize that this also affects the operating costs of the church or client. A balanced approach is recommended. Churches should try to maintain a temperature of 15-18 degrees celsius during weekdays and 20 degrees celsius during service times. Extreme changes in temperature and humidity affect the instruments negatively especially the tuning and mechanical functioning, even digital circuitry is affected by these changes. There is an extreme difference between pitch and tuning. The pitch of the organ is set overall by the pitch standard of A-440 cycles per second or a pitch standard determined by the time when the organ was built or construction of the pipe. Many older organs and pianos in North America were built during the early part of this century tuned to an older pitch standard of A-435. In order to change the pitch of such organs additional work is required to the pipe work to make such a change possible to tune at the Concert pitch of A-440. Once the pitch is established the organ pipes are tuned to this scale. Some organs may also be pitched to Historical pitch standard by request or instrument design. This overall pitch will fluctuate depending upon the temperature and humidity. Different stops and pipes are affected differently as well. It is more cost effective to maintain a balance approach to temperature and humidity control than violent and extreme changes during the week. A survey of 100 churches was conducted across the country and substantiates this fact. Changes in temperature should not be made abrupt but gradually.

Temperature changes of even a few degrees will affect the pitch of the organ (as well as pianos and most instruments). Also the air movement from forced air systems change the movement of the pipes. These changes also affect the divisions of the organ for example. The Swell can be one side of the church and the Great and Pedal in another side. Temperature and humidity can be different even slightly from one side of the room to the other.

The temperature changes the pitch of organ pipes from one season to other. Higher temperatures will cause pipes to sharpen and the opposite in low temperature where they can go flat. This also depends on the material construction of pipes whether wood, metal or if it's a reed or flue pipe. This also has nothing to do with whether the instrument is used frequently or not.

RELATIVE HUMIDITY

Things being perfect it would be nice to have a relative humidity of 45-60 % during the course of the year. Some buildings especially older churches this can be challenging. Low humidity (dryness) can destroy the chests, wooden pipes, leathers and intricate components of an organ. Often one looks at a massive pipe organ with towering pipes but forgets to realize the tiny intricate components which can be very temperamental to these changes. The components can be very costly to repair. High humidity can cause severe damage to wood and metal parts as well as the intricate components and electrical and electronic parts of the instruments.

Organs should not be made susceptible to direct or blowing heat or cold. Like people we prefer to be warm in the winter and cool in the summer but no one likes heat or colder air blowing directly on them. Heating systems such as electric or water radiation systems can severely dry out instruments so it is advisable to keep radiators away from the organ chambers. The organ company could provide recommendations for humidity and temperature controls in the case of severe situations. A humidifier maybe recommended however, they should never blow directly onto the instrument or their components as this could damage the organ pipes and components and proper levels of humidity should be adhered too!

Maintaining proper temperature and humidity will help keep tuning stable and prevent damaging organ pipes and components.

WINDING

The organ bellows and regulators are affected by the climatic conditions. Leathers and cloths can wear out as well as the electrical components. These should be reviewed from time to time and the client advised. Unauthorized personal should never attempt to adjust wind pressures or make adjustments and repairs to the winding systems. Qualified organ technicians should have proper gauges and tools to adjust accordingly.

Blowers and wind lines are to be kept clean and lubricated. Blower rooms should always be kept clean and clear of debris as well as for safety and airflow. Some organ companies prefer to provide routine maintenance to the blowers. The frequency of lubrication depends on the type and manufacturer and this should be discussed with the church client.

The wind chests in a pipe organ use either mechanical or electric valves for each pipe. This depends on the type of organ as to the type of valves whether mechanical or electrical are used. This depends a lot on the manufacturer of the organ. Over time these valves can wear out and need replacement or re-leathering. These should be inspected from time to time and the church advised accordingly. It is advisable to let the organ service company know of any repairs or other problems with the organ prior to the tuning visit in order to allow the needed time to make a repair and not inconvenience other clients on a given day. Write a note with offending stops or notes for example 1 6 BOURDON C+1 PEDAL NOTE CYPHERING or Great manual octave 1-5 and the note, C4 Great 8 Flute does not sound. This will help the technician determine a repair and course of action or whether the repair indicates a more complex problem to be addressed on a separate service visit etc.

On the tuning visit the church should be at the same temperature and humidity as the sanctuary is for the divine service (or worship service). Preferable adjusted 4-6 hours prior to the service visit.

GENERAL MAINTENANCE AND TUNING

A pipe organ is a large investment and in North America we have an extremely changeable climate especially in the Great lakes area of Ontario, Quebec and the Great lake states.

Professional and qualified pipe organ tuners and technicians should always be employed to maintain an organ to prevent damage to pipes and intricate components. Proper tunings should include general inspection of the instruments and advising clients of any maintenance requirements. Fine leathers and cloths in organs become worn and may require replacement. Metal and electrical components suffer from use and time and may need upgrading. These repairs are determined by a seasoned craftsman. We recommend seasonal tuning visits. For example, spring and fall as this usually falls within the church calendar Lent/Easter or Thanksgiving/Advent/Christmas. Allowance should be made for emergency or concert tunings. Our company provides a regular combination Piano/Organ tuning program.