

PEDALS, PIPES & PIZZA

Trinity Presbyterian Church

October 12, 2019

Welcome!

The pipe organ in Trinity Presbyterian Church was originally built by the W.W. Kimball Organ Company of Chicago, IL, and installed in 1939. The organ was rebuilt and enlarged in 1961 with an Austin console by Tucson organ builder David McDowell. It has 27 ranks (sets of pipes) on three manuals and pedal. Pipes are in chambers behind the front of the sanctuary. There are more than 1,500 pipes, from the size of a pencil to more than eight feet in length.

Stop tabs are located above the keyboards on the console to activate the ranks of pipes. To activate a rank of pipes, the organist presses down the stop controlling that rank. When the stop is pulled up, the pipes in that rank will not sound. Each manual keyboard has 61 keys. The pedal board has 32 “keys”. Buttons under each manual allow the organist to select pre-set combinations of stops, permitting greater flexibility and faster changes of sounds.

A pipe organ is really a large set of whistles (pipes) with a device (console) operated by the organist to control pressurized air going into each pipe to make it sound. Organ pipes are made of either wood or metal in various combinations of tin and lead. Each pipe in an organ is entirely hand-made by expert pipe makers. An instrument the size of the Trinity organ typically requires 6-9 months to build in the factory. After it is completed, the organ is assembled and tested in the factory. Then it is completely disassembled, carefully packed in containers and shipped to its final destination, where technicians put it all back together again.

A pipe organ is capable of producing a great variety of sounds. The typical solid organ sound comes from large-scale metal pipes called **Principals**. Slender metal pipes produce sounds like string instruments, while pipes which are mostly lead sound like flutes. Wood pipes also sound like flutes and piccolos. Metal pipes with vibrating brass strips inside them sound like trumpets, oboes, and trombones. The number on a stop indicates the length of the lowest pipe in a rank, in feet. The longer the pipe, the lower the pitch. For an 8’ stop, the C key in the center of the keyboard is Middle C. For a 4’ stop, the center C key sounds one octave higher. A 2’ stop sounds two octaves higher, while a 16’ stop sounds one octave lower. With a combination of stops, the organist can play several octaves all at once by depressing a single key.

Pipe organs have existed for several thousand years. In the early 17th Century, modern organs began to be developed. Before the Twentieth Century, the keys were mechanically connected to valves under the pipes by wooden rods called “**trackers**”. Air pressure was supplied by hand- or foot-operated bellows. The Trinity organ operates by modern **electro-pneumatic action**. When a key is depressed, a small electric current flows to the pipe chamber and opens a valve which lets air flow into a pipe, causing it to speak. Air pressure is supplied by a small electric motor turning a blower.



J.S. Bach, the famous German organist and composer, is said to have remarked, “*Playing an organ is easy; if you put the right fingers on the right keys at the right time, the instrument plays itself.*”

So, welcome to Pedals, Pipes & Pizza. We are glad you have chosen to spend the day with us, and we hope you have fun as you learn about and play the King of Instruments!