

Williamwood Parish Church Clarkston



**The Allen Digital Organ
MOS-600 (1971)**

About our organ



The MOS-600 Allen digital organ that we have installed at Williamwood Parish Church is very special. It is the first of the digital organ age, and offered for the first time some very special features.

Our organ was manufactured in 1971 and was shipped to the UK in November of 1971 in the first shipment of this “new wave” of organ technology.

It is identical to the organ that was first shown on “**Tomorrow’s World**” in the autumn of 1971. This model was the world’s first “**sampled sound**” organ.

*A **sampled sound** organ contains a large number of pipe sounds which will often have been recorded (i.e. 'sampled') on a pipe organ. The samples are stored as waveforms in the memory of a microprocessor system, which also enables them to be quickly accessed and passed to the loudspeakers as stops are selected and notes played.*

At the time Raymond Baxter, the presenter of Tomorrow’s World, had never seen a silicon chip before!



We also have in our organ the world's first digitally programmable piston action - in fact 40 years on Allen Organs now have a commemorative series celebrating that! Before this period pistons on organs were hard wired or you had to use a selector switch.

It was also the first organ model to use two full computers to create a thicker sound which was called doubling - each stop was created twice with one very slightly out of tune with the other to create the warm chorus effect we have on the organ.

The chips used were built by North American Rockwell and are visually identical to the ones on the Apollo 11 'Eagle' which was the first vehicle to land on the moon.

In fact the design of the organ was a direct spin off from the space race. Because it was so expensive to produce each chip the only way to make a chip in the 1970s was to lay paper out in an aircraft hangar and it was drawn out by hand, photographed from the top and reduced continually until it created a mask which was used to cut out the chip using a laser.

This cost a fortune – to overcome this and give different sounds the Allen engineers designed a card reader whereby you could store data on punch cards which was a proven system.

Allen thought that this was cutting edge technology because the clock for the logic train for the entire instrument 'ticked' 4 million times per second - today we think in terms of nanoseconds!

Here at Williamwood there is a large collection of these “punched cards” including sounds such as “French Horn” and “Harp”.

Allen Organ
Model MOS-600

The stop list specification is:

Swell	Great	Pedal
Salizional 8'	Quintaden 16'	Contra Bass 32'
Gemshorn 8'	Prinzipal 8'	Contre Bourdon 32'
Gedackt 8'	Dulciana 8'	Prinzipal 16'
Spitzprinzipal 4'	Hohlfloete 8'	Bourdon 16'
Koppelfloete 4'	Oktav 4'	Lieblich Gedeckt 16'
Nasat $2\frac{2}{3}$	Spitzfloete 4'	Octave 8'
Blockfloete 2'	Quinte $2\frac{2}{3}$	Gedacktfloete 8'
Terz $1\frac{3}{5}$	Doublette 2'	Choralbass 4'
Siffloete 1	Waldfliete 2'	Flute Ouverte 4'
Mixtur III	Mixtur IV	Mixtur II
Contra Fagotto 16'	Schalmei 8'	Posaune 16'
Hautbois 8'	Krummhorn 8'	Trompete 8'
Trompete 8'	Alterable Voice I (L)	Great to Pedal
Clarion 4'	Alterable Voice I (R)	Swell to Pedal
Alterable Voice I (L)	Alterable Voice II (L)	Sustain
Alterable Voice I (R)	Alterable Voice II (R)	Doubling Off
Alterable Voice II (L)	Percussion	Celeste Tuning
Alterable Voice II (R)	Swell to Great	Percussion
Percussion (L)	Tremulant	
Percussion (R)	Celeste Tuning	
Chiff		
Sustain		
Tremulant		
Doubling Off		
Cleste Tuning		
Fast Attack		
Speech Artic. Off		
Random Motion		

Williamwood Parish Church of Scotland,
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Congregation No: 160892

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