

## **Kingston City Hall Wurlitzer Upgrades June 2016**

As most members may know, Kingston City Hall was closed for 6 weeks for some capital works as part of the ongoing upgrade program for the venue.

Amongst the works undertaken, a new passenger lift was installed replacing the now 53-year-old hydraulic passenger lift in the foyer plus heating added to the level 1 and level 2 areas and a redesign of the ground floor foyer area to provide more space for patrons.

The 6 weeks closure provided an ideal opportunity for us (TOSA) to perform some upgrade works on the Wurlitzer organ.

Kingston's Mighty Wurlitzer; now in its 46<sup>th</sup> year of operation in the hall having been installed by our members back in the late 1960's has become an icon for the City of Kingston (formerly Moorabbin) and is very much a valued and treasured part of the Town Hall and the City of Kingston itself. Heritage listed by the National Trust during the 1990's, the Wurlitzer is classified as being of 'National Significance' to Australia and was the largest Wurlitzer organ to be shipped to Australia in the 1928.

Our members have spent the past 46 years voluntarily maintaining this wonderful instrument and many artists both Australian and International, enjoyed performing on it.

The Wurlitzer received a major upgrade in the early 2000's and was re premiered as part of the 2005 TOSA National Convention. Much work has continued since then to further improve reliability and performance of the instrument.

In the past 6 weeks myself, and a handful of our members once again have undertaken some significant work on the organ and piano to address a number of 'behind the scenes' upgrades to even further improve the instrument.

Without getting too technical, following is high-level summary of some of the work that has taken place:

Fitting angle iron to the sub chamber floors for the regulator springs to hook on to. Previously the springs were attached by hooks into to the timber floors and over the years with the tension on the sub chamber floors, were starting to pull the timber away from the floor bearers. The angle iron is bolted through the floor and into the bearers thus providing a solid and stable anchor point for each of the regulator springs. To achieve this, each piece of angle iron had to be measured, cut and drilled to fit the sub chamber floors, attached firmly the bearers, pull the floor back into shape and provide an anchor for regulator spring.

A number of the shutter pneumatic push motors (air filled motors that push the shutters open) had minor leaks and the rubber cloth itself had become very hard with numerous cracks. The organ has around 60 shutters of which 50 motors had to be completely refurbished. This entails removing each motor from the shutter action assembly, taking each motor apart, stripping the timber of all the old rubber cloth, cutting new cloth to fit each motor (they all vary in size) then glue the new cloth on and finally, re fit the wooden batons to provide strength to the glued joints. After all this is done, they are then re fitted into the shutter actions and adjusted for smooth and quiet operation. As part of this job, we increased the amount each shutter opens which has led to an increase in the instruments overall clarity.

The Sleigh Bells unit was completely refurbished with all pneumatic motors being re leathered, contacts cleaned, missing bells replaced and all bells polished. Once completed, the Sleigh Bells unit was hoisted back up into the percussion chamber, the wind line to supply it replaced with a new PVC wind line, and the Sleigh Bells all adjusted to operate correctly.

A number of reiteration contacts were replaced to allow the Glockenspiel, Xylophone and Harp percussions units to reiterate (repeat) when the reiteration effect is selected. This involved playing and adjusting each contact for each note on the above percussions to achieve the reiteration effect.

The organ had a number of small wind leaks that had developed over the years, so we gradually indentified and repaired a number of these as we worked through the organ. Some

fixes were fairly simple; others a little more time consuming. One in particular required us to cut away a small portion of the solo chamber floor so we could replace a perished gasket on an inlet manifold (supplies the wind to a chest of pipes). Once repaired, it was a matter of re fitting the portion of floor and re connecting the wind supply to the manifold.

One major objective we wanted to achieve during the 6 weeks closure was to install the infrastructure necessary to get the 3 new ranks of pipes playing.

The organ was originally a 21 rank organ and in it's early days had a Krumet rank that was later replaced with an Oboe Horn and then when arriving at Moorabbin, the Oboe Horn was replaced with the Post Horn that is currently installed.

As part of the earlier refurbishments 15 years ago, provisions were made on the console with stops added to reinstall both the Krumet and Oboe Horn plus an additional String in the solo chamber and a second smaller tibia rank in the main chamber. The new pipe work has been stored in the basement waiting for the installation of the new wind chest in the solo chamber to accommodate the Krumet, Oboe Horn and String pipes. The chests had been sited in the chamber, all components refurbished but not assembled or winded up.

To install and wind up the new chest we needed to source a spare regulator to run the new ranks, tap into the existing wind supply and install a new tremulant unit.

As space is very limited, it was decided to use the existing regulator that supplied the Post Horn and use that to supply the new chest and it's 3 ranks. To achieve this, we then needed to locate a new wind supply for the Post Horn. This was done by using the old console winker,(a small regulator) which used to supply the console wind for its combination action prior its replacement 15 years ago. This winker was refurbished, a frame made up to locate it in the sub chamber and a new wind line made to supply it and from it to the Post Horn. Once the winker was fitted and connected up, it was then a matter of adjusting the wind pressure to supply the Post Horn to ensure the correct operation of the rank.

With the regulator now available for us to use, we fitted a new supply line for the 3 rank chest and then turned our attention to the outlet end of the chest which is where the wind goes from the chest to the tremulant. The outlet end was impacted by limited space and interference from other wind lines near it, so a specially designed outlet manifold had to be made – which was done by Bill Cerutti. Once fitted, we were able to connect the wind from the chest to the tremulant. With the wind lines in place, we now had to fit the chest top boards (the pipes sit on) and then fit the chest bottom boards. Once fitted and the blower turned on, we then spent considerable time tracing and fixing wind leaks and sticking notes (ciphers) on the new chest. In the coming weeks we will be installing the wiring from the new chests to the organ relay so the chests will operate from the console. Once this is done we will make and fit the new rack boards which hold the pipes in place. We anticipate that the additional 3 ranks of pipes will be fully playable mid August this year. The organ will then be operating at 24 ranks.

Lastly, the Wurlitzer grand piano has been a source of frustration for a number of years especially as it had become very noisy when playing from the organ. Investigating this showed that the motor operating the piano was running at 3 times the speed it needed to and that the vacuum pump located on the underside of the piano was starting to fail with a number of leaks and perishing leather. The piano pump system in the Wurlitzer piano is a rare American 'Art-echo' player piano system. We were able to locate a specialist here in Melbourne who was able to rebuild the vacuum pump repairing some 21 leaks in it. We were also generously donated from Roy Powlan from NORCAL Theatre Organ Society in California a replacement motor designed for the piano. Once fitted and repairs made to the grand piano interface cable. The Wurlitzer grand piano was running well with virtually no operational noise from it when it's playing – a great outcome.

My sincere and grateful thanks to: Rod Cripps, Peter Holles, Bill Cerutti, Ivan Dinsdale, John McLennan, Neil Hunter, Neville Smith, Julien Arnold and Nick Lang. Without the incredible assistance from these people, none of this could have been achieved.

I would also like to express my thanks to Vince Healy from Kingston City Hall who allowed us access throughout this period.

Scott Harrison  
Kingston Wurlitzer Maintenance Supervisor