

Brisbane City Hall Clock

In October 1927 Synchronome gained the contract to supply Brisbane's new City Hall with a tower clock. The following description is taken from a brochure *c.1930*.

'THE CITY HALL is equipped with the most modern and complete Electrical Time-keeping system in Australia at the present time. The whole installation is automatic. Neither the Master Clock nor any of the dials require any winding up.

The Clock in the Tower is the largest in Australia, and has four dials each 16 feet in diameter, approximately 180 feet above the ground, and strikes the hours and chimes the quarters on five bells situated another 50 feet higher.

The Dials are of cast iron, the patterns and castings being made in Brisbane, and weigh, without glass and fittings, approximately three tons. The design provides the maximum visibility, there being an entire absence of any ornament which would interfere with the purpose of the dial - that is, to indicate the time. The openings in the skeleton framework are filled with white opal, the weight of which is estimated at one ton. To hold this glass in place, three cwt. of putty, and over 1000 screws were required. The hands are built up of sheet copper, and run on ball and roller bearings. The minute hand is ten feet long, and the hour hand five feet six inches long. The strokes on the dial indicating the hours are two feet three inches long and ten inches wide. On account of the lift running through the clock room, it was necessary to provide a separate movement for each face. The hands are driven by a small motor through gearing, which is very ingenious in its design, and in a very compact unit the tremendous reduction of 43,000 to 1 is obtained. The control device is mounted at the opposite side to the motor, and the outstanding feature of the whole clock is its simplicity and absence of complicated parts.

The Time Keeping is controlled by a master pendulum, which is a duplicate of the Slave Clock at Greenwich Observatory, from which the world's standard time is controlled. Every half minute the hands of the big dials are moved slowly until they have covered the correct space, and then they are held stationary until the master clock allows them to again progress around the dial.

The Chiming and Striking Parts have for convenience been made in two units, each comprising a motor, with levers to lift the bell hammers and the necessary switching device.

In the Hour Striking, the lifting of the hammer of the big bell is done by a cam on the shaft of a worm reduction gear, and the number of strokes is counted by a mechanism on the side of the machine. This mechanism contains several features which are a distinct advance on previous practice in large Tower Clocks. The number of strokes struck by the hammer is controlled by the master clock, and thus the current for the motors may be cut off for any period without interfering with the working of the clock.

The Chime Part is controlled in a similar way to the strike part. The clock can be silenced at any time and there is no necessity to go to the clock to set the silencing device, as it can be done either automatically, at pre-arranged times, or manually, by the pressing of a push button in the office 12 floors below the clock. Provision is made to prevent the operation of the silencing device while the clock is striking.

The Whole of the Dials, Hands, and Mechanisms were built in Brisbane to the design of Mr. Arthur A. Jackson, AMIE (Aust.), MBHI, of the Synchronome Electrical Coy. of Australasia Ltd., in whose workshops were also made the clocks at Lutwyche Church, South Brisbane Town Hall, Brisbane Post Office, and a very large number of other Public Clocks in Australia and New Zealand.

The Electric Supply is taken from the mains through a rectifier with an automatic change-over to the storage battery originally installed for the emergency lighting of the Concert Hall.

The Bells are by Messrs. John Taylor & Co., who were the first to adopt the Simpson 5 Tone System of tuning bells. The large Bell used for sounding the hours is 6ft.4inches in diameter, weighs four and a quarter tons, and has the note A flat.

The Four Smaller Bells comprise the Westminster, or more correctly, the Cambridge Chime. The notes are C-A sharp -G sharp -D sharp, and the weight is approximately three tons.

In addition to the Tower Clock there are 60 Dials of various sizes in the different department offices, many of which are of especial design, and also Watchman's Clocks and Time Switches, all controlled from the Master Clock.'

A circuit was also run back to Clock House where comparison could be made with signals from the Queensland Observatory. In 1931, the *Courier* reported that the clock had set a World record among big clocks by losing only five seconds in two years. Later, a PMG line was used to monitor the sound of the bells. It was necessary to go up to the clock only once a month for maintenance.

The master clock was imported from England, perhaps to impress the Council. It is similar to the slave of a Shortt-Synchronome free pendulum system, and was in fact originally synchronised to another controlling pendulum which was then in the basement, but is now in the Lord Mayor's Conference Room. This was disconnected in the 1950s, since when the clock has been controlled solely by the pendulum in the tower. It also has a seconds counter and an eight inch diameter seconds dial, which were never used, as well as a nicely carved mahogany case, and an invar pendulum.

Since the sale of the company in 1991, the clock has been maintained by Tony Klee.