

# Project Case Study



## The Queensland Performing Arts Centre Dimmer Upgrade

Queensland, Australia—March 2015

### The Client

Located on the Southern Bank of the Brisbane River, and built on lands which were the traditional home to the Jagera and Turrbal Aboriginal people, the Queensland Performing Arts Centre is the premier Arts Centre in Queensland.

The Robin Gibson designed complex commenced construction in 1976 and this most prestigious building was officially opened by HRH The Duke of Kent on 20th April 1985. The final stage of construction saw the 850 seat Playhouse Theatre completed in 1998.



The Playhouse Theatre

Since opening, more than 14 million tickets have been sold to events at QPAC and hundreds of thousands of people have participated in free events, workshops and outdoor performances.

More than 20,000 performances have taken place in one of the Centre's four venues, many featuring some of the world's most significant artists including:

Lauren Bacall, Steven Berkoff, Peter Ustinov, Maggie Smith, Geoffrey Rush, Cyndi Lauper, Bille Brown, The Israeli Philharmonic Orchestra, The Paris Opera Ballet, Bolshoi Ballet, National Theatre of Great Britain, Shirley MacLaine, Dylan Moran, Debbie Reynolds, Dame Edna Everage, Ute Lemper, Rudolph Nureyev, Elvis Costello, Batsheva Dance Company, Dame Kiri Te Kanawa, Brian Wilson, Bill Bailey, Whoopi Goldberg, Betty Buckley and Michael Feinstein.

Many of the world's major musicals have been staged at QPAC including Cats, A Chorus Line, The Phantom of the Opera, CHICAGO, Mamma Mia!, The Boy From Oz, Dirty Dancing, We Will Rock You and Les Misérables.

**QPAC** regularly welcomes visiting performing arts companies from around the country including the Australian Ballet, Sydney Dance Company, Brandenburg Orchestra, Opera Australia, Bell Shakespeare, Bangarra Dance Theatre, Australian Chamber Orchestra and more.

QPAC is also the performance home to four of Queensland's leading companies:

Queensland Theatre Company;  
Queensland Symphony Orchestra;  
Queensland Ballet and  
Opera Queensland.

## The Project

The Queensland Performing Arts Centre has four major performance spaces (the Lyric Theatre, The Concert Hall, The Cremorne Theatre and the Playhouse Theatre) as well as outdoor performance areas, restaurants and cafés.

QPAC needed to replace its aging dimmers in the Playhouse Theatre and engaged Phil Viney from Design Stage to prepare a specification to directly replace the existing dimmers with new units.

The existing system comprised 6 and 12 channel wall-mounted units but Phil discovered that there was no replacement with a similar form factor available on the market at the time. This meant, either a complete redesign of the available wall space to suit the dimmers that were available (expensive) or installing standard rack-mount dimmers and associated rack frames or cabinet thus taking up much of the valuable floor space and resulting in cramped dimmer room conditions.

In addition to this, the refit also called for a number of portable units to be provided and it was desirable that these two different styles of dimmer required had the same functionality and operation.

## The chosen solution

On first look, LSC could see that the EKO family of products would meet the operational requirements and although there was a rack-mount portable version (TEKO) available, the EKO wall-mount dimmer was physically too large for the available wall space. An alternative was required.

LSC Lighting Systems responded to the requirements by offering a unique option to the client by repackaging the existing TEKO TruPower dimmer into a wall mount chassis, the result named the **iTEKO**.

The iTeko mechanical design is based on a previous range of LSC product, namely the iPAK/iPRO series. This series had a small wall-mount footprint, offered a clamshell design and was available in hardwired and output socketed versions. This design was updated to include sockets thus permitting the rear frame to be mounted in place and wired prior to the dimmer itself arriving on site.

The updated design resulted in a dimmer that needs only a 250mm high by 500mm wide footprint for mounting. The iTeko fitted the available layout without any major load or supply rewiring, therefore saving a significant amount of installation and theatre down time. Additional benefits were lower overall costs and better space utilisation compared to any other dimmer system available.

QPAC chose the LSC Lighting Systems iTeko Installation Dimming System as their preferred solution. A number of factors convinced the QPAC technical team to select the iTeko, namely its:

- ability to offer remote switching between PTFD dimming and TruPower outputs;
- ability to remotely monitor all dimmers (including Circuit Breaker status) via the Houston Software;
- compact physical footprint to allow minimum dimmer room space requirements;
- proven track record in other Arts Centres and Television stations;
- overall low installation and on-going running costs.



The iTeko clamshell frame that can be installed and wired prior to the dimmer arriving on site.



Two of the iTeko dimmers mounted on brackets.



**Equipment installed.**

<b>Basement Level</b>	10	60ch	6 x 6kW Hi Rise Time iTeko Wall-Mounted dimmers.
<b>Slots</b>	8	96ch	12 x 3kW Hi Rise Time iTeko Wall-Mounted dimmers.
<b>Fly Floor</b>	2	12ch	6 x 6kw Hi Rise Time iTeko Wall-Mounted dimmers
	2	24ch	2 x 3kw Hi Rise Time iTeko Wall-Mounted dimmers
<b>FOH Dimmer Room</b>	18	216ch	12 x 3kw Hi Rise Time iTeko Wall-Mounted dimmers
<b>Grid Dimmer Room</b>	24	288ch	12 x 3kw Hi Rise Time iTeko Hardwired dimmers
	11	66ch	6 x 6kw Hi Rise Time iTeko Hardwired dimmers
<b>Studio Lighting</b>	12	144ch	12 x 3kw Hi Rise Time iTeko dimmers (4 Hardwired and 8 with Australian outlets)
<b>Loose Dimmers</b>	4	48ch	12 x 3kw Hi Rise Time iTeko rack-mount dimmers
	2	12ch	6 x 6kw Hi Rise Time iTeko rack-mount dimmers
<b>TOTAL</b>	93	966ch	

**The Installation**

Installation of the new dimmer system for The Playhouse was contracted to Ryan Wilkes Electrical. The Ryan Wilkes team headed by Mark Weilly was charged with removing the old dimmers, repositioning some incoming power supplies, rewiring all existing hardwire dimmers and to create the support structures for the incoming iTeko dimmers from LSC.

As the Playhouse was a fully working venue throughout the installation time frame, planning was essential to ensure that the venues functionality was not in any way impeded during the process. As a result, the install was completed in sections, with the final dimmers being successfully installed during March 2015.



The hard-wired version of the iTeko

**The Result**

The Playhouse Theatre now has an LSC iTeko Dimming System throughout the venue comprising of 816 channels of 3kW and 150 channels of 6kW. The client is more than happy with the result but government policy prevents them from providing us with an official quote.

