

## **Announcement: Installation of PA sound system for National Soccer Stadium in Iceland – Laugardalsvöllur.**

Near the heart of Reykjavik, Iceland is the National Soccer Stadium: Laugardalsvöllur located. In 2005-2007 it had major upgrade where the main seating area was completely renovated and new office buildings built. The stadium accommodates 15.000 people where 9.800 are seated.



Photo source: KSÍ – [www.ksi.is](http://www.ksi.is)



Photo source: T.ark

*EB Kerfi ehf. is leading company in the pro audio and lighting industry in Iceland founded in 1992. Distributors for EAW, Powersoft, SommerCable, SGM, Litec, Optoma, Australian Monitor, Ultimate Ears and many other brands.*





In January 2007 The Football Association of Iceland requested an offer for a complete PA sound system for the west seatings of Laugardalsvöllur with possible expansion later for the remaining seatings.

In april 2007 a contract was made between The Football Association of Iceland and EB Kerfi ehf. Final design stage started immediately.

As being distributors for many of the leading high quality professional equipment companies the product brands were an easy choice. All loudspeakers were to be EAW, amplification by Powersoft, and cables by SommerCable.

The design of the speaker setup was mainly done by Steve Badham at Eastern Acoustic Works. Hardware design and management was done by Einar Björnsson, general manager of EB Kerfi ehf. Technical design, programming and measurements were done by Dagur Hilmarsson, technical director of EB Kerfi ehf.

The speakers that were chosen for this installation were EAW MK53xx series with rotatable horns and available in special weather protected version.

The weather protected version is designed to maximize the loudspeakers durability in outdoor use. Some of it's features include multi-layer grill assembly (steel mesh, synthetic foam and stainless steel perforated grill), enclosure constructed of exterior grade plywood coated with styrene resin, fiberglass shell and every hatches and bolts sealed with non hardening sealant. All drivers and transducers are designed specifically for outdoor applications.

Final design consisted of 6 arrays each with two loudspeakers for the main seatings and additionally four speakers directed to the runway on the side of the field.

The amplification was located on the top floor to minimize cable lengths to the speakers, the processing and announcer's control room is located on ground floor.

We decided to go with the fairly new K-series amplifiers from Powersoft. The K-series amplifiers are top of the line equipment which brings innovative concept to the professional audio market. It includes extraordinary output power with audio quality usually associated with Hi-Fi systems. Not forgetting to mention it's extremely small size (1 RU) and weight (12kg each!)

The K-series amplifiers include intergraded DSP processing which controls precisely the crossover, equalization, limiting and protection system. All amplifiers are connected to a computer where every single part of the amplifier and DSP can be monitored and reports automatically sent with e-mail to the system administrator.

Final design consisted of four Powersoft K4 for the high frequency part and four Powersoft K6 for the low frequencies.

All cables were made by SommerCable in Germany. Included over 1000m of quad core speaker cables, 200m of analogue audio cables and 200m of Ethernet cables. Cables that we trust to deliver the high quality sound amplified by Powersoft to the amazingly sounding EAW loudspeakers.

Due to delays of construction with the building the PA system's installation delayed for one year. Installation started early summer 2008 and was completed in a week's time to meet tight schedule of matches in the stadium.

The result was just as we hoped. Every single seat was nicely covered with rich sound and enough power to deliver rock concert.

## Photos

Photo package can be downloaded from: <http://files.ebkerfi.is/laugardalsvollur.zip>

## Quotes

“This system sounds much better than I ever hoped for!” – Páll Sævar Guðjónsson, main announcer for national soccer matches.

“We are very satisfied with the sound system, it’s very easy to use and sounds very nice!” – Jóhann G. Kristinsson, stadium manager.

“The final result of the PA matches the quality we aimed for. The client wanted the best, and I believe that we gave them the best. Thanks to EAW and Powersoft!” – Einar Björnsson, EB Kerfi’s general manager.

“It was a real pleasure configuring the PA, the Powersoft’s DSP interface was almost too easy to use!” – Dagur Hilmarsson, EB Kerfi’s technical director.



Photo source: KSÍ – [www.ksi.is](http://www.ksi.is)



**Equipment list:**

16x EAW MK53xx speakers  
4x Powersoft K4 DSP amplifiers  
4x Powersoft K6 DSP amplifiers  
1x Powersoft Hub  
1x EAW DX810 digital matrix mixer  
Shure UHF-R wireless microphone system  
Australian Monitor CD players and tuners.

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