



# GERMAN CONCERT HALL DEPLOYS A MOTOTRBO™ CAPACITY PLUS SYSTEM

TO DELIVER EASY-TO-USE, CRYSTAL-CLEAR AND SCALABLE COMMUNICATIONS



## TONHALLE DÜSSELDORF

The Tonhalle Düsseldorf is a magnificent concert hall on the banks of the Rhine in the city of its name. Built originally as a planetarium in 1926 by the architect Wilhelm Kreis, the hall has an awe-inspiring auditorium decorated with light-brown wooden balconies and galleries, with a spectacular blue dome overhead. It has a capacity of 1,854 and has an excellent, broad international programme of events, hosting in excess of 350 concerts every year; the Düsseldorfer Symphoniker is the resident orchestra.

## CHALLENGE

The Tonhalle had previously been using the City of Düsseldorf's PMR system. Coverage, which came from a transmission mast installed on a central bridge over the Rhine, was intermittent within the Tonhalle and the radios were configured to a municipal standard and complicated to use. Consequently, the radio system was not widely utilised – only used during events

or performances. Staff often relied on their mobile phones on a day-to-day basis, although this was also problematic, with limited mobile coverage deep within the Tonhalle, which has 2-metre thick walls, an extensive cellar and a maze of internal rooms; and it was time-consuming looking up numbers, leaving messages and not having the option to make group calls.

## CUSTOMER PROFILE

**Organisation:**  
Tonhalle Düsseldorf gGmbH

**Partner:**  
kölnton rental GmbH

**Industry:**  
Leisure

**Location:**  
Germany

## Motorola Solutions Products:

- MOTOTRBO™ Capacity Plus system comprising:
- MOTOTRBO SLR 5500 repeater
- MOTOTRBO DP4400e portable two-way radios
- MOTOTRBO DM4600e mobile two-way radios
- Accessories including single- and multi-unit chargers

**“With the Tonhalle’s thick walls, underground areas and unusual layout, we’ve always struggled with radio or mobile coverage in the past; no longer. Our new MOTOTRBO Capacity Plus system, efficiently installed to our precise requirements by our local partner kölnton, delivers seamless, reliable coverage across the Tonhalle. In fact, the system has been so warmly received that we’ve already extended it to include a new user group for the Düsseldorfer Symphoniker; and, with a Capacity Plus system, this was of course quick and easy for kölnton to manage.”**

Tobias Frings, Event Technology, Tonhalle Düsseldorf



When the Tonhalle became a not-for-profit limited liability company, it had the opportunity to choose its own radio system. It decided to work with local radio service provider and long-term Motorola Solutions partner kölnton rental GmbH, as some of the team knew kölnton from previous employment. Tobias Frings explains: “I had worked with kölnton before, having rented systems from them for large-scale events; the quality of their Motorola Solutions installations and the service and support they offer are second to none. We wanted a single point of contact for any issues, expansion or repairs and kölnton was the obvious choice for a competent, hands-on, local partner.”

## SOLUTION

Following a successful testing phase, kölnton has installed a MOTOTRBO Capacity Plus system in the Tonhalle. The single MOTOTRBO SLR 5500 two-way radio repeater and antennas are installed high up in the dome and provide robust coverage throughout all areas of the Tonhalle and its grounds. Mobile workers are equipped with MOTOTRBO DP4400e portable two-way radios and there are currently six talk groups: safety (fire service and paramedics, internal and external), technical teams (event technicians, air conditioning, caretaker and ushers at the performers’ and trade entrance), event management (from the event manager and steward team leader, to wardrobe and admissions), external providers (set builders, for example), a free group (for employees working closely on a short-term project) and the Düsseldorfer Symphoniker (orchestra office and control room). This latter group was not on the original specification list, as the orchestra is actually a municipal entity; however, when the orchestra operational teams saw how effective the new radio system was and how it could help them to successfully coordinate and organise a performance, they requested their own user group, which was simply and quickly added by kölnton, a perfect example of the flexibility and scalability of a Capacity Plus system.

Three MOTOTRBO DM4600e mobile two-way radios have been deployed. One is within the fire control system

at the main entrance to the hall, so all personnel can communicate efficiently to ensure the correct evacuation process in case of fire. This radio is also used to communicate with the caretaker and the air conditioning technician, as the air conditioning system plays an integral role in efficient smoke extraction (with air being pumped into the auditorium from outlets under every chair so smoke can be efficiently removed via the extraction unit in the dome). The second DM4600e is used by the head usher at the other side of the hall at the performers’ and trade entrance, to coordinate control of who is entering or leaving the building. And the final DM4600e is in the production control room to coordinate lighting and sound technology during a performance; the controller can also organise a building-wide evacuation from here.

## BENEFITS

“We’re still learning about and amazed by all the functionality that our system has to offer. Since deployment, kölnton has already added and altered some of our configurations to suit our needs. For example, we’ve added a talk group and set up emergency calls, all without any system downtime, which is crucial, as we use our radios all the time now; and I’m sure we’re going to keep exploring and developing how we use this incredible, scalable system,” comments Tobias Frings. Indeed, the system is now the key means of communication within the Tonhalle, both on a day-to-day basis and at events. Users have praised the easy-to-operate radios, the crystal-clear audio, the long-life battery and the reliable coverage, which enables teams to work more productively and efficiently and helps to keep operations and performances running smoothly.

Jürgen Michels, kölnton’s project manager, summarises: “This deployment has once again proved what a flexible, high-performance system Capacity Plus is. I love the fact that this system is totally scalable and can work well under so many different circumstances, from large-scale music events to small, fixed installations; it always works optimally.”

### Benefits:

- The MOTOTRBO system offers crystal-clear audio and robust coverage across the site, from cellar to dome, for operational efficiency
- The radios are now used on a day-to-day basis, not just at concerts
- The system is easily scalable and easy to programme to the concert hall’s exact needs, in case extra groups or users need to be added in the future
- Excellent user feedback citing seamless coverage, radio ease of use and battery life

