



YOUR ONE SOLUTION FOR

- BARS & RESTAURANTS
- BROADCAST RADIO
- BROADCAST TV
- CASINOS
- CINEMAS
- CONVENTION CENTERS
- CORPORATE
- CRUISE SHIPS
- eSPORTS
- GOVERNMENT
- HEALTHCARE
- HIGHER EDUCATION
- HOTELS
- HOUSES OF WORSHIP
- K-12/PRIMARY EDUCATION
- KARAOKE
- LIVE ENTERTAINMENT
- MUSEUMS
- NIGHTLIFE
- PERFORMING ARTS
- PORTABLE PA SYSTEMS
- RECORDING
- RETAIL DESTINATIONS
- STADIUMS & ARENAS
- THEMED ATTRACTIONS
- TRANSPORTATION
- TUNNELS

THE HARMAN FAMILY

 **AKG** MICROPHONES, HEADPHONES, INTEGRATED DIGITAL WIFI SYSTEMS

 **AMX** A/V DISTRIBUTION, NETWORKED A/V, COLLABORATION SPACE, USER INTERFACES
DEVICE CONTROL, AUDIO DISTRIBUTION, A/V MANAGEMENT SOFTWARE

 **AXYS
TUNNEL
HARMAN** DIGITAL SIGNAL PROCESSING, AMPLIFIERS & TUNNEL HORNS

 **EAS** ADVANCED AUDIO CONTROL AND AUDIO SYSTEMS

 **CROWN** POWER AMPLIFIERS, PREAMPLIFIERS, COMPACT AUDIO MIXERS,
AUDIO NETWORKING, PORTABLE PA

 **dbx** DBX NOISE REDUCTION SYSTEMS, COMPRESSORS, EQUALIZERS
ACTIVE CROSSOVERS, LOUDSPEAKER MANAGEMENT SYSTEMS

 **JBL
PROFESSIONAL** CINEMA SOUND, INSTALLED SOUND, LIVE PORTABLE SOUND
TOUR SOUND, RECORDING AND BROADCAST SOUND

 **lexicon** AMPLIFIERS, PREAMPLIFIERS

 **Martin** STAGE AND ARCHITECTURAL LIGHTING, EFFECTS FIXTURES,
INTELLIGENT LIGHTS, FOG MACHINES, LED FIXTURES

 **Soundcraft** MIXING CONSOLES, STAGEBOXES, OPTION CARDS
RECORDING INTERFACES, PLUGINS, MOBILE APPS

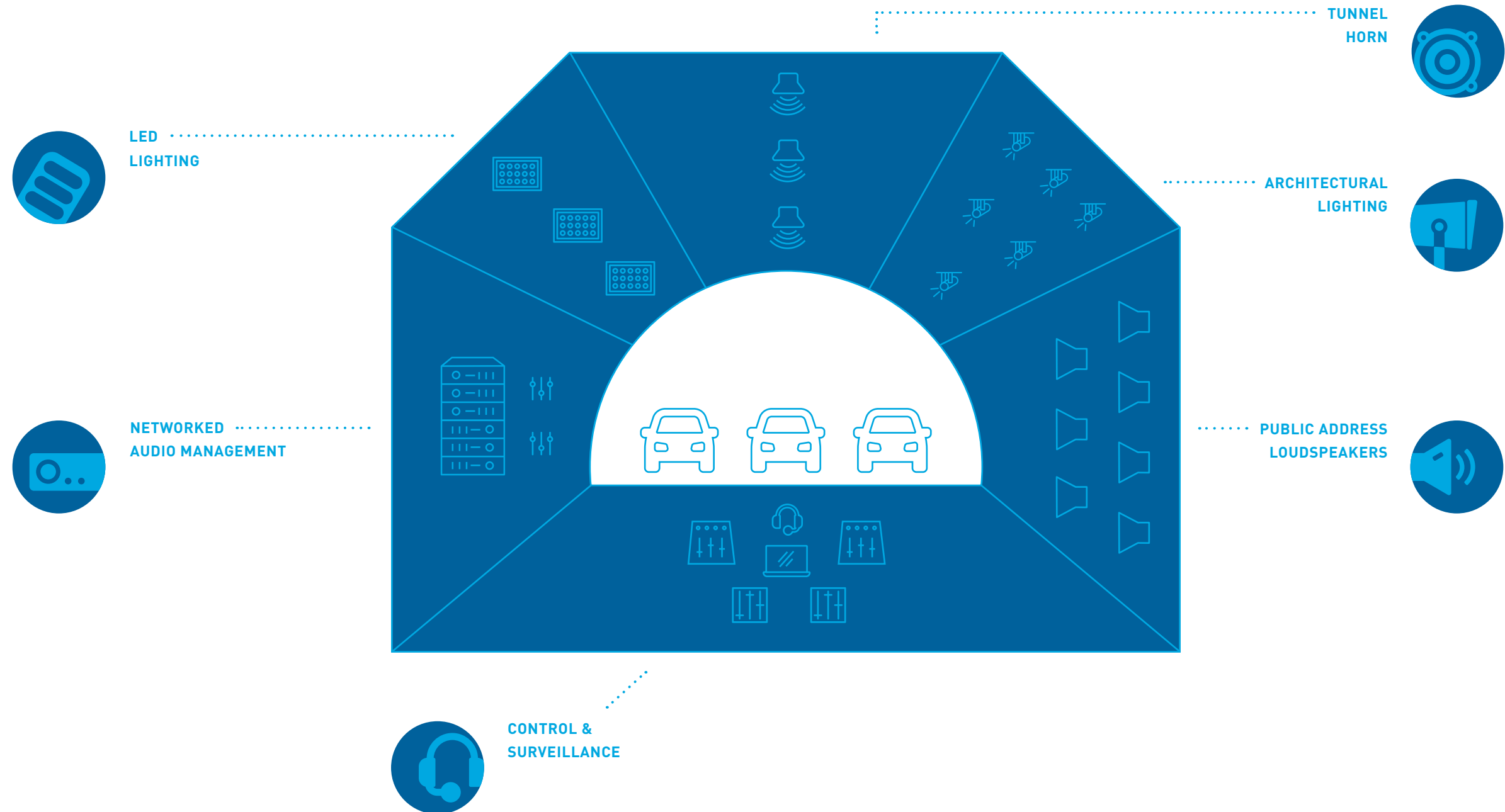
 **STUDER** MIXING CONSOLES, ROUTING AND I/O, WORKFLOW & AUDIO SOLUTIONS

HARMAN TUNNEL SOLUTIONS

HARMAN has developed a complete suite of audio, video, lighting and control solutions, designed specifically to address the unique needs of tunnel operators. From clear and robust audio communications to architectural lighting to easily managed control systems, HARMAN solutions are a pleasure to use and operate.

COMMON HARMAN APPLICATIONS IN TUNNEL SPACES

- LED Lighting
- Networked Audio Management
- Control & Surveillance
- Tunnel Horn
- Architectural Lighting
- Public Address Loudspeakers



CREATING SAFER TUNNEL SPACES

From public address systems and audiovisual control to video distribution and architectural lighting, HARMAN offers a portfolio of solutions for road tunnels. We provide solutions to help get tunnel users to and from their destinations safely, securely and on time.



TUNNEL HORN

DELIVERING INTELLIGIBILITY

Road tunnels provide unique acoustical challenges which require a dedicated solution. HARMAN developed the ABF tunnel horn specifically to address the needs of the tunnel market. These products feature high SPL capability and enhanced water ingress protection. The ABF's ability to produce high sound pressure levels with negligible distortion make it ideal for noisy traffic tunnels.



PUBLIC ADDRESS LOUDSPEAKERS

CLEAR AND ACCURATE DELIVERY

Products from our JBL loudspeaker portfolio can also ensure coverage and intelligibility in cross passages and egress tunnels. When using our Networked Audio Management solution the complete PA can be centrally managed and monitored to ensure clear and accurate message delivery.



LIGHTING

BRIGHT, VIBRANT ILLUMINATION

No matter the tunnel size, we have a wide range of Martin architectural lighting solutions to support them. Outside the tunnel, we illuminate tunnel portals to make them visually appealing and inside the tunnel, carefully placed LED lighting helps keep drivers alert by breaking the monotony of long tunnel distances. Creative LED solutions can provide visual self-evacuation guides to exits.



CONTROL & SURVEILLANCE

MANAGEMENT AND MONITORING FROM A CENTRAL LOCATION

Whether you are managing a single tunnel or a tunnel network, our control room solutions can scale to fit your application. Our AMX control, touch panels and video distribution products are an ideal solution to partner with SAMSUNG displays and our audio solutions. Our solutions equip system integrators with the tools they need to deliver complete control room solutions.



NETWORKED AUDIO MANAGEMENT

NETWORKED AMPLIFIERS - HIGH POWER, ULTRA-RELIABLE

PB Series Amplifiers drive the ABF260 tunnel horn and other loudspeaker systems for egress and cross-passages. They feature on-board DSP allowing gain, EQ, delay and other parameters to be controlled remotely via the WinControl Server. They can be fully monitored and feature automatic fault detection and reporting. Inputs may be either analogue audio (balanced audio) or networked digital audio via DANTE™.

WINCONTROL SERVER - CONTROL, MONITOR & INTERFACE

Our WinControl Server empowers simple control and monitoring of the audio system as well as an interface to the Tunnel SCADA via its API. In addition to these features, the WinControl Server has a built in .wav player to play pre-recorded audio messages to tunnel users. The connection between WinControl and the PB Series amplifiers is via DANTE™.

SYSTEM OPTIMIZATION - MAXIMIZING INTELLIGIBILITY

The optimization of an audio system is critical to ensuring that communications can be heard clearly and intelligibly. In the harsh environment of a tunnel with traffic, fan and reverb noise, this becomes even more important. For this reason, HARMAN developed OpSTImizer software to maximize message clarity and allow users to get the very most from their Tunnel PA System.



WORLDWIDE SOLUTION SUPPORT

HARMAN HAS SALES OFFICES AROUND THE GLOBE READY TO HELP

Wherever you are, you can always contact us. We have dedicated team members ready and knowledgeable around the world who know our products inside-out.



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