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**YOUR COMPLETE GUIDE FOR  
RAIL SOLUTIONS**





## HANOVER DISPLAYS AT THE HEART OF GLOBAL TRANSPORTATION

Hanover Displays is a family owned, UK based company designing and manufacturing passenger information systems for the public transport industry since 1985. With subsidiary offices in France, Spain, Germany, Italy, Australia plus a second production facility in the US and representatives all over the world, Hanover Displays has satisfied customers in over 75 countries worldwide. The security afforded by more than 30 years' industry experience, financial independence and a continuous product development program is further assurance of the company's dependability.



## INTRODUCING HANOVER RAIL SOLUTIONS DISPLAYS

It is important to be able to inform passengers on-board a vehicle of their current position along the route. Providing "This Stop" and "Next Stop" information helps to ensure that passengers know where they are at all times, so that they do not miss their stop and makes their journeys stress-free. Hanover supplies a number of different units to provide a comprehensive solution for on-board passengers:

- **AUDIO ANNOUNCEMENT SYSTEMS**
- **INTERIOR LED SIGNS**
- **MULTIMEDIA SCREENS**

These units are controlled by a powerful on-board computer, the HTC (Hanover Transport Computer). As well as helping operators to provide their passengers with accurate location information, these systems also offer the additional benefits of allowing operators to broadcast promotional announcements and advertising on a location-specific basis.



## LED DESTINATION DISPLAYS



Our in-house production and stringent quality control means we manufacture to a high quality as well as complying to EN50155 certification. All displays benefit from excellent legibility in all environments and are fitted with automatic brightness adjustment which optimises visibility and reduces power consumption.

The sign system is programmed using Hanover's proprietary, Windows based software (HELEN) which is simple to use and allows messages to be displayed in multiple languages and a wide variety of presentation styles. The sign system is driven by a dedicated controller which also serves as the driver interface.

### CASE STUDY: DE LIJN, BELGIUM

#### CHALLENGE

De Lijn tendered for a passenger information system for 88 new trams and 400 buses. The specific requirement of the supplier was to manufacture and supply complying to EN50155 specifications.

#### SOLUTION

Hanover's wide range of system possibilities catered for both bus and rail applications, offering De Lijn a comprehensive solution to their requirements. The passenger information systems for the trams have been fine tuned in close cooperation with the tram builder Bombardier to integrate especially the interior signs in the interior of the trams and meet the stringent rail standards.







## CASE STUDY: STAS, FRANCE

### CHALLENGE

STAS (St Etienne, France) purchased 16 new Urbos trams from CAF in 2015. Having already supplied all their passenger information systems for their bus network, STAS asked if Hanover could supply a rail-certified system for their new trams which also integrated with their back-office despatch system from INEO. Space restrictions within the trams meant that new sign sizes needed to be designed plus our existing communications protocols with INEO needed to work over an IP network.

### SOLUTION

Hanover's in-house design and manufacturing capabilities enabled us to quickly design, develop and supply a completely new colour route number LED sign for the front and rear of the trams. Our software development team worked closely with INEO to ensure that the Hanover on-board system communicated over IP as required with the STAS back-office system. This work, as well as certifying all hardware to EN50155 standards, was achieved within the project time-scales so that there were no delays in supplying a complete, working solution. This required close co-operation with the end customer (STAS), the OEM (CAF) as well as the despatch management system provider (INEO).



## MULTIMEDIA TFT SCREENS



Hanover's multimedia screens use high resolution TFT panels, which are fitted inside robust, vandal resistant cases, specially designed for the public transport environment. The screens can display still images, animated graphics and high definition video.

The sophistication of this technology allows the operator to present more information to passengers, such as complete vehicle routes, places of interest, connection points with other routes on the network, timetables, promotional information and advertising messages. Both VGA and Ethernet communications options available in a variety of sizes.

### KEY BENEFITS:



Screen sizes from 19" to 29", in both single-sided and double-sided formats



29" can be screen split if required for a variety of content, such as route information and advertisements.



All are Ethernet enabled Smart displays making them easy to use and low maintenance



GPS and WiFi enables for live route information and arrival times to the next stop



Display of data from web feeds and integration with other on vehicle equipment e.g. CCTV