

Real Time Traffic Information Systems



DIMITRI signs have been specially designed for motorway and urban road applications so that they meet or exceed all the requirements for legibility and user comprehension for both alphanumeric messages and colour pictograms.

Approval

DIMITRI signs are Type Approved by the UK Highways Agency to the requirements of TR 2141A, TR 1100, MCE 1349, TR 2130 and TRG 1068.



Over the last twenty years, Neuhaus have acquired considerable knowledge and experience in the design and development of real time variable message signs. Using the latest advances in Light Emitting Diodes, DIMITRI Enhanced Message Signs offer a low life cost solution and high performance alphanumeric and pictogram displays.

Neuhaus were the first company in Europe to develop the LED technology for road signs employing variable message text and legends.

DIMITRI offers the following benefits:

- An optical performance that significantly exceeds the UK standard.
- Low power consumption compared with other display technologies.
- High Reliability, extended low life cost.
- Low level maintenance with no moving parts.



Technical Information

Principal Functions.

Using innovative design techniques, DIMITRI variable message signs represent a technically advanced system to provide effective driver information and to improve road safety. The main element is a multi functional matrix consisting of a 7x5 LED matrix for alphanumeric characters and 7x7 LED matrix for pictograms. Each Module of the matrix can be individually controlled.



DIMITRI Modules

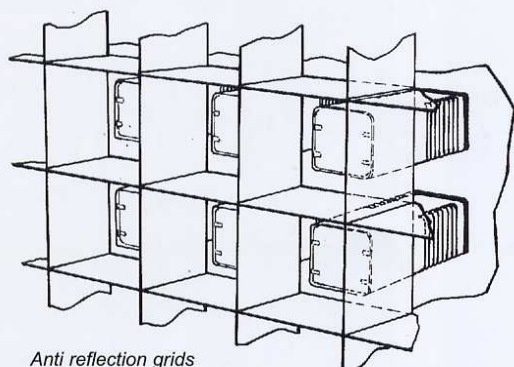
The PL16J module comprises of 16 high luminosity yellow AllnGap Hewlett Packard Diodes for alphanumeric display. Each module produces 21cd.

The PL16JR module comprising 8 high luminosity yellow and 8 Red high luminosity diodes for the pictogram.

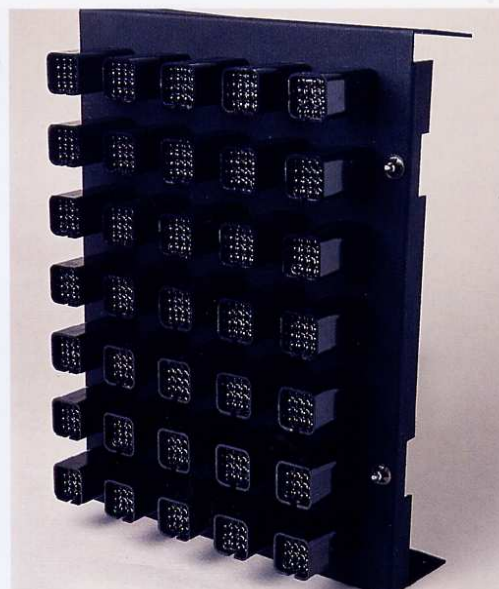
Sign formats for all Applications

Several character heights are available according to the application. For lower speed roads 125mm and 160mm characters are suitable. For major trunk roads and motorways, 210mm, 320mm or 420mm characters should be selected. In the standard format, up to 4 lines can be used whilst the number of characters per line can be 9, 12, 15 or 18.

By using a new substrate technology, the operational life of the LED and the light emitting characteristics are maximised. After many years of service the DIMITRI module has proved its ability to withstand harsh environments often encountered at motorway sites such as driving rain and vibration .



Anti reflection grids



Technical Characteristics of DIMITRI

Our experience, complemented by European research programs conducted by National Road Authorities has resulted in the establishment of a set of standards for LED road signs.

The height of the characters is a function of the drivers ability to read and rapidly understand the message. The viewing distance and speed of travel of the vehicle are the critical factors.

	Recommended Height of Character	Minimum Value	DIMITRI Height of Character
Motorway < 80mph	400	320	320 or 420
Urban < 56mph	250	200	210 or 320
Town < 30mph	160	125	210

The success rate for reading reaches 85% when the contrast ratio is 10 ± 2 . The excellent legibility results that Neuhaus have achieved ensure that DIMITRI has the very best performance whichever character height is specified.

This performance must also be compliant with the specifications throughout the lifetime of the signs. The uniform brightness of the diodes is controlled so that both the comfort of the driver and his ability to understand the sign is assured.

The UK standards for Variable Message Signs require that a brightness level of at least 50% must be maintained within a viewing angle of 5 degrees from the perpendicular axis. Independent optical tests demonstrate that DIMITRI signs exceed these standards.

The standards also require that the emitted chromatic frequencies fall within defined colour band widths.

DIMITRI colours fully comply with these requirements.

Contrast is one of the most important characteristics in defining the clarity of road traffic signs. According to the standards the acceptable contrast for signs containing information is between 10 and 50.

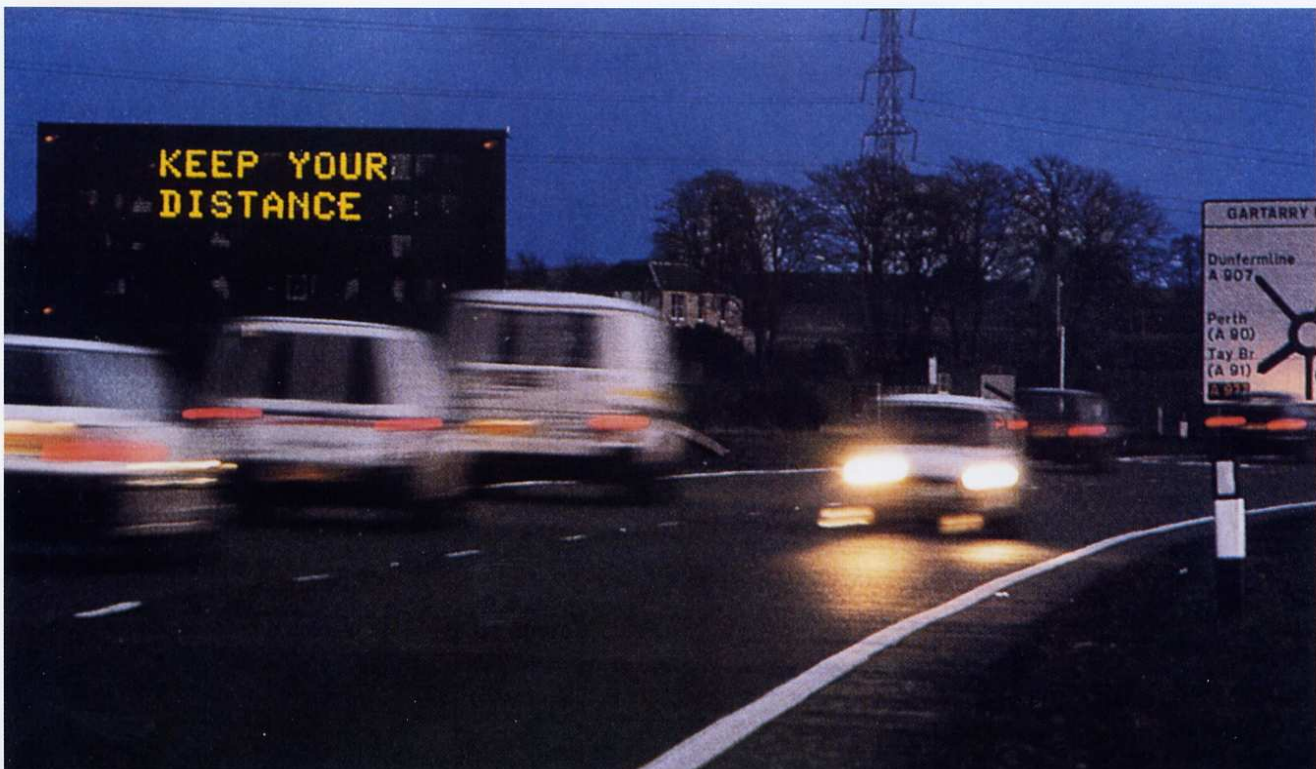
DIMITRI MATRIX	210mm PL16J without Grid	320mm PL16J with Grid	420mm PL16J with Grid
Contrast	min 7	29	34
Power Supply	20mA	5mA	10mA

Sign Construction

The main matrix face contains the LED modules. Matt Black anti-reflection grids are secured behind clear polycarbonate windows which are also sealed to the front of the enclosure.

The construction of the enclosure varies according to the format of the sign, the number of characters and lines. All DIMITRI enclosures are constructed using a rigid aluminium frame covered in aluminium sheeting. Access to the sign is from the rear, the method of axis depends upon the supporting structure.

The signs can be fixed to gantries or to posts on the roadside. They may also be attached to beams using I section plates which allow for horizontal adjustments.

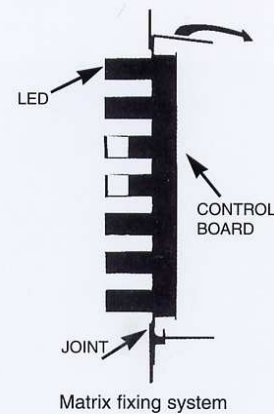
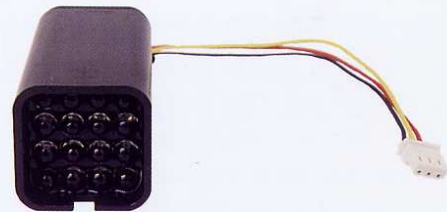
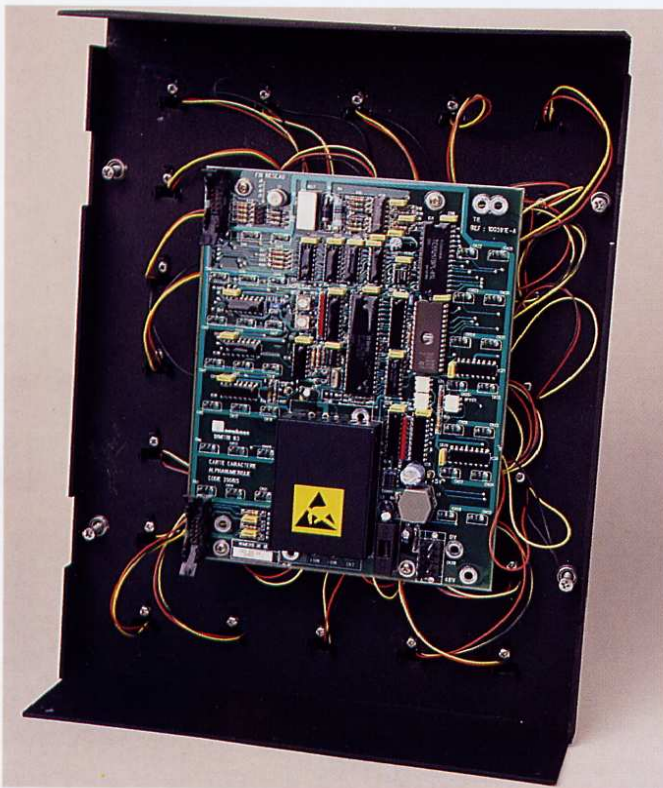
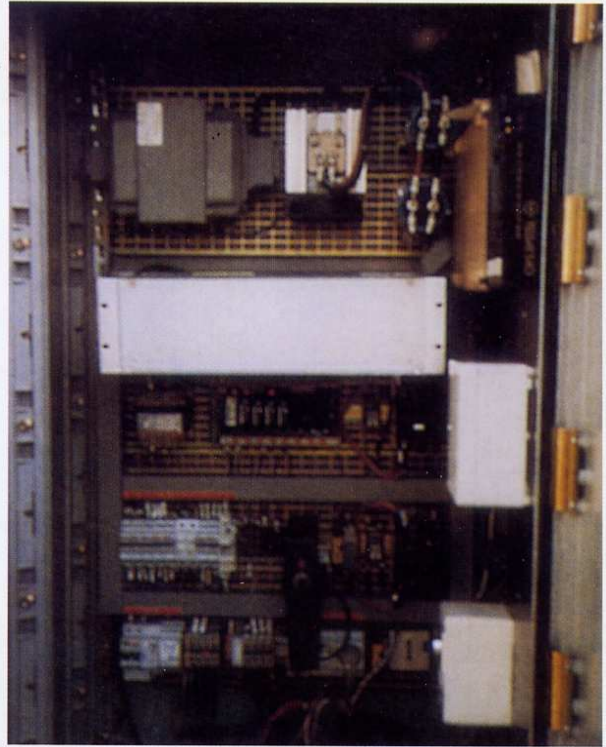


Easy Maintenance

The DIMITRI matrix is made up of the following components:-

- The LED modules which can, if necessary, be removed in a few seconds.
- The module back plate which is secured by four quarter turn screws and can then be removed after disconnecting the data and power cables.
- The character interface card which can be re configured by changing the card address.

The signs construction is a welded aluminium assembly to form a waterproof enclosure. The design is such that any maintenance task can be conducted from the rear of the sign.



The Sign Controller

The Sign Driver Control Module can be located in the VMS or in an adjacent roadside cabinet. The driver stores the appropriate message set and controls the operation of the VMS. Communication between the driver and the sign is by a RS 485 link. The Character card holds the address for specific characters to be displayed and controlled. Luminosity cells determine the ambient light and in monitor mode the Anator Card via the driver controls the luminosity levels. Several levels of luminosity are available, each level being software configurable.

In driving mode, the Anator Card and Dimmer Card set the luminosity level for the conspicuity lanterns (Amber and Red). Anti condensation heaters are also used to ensure a clear display.

For more information please contact:

Neuhaus Systems, Signature House, Lanesfield Drive, Wolverhampton, West Midlands, WV4 6UB.
Telephone: 01902 404808

Fax: 01902 404708



neuhaus

PASSENGER SHELTERS



STYLE WITH PERFORMANCE

Neuhaus Passenger Shelters

The Neuhaus range of high quality passenger shelters offers a unique combination of distinctive style, versatility and passenger convenience.

Our modular construction techniques enable a comprehensive range shelter sizes and formats to be created, all with a unified style and attractive appearance. An exceptional level of customisation is achievable to suit site location or corporate requirements.

With over twenty years experience in the manufacture of passenger shelters, our design skills, materials technology and manufacturing techniques enable our shelters, bus stops and information displays to provide many years of trouble free service whilst retaining their elegant appearance.



Neuhaus passenger shelters are available in enclosed, cantilever or cloche formats. All our shelters offer:

- Attractive and elegant appearance.
- Excellent weather protection.
- High passenger visibility and safety.
- Resilient, powder coated finish.
- Wide choice of sizes and colour schemes.
- Low maintenance, ease of installation.
- Aluminium or galvanised steel construction.

Customised Products

Our Smart range of shelters can be tailored to suit almost every application of size and format for superstores, rail and coach stations, airports, urban and city streets. Site location and travel operator telephone numbers can be incorporated into the glass panels. A wide range of paint finishes is available to complement corporate colour schemes and to suit environmental considerations.

Standard Products

Our Metro and City models also offer effective protection from the weather, in addition high visibility and safety. The Metro features two central aluminium uprights which support the polycarbonate roof, integral gutters and lighting units. The City is a cantilever shelter manufactured in galvanised steel, available with an optional advertising or information display panel.



Visibility and Passenger Safety

A key consideration is passenger safety. Neuhaus shelters maximise the use of natural light and provide a high level of passenger visibility.

The enclosed shelters are designed with wide entry and exit points providing easy access for wheelchair and pushchair passengers. Mid rails are usually specified however if single piece glass panels are required, vision strips are added, for extra safety. During the hours of darkness, integral lighting provides additional security.

Design and Construction

Each shelter is manufactured from either aluminium profiles or galvanised steel and finished with a tough powder

coated polyester paint. Highly resistant to climatic and environmental conditions, this hard wearing finish retains its attractive appearance over many years of service. To maximise protection from wind and rain, the glass panels are rebated into the mid and base rails. The base rail provides structural integrity and supports the glass panels which can be supplied in either 8mm or 10mm toughened glass. Hand and foot holds are minimised to reduce attention from vandals. The strong and leakproof polycarbonate roof provides protection against solar gain whilst contributing to the aesthetics of the shelter.

A key aspect of the construction is the base anchorage system. This ensures that the shelter remains secure after many years of trouble free service, even in the most demanding environmental conditions.

A Wide Range of Options

A complementary range of bus stops is available which can include real time displays or timetables. Alternatively, timetables and real time display units can be incorporated into the shelter. Shelters can also include separate modules for telephone communication equipment.

A wide range of complementary accessory products including seating and information or advertising displays is available.

Low Maintenance

Another key factor is the low life cost of Neuhaus shelters. Apart from cleaning, no general maintenance is required. All materials are easily cleaned and are graffiti resistant. Any broken glass panels are easily replaced without the need for special tools and new parts are readily available, ex-stock, ready for immediate installation. The shelter design maximises the versatility of component parts thus reducing the need for a large stock of replacement spares.



Specification and Installation Services

Neuhaus will be pleased to assist with the specification and design of passenger shelters. We can supply standard models or develop your concept idea into a cost effective solution to satisfy your specific requirements. Our shelters use straightforward installation methods, even on difficult sites. The anchor points are accurately positioned using a jig frame to ensure perfect and accurate installation. We offer a full installation service and project management facility using our own experienced teams.

For more information please contact:
Neuhaus, distributed in the UK by Pathfinder-Franco, Signature House, Lanesfield Drive,
Wolverhampton, West Midlands, WV4 6UB.
Telephone: 01902 404808
Fax: 01902 404708