



## GPS Receiver/Antenna

**Hanover product code: H103**

### Description

The H103 Receiver/Antenna has been designed for use with Hanover Displays on-bus equipment. It is used in conjunction with units that do not have sufficient space within the enclosure to house an integral GPS receiver (e.g. ERIC or DERIC sign console). It also provides an added benefit over a separate antenna and receiver in that the connecting cable (power and communications) is much more robust and less likely to become damaged than a co-axial RF cable.

The unit comprises a small 90mm square housing normally mounted on the bus roof. It includes a 30mm cable outlet with Microfit connector to which an extension cable (Hanover Part CXAS003) is connected to reach the processor equipment.

### Installation

The preferred location is outside on the roof of the vehicle where there is an unobstructed sky view in all directions and at least 1m from any other antenna or source of radio interference.

In the case of interference between this antenna and any other equipment, either or both sets of equipment may need re-orientating to minimise interference.

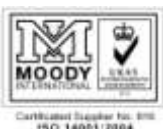
Drill a 15mm diameter mounting hole. Pass the short 300mm cable through the hole and screw up the retaining nut from underneath (inside the bus).

The sloping face should face forwards (to deflect low branches).

Run a bead of silicone sealant around the outside to prevent water getting into the bus.

A separate extension cable (Hanover Part CXAS003) should be specified and made to length to suit the installation. This is a four-way cable (0V, 24V, RS232 RX, RS232 TX). For an ERIC++ installation, this will typically connect to a CXAS001 harness that provides the final connection to the ERIC++ 25-way D-type.

Where an external mounting is not possible, an alternative (but less preferable) location is fitted to a bracket immediately below a glass-fibre roof (NOT METAL ROOF). The roof should also not be painted with a metallic-based paint.



Certified Supplier No. 816  
ISO 14001:2004

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Certified Supplier No. 816  
ISO 9001:2000

## Operation

On first use the unit may need to download a new almanac. This requires 10 minutes clear sky view. It has a battery back-up that should subsequently retain this for up to about 10 days. Normal startup time from cold with a good sky view should be less than 1 minute.

If an "instant start" is required the unit should be permanently powered from a fused vehicle battery supply, current consumption is 15ma.

The serial input RS232 data stream is fixed at 9600 baud. It includes the standard NMEA GPS logs as follows:

GLL  
GSA  
GGA  
GSV  
RMC  
VTG

### Connector Data

GPS cable

Microfit receptacle Hanover part no.: 30-3012-8004-00

Microfit socket pins Hanover part no.: 30-3012-8000-00

Extension cable

Microfit plug housing Hanover part no.: 30-3012-8004-01

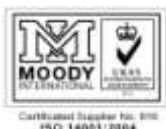
Microfit plug pins Hanover part no.: 30-3012-8000-01

Red: 24VDC @ 15ma

Blue: 0VDC

Yellow: RS232 TX (from antenna)

Green: RS232 RX (to antenna)



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