

### **Electro-Magnetic Compatibility (EMC)**

This product complies with Council Directive 2004/108/EC when installed and used in accordance with the relevant instructions.



### **Service and Technical Support**

PLEASE CONTACT YOUR NEAREST DISTRIBUTOR

If unknown then fax: 44 (0) 1453 733322

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Document number

S/DC/500-10-600: Issue 1.0 : 15/5/08

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# **User Guide**

## **A100 GPS Receiver**

Installation

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## Introduction



The RDS A100 GPS Receiver uses SBAS\* to enable 50cm accuracy 95% of the time (assuming good reception). It is pre-configured for operation with the PSi head unit and/or the ASC 200 Automatic boom section Controller.

- \* SBAS Satellite-Based Augmentation System providing a differential correction signal e.g. EGNOS (European Geostationary Navigation Overlay Service) or WAAS (Wide Area Augmentation System)

## Parts List – Kit Ref. P/A100-GPS

Part No	Description	Qty
S/HU/216-7-001	A100 Receiver	1
S/AC/216-7-007	Magnetic Mount	1
S/CB/216-7-006	Receiver Cable - 5m	1
S/AC/268-1-078	Clip for 9-way D Connector	1
S/CB/268-1-045	PSi-Jupiter Cable (connection to PSi only)	1
S/CB/216-7-005	Splitter Cable (connection to PSi + ASC200)	1

## Mounting the antenna

- The receiver comes fitted with a short mounting stalk with magnetic base. Mounting on a plastic roof will require a metal base plate (not included) to be attached by suitable means. Run the combined antenna/power cable into the cab.
- *Mount the antenna in the location for which you desire a position* e.g. along the centre line of the vehicle and as close as possible over the working interface.

NOTE: As this may well be impractical to achieve, the Pro-Series can be programmed via the PF SETUP menu with GPS ANTENNA OFFSETS to compensate for the difference in position of the antenna from the cutter bar, spray boom etc.

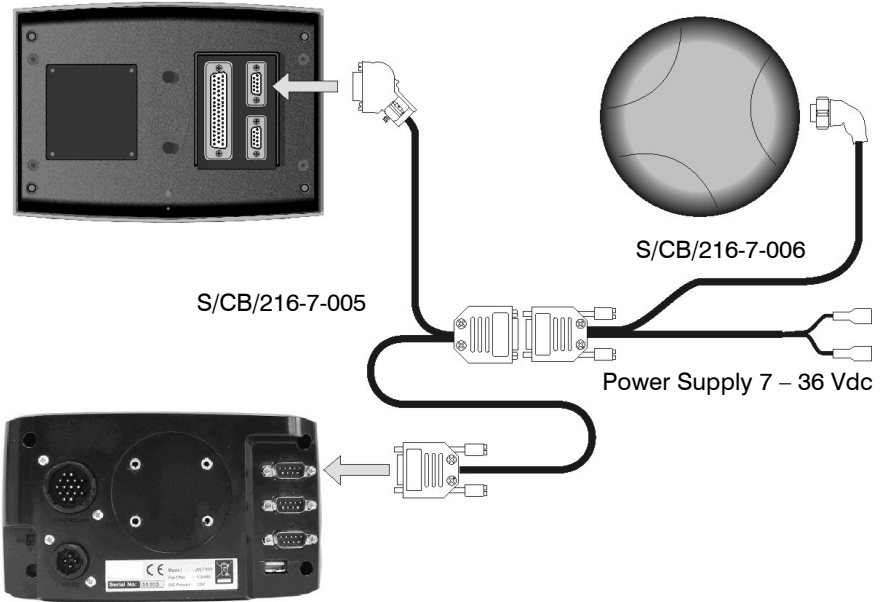
- *Mount the antenna to give an unobstructed hemisphere of sky.* This will ensure that GPS satellites are not masked by parts of the vehicle, potentially reducing system performance.
- *Wherever possible, avoid drilling holes in the roof* to avoid both water ingress and possibly wiring / air conditioning equipment etc. If drilling is unavoidable, use silicone sealant around fixing and cable entry points.
- *Mount the antenna as far as possible from any equipment that can cause Electromagnetic Interference (EMI)* including DC motors (e.g. air conditioner), alternator, solenoids, CB radio, power cables, display units, or other electronics. Excessive EMI will degrade system performance.

TIP: To detect possibly troublesome interference, tune a LW band portable radio off-station. With the aerial laid flat you can then (hopefully) pick up the direction and source of the interference from the increase in noise. The antenna can then be repositioned or if necessary, the source of the interference suppressed. If need be, contact RDS for further advice on suppression methods.

- *Secure the antenna cable close to the antenna mounting* (using cable ties) so that in the event the antenna is knocked off its magnetic mounting, it will be restrained and minimise the possibility of further damage.

## Connections

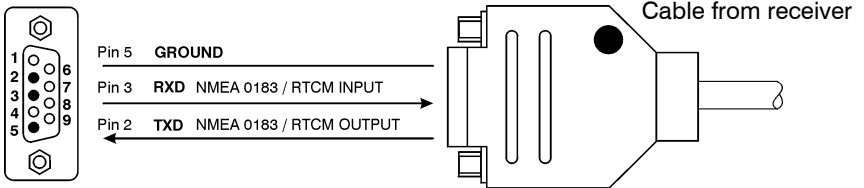
### Psi with ASC 200





## Configuration

RS232-C interface (DB-9 **Female** Connector) with the following pin outs.



The receiver is pre-configured as follows:

Data Protocol:-	Data format	NMEA 0183 / RTCM-104,
	Message rate:	GGA @ 10Hz ((Position) VTG @ 1Hz (Ground Speed) ZDA @ 1Hz (Time and Date)
	SBAS:	EGNOS
	Baud rate:	19,200
	Data Bits:	8
	Stop Bits:	1
	Parity:	None
	Flow Control :	Off

Any changes to the configuration can be done via the utility 'TERMINAL1.EXE' on a PC. If re-configuration is necessary, please contact RDS Technology Ltd, UK for assistance on how to do this.

## Operation

The first startup can take from 5 to 15 minutes depending on the location. Subsequent startups will be quicker.

On power-up, the LED on the receiver indicates the following,

<b>LED Indication</b>	<b>Condition</b>
Red	Power On
Amber	GPS Lock
Green (flashing)	Establishing DGPS
Green	Full DGPS position acquired

Issue 1.0:

15/5/08

Original issue