

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

This product complies with Council Directive 89/336/EEC when installed and used in accordance with the relevant instructions.

## **Service and Technical Support**

PLEASE CONTACT YOUR NEAREST DISTRIBUTOR

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Our policy is one of continuous improvement and the information in this document is subject to change without notice. Check that the software reference matches that displayed by the instrument.

### **Document number**

S/DC/500-10-048 : Issue 4 : 5/1/96

\\UK048-4.DTP



# **User Guide**

## **Bale Wrap Monitor**

### **Operation and Calibration**

**Software Ref: UDM 316-1**



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## Section 1 - Introduction

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The *RDS Bale Wrap Monitor* is used on a bale wrapping machine to count the number of wraps of film applied to the bale. The total number of bales wrapped is accumulated and stored in the instrument memory.

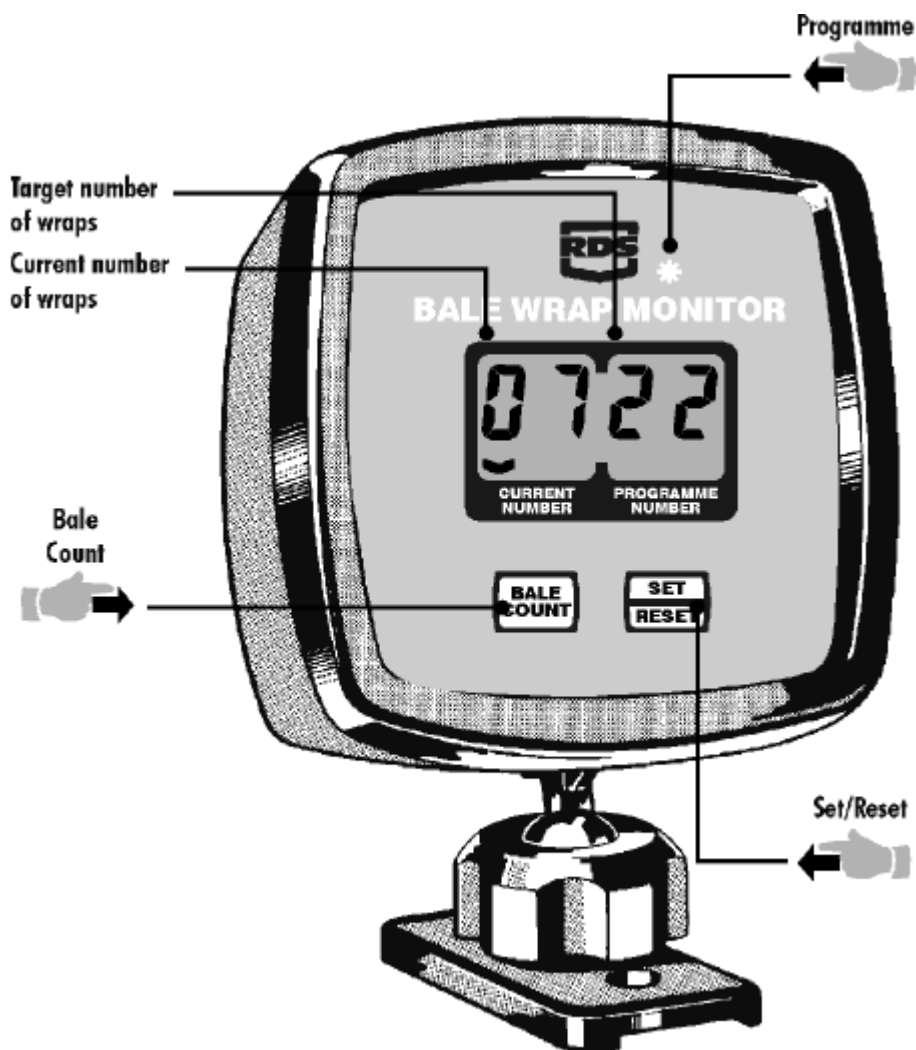
It has an illuminated 4 digit LCD display, 3 switches to control all functions and an internal alarm. An external alarm is optional.

The instrument is normally powered on via the vehicle ignition circuit.

### What can it do ?

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- / Continuously displays the current number of wraps around the bale alongside the desired number of wraps preset by the operator.
- / Sounds an alarm at a preset number of wraps before the target number is reached.
- / Automatically senses when the bale wrap sequence ends and records it to each of two memory registers:
  - (i) Grand Total
  - (ii) Part Total
- /



## Section 2 - The control switches

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There are 3 switches on the front panel **used individually or in combination**, to programme, set/reset or select a function.

### Programme

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**Press and hold** in combination to:


- (i) Set Target Wrap number.
- (ii) Set alarm threshold.
- (iii) Totally reset instrument.

### Set/Reset

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**Press and hold:**

/ in combination with , to cycle digits from **0-9** when entering preset value:

- (i) Target Wrap number.
- (ii) Alarm threshold.

/ for 5 seconds to reset part total or Current Wrap number.

### Bale count

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**Press and hold** to display bale totals.

### 3.1 Current/Target Wraps display

The lefthand section shows the current number of wraps and the righthand section shows the target number.

When the current number = Target number, the alarm will sound for 2 seconds and the display will flash. (If set, the early warning alarm sounds beforehand). Automatic reset of current number to zero normally occurs 3 seconds after the Target number is reached. If additional wraps are added after the Target number is reached, the current number will continue to advance.



#### Manually reset Current Wraps to zero



Hold.

#### Programme Target Wraps



1 Hold continuously.

*Third digit flashes.*



2 Hold to cycle to the desired digit, then release, otherwise press once.

*Fourth digit flashes.*



3 Repeat Step 2.

4 Release all.

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## Section 3 - Using the instrument

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### Programme Early Warning Alarm

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An early warning alarm can be programmed to sound from 1 to 9 wraps before the target number is reached. For example, if the bale requires 22 wraps and you want an alarm at 20 wraps, then set the number to 2.

To effectively disable the alarm, set the number to 0.

**1 Switch power off.**



**2 Hold, switch power on and continue holding.**

*Fourth digit flashes.*



**3 Cycle to the desired number (0-9).**

**4 Release all.**

### 3.2 Part and grand total

When bale wrap is complete, both part and grand totals automatically advance by 1. The part total can be reset at any time. The grand total cannot be reset.

#### Display totals

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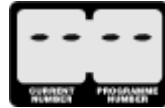


**Hold.**

*Part total displays for 8 seconds.*

*4 bars display momentarily*

*Grand total displays for a further 8 seconds, then defaults to the normal display.*



#### Reset part total

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**Hold with part total displayed.**

## Section 3 - Using the instrument

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### 3.3 Total reset

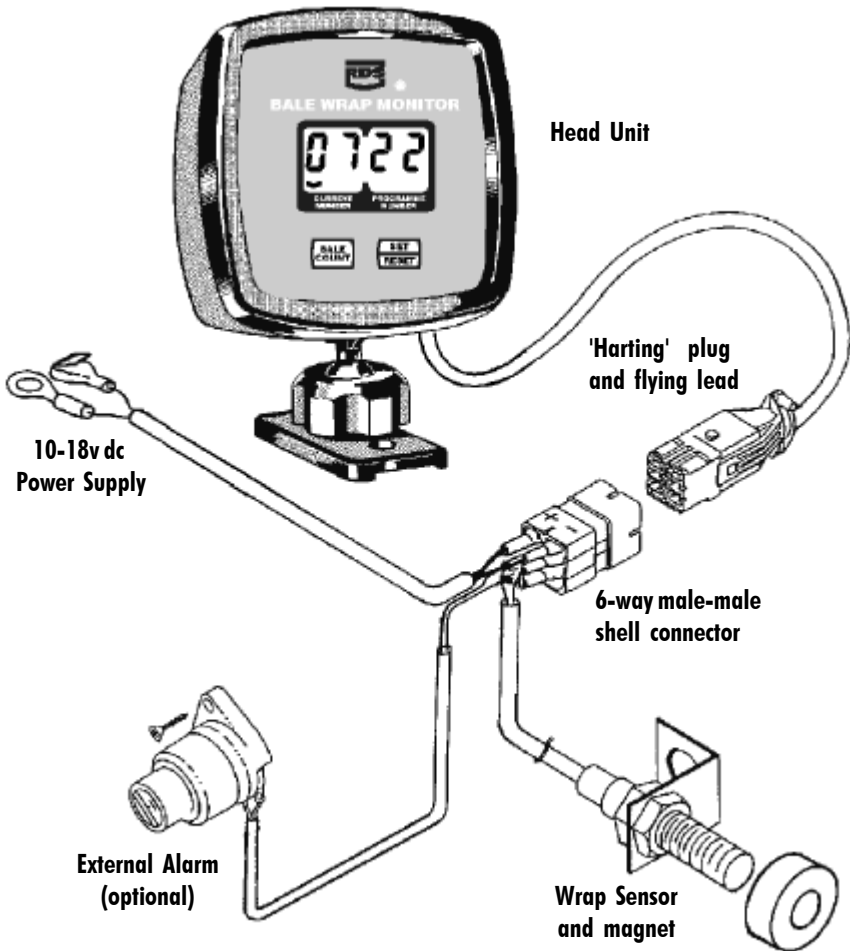
If for some reason the data in the instrument is corrupted or the display shows '**PrOg**' then the instrument must be totally reset.

- 1 **Switch power off.**
- 2 **Press and hold all control switches.**
- 3 **Switch power on.**
- 4 **Release all switches.**

All instrument settings should be returned to the factory-set values. If the display shows '**PrOg**' again, the instrument may be faulty and must be returned to the manufacturer for inspection and repair.

### System components

- / Instrument head unit with internal alarm, supplied housed in an instrument pod for versatile mounting.
- / Magnet fixed on the turntable or wrapper arm, operating a stationary wrap sensor.
- / External Audible alarm (Optional).



# Section 4 - Installation

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## Head unit

### Location

The instrument can be situated in the tractor cab or on the bale wrapper whichever is more convenient for the operator.

Cab-mount in front of the driver, on the dashboard or suspended from the cab roof or corner pillar.

If the bale wrapper is operated from the wrapper, the instrument can be fitted on it. The head unit is waterproof.



**Do not position the instrument where it may obstruct the operators view or use of existing controls.**

### Fixing the instrument pod

The instrument pod can be positioned so that the pod foot is below, on top, or on either side of the head unit.

To change the pod foot orientation,

- 1 Remove the large 'pozi-drive' 'screw from the rear of the pod.**
- 2 Withdraw the inner head unit and turn through 90° or 180°. It may be necessary to re-route the cable underneath the fixing strap.**
- 3 Re-assemble the pod and head unit, taking care to locate the cable grommet in the cable slot.**

To fix the pod foot,

- 1 Remove the instrument pod completely from the pod foot, by undoing the large nut at the base of the instrument.**
- 2 Fix the foot using two No. 8 x 5/8" countersunk self-tapping screws. These require two 3.5mm (9/64") holes.**



Do not overtighten the fixing screws.

- 3 Re-mount the instrument pod to the foot.**



Do not overtighten the fixing nut.

## 'Harting' Connector

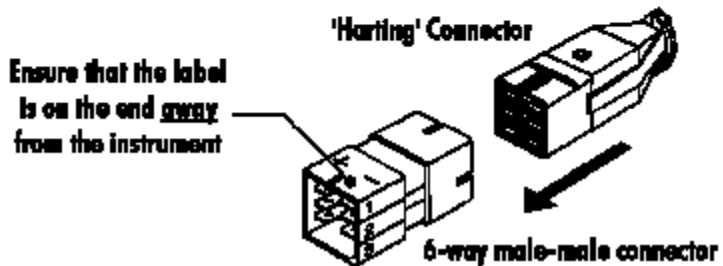
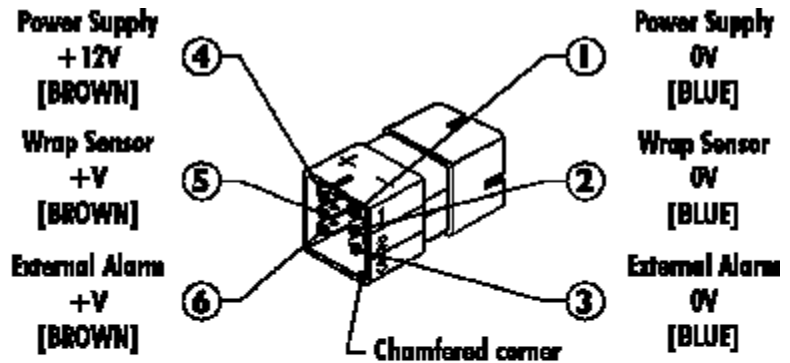
The head unit is supplied with a flying lead terminating in a 6-way connector plug.

Cables are connected to a mating 6-way male-male connector **shell**, to create a quick release connection between the instrument and the vehicle. This allows the head unit to be easily transferred to another vehicle.

A label on the connector identifies each terminal. Orientation is identified by a **chamfered corner** and a groove.

### NOTE

It will be easier to identify the connections by fitting the connector shell onto the flying lead before installation. The labelled end is fitted **furthest** away from the the flying lead.



## Section 4 - Installation

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### Power supply

#### Cab mounted

Use the two-core cable supplied with female push-on connectors at one end, a ring and a piggyback at the other end.

- 1 Connect the blue wire to terminal 1 and the brown wire to terminal 4 of the shell connector.**
- 2 Connect the piggyback connector to a +12v terminal at a switched, fused point on the vehicle electrical system. This may be at the fuse box or on the back of the ignition switch.**



**5 amp maximum fuse rating.**

- 3 Fix the ring terminal under any convenient bolt head.**

#### NOTE

Ensure a good earth connection. Check the bolt is fixed to an integral part of the vehicle chassis, free of paint, rust, grease etc.

#### Bale wrapper mounted

Take the power supply from the trailer lighting socket if fitted.

Utilise the two-core cable supplied.

- 1 Cut off the ring and piggyback terminals and strip the wires back 5mm.**
- 2 Connect the brown wire (+ve) to terminal 5 (58R) or 7(58L) and the blue wire (-ve) to terminal 3(31) of the lighting plug.  
This will provide power to the instrument when the tractor side lights are switched on.**

### External Alarm (optional)

This can be sited anywhere convenient to the operator. It is secured by a single self-tapping screw. If it is fitted on the wrapper it must be protected from direct rain or hosing.

**Connect the blue wire to terminal 3 and the brown wire to terminal 6 of the shell connector.**

### Wrap Sensor and magnet

The sensor is the M12 threaded stainless steel component, and is attached to a bracket fixed to the main frame of the bale wrapper.

The sensor is tripped by a magnet attached to a similar bracket fixed to the wrapper turntable.

- 1 Locate the magnet and sensor so that the sensor is tripped  $\frac{1}{4}$  or  $\frac{1}{2}$  turn before the normal start/stop position of the wrapper.**
- 2 Determine the vertical position of the sensor bracket so that there will be 10-20mm clearance between the magnet and the sensor, and that at least 20mm of the sensor protrudes from the sensor bracket.**



Ensure that the magnet does not stand proud of the framework, to avoid fouling any stationary part of the machine.

- 3 Drill 5.5mm ( $\frac{7}{32}$ " ) and secure each bracket to the box section of the machine with two M6 Tapitite fasteners.**
- 4 Run the sensor cable along the chassis of the machine and secure tidily with the cable ties provided.**



On platform type wrappers where the sensor is mounted on a tipping frame, run the cable down to the hinge point and leave enough slack to allow the platform to tip.

Ensure that the cable cannot be damaged by moving parts or debris falling from the bale.

- 5 Connect the blue wire to terminal 2 and the brown wire to terminal 5 of the shell connector.**

**Magnet on  
rotating frame**



**Sensor on fixed frame**



Your local distributor is: