



SmartReader HR1
User Manual

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Gallagher SmartReader HR₁ User Manual
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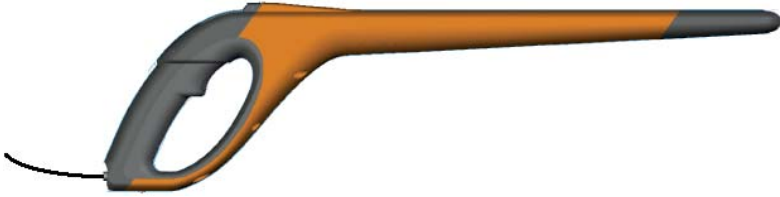
Developed and manufactured by Gallagher Group Limited, an ISO 9001:2000 Certified Supplier.

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Overview

The Gallagher SmartReader HR₁ is a hand held Electronic ID reader which allows the user to read ISO animal Electronic ID tags.



Tag types read

The Gallagher SmartReader HR₁ enables you to read both HDX (Half Duplex) and FDX-B (Full Duplex-B) Electronic ID tags.

Care and Maintenance

The SmartReader HR₁ is a tough and reliable product designed for use in typical livestock environments. However, proper care and maintenance can extend the SmartReader's life. Listed below are guidelines for keeping the SmartReader in good condition.

- For optimal life, Gallagher recommends that you store the SmartReader in a cool, dry area (15 to 25 ° Celsius) out of direct sunlight.
- After use, clean the SmartReader with a damp cloth.

Configurator software

The Configurator is a software program that can be used to alter user settings on the SmartReader. This software program is not supplied with the SmartReader, however it can be downloaded.

The Configurator is for **advanced users** and should be used with care as altering settings affects the operation of the SmartReader.

For further details refer to the *SmartReader HR₁ Configurator Help* (accessible via the Help menu in the Configurator program).

User information

Kit Contents

The Gallagher SmartReader HR₁ box contains:

- Gallagher SmartReader HR₁ with Reader to RS232 (weighscale comms/power) cable
- 12 volt battery cable
- Instruction manual

Accessories

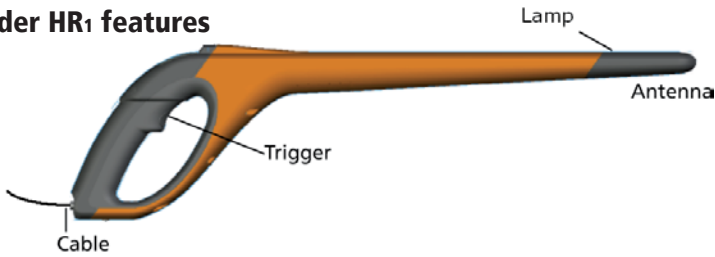
Gallagher is able to provide a USB to RS232 adaptor if needed.

Terminology

The following are terms and abbreviations used throughout this manual:

Electronic ID tag number	The Electronic ID tag number is the electronic code in an ear tag that can be scanned to recognise an individual animal.
Antenna	Contains the aerial used to capture Electronic ID tag data.
Activate the SmartReader	Power up the SmartReader ready for use.
Double-Click	Two quick successive clicks of the SmartReader trigger.
Read period	The time the SmartReader is actively scanning for Electronic ID tags. Once the read period ends the SmartReader antenna is turned off. Default time is three seconds. This time can be altered. See the <i>SmartReader HR₁ Configurator User Manual</i> .
Scale	A digital weighing display unit that detaches from loadbars and connects to your computer.
Scan for tags	Connect the SmartReader to a power source and single-click the trigger. This activates the antenna and makes it ready to read Electronic ID tag data once the tags move within the reader range.
Single-Click	A single click of the SmartReader trigger.

SmartReader HR₁ features



Trigger

Use the trigger to activate the SmartReader and collect tag data.

- **Single-Click** - A single click of the SmartReader trigger.
- **Double-Click** - Two quick successive clicks of the SmartReader trigger.

Beeper

The beeper sounds in the following situations:

- on power up
- after a successful Electronic ID tag read
- when the trigger is pulled (single beep)
- on a duplicate tag read (two beeps). See *Duplicate Tags* (p 12)
- the beeper can be turned on and off. See *SmartReader HR₁ Configurator User Manual*.

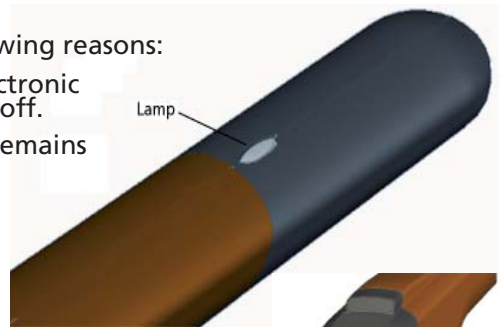
Lamp

The lamp (red) illuminates for the following reasons:

- When the SmartReader scans for Electronic ID tags, the red lamp flashes on and off.
- On a successful tag read. The lamp remains solid for an extended period.

Note: If a tag is not read within the read period the lamp stops flashing.

The timing of the lamp illumination can be altered, see the *SmartReader HR₁ Configurator User Manual*.



Cable connector

A **Data and power cable** is permanently attached. This enables:

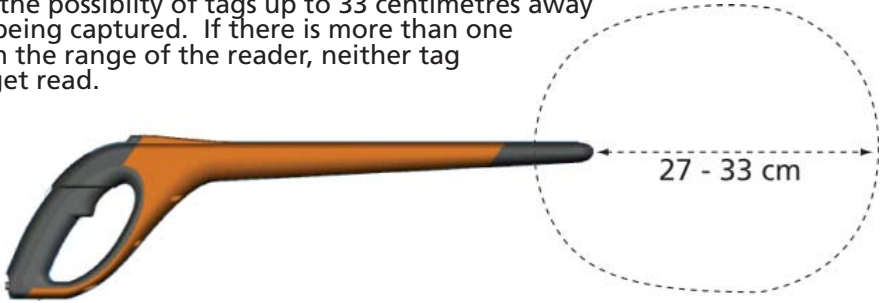
- data to be transferred to a computer
- data to be transferred to scales
- the **12V battery cable** to power the SmartReader.

The cable connector is a serial port. All tag data is sent out this port.



Antenna

Any Electronic ID tags that come within 27 cm of the Antenna will be read, with the possibility of tags up to 33 centimetres away also being captured. If there is more than one tag in the range of the reader, neither tag will get read.



Power options

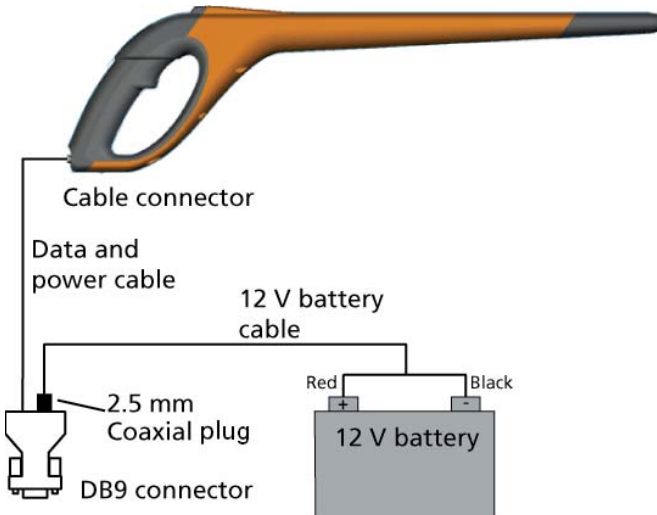
This section describes how to power the SmartReader. There are two options:

- using a 12 V battery for power, or
- using a scale for power

Operating using a 12 V battery

To operate the SmartReader using a 12 V battery, use the following steps:

1. Plug the **12 V battery cable** to the Data and power cable DB9 connector using the 2.5 mm Coaxial plug.
2. Connect the **12 V battery cable** to the 12 V battery. Connect the **Red** lead to the **positive** terminal. Connect the **Black** lead to the **negative** terminal.



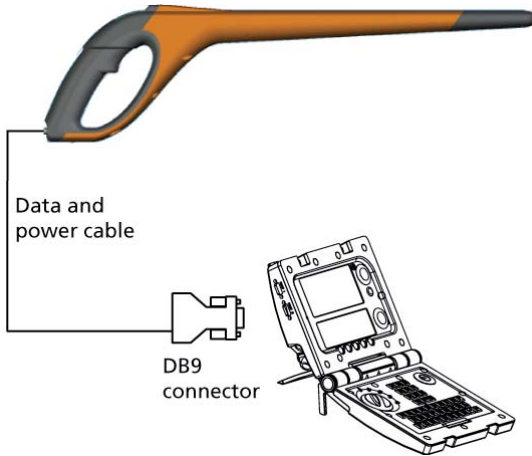
Note:

If powered from a battery in a vehicle, the engine must not be running.

Operating using a Scale

To operate the SmartReader using a scale, use the following steps:

1. Plug the **Data and power cable** DB9 into the Scale.
On a Gallagher Scale connect to Port 2.



2. Turn on the Gallagher Scale.
3. Set up the Gallagher Scale to receive the Electronic ID tag data. See *Setting up the Scale* (below).
Note: If you are connecting to a computer or other data logging device you need to have software running (not supplied) to collect the Electronic ID tag data.
4. Test the connection between the Scale and the SmartReader, see *Testing the connection between Scale and SmartReader* (p 10).

Setting up the SmartReader HR₁

Depending on how you intend using the SmartReader HR₁ you may need to set one or both of the following options:

- the connection to Scale, see *Connecting to the Scale* (next).
- you can also connect to a computer or other data logging device. See "Connecting the SmartReader to the computer" in the *SmartReader HR₁ Configurator User Manual*.

Connecting to the Scale

Before operating, you need to setup and test the connection to the Scale. See *Testing the connection between Scale and SmartReader* (p 10).

Note: You can also connect to a computer or other data logging device. See "Connecting the SmartReader to the computer" in the *SmartReader HR₁ Configurator User Manual*.

Setting up the Scale

Consult the User Manual supplied with your scale. It is likely you will have to assign a communications port (the SmartReader connects to COM 2 on the Gallagher Scale).

Testing the connection between Scale and SmartReader

Once the connection between the SmartReader and Scale is established you need to test the Scale is receiving the Electronic ID tag data from the SmartReader.

1. Activate the SmartReader.
2. Scan an Electronic ID tag.
3. Did the Electronic ID tag number display on the Scale?
 - If **yes**, the connection is working.
 - If **no**, the connection is not working. Check the following:
 - that the Scale is set up correctly, including the Scale communications port.
 - that the RS232 plug is firmly attached to the correct socket on the Scale.

Using the SmartReader

Once you have set up the SmartReader you are ready to use it to capture Electronic ID tag data.

For details on how to set up the SmartReader, see *Setting up the SmartReader HR₁* (p 9).

1. Single-Click the trigger to scan for Electronic ID tags.
2. Move the tip of the SmartReader towards the Electronic ID tag on the animal.
Once an Electronic ID tag is read the SmartReader beeps and the lamp illuminates for an extended period.
3. Repeat steps until all animals Electronic ID tags are read.

Notes:

- The SmartReader beeps twice if a duplicate tag is read.
- The SmartReader stops scanning for Electronic ID tags once a tag is read. You need to Single-Click the trigger to scan for the next Electronic ID tag.
- If an Electronic ID tag is not read within the read period the SmartReader stops scanning for tags.

Duplicate tags

Each tag read is placed in a temporary storage area referred to as a buffer. The tag buffer can store a single tag. A tag is retained until the SmartReader is disconnected from its power source. The duplicate tag checking option can be altered with the Configurator. For further details refer to the *SmartReader HR₁ Configurator User Manual*.

Approvals and Standards

FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION

Changes or modifications not expressly approved by Gallagher Group Limited could void the user's authority to operate the equipment.

Waste Electrical and Electronic Equipment



This symbol on the product or its packaging indicates that this product must not be disposed of with other waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city recycling office or the dealer from whom you purchased the product.



TWO YEAR WARRANTY

FOR THIS PRODUCT FROM DATE OF PURCHASE

MODEL

.....
SERIAL NO

.....
DATE PURCHASED

- Failure to follow care and maintenance guidelines described in the User Manual
- Physical Mishandling
- Lightning Strike
- Floods, fires or acts of God
- Use of an arc welder on loadbars or equipment or steelwork attached to loadbars while a WeighScale is connected

.....
This product is guaranteed free from defects in material or workmanship for a period of two years from date of purchase by the end user. Gallagher will repair or replace at their option any faulty product returned to them or their Dealer within this time period. Freight/forwarding costs incurred by the Customer in the warranty process remain the responsibility of the Customer.

This warranty does not cover damage (including subsequent corrosive damage) due to:

- Unauthorised repairs
- Modifications

Gallagher, their Distributors, and their Dealers accept no responsibility for the misuse of this product.

Gallagher, their Distributors, and their Dealers accept no responsibility for any accident caused subsequently to any tampering with or modification to or misuse of this product.

Gallagher, their Distributors, and their Dealers accept no liability for consequences and/or secondary damages or losses of any kind sustained directly or indirectly, a result of failure or defect in any product, material, installation or service.

**PLEASE READ INSTRUCTIONS CAREFULLY BEFORE USE.
PLEASE COMPLETE DETAILS AND KEEP WITH YOUR RECEIPT — IT IS YOUR
PROOF OF WARRANTY**