Gallagher SmartReader R Series Instruction Manual

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Overview

The Gallagher SmartReader R Series is a panel reader for use in permanent installations where it can be connected to:

- an external power supply and
- to a permanently connected data collection device.

The captured Electronic ID tag data is transferred to the data collection device (Scale or computer).
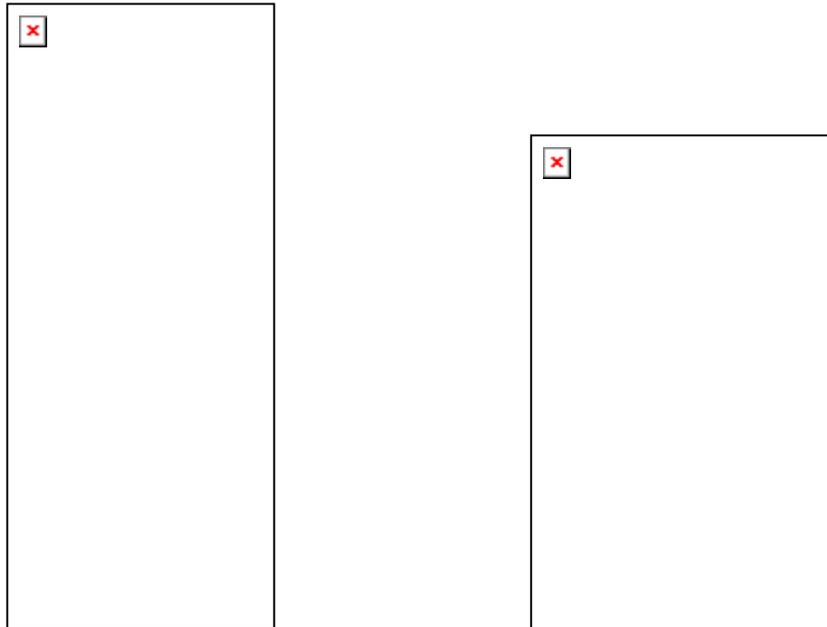
The Gallagher SmartReader R Series has two parts:

- the Electronic Controller and
- the Antenna Panel.

Two Antenna Panel sizes are available to suit the animals being scanned.

There are two models in the Gallagher SmartReader R Series:

- R600
    - Small panel (600 mm x 400 mm)
    - Electronic Controller with external power.
    - RS232 port for transferring data to the Scale.
- R1300
    - Large panel (1300 mm x 600 mm)
    - Electronic Controller with external power.
    - RS232 port for transferring data to the Scale.

If required, multiple SmartReader's can operate in close proximity, so long as they are set up to ensure all Electronic ID tags are read correctly.

Tag types read

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

HDX and FDX-B Electronic ID tags operate differently and therefore have different applications.

Configurator

The Configurator is a software program provided with the SmartReader HHR. Use it to alter settings and to diagnose performance problems in the installed SmartReader HHR.

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

The Configurator software is automatically installed with the MyScale Pro software.

MyScale Pro

Note: The MyScale Pro CD is included with this product to so that the Configurator software (Included on the CD) can be installed as required, see *Installing the Configurator - BR R* (see "Installing the Configurator" on page 27)

For the **SmartReader R Series**, MyScale Pro is not used. MyScale Pro does not communicate directly with the R Series Electronic Controller. The Electronic ID tag information is transferred to a Scale or computer etc.

If the R Series Electronic Controller is connected to a Gallagher Scale, the captured Electronic ID tag information is incorporated into Scale sessions and can be transferred to MyScale Pro from the Scale.

For information on the MyScale Pro features see the documentation provided with the Scale.

For an updated version of the MyScale Pro manual go to the following website:

www.gallagherams.com

User information

Electronic Controller Features

Buttons

Volume	There are two volume levels on the Electronic Controller:
	• Off
	• On
	To change the volume on the Electronic Controller while it is operating, press the **Volume** button.
	Note: Warning beeps (i.e. low battery warning etc) ignore the Volume setting and beep as required.

Audible beep

The Electronic Controller beeps whenever one of the following situations occurs:

- An Electronic ID tag has been read, except if the volume is set to **OFF**.

- The volume level is set. For more details on setting the volume *of the* beep, see Buttons (p 3).

- The external power supply level is too low or too high. This warning sounds regardless of the volume level setting.

Installation

Mounting the Antenna Panel

Antenna Panel Kit

The **Antenna Panel kit** contains the following components:

- Antenna Panel
- Mounting instructions
- Antenna Panel mounting kit:
  - 4 x Washers M8 x 21 mm flat Stainless steel
  - 4 x Bolt M8 X 70mm HEX Stainless steel
  - 4 x Nut M8 HEX Stainless steel
  - Screw Wood TEK 14 X 10 90mm
  - Screw Wood TEK 14 X 10 65mm

Notes on locating the Antenna Panel

Gallagher recommends the following when installing the SmartReader Antenna Panel:

- The Antenna Panel can be mounted onto metal pipe work or wood of the animal handler but not solid steel handler walls.
- The edges of the Antenna Panel contain the antenna windings. This means that when the Antenna Panel is mounted, vertical bars should be kept away from the vertical edges of the Antenna Panel and horizontal bars should be kept away from the horizontal edges of the Antenna Panel.

Considerations

- The position of the Antenna Panel installation depends on the type and size of the animals to be scanned and the size of Antenna Panel to be installed.
- Gallagher recommends you mount the Antenna Panel temporarily while you determine the most appropriate position.
- Mounting the Antenna Panel on a metal animal handler can alter the read range of the SmartReader. Gallagher recommends that the SmartReader is mounted on wood or spaced pipework.
- Multiple SmartReaders can be installed in close proximity to each other, so long as they are synchronised to ensure conflict does not occur between *SmartReaders. See Installing m*ultiple SmartReader (p 21) for further details.
- Use the defined mounting holes, because drilling through the Antenna Panel will damage the antenna.

Procedure

1. Measure the vertical range of the Electronic ID tags on the animals to be scanned.
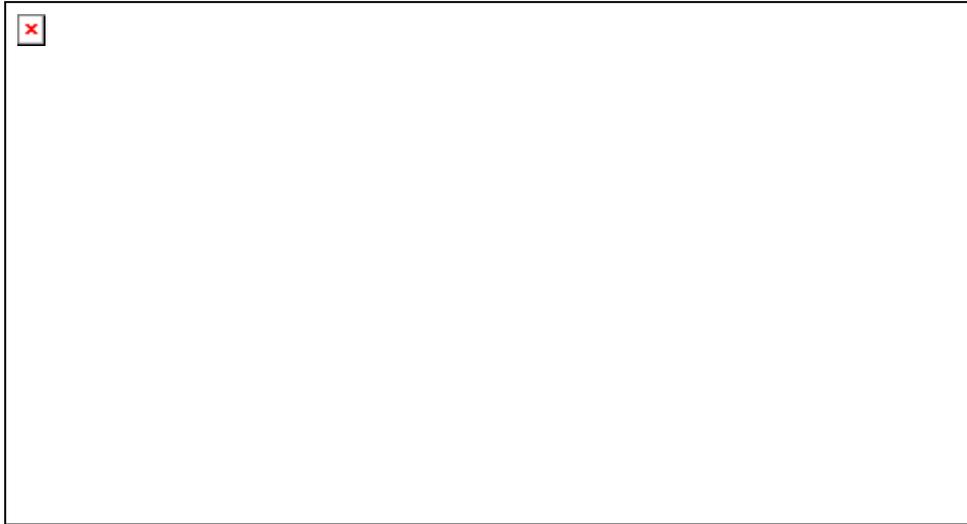
2. Determine the average height of the Electronic ID and mark this on the **outside** of the animal handler.

3. Determine what the Antenna Panel is to be mounted on, wood or pipe work, and prepare the appropriate mounting hardware from the supplied kit.

   Wood - washers and tek screws   Pipe work - washers, bolts and nuts
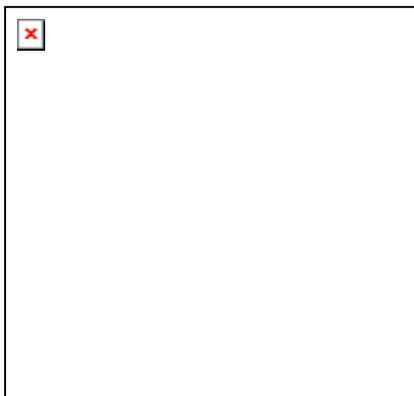
4. Using the **defined mounting holes**, mount the Antenna Panel on the **outside** of the animal handler so that the middle of the Antenna Panel matches the average height.

   Note: DO NOT drill through the Antenna Panel as it will damage the antenna.
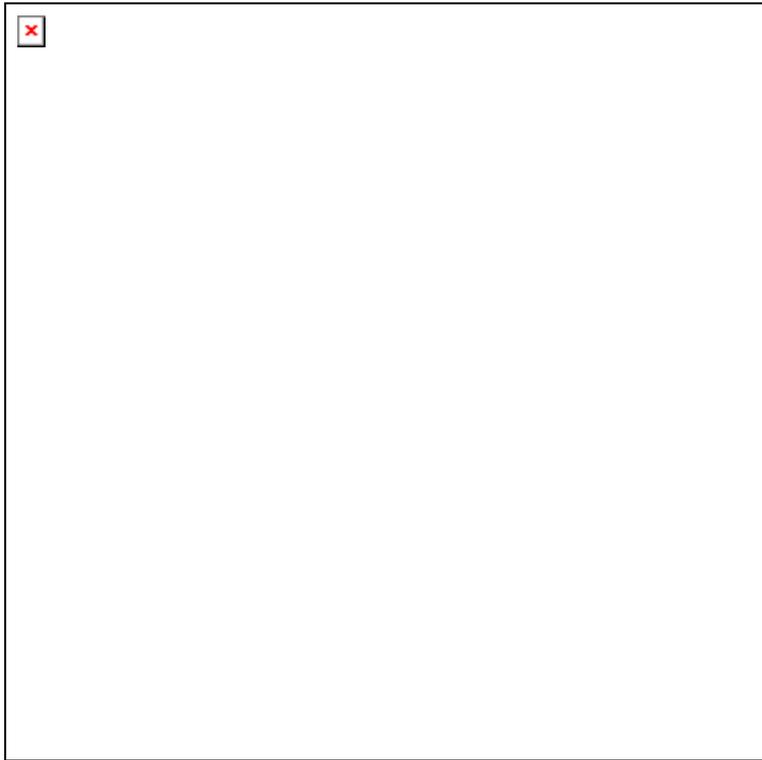
Note: You may want to temporarily attach the Antenna Panel and test the read range prior to permanently attaching the Antenna Panel.

Mounting the Electronic Controller

Considerations

- Ensure the mounting location of the Electronic Controller provides protection from being knocked or damaged by animals.

Electronic Controller Kit

The **Electronic Controller kit** contains the following components:

- R Series Electronic Controller.
- MyScale Pro CD
- Instruction Manual (this manual)
- Cables
    - Short serial cable (DB9 to DB9)
    - Long serial cable (DB9 to DB9)
    - DB9 to USB adapter

Connecting the Electronic Controller to the Antenna Panel

For information on using the Extension Mounting Kit see
SmartReader Extension Mounting Kit installation (p 46).

1. Ensure the Electronic Controller is turned off.

2. On the Antenna Panel, unscrew the Amphenol connector locking nut from the Amphenol socket and pull it down to unplug from the Antenna Panel.

3. Mount the Electronic Controller on the mounting bracket by grasping the Electronic Controller on both sides and slide the back handle onto the mounting bracket.
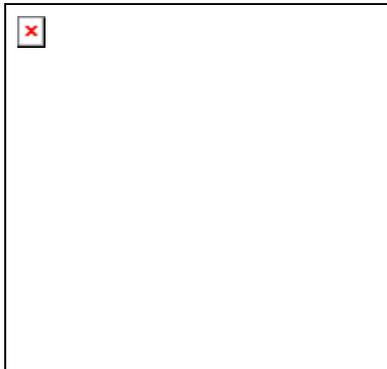
4. Connect the antenna cable to the Electronic Controller and tighten the locking nut.
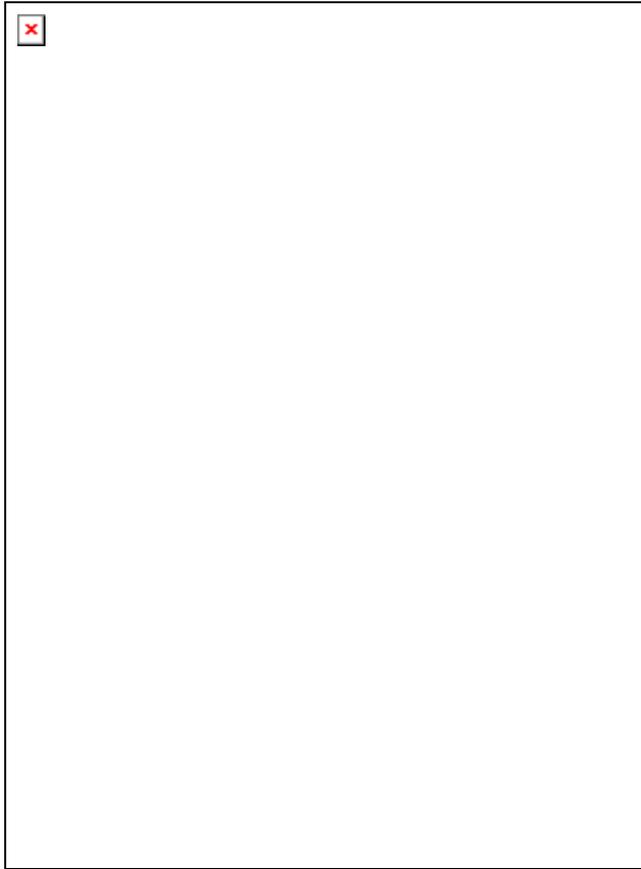
Connect the Electronic Controller to a computer

1. Using one of the supplied cables, connect one end into the RS232 port on the Electronic Controller.
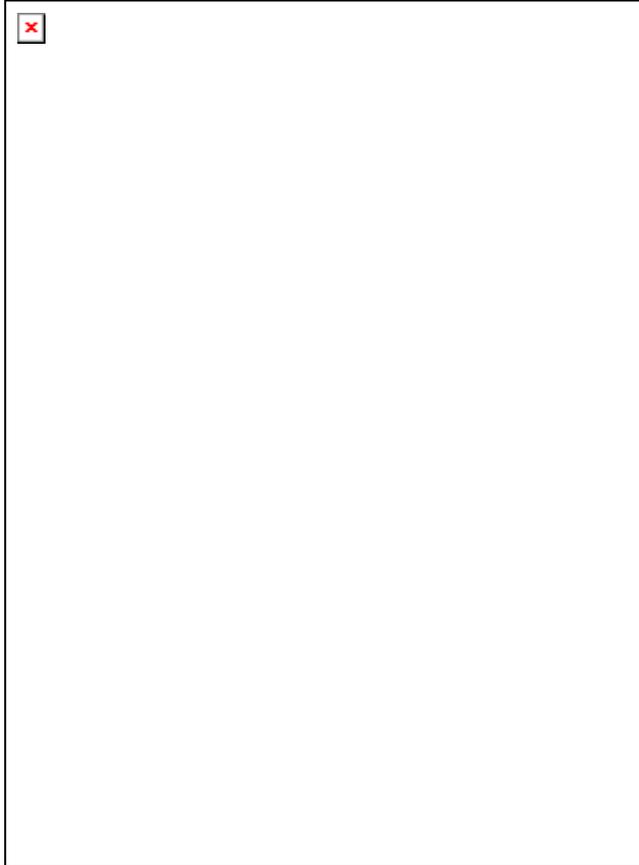
2. Connect the other end into appropriate port on the Scale or computer, etc:

    - Scale - RS232 (COM Port 2)
    - Computer - RS232 or USB

Testing the SmartReader EID tag read range

The SmartReader EID tag read range should be tested to ensure the animals passing through the animal handler are accurately and reliably identified.

The SmartReader generates a balloon shaped read range (see diagram next page), within which EID tags are read reliably. The size of the read range for individual installations should be the width of the animal handler.

The SmartReader EID tag read range for a particular installation is tested using the built in set up mode in the SmartReader. This set up mode changes how often the SmartReader beeps to confirm a tag read from "only on first read" to "every read". This enables you to easily test the SmartReader EID tag read range using the same tag.

The following section describes how to complete an initial test on the SmartReader EID tag read range for your SmartReader installation. For more advanced *testing see Advanced EID tag read r*ange testing (p 15).

Note: The SmartReader R Series is shipped in Operational mode. See *Using the Configurator* (p 27) for details on how to set the SmartReader R Series into Setup mode.

Testing the read range

For your SmartReader installation you need to determine the size of the EID tag read range. If the read range is too small you need to take steps to improve it.

You need to test the appropriate type of EID tag you will be using, either HDX (Half duplex) and/or FDX (Full duplex).

To determine the size of your installation's SmartReader EID tag read range, complete the following steps:

1. Turn on the SmartReader.

2. Ensure the SmartReader is in set up mode by holding an EID tag in front of the SmartReader.

    - If the SmartReader beeps continuously it is in set up mode.

    - If the SmartReader beeps once it is in operational mode.

3. Hold the EID tag in the best orientation in the animal handler near the SmartReader Antenna Panel.
    The SmartReader should **beep** indicating it is reading the EID tag.
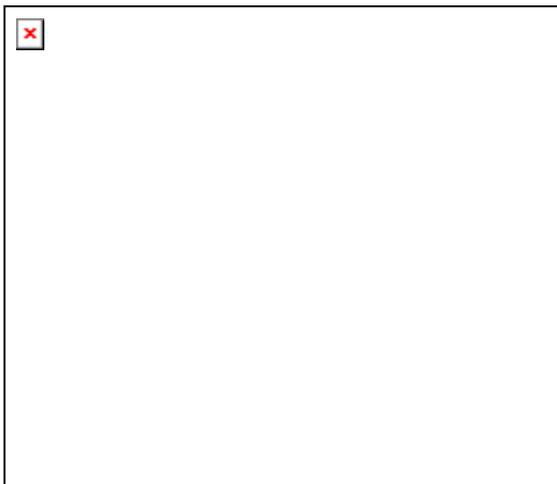
4. Move the EID tag around to determine the size of the read range.

5. Is the read range indicated by the EID tag reads close to the ideal?

    - If yes, then test with live animals by passing a small group of animals through the animal handler and reading their Electronic ID tags.

    - If no, see *Investigating SmartReader read range issues* (p 14).

Investigating SmartReader read range issues

If the EID tag read range on your SmartReader installation is not adequate, check the following:

- The SmartReader is turned on and connected to the Antenna Panel.
- The EID tag is functional and is in the correct orientation for testing.

Re-test the read range by passing a small group of animals through the animal handler and reading their Electronic ID tags. If the SmartReader read range is still not adequate, complete the advanced testing and contact your Gallagher representative, *see Advanced EID tag read range tes* (p 15)*ting*.

Advanced Electronic ID tag read range testing

If an adequate EID Tag read range is not achieved during the initial testing, use the following advanced testing procedures.

Install the Configurator software utility prior to starting the advanced Electronic ID tag read range testing.

The Configurator software utility is automatically installed with the MyScale Pro software.

You will need the following items at the animal handler:

- a Laptop computer with either a serial (DB9) or USB port
- a Serial cable (supplied)
- the Serial to USB cable - if using the USB port (supplied).

Connect the Electronic Controller to a computer

For more information about the Configurator, see *Configurator* (p 2). The Configurator software is automatically installed with the MyScale Pro software.

Procedure

1. Using the supplied serial cable, connect the computer and the Electronic Controller.

   a. Connect one end of the serial cable into a COM port on your computer.

      If required, use the supplied DB9 to USB adapter to connect to the USB port on the computer.

   b. Connect the other end into the COM port on the Electronic Controller

Note: Once you have finished using the Configurator ensure you click on the disconnect button in the Configurator program prior to unplugging the cable. This ensures the data transmission returns to the correct state.

Start the Diagnostics Wizard

1. Connect the SmartReader to a computer. See *Connect the Electronic Controller to a computer* (p 15).

2. Open the Configurator software.

   - Double-click on the Configurator icon on the desktop.

   OR
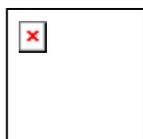
    a.   Click on the Windows **Start** button.

    b.   Select **All Programs** (Windows XP) or **Programs** (Windows 2000).

    c.   Select **MyScale**.

    d.   Click on **SmartReader Configurator**.
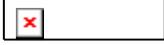
3.   Click .

The current settings for the connected Electronic Controller are displayed in the lower part of the screen.

4. Click on the ☒ tab. The following screen displays:

☒
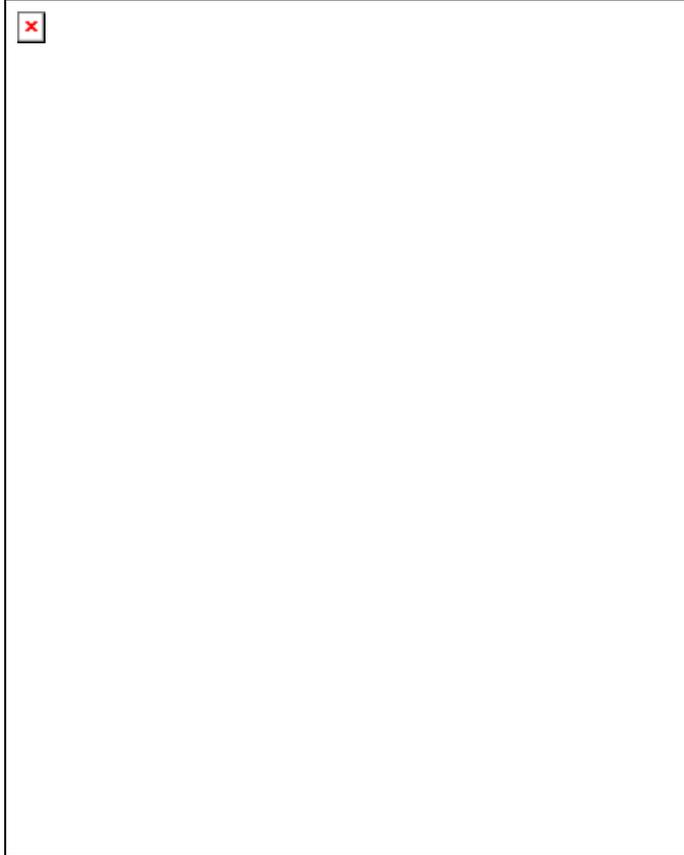
5. Click ☒ . The following screen displays:

☒
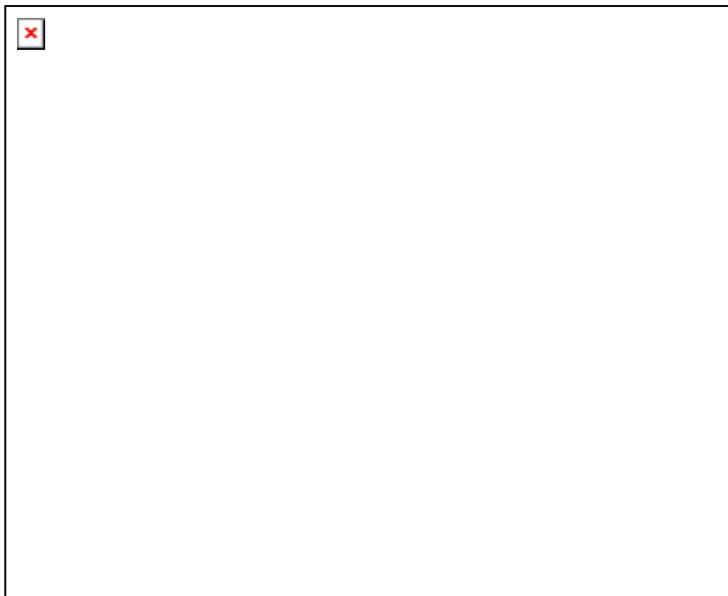
Assessing the background noise

With this screen displayed, SmartReader "hears" background electrical noise like that generated by Computers, Mobile Phone, Electrical generators etc in the frequency band that the EID tags work in. This background noise can interfere with the reading of the EID tags.

1. Press ![x]. The following screen displays:
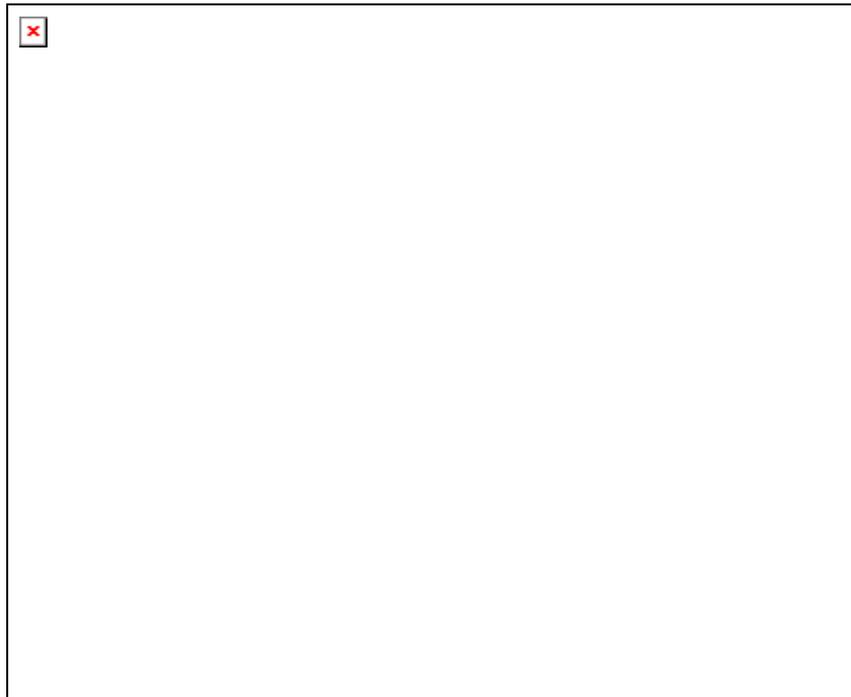
Note: While this screen displays the SmartReader will not read EID tags.
The horizontal scale shows approximately 2 minutes viewing of the background noise.
The vertical scale shows the level of background noise. The higher up the scale the more background noise and the more likely the Tag read range will be reduced.

2. If the background noise level is high, try turning off sources of electrical noise and re-test.

Test read range

1. Press . The following screen displays:
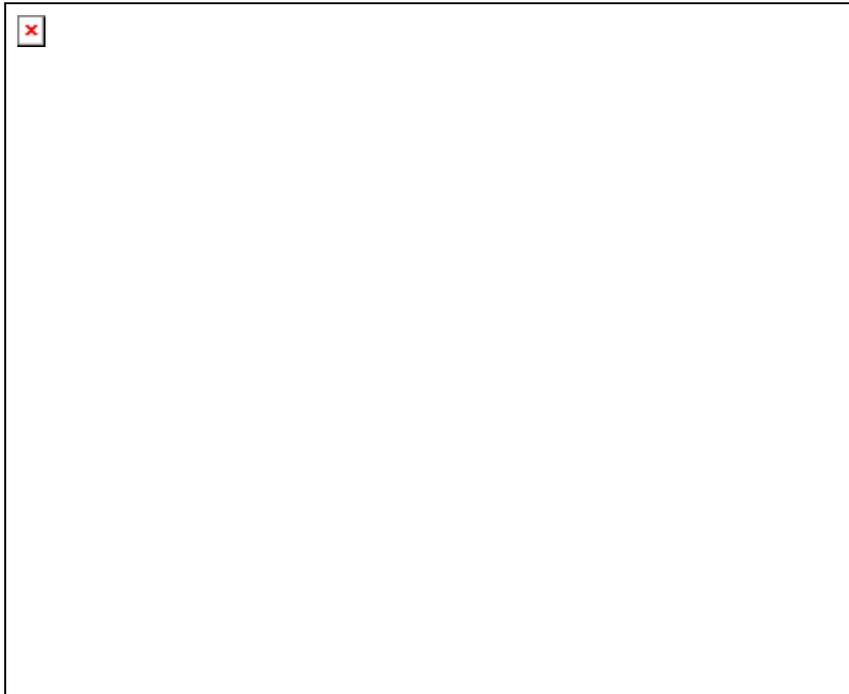
2. Follow the instructions on the screen to test the EID tag read range in your animal handler.

3. Press . The following screen displays:
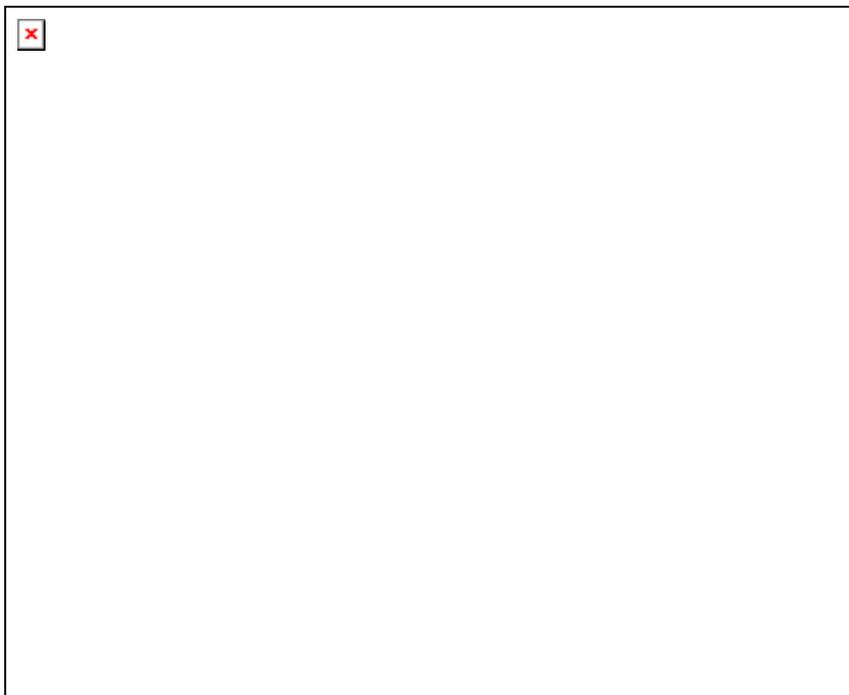
    Note: While this screen displays the SmartReader is automatically set to continuously read.
    The type of tag being read is shown at the bottom of the screen.

4. Alter the mounting location of the Antenna Panel with the aim of improving the read range.

See *Mounting the Panel* (p 5).

Note: Once you have finished using the Configurator ensure you click on the disconnect button in the Configurator program prior to unplugging the cable. This ensures the data transmission returns to the correct state.

Testing with live animals

1. Pass a small group of animals through the animal handler.
2. Did the SmartReader read all the tags?

   - If yes, the SmartReader is operational.

   - If no, contact your Gallagher representative for further information.

Installing multiple SmartReaders

When multiple SmartReaders are installed in close proximity, additional set up is required to ensure all Electronic ID tags are read correctly.

Each SmartReader must be able to communicate with all other SmartReaders to enable the panel antenna to be switched on and off at the appropriate times to ensure both Electronic ID tags can be read. For additional information about tags, see *Tag types read* (p 2).

- If you have two SmartReaders to install you may use a wireless installation.
  The wired option may also be used. The wired option is the preferred option for the greatest reliability.

- If you have more than two SmartReaders you must use wired installation.

Wireless installation

Note:

- This option is applicable if you are installing two SmartReaders.

Once you have installed both SmartReaders, you need to change the following settings in the Electronic Controller via the Configurator program on your computer.

Procedure

1. Connect the SmartReader to a computer. See *Connect the Electronic Controller to a computer* (p 15).

2. Open the Configurator software.

   - Double-click on the Configurator icon on the desktop.

     OR

   a. Click on the Windows **Start** button.
   b. Select **All Programs** (Windows XP) or **Programs** (Windows 2000).
   c. Select **MyScale**.
   d. Click on **SmartReader Configurator**.

3. Click .

   The current settings for the connected Electronic Controller are displayed in the lower part of the screen.

4. Click .

The Electronic Controller current settings are transferred to the Configurator and displayed.

5. Set the **Synchronisation - Wireless** option to **On**.

6. Click to copy the changes down to the Electronic Controller.

7. Repeat for the second SmartReader.

Wired installation

Note:

- Applicable if you are installing more than two SmartReaders.
- Applicable for two SmartReader installations where greater reliability is required and it is practical to run the required cables.

Once you have installed the SmartReaders, you need to change the following settings in the Electronic Controller via the Configurator program on your computer.

Procedure

1. Connect the SmartReader to a computer. See *Connect the Electronic Controller to a computer* (p 15).

2. Open the Configurator software.

   - Double-click on the Configurator icon on the desktop.

   OR
   a. Click on the Windows **Start** button.
   b. Select **All Programs** (Windows XP) or **Programs** (Windows 2000).
   c. Select **MyScale**.
   d. Click on **SmartReader Configurator**.

3. Click .

   The current settings for the connected Electronic Controller are displayed in the lower part of the screen.

4. Click .

   The Electronic Controller current settings are transferred to the Configurator and displayed.

5. Set the **Synchronisation - Wired** option to **On**.
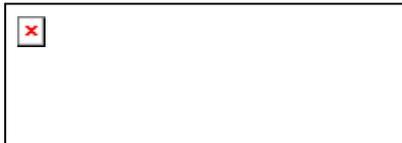
6. Click to copy the changes down to the Electronic Controller.

7. Repeat for all other SmartReaders.

Cabling requirements for connecting SmartReaders

During the wired installation you need to connect all SmartReaders together with a cable with the following pin outs:
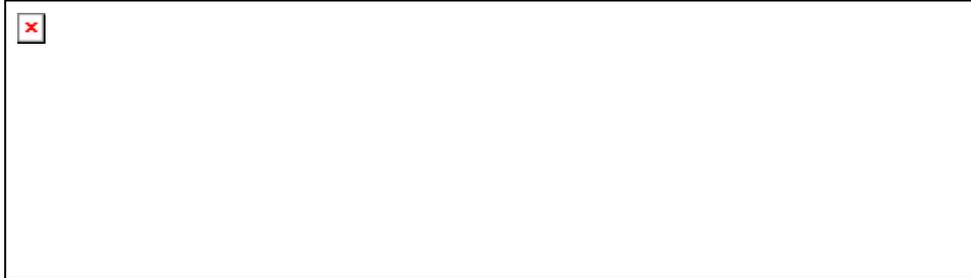
This cable in not supplied by Gallagher - you are expected to have a custom cable made to suit the individual installation.
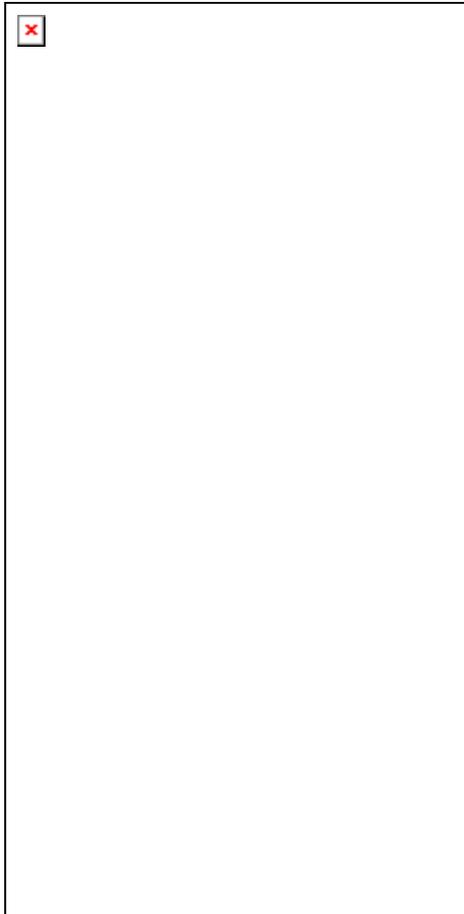
The extra COM connectors enable you to alter the settings of each Electronic Controller.

Create one for every Electronic Controller you have. This enables you to easily set up and communicate with all SmartReaders.

Using the Configurator

The Configurator is a software program provided with the SmartReader HHR. Use it to alter settings and to diagnose performance problems in the installed SmartReader HHR.

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

The Configurator software is automatically installed with the MyScale Pro software.

Installing the Configurator

The Configurator software is automatically installed with the MyScale Pro software. However, if you want to install the Configurator separately, use the following instructions:

Note: Before installing the MyScale Pro software, make sure that you close all open applications on your computer.

1. Load the MyScale Pro CD and cancel the automatic installation.
2. On the MyScale Pro CD, locate the **Configurator Setup.exe** file.
3. Double-click on the **Configurator Setup.exe** file.
    The installation process starts and the **Welcome** screen displays.
4. Click **Next**.
    The **License Agreement** screen displays.
5. Select the **I accept the terms of the licence agreement** radio button.
6. Click **Next**.
    The **Installation** screen displays.
7. Click **Install**.
    The Configurator software is installed onto your computer.
8. Click **Finish** to complete the installation.
    A short cut is added to you computer desktop.

Connecting the Electronic Controller to the computer

In order to view or alter settings on the Electronic Controller, you need to establish a connection between the Electronic Controller and the computer.

To connect the Electronic Controller to a computer, complete the following steps:

1. Plug the supplied COM cable (RS232 to RS232) into the RS232 port on the Electronic Controller.
2. Plug the other end into the serial port on your computer.

   Note: If your computer does not have a serial port, use the supplied RS232 to USB adaptor to connect to a USB port on the computer.

Viewing the current Electronic Controller settings

1. Open the Configurator software.
2. Connect the Electronic Controller to the computer, see above.
3. Turn on the Electronic Controller.
4. Either:

   - Click .

     The current connection settings of the connected Electronic Controller populate the Configurator.

   - Click .

     The Configurator searches for the connected Electronic Controller. Once one is found, the current connection settings of the connected Electronic Controller populate the Configurator.

Note: Until you connect to an Electronic Controller, you can not display or alter any settings in the Configurator.

Altering Electronic Controller Settings

1. In the Configurator, alter the required settings.

2. Click [×   ].

   All settings is transferred to the Electronic Controller.

Screen descriptions

IMPORTANT

Before you physically disconnect the Electronic Controller from the computer, click [×   ] on the Configurator.

Otherwise the Electronic Controller will not function correctly.

Operational Settings - BR
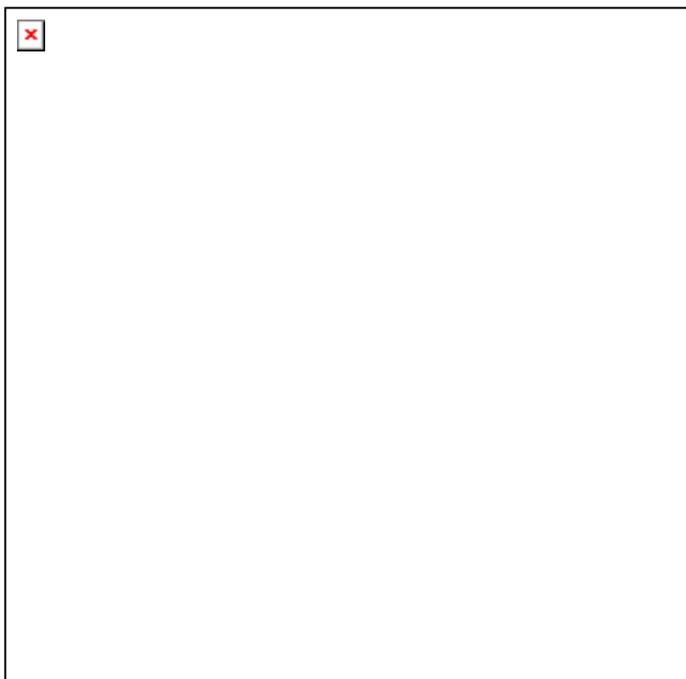
Read mode

The read mode determines how and when the Electronic ID tags are read by the Antenna Panel. There are two read modes:

- In **Continuous mode** (Default mode), the Antenna Panel is continuously running looking for Electronic ID tags to read. Electronic ID tags are read when they are recognised by the Antenna Panel.

- In **Requested mode**, Electronic ID tags are only read when the SmartReader receives a read command via the COM port. The read command request may come from a connected computer, Scale or data logger.

  The time the Antenna Panel is on is determined by the **Read time** setting (5 to 30 seconds).

  The read command is "R" (ASCII).

Indication of tag read

This option configures the beep and flash characteristics of the SmartReader when reading Electronic ID tags.

Note: These settings are independent of the settings in the **Duplicate tag reads** option.

- **Flash**

  Flash on **First read,** lights the SmartReader LEDs once only while the Electronic ID tag is within the Antenna Panel read range.
  Flash on **Every Read,** lights the SmartReader LEDs continuously while the Electronic ID tag is within the Antenna Panel read range.

- **Beep**

  Beep on **First read** beeps once only while the Electronic ID tag is within the Antenna Panel read range.
  Beep on **Every Read** beeps continuously while the Electronic ID tag is within the Antenna Panel read range.

Duplicate tag reads

This option applies to the sequential reads of the same Electronic ID tag and determines how subsequent reads of the same Electronic ID tag are processed.

- The **Send** option sends each and every read result out the COM port.

- The **Don't Send** option prevents successive *identical* Electronic ID tag reads results from being sent out the COM port.

Duplicate recognition method

This option determines how duplicate Electronic ID tag reads are recognised by the SmartReader.
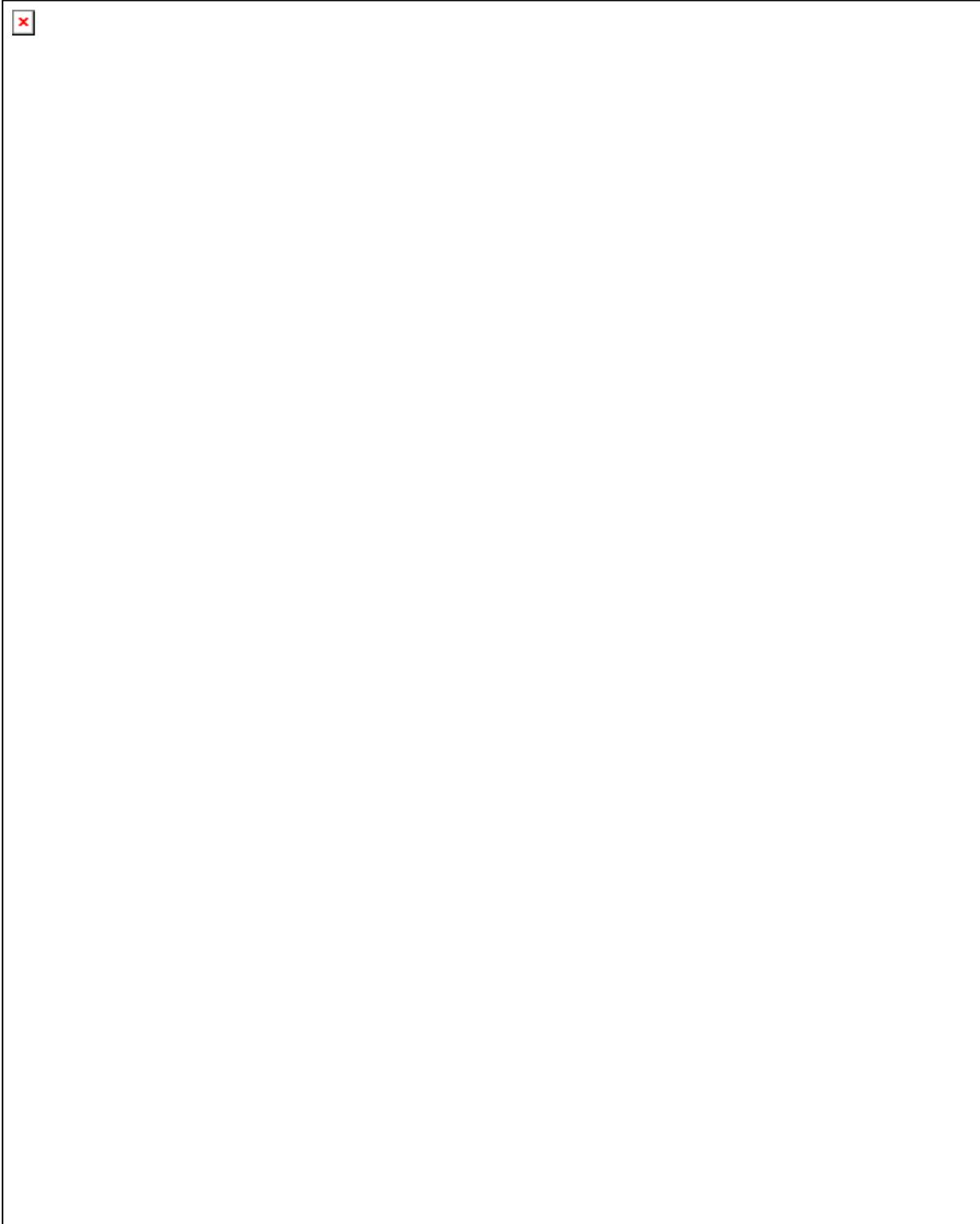
Note:

"BR Series" refers to battery powered Panel Readers (also branded "SmartReaders".

Last tag only

With the **Last tag only** option selected, only the last read Electronic ID tag is stored in the Tag buffer. When the next Electronic ID tag is read, it is compared with the tag buffer and one of the following actions occurs:

- If the Electronic ID tag is the **same** and the **Remember delay** has not expired, the tag read is ignored. The tag information is:
  - not saved to internal memory (BR Series only),
  - not sent out the COM port, and
  - the animal counter is not incremented (BR Series only).
- If the **Electronic ID tag is not the same** or the **Remember delay** has expired, the tag read is processed. The tag information is:
  - saved to internal memory (BR Series only),
  - sent out the COM port, and
  - the animal counter is incremented (BR Series only).

Buffer

With the **Buffer** option selected, the number of previous Electronic ID tag reads stored in the buffer is user defined (range 1 to 50 tags). The buffer default value is 10, if no value is set. When the next Electronic ID tag is read, it is compared with the tag buffer and one of the following actions occurs:

- If the Electronic ID tag number is **not** in the tag buffer. The tag information is:
  - saved to internal memory (BR Series only),
  - sent out the COM port, and
  - the animal counter is incremented (BR Series only).
- If the Electronic ID tag number is in the tag buffer and **is not** the last tag scanned. The tag information is:
  - sent out the COM port.
- If the Electronic ID tag number is in the tag buffer and **is the last tag** scanned. The tag information is:
  - not sent out the COM port, and
  - the animal counter (BR Series only) is **not** incremented.

Electronic ID tags are removed from the tag buffer in the following ways:

- The oldest tags are removed when the buffer is full as new ones are added.
- When a tag's **Remember delay** expires.

The **Resend after** option limits the rate tag re-reads are sent multiple times to the COM port when the reader is set to **Continuous mode**. The default is five seconds.

Overwrite oldest session when full (BR Series only)

This option determines what happens when the SmartReader internal memory becomes full. Once the memory is full, no more tags are saved.

Select **Yes** if you want the oldest sessions deleted.

Select **No** and once the internal memory is **full,** no more Electronic ID tags can be saved (however the tags are read). The SmartReader's display shows FULL when a tag is read.

Time last tag remembered

The **Remember Delay** options sets how long Electronic ID tag information is stored in the tag buffer. The default is 300 seconds.

Speaker

Turns the speaker on or off for the connected SmartReader. Alter the connected SmartReader settings and then click ☒   .

To make the connected SmartReader beep click ☒   .

Synchronisation

Wireless synchronisation is a means of detecting the presence of other SmartReaders operating in the same vicinity. The tag read cycles then adapt to ensure flawless operation of multiple active Antenna Panels. Wireless synchronisation does not require the SmartReaders to be connected via cable.

Wired synchronisation requires all SmartReaders to be connected via cable. The tag read cycles then adapt in order to ensure flawless operation of multiple active Antenna Panels.

For more information see *Installing multiple SmartReaders* (p 21).

ID Code Format
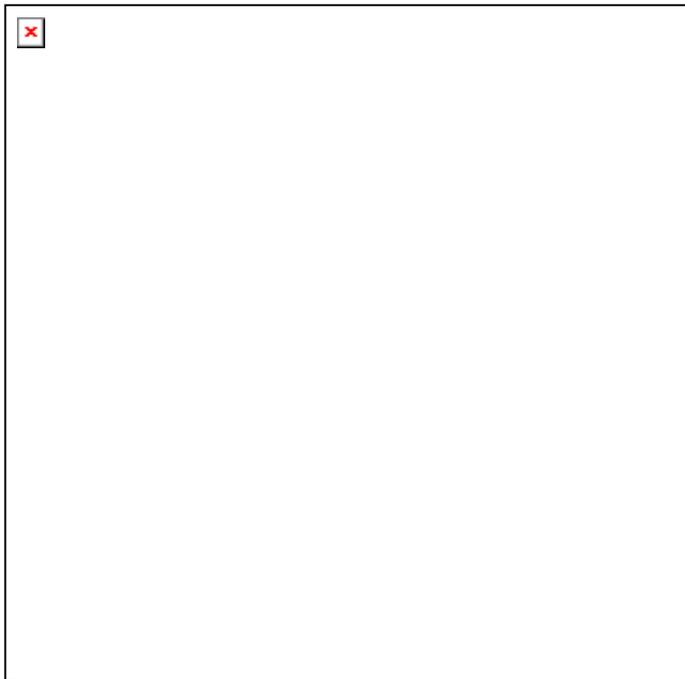
This screen determines what parts of the captured data are sent out the SmartReader COM port.

The full data (as defined by the ISO 11784 standard) is saved to internal memory (BR Series only). MyScale Pro transfers all captured Electronic ID tag information to the connected computer when the session is transferred.

Both animal and non-animal tags can be processed as defined in the ISO standard.

Field delimiter

This option sets the field delimiter of the sent data. Used in conjunction with the **ID Code** field.

Number format

This option sets the number format the captured data is sent out the COM port, either Decimal or Hexadecimal.

Reserved field

This option determines whether the **Reserved field** data is included in the sent data. Unused in the current standard.

Data block flag

This option determines whether the **Data block flag** is included in the sent data.

Application code

This option determines whether the **Application code** is included in the sent data. Applies to non animal Electronic ID tags only.

Command Prompt

This option determines whether a Command prompt (>) is sent after to sending the data.

ID Code

This option sets whether the data is sent out as formated or un-formated data.

If the ID Code is sent out as **Formatted** the character defined in the **Field delimited** option is inserted between the blocks of data.

Leading zeros

This option determines whether the **Leading zeros** are included in the sent data.

Country code

This option determines whether the **Country code** is included in the sent data and if so, what format is used. Applies to animal Electronic ID tags only.

Numeric - a three digit numeric country code is included in the data string sent out.

ISO (alphnum) - a three digit alphanumeric country code is included in the data string sent out.

Initial character

This option determines the initial character of the data. Used in conjunction with the **Tag Type ID** field.

Tag type ID

This option determines the Tag type ID used to identify the beginning of the data. Used in conjunction with the **Initial character** field.

Panel Settings
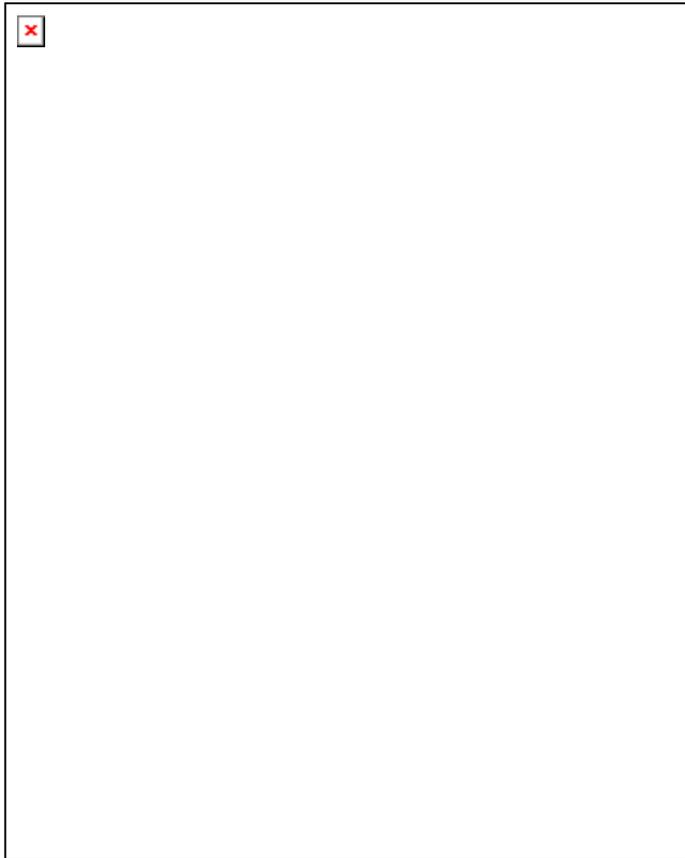
Output Power

> This screen enables you to control the output power level of the connected Antenna Panel.
>
> The higher the power setting, the more current is drawn from the batteries.
>
> **Note:**   You must use the highest power setting if you are reading FDX tags.
>
> If you have multiple Electronic Controller installed on the site **AND** are only reading HDX tags you may reduce the power setting. This will minimise the interference between Electronic Controller and extend the battery life.

Communication Settings
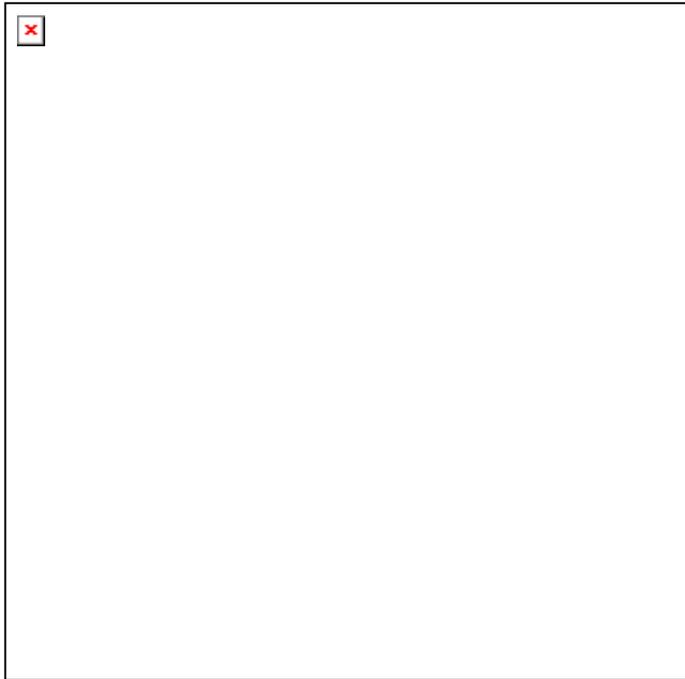
This screen sets up the connection between a Electronic Controller and a computer (datalogger, Scale etc) via RS232 or Bluetooth.

Once altered, these settings are saved to the PC only. To transfer the alterations to the Electronic Controller you must click [×].

Note: Changing these settings, from the defaults, **will cause** the communication between the Electronic Controller and MyScale Pro to fail.

Baud rate

This option sets the **Baud rate** of the connection. The default is 9600 bps.

Data bits

Fixed.

Flow control

This option sets the **Flow control** of the connection. The default is None.

Parity

This option sets the **Parity** of the connection. The default is No parity.

Stop bits

This option sets the **Stop bits** of the connection. The default is 1.

Diagnostics
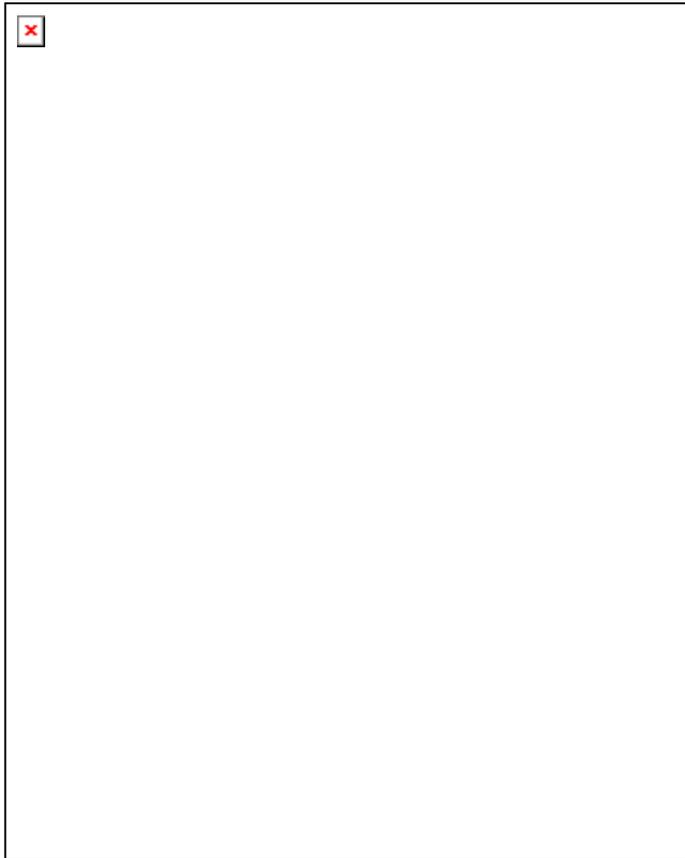
This screen enables you to:

- view statistics on the functionality of the Electronic Controller and Antenna Panel, and

- run the diagnostics wizard.

Start Stats

To display statistics, click ☒.

Stop Stats

To stop the display of statistics, click ☒.

Clear Stats

To clear the displayed statistics from the screen, click ☒.

Input

Displays the input supply and battery levels, in volts, for the connected Electronic Controller.

The input **supply** indicates the external charger level.

The input **battery** figure indicates the current internal battery level (BR Series only).

HDX (Half Duplex)

>   Displays the percentage of good and bad HDX tag reads since
>   statistics display started.

Tuning

>   This displays the tuning level and setting for the connected Electronic
>   Controller.
>
>   The tuning level indicates how well the Antenna Panel is tuned. The
>   higher the number the better.
>
>   The tuning setting indicates which of the tune settings is currently
>   used by the Electronic Controller. There are 32 possible settings (0 to
>   31). If the value is close to either 0 to 31 then there is a risk of not
>   being able to achieve the optimal tune for the Antenna Panel.

FDX (Full Duplex)

>   Displays the percentage of good and bad FDX tag reads since
>   statistics display started.

Noise level

>   This display the background noise level. Turn off the Antenna Panel
>   prior to reading this value so you can get a reading of the background
>   noise in the area of the Antenna Panel.
>
>   Turn off the Antenna Panel by changing the read mode to
>   *R*equested. *See Oper*ational Settings (p 30).

Reader diagnostic wizard
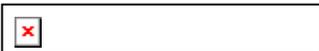
>   Click and the following screen displays:
>
>   For more information on using the Reader diagnostic wizard, *see
>   Advanced EID tag read range tes* (p 15)ting.
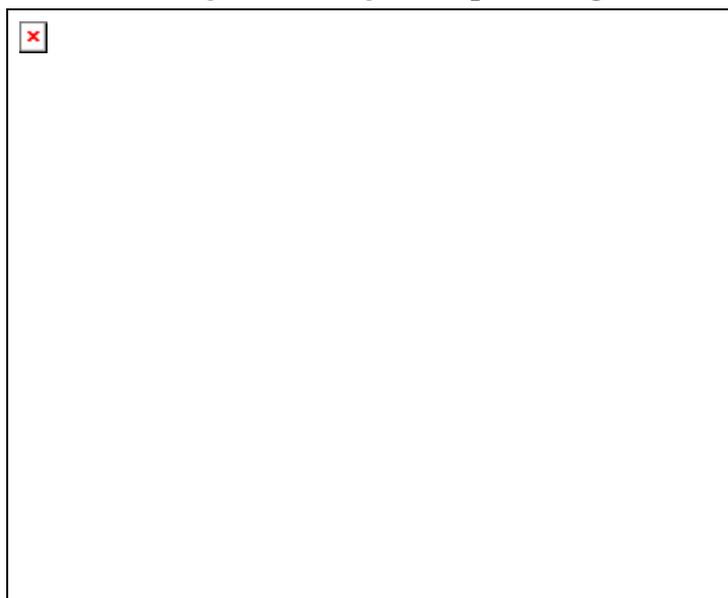
Menu options

Reader menu

Get Settings

See *Reader toolbar* (p 44).

Apply Settings

See *Reader toolbar* (p 44).

Restore Defaults

This option loads the factory default settings into the following screens:

- Operational settings
- ID Code format
- Communication settings.

Click **Apply** to transfer setting to Electronic Controller.

Connection menu

Disconnect

Click **Disconnect** to stop communication between the computer and the Electronic Controller.

Settings

Use the pop-up menus to select the appropriate Communications Port and Bit (Baud) Rate.

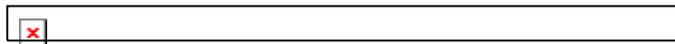### Search

Click **Search** to ask the computer to search for any connected Electronic Controller. Once an Electronic Controller is found, communication is automatically started.

Tools menu

Connection

This option hides or displays the Connection toolbar.

See *Connection toolbar* (p 43).

Reader

This option hides or displays the Reader toolbar.
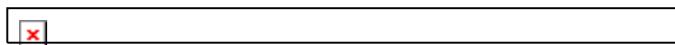
See *Reader toolbar* (p 44).

Advanced menu

ID code format

Add Delimiter

This option enables you to add an additional delimiter for use in *the*
Field Limiter field on the ID Code Format (p 35) screen.
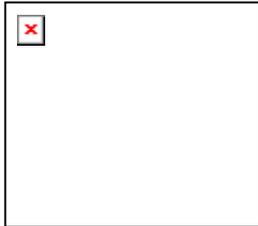
1. Select the required type of delimiter (Character or Hexadecimal)
    and enter the value.

    Note: The Hexadecimal value must be in hexadecimal format.
2. Click **OK**.
    Note: The entered value is checked for validity.

Toolbars

Connection toolbar

The **Connection** toolbar displays details of the current connection between the computer and the Electronic Controller.

The **Connection** toolbar is hidden or displayed via the *Tools menu* (p 41).

Connection

This option indicates the type of connection between the computer and the Electronic Controller.
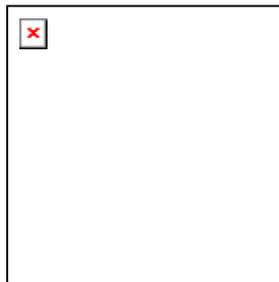
Port

This option indicates the port on the computer to which the Electronic Controller is connected.

Baud Rate

This option indicates connection baud rate of the current connection.

More

THIS SCREENSHOT NEEDS TO BE CHANGED !!! Updated in build 2.6.0.11

These options mirror the setting on the *Communication Settings* (p 38) screen.

Reader toolbar

The **Reader** toolbar is hidden or displayed via the *Tools menu* (p 41).

Connect buttonEC>

Click **Connect** to start communication between the computer and the Electronic Controller. This changes to **Disconnect** after use.

Disconnect button

Click **Disconnect** to stop communication between the computer and the Electronic Controller.

Search button

Click **Search** to ask the computer to search for any connected Electronic Controller. Once an Electronic Controller is found, communication is automatically started.

Get Settings button

Use this option to get the current settings of the currently connected Electronic Controller. The Electronic Controller must be connected to the computer via the serial cable and

This option is also available in the *Reader menu* (p 41).

Apply Settings button

Click **Apply Settings** to transfer the displayed settings to the Electronic Controller.

This option is also available in the *Reader menu* (p 41).

Restore Defaults button

Click **Restore Defaults** will restore all the values in the screens to the factory default settings. To apply them to your Electronic Controller you will need to click the **Apply Settings** button.

Accessories

SmartReader Extension Mounting Kit installation

The Extension Mounting Kit contains:

- 1 x Extension cable (4m)
- 1 x Mounting bracket
- 2 x metal tek screws

Mount the Antenna Panel

Mount the Antenna Panel as per your SmartReader manual.

Mounting the Electronic Controller

Considerations

- The Extension cable is part of the Antenna Panel circuit so keep away from large metal surfaces.
- Ensure the Electronic Controller mounting location provides protection from being knocked or damaged by animals.
- Ensure the Extension cable is run so it can not be damaged or tripped over.
- Protect the Extension cable from damage from the environment, animals, people or weather. Avoid mounting the Extension cable in wet areas.
- ****BR Series only**** - The Gallagher SmartReader BR Series Electronic Controller needs to be able to be removed to recharge the internal batteries.
- The extension cable length is 4 m.

Procedure

1. Determine the location of the Electronic Controller based on the above considerations.

2. Using the supplied metal tek screws attach the mounting bracket to a solid mounting location using at least two of the holes in the mounting bracket.

   The two sets of two holes allows for installation on horizontal and vertical pipe work.
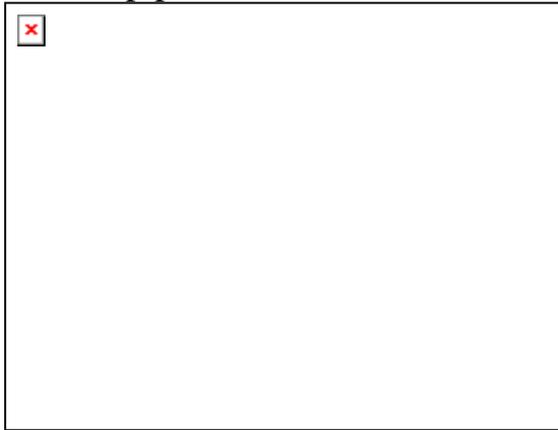
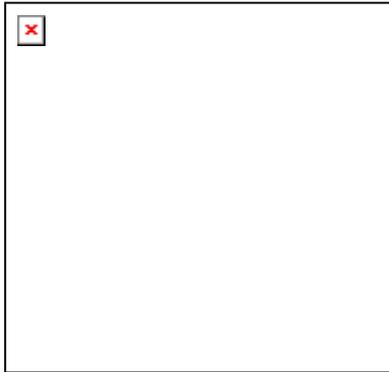3. Run the Extension cable from the Electronic Controller to the Antenna Panel along the proposed path and temporarily fasten the cable in place.

4. Ensure the Electronic Controller is turned off.

5. On the Antenna Panel, unscrew the Amphenol connector locking nut from the Amphenol socket and pull it down to unplug from the Antenna Panel.

6. Connect the Extension cable to the Amphenol connector and tighten.

7. Mount the Electronic Controller on the mounting bracket by grasping the Electronic Controller on both sides and slide the back handle onto the mounting bracket.

8. Connect the Extension cable to the Amphenol socket on the side of the Electronic Controller and tighten the locking nut.
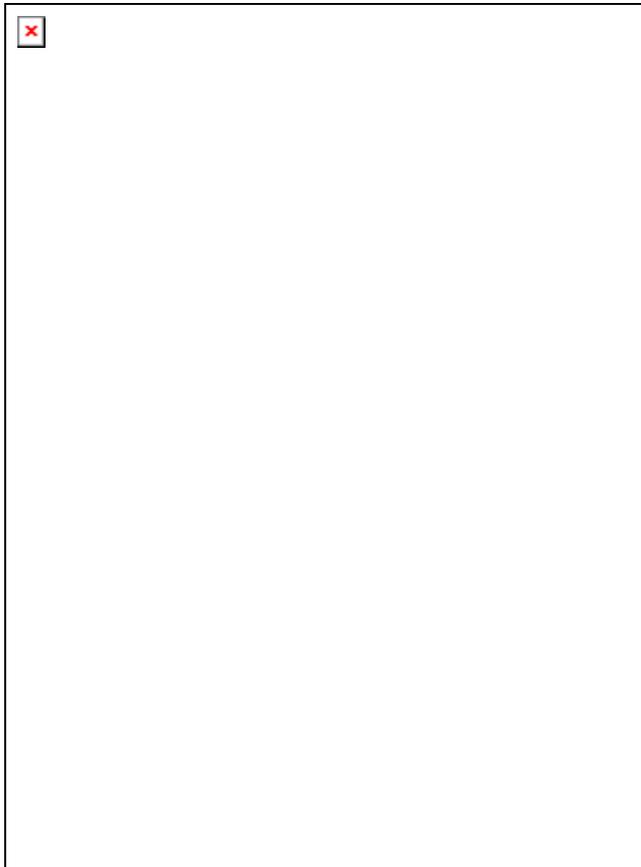
9. Once the Extension cable location is finalised, attach the cable permanently using cable ties.

    The SmartReader is now ready to use.

Specifications

Small Antenna Panels

Small

Small Antenna Panel	3 kg
Dimensions (w x h x d)	400 x 600 x 50 mm
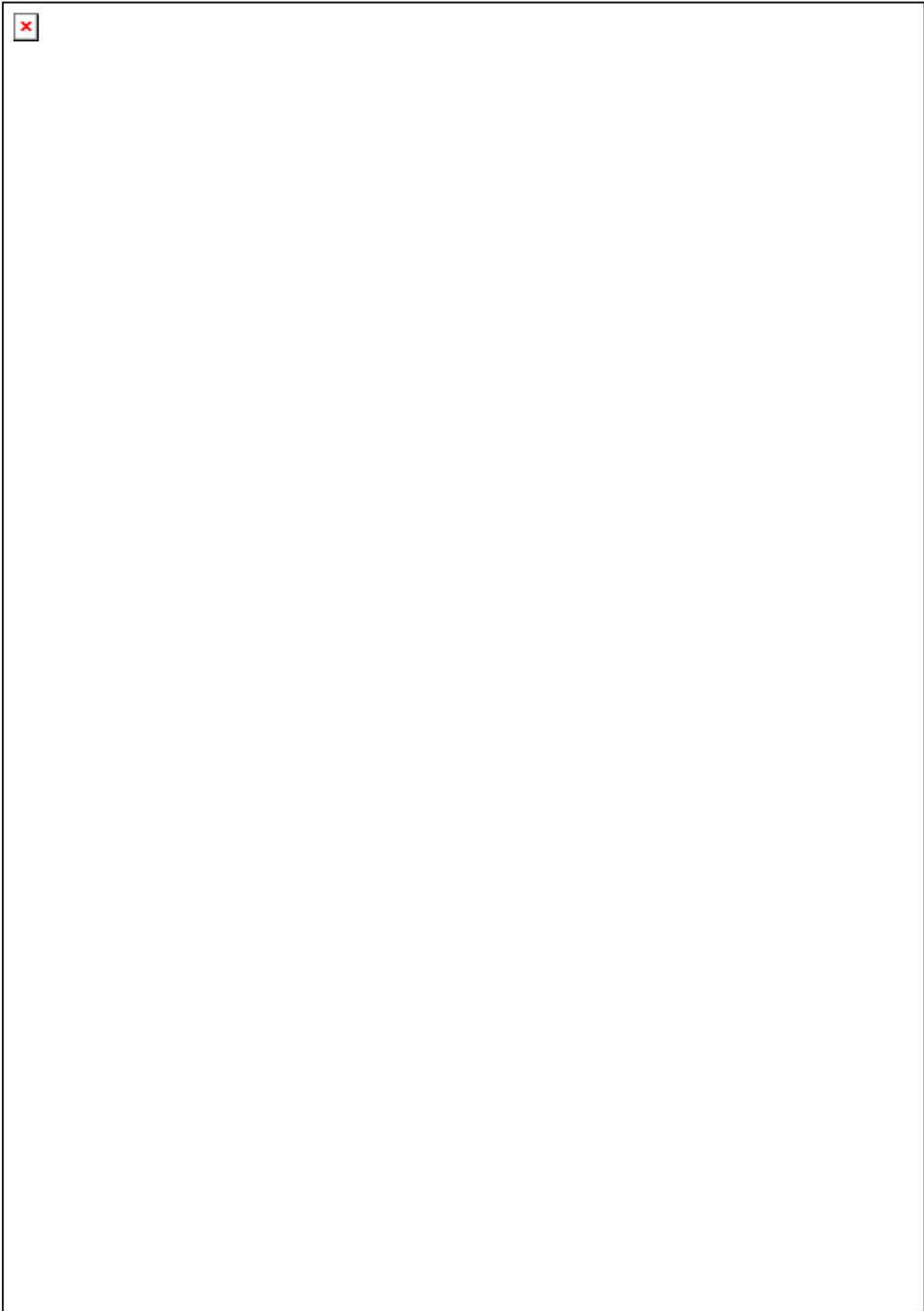
Large Antenna Panels

Large

Large Antenna Panel	7.3 kg
Dimensions (w x h x d)	400 x 1300 x 50 mm
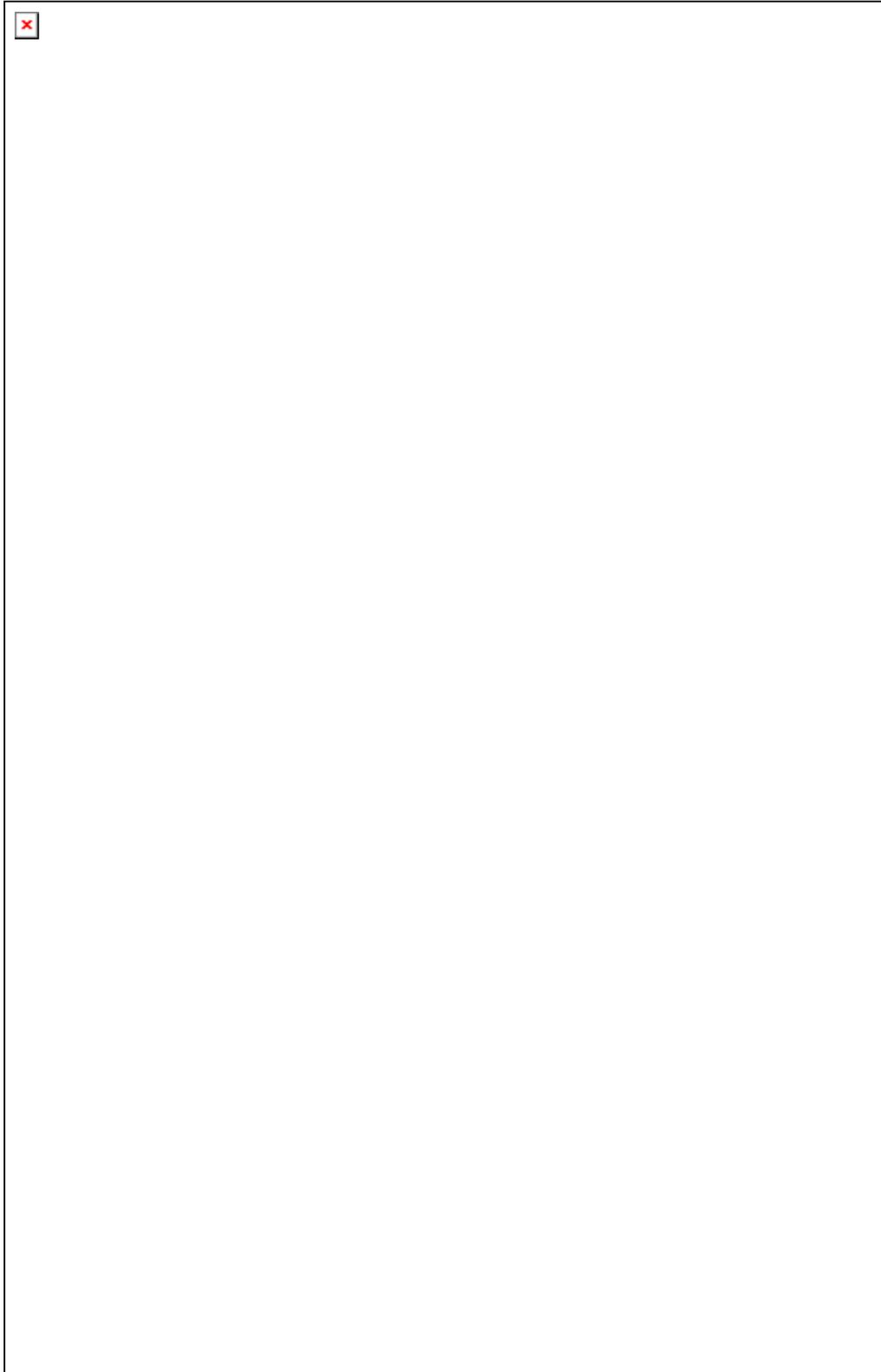
Electronic Controller

Weight R Series series	1.5 kg
Dimensions (w x h x d)	300 x 220 x 100 mm (approx) The front and back are slightly curved out.

Standards

Physical / Environmental

IP rating	IP66
Operating Temperature	-10 to 55 °C
Storage Temperature	-40 to 85 °C

Standards

Safety Standards	Australia and New Zealand (AS/NZS 3350.2.29 or AS/NZS 60335.2.29)
	Europe(EN 60335.2.29)
Radio Standards	Europe, Australia or New Zealand
	(ETSI EN 300 330-2)
	"Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment and in the frequency range 9 kHz to 25 MHz
	and inductive loop systems in the frequency range 9 kHz to 30 MHz"
EN immunity standards	All Panel readers sold in Europe (ETSI EN 301 489-3)
	"Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC)
	standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz"
C-Tick approval	New Zealand & Australia
CE Mark	EN 300 330-2, EN 301 489-3
	EN 60335.2.29 with respect to the Low
	Voltage Directive.

FCC	NOTE: 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.
Industry Canada	Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
	The carrier frequency is 134.2 kHz, the RF output power is 93.9 dBµV/m @ 10 m.
	This Category II radiocommunication device complies with Industry Canada Standard RSS-310.
	Ce dispositif de radiocommunication de catégorie II respecte la norme CNR-310 d'Industrie Canada.

TWO YEAR WARRANTY

FOR THIS PRODUCT FROM DATE OF PURCHASE

MODEL

....

SERIAL NO

....

DATE PURCHASED

....

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

- 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

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.

SELLING DEALER STAMP

AUSTRALIA
Gallagher Australia Pty Ltd,
A.C.N. 005 550 845, P.O. Box 122, Rydalmere,
Sydney, NSW 2116.

CANADA
Gallagher Power Fencing Systems Inc.,
P.O. Box 576, Owen Sound, ON N4K 5R1

NORTHERN IRELAND
Sam Nelson & Son,
16 Lower Ballinderry Road, Upper Ballinderry,
Lisburn, Co. Antrim BT28 2JB.

IRELAND - REPUBLIC OF IRELAND
Gallagher Power Fence Systems (IRL) Ltd,
Kinsale Road, Cork.

NEW ZEALAND
Gallagher Group Ltd,
Private Bag 3026, Hamilton.

SOUTH AFRICA
Rudd Products cc, South Africa
Tel: 086 111 4634

UNITED STATES OF AMERICA
Gallagher USA
130 W. 23rd Avenue, P.O. Box 7506,
North Kansas City, MO 64116.

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