# REESE GROUP



# Aitchison 'Seedmatic' Areameter Instruction Manual

## Basic Functions of:

- Area displayed in Acres or Hectares.
- Speed displayed in kph or mph
- Distance Displayed in Kilometers or Meters

## Optional Functions of:

- Working Time
- 4 section width switch inputs for spray area
- Low / High Speed Alarm

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www.reeseagri.com

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### Introduction

This is a control unit designed by The Reese Group for Aitchison Seedmatic Drills, and can also be used for general use in agriculture.

The rotational speed of the ground wheel is counted by a magnetic reed sensor. This sensor is inline with a magnet fixed to the rotating mechanism. The magnet indicates to the sensor when the wheel has rotated once.

There is a second magnetic sensor or switch input which can be used to disable the area counts at headlands etc. This can be paralleled up to a pause switch if required.

When the control unit is powered down all relevant information is stored and retained.

The functions on the large display can be adjusted by using the two panel buttons.

### Technical

| | |
|---|---|
| Power supply | -DC 10 to 30 Volts low current. |
| Fused | -not applicable |
| Dimensions | -150mm x 100mm x 63mm |
| Display | -4 character, some alphanumeric |
| | -Optional backlight. |
| Magnetic Reed Sensor | -M12 nylon, 40mm length, 2 mounting nuts. |
| | -Protection fitted to the wheel sensor. |
| | -Working distance 10 to 25mm from magnet |
| Circuit board | -Standard Monitor unit ST6265 Processor 8MHz |
| | Memory retention of Count and options |

### Installation

Mount the control box within the cab so that the display can be easily seen. Position using a suitable bracket and the side mount M6 bolt fixings.

With the control switched off run the power cable to a suitable 12 volt dc power source. This power source must have permanent power and not be switched through the ignition otherwise data may be lost when switched off. Brown or red core for positive and blue or black for negative. The control is reverse polarity protected.
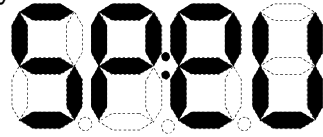
Run the wheel sensor cable, identified with the protection sleave, down

NOTES

## Two Speed Displays

Press Display again to change to the speed display.
This displays an accurate running ground speed.

Initially displays SP:EU for European measurements and displays
Ground speed in Kms per hour

**DISPLAY**

Press display once to convert to show in miles/hour.
Initial shown by SP:GB
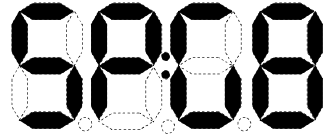
Speed Display is updated every 2 seconds.
If there are no pulses for 10 seconds then the display will clear.


## Display Distance in Kilometers and Meters

Press Display again to change to show Distance. This displays an accurate running Distance covered. The smallest denomination displayed is 0.001 kms or 1 m.
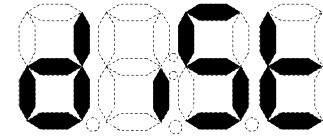
**DISPLAY**

Press and hold change to clear the Distance store.
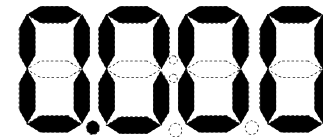
Press Display again to revert to running area.

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through the cab to a suitable position on the axle of the wheel. Fashion a bracket to mount the wheel sensor with ½ inch hole or cable tie the sensor in a suitable position. Mount the powerful linear magnet onto the wheel hub with a suitable epoxy glue. Check that the magnet will not catch the sensor and will pass within 25mm of the sensor.

Run the machine cut off sensor cable, identified as the sensor without the protection sleeve, down to a position where the machine will move at headlands. When the magnet is close to this sensor the area counters are disabled, but the speed displays are still enabled. There are many possibilities for positioning this sensor;
- Lever movements within the cab,
- Three point linkage movements at the headlands,
- Arm movements on the machine.
- Cut the sensor off and fit to spare terminals on a spray cut-off switch
- Short circuit to disable the area count.

Check again that the sensor comes within 25mm of the magnet when the unit moves.

## Circumference and Span measurements

During the start up procedure the controller allows for the input of the wheel circumference and the width of the machine.

### Circumference:

The measurement required is actually the distance the machine moves between each pass of the sensor.

For the magnet fitted wheel.
1. Mark the ground and the wheel.
2. Drive in a straight line with a second person counting the number of wheel turns. Stop at ten turns precisely.
3. Measure the distance travelled and divide by ten.
4. Keep a record of this value for future reference.

### Span

Span is the width of the machine.  Note: the maximum width is 25.6m.

## Start-Up

After power on the control displays Area for 2 seconds. During this time the control performs its own self tests. Also during this period it is also possible for the user to switch to Options mode.
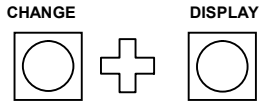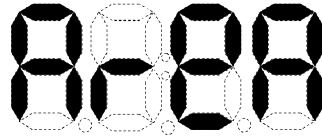
**CHANGE** ◻ + **DISPLAY** ◻   Pressing Change and Display buttons at the same time, whilst the control is in the initial test mode enters the option change mode.
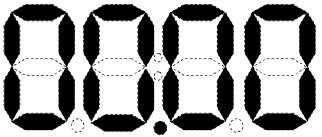
Initially Circ for Circumference is displayed for 2 seconds
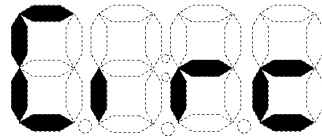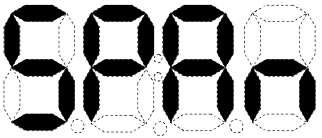
**CHANGE** ◻   Press change to increase the circumference to the value required. Note the maximum circumference is 5.12 meters, always displayed in meters i.e. 5m12cm. Holding the change button will increment the span automatically.
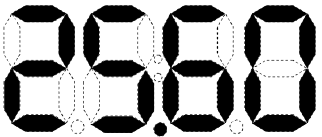
**DISPLAY** ◻   Press display once to store the new circumference and move on to input the span of the machine.
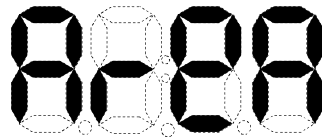
**CHANGE** ◻   Press change to increase the machine span to the value required. Note the maximum machine width is 25.6 meters, always displayed in meters ie 25m60cm. Press and hold will increment automatically.

**DISPLAY** ◻   Press display once to store the new span value and. Move on to the operational mode.

## Operational Mode

After the initial two second display of area, the control will always switch to display the identifier for the last Mode i.e. if switched off in distance mode when switched back it will remain in distance mode.

There are seven displayed modes of operation. These are swapped sequentially with each press of the display button. Holding the button displays a character sequence as an identifier. Press and hold the change button to reset the area and distance counts.
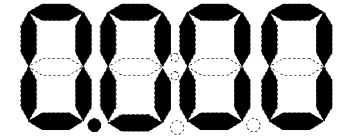
## Running Hectare and Acre Display

Displays an accurate running Hectare Area covered. The smallest denomination displayed is 0.001 Hectares ie 10 m2.
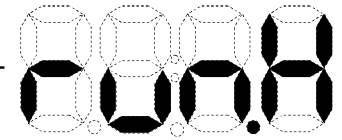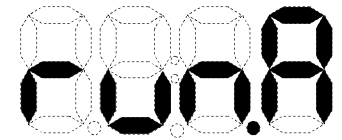
**CHANGE** ◻   Press and hold change to clear the running Area store. Note this also clears the running Acre display
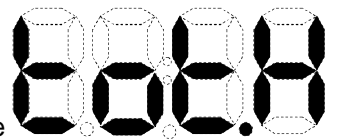
**DISPLAY** ◻   Press display once to convert to show in Acres.
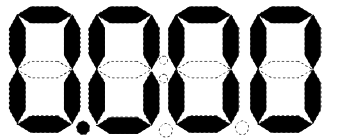
## Total Hectare and Acre Display

Press Display again to change to the total or machine area displays. This displays an accurate running Hectare Area covered. The smallest denomination displayed is 0.001 Hectares ie 10 m2.

**CHANGE** ◻   Press and hold change to clear the running Area store. Note this also clears the running Acre display

**DISPLAY** ◻   Press display once to convert to show in Acres.