





<b>Content</b>	<b>Page No.</b>
<b>1.0 MENU OVERVIEW</b>	<b>7</b>
1.1 TO ENTER THE 'MAIN MENU' FROM THE 'RUNTIME SCREEN'	7
1.2 TO MOVE THE FOCUS AROUND THE SCREEN	7
1.3 TO RETURN TO THE 'RUNTIME SCREEN'	7
1.4 TO ENTER A 'MENU SCREEN'	7
1.5 TO EDIT A VALUE	7
<b>2.0 CONSOLE OVERVIEW</b>	<b>8</b>
2.1 'RUNTIME SCREEN' DISPLAY	8
2.2 'RUNTIME SCREEN' BUTTON FUNCTIONS	10
2.3 MAIN MENU	13
2.4 SETUP MENU	14
2.5 FACTORY DEFAULT SCREEN 1	15
2.6 FACTORY DEFAULT SCREEN 2	16
<b>3.0 SPRAYER SETUP MENU</b>	<b>17</b>
3.1 SET THE 4 PRESET TARGET RATES	18
3.2 SET THE MINIMUM FLOW HOLD VALUE	18
3.3 SET THE 4 PRESET WIDTHS	18
3.4 SET THE LOW SPEED SHUTOFF	20
3.5 SET THE TANK VOLUME	20
3.6 SET THE APPLICATION MODE	20
3.7 SPEED CALIBRATION	21
3.7.1 AUTOMATIC SPEED CALIBRATION SETUP	22
3.7.2 MANUAL ENTRY OF SPEED CALIBRATION FACTOR	22
3.8 FLOW CALIBRATION FACTOR	23
3.8.1 AUTOMATIC FLOW CALIBRATION	24
3.8.2 MANUAL FLOW CALIBRATION	24
3.9 SPRAYER SETUP 2 SCREEN	25
3.10 ENABLE THE DATA LOGGER	26
3.11 ENABLE FAN MONITORING	26
3.12 SET A MANUAL SPEED	26
3.13 ADJUST TO RATE INCREMENT	26
<b>4.0 ALARMS SETUP MENU</b>	<b>27</b>
4.1 RATE ALARMS	28
4.1.1 Setting the MINIMUM FLOW ALARM	29
4.1.2 Setting the APPLICATION RATE LOW ALARM	29
4.1.3 Adjust the APPLICATION RATE LOW POINT	29
4.1.4 Setting the APPLICATION RATE HIGH ALARM	30
4.1.5 Adjust the APPLICATION RATE HIGH POINT	30
4.2 FAN ALARMS	31
4.2.1 Setting the FAN SPEED LOW ALARM	32
4.2.2 Adjust the FAN SPEED LOW POINT	32
4.2.3 Setting the FAN SPEED HIGH ALARM	32
4.2.4 Adjust the FAN SPEED HIGH POINT	33
4.3 SPEED ALARMS	34
4.3.1 Setting the SPEED LOW ALARM	35
4.3.2 Adjust the SPEED LOW POINT	35
4.3.3 Setting the SPEED HIGH ALARM	35
4.3.4 Adjust the SPEED HIGH POINT	36
4.4 TANK ALARMS	37
4.4.1 Setting the VOLUME LOW ALARM	38
4.4.2 Adjust the VOLUME LOW POINT	38
4.5 DATA LOGGER ALARMS	39
4.5.1 Setting the DATA LOGGER INTERFACE ALARM	40
4.5.2 Setting the DATA MODULE ERROR ALARM	40
4.5.3 Setting the DATA MODULE FULL ALARM	40

<b>Content</b>	<b>Page No.</b>
<b>5.0 OPERATING HISTORY</b>	<b>41</b>
5.1 TOTALS HISTORY	42
5.1.1 Reset the TOTAL VOLUME	43
5.1.2 Reset the SUB VOLUME	43
5.1.3 Reset the TOTAL AREA	43
5.1.4 Reset the SUB AREA	43
5.1.5 Reset the TOTAL DISTANCE	44
5.1.6 Reset the SUB DISTANCE	44
5.1.7 Reset the TOTAL TIME	44
5.1.8 Select a SUB AREA NUMBER	44
5.2 FAN HISTORY	45
5.3 MACHINE HISTORY	45
5.3.1 Enter the Machine History Screen	45
<b>6.0 OPERATIONS: SPRAYER &amp; DATA LOGGER</b>	<b>46</b>
6.1 OPERATION OF THE SPRAYER	47
6.1.1 Display the VOLUME REMAINING IN THE TANK	47
6.1.2 FILL THE TANK	47
6.1.3 SELECT between MANUAL AND AUTO MODE	47
6.1.4 Select between GROUND SPEED, FAN SPEED AND FLOW RATE	47
6.1.5 Choose a PRESET WIDTH	48
6.1.6 Switch a SECTION ON	48
6.1.7 Adjust the SCREEN CONTRAST	49
6.1.8 BEGIN SPRAYING	49
6.1.9 Increase or decrease the APPLICATION RATE (MANUAL MODE)	49
6.1.10 Increase or decrease the APPLICATION RATE (AUTO MODE)	49
6.1.11 Choose a PRESET APPLICATION RATE (AUTO MODE)	49
6.2 OPERATION OF THE DATA LOGGER	50
6.2.1 Connect the DATA LOGGER INTERFACE TO THE EAGLE	51
6.2.2 Connect a module to the DATA LOGGER INTERFACE	51
6.2.3 Remove a module from the DATA LOGGER INTERFACE	51
6.2.4 SPRAY TO A PREPROGRAMMED RATE	51
6.2.5 CHANGE THE JOB NUMBER	52
<b>7.0 CONFIGURATION OPTIONS</b>	<b>53</b>
7.1 KEY CONFIGURATION	54
7.1.1 Enable the KEY BEEPER ON or OFF	55
7.1.2 Set the KEY BEEPER TME	55
7.1.3 Enable the KEY REPEAT	55
7.1.4 Set the KEY REPEAT DURATION	55
7.2 ALARM CONFIGURATION	56
7.2.1 ALARM BEEPER OVERVIEW	57
7.2.2 Set the ALARM CYCLE TIME	58
7.2.3 Set the ALARM DUTY CYCLE	58
7.2.4 Set the number of ALARM CYCLES	58
7.2.5 Switch the ALARM BEEPER ON or OFF	58
7.3 GENERAL CONFIGURATION	59
7.3.1 COLD RESET (Restore Factory Settings)	59

<b>8.0 DIAGNOSTICS MODE</b>	<b>60</b>
8.1 LED TEST	61
8.2 SWITCH TEST	62
8.3 KEYS TEST	63
8.4 SENSORS TEST	64
8.5 RELAYS TEST	65
8.6 REG VALVE TEST	66
8.7 EEPROM TEST	67
8.8 DISPLAY TEST	68
<b>9.0 SPECIFICATIONS</b>	<b>69</b>
9.1 CONSOLE	69
9.2 GROUND SPEED AND FAN SPEED SENSOR	69
<b>10.0 WIRING DIAGRAMS</b>	<b>70</b>
10.1 HV4000 CONSOLE PINOUTS	70
10.2 8 HEAD FAN MONITOR KIT	71
10.3 12 HEAD FAN MONITOR KIT	72

Lined area for personal notes with horizontal ruling lines.

## 1.0 MENU OVERVIEW

### 1.1 TO ENTER THE 'MAIN MENU' FROM THE 'RUNTIME SCREEN'

- Ensure the 'Master Switch' is in the OFF (HOLD) position
- Press the 'MENU' button
- The screen will advance to 'Main Menu' screen

### 1.2 TO MOVE THE FOCUS AROUND THE SCREEN

- Using the 'DEC' button the focus will progress down the screen from 'Left' to 'Right' and 'Top' to 'Bottom'. The 'INC' button will move the focus in the opposite direction.
- If a value is uneditable (ie a title or display value) you may not be able to set the focus to that state.
- To advance to the second screen if available, keep pressing the 'DEC' button until the focus is in the bottom right of the screen, then Press the 'DEC' button this will now advance to next screen.

### 1.3 TO RETURN TO THE 'RUNTIME SCREEN'

- Ensure that you are not editing a value (if you are editing a value an asterisk (\*) will be shown in the box the focus is set to). Press 'SELECT MODE' to accept and save the value, the asterisk will disappear.
- Press the 'MENU' button. *The operator will be returned to the previous Menu Screen.*
- The 'MENU' button may have to be pressed several times to return to the 'RUNTIME SCREEN'.

### 1.4 TO ENTER A 'MENU SCREEN'

- Set the focus to the field displaying the Menu you wish to enter, by using the 'DEC' or 'INC' buttons.
- Press the 'SELECT MODE' button.
- The screen will advance to the next Menu screen.

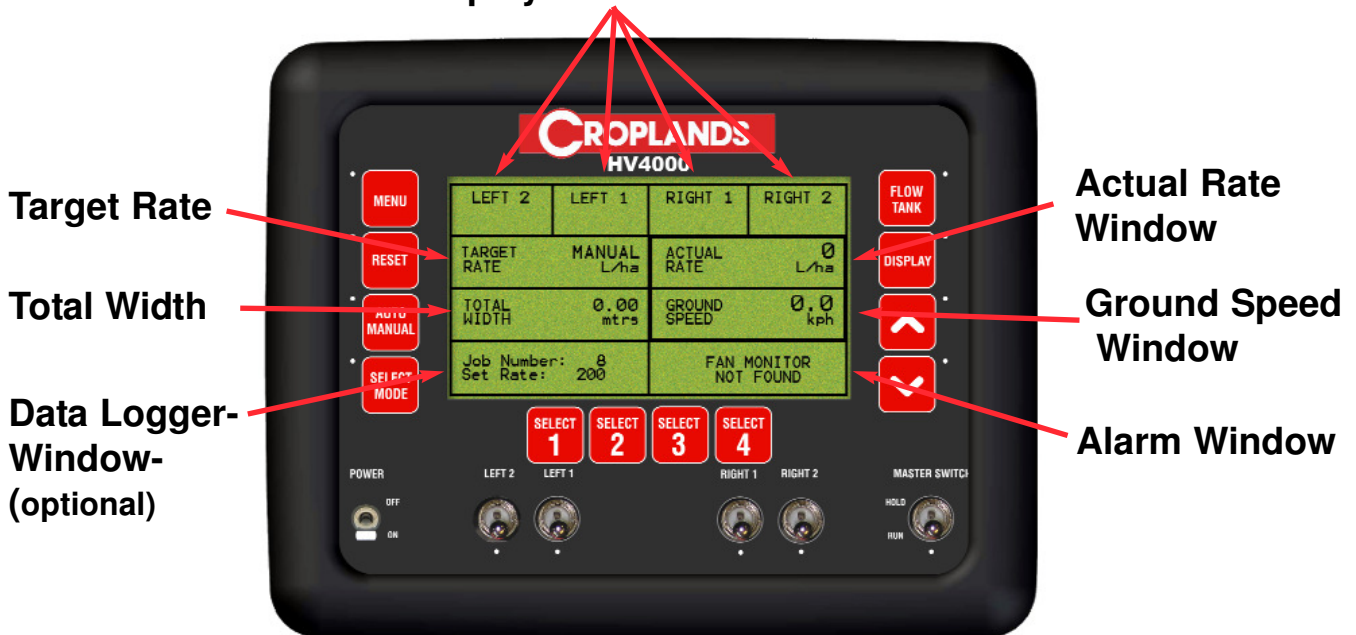
### 1.5 TO EDIT A VALUE

- Set the focus to the field displaying the value, to be edited, by using the 'DEC' or 'INC' buttons, .
- Press the 'SELECT MODE' button. An asterisk (\*) will appear in the field to be edited.
- Use the 'INC' and 'DEC' buttons to adjust the value. The INC or DEC buttons can be pressed repeatedly to change the value OR the INC or DEC buttons can be pressed and held to change the value, the longer the button is pressed the faster the value will change.
- Press the 'SELECT MODE' button to accept and save the changed value. The asterisk (\*) will disappear.

## 2.0 CONSOLE OVERVIEW

### 2.1 RUNTIME SCREEN DISPLAY

Displays Number of Sections



### Runtime Screen

The above "Runtime Screen" is what is displayed when the console is first switched ON.

The "Runtime Screen" is the screen displayed when spraying.

Below is a brief description of what is displayed in each window. The functions listed below are the default settings, for each window.

Some windows can display more than one function, these are explained on the next page.

**Number of Sections-** The number of Sections and Section configuration is factory set and can not be altered. The sprayer will be configured at the factory to one of the configurations below. Only the sections set at the factory will be displayed on the screen.

- 1). 2 Sections- LEFT 1 and RIGHT 1
- OR 2). 3 Sections- LEFT 2, LEFT 1 and RIGHT 1
- OR 3). 3 Sections- LEFT 1, RIGHT 1 and RIGHT 2
- OR 4). 4 Sections- LEFT 2, LEFT 1, RIGHT 1 and RIGHT 2

**Ground Speed-** Displays the 'live' ground speed from the wheel sensor on the sprayer in km/h.

**Actual Rate-** Displays the 'live' spray rate, in Litres/Ha.

**Volume Left-** Displays the volume left in the spray tank, in litres(L).



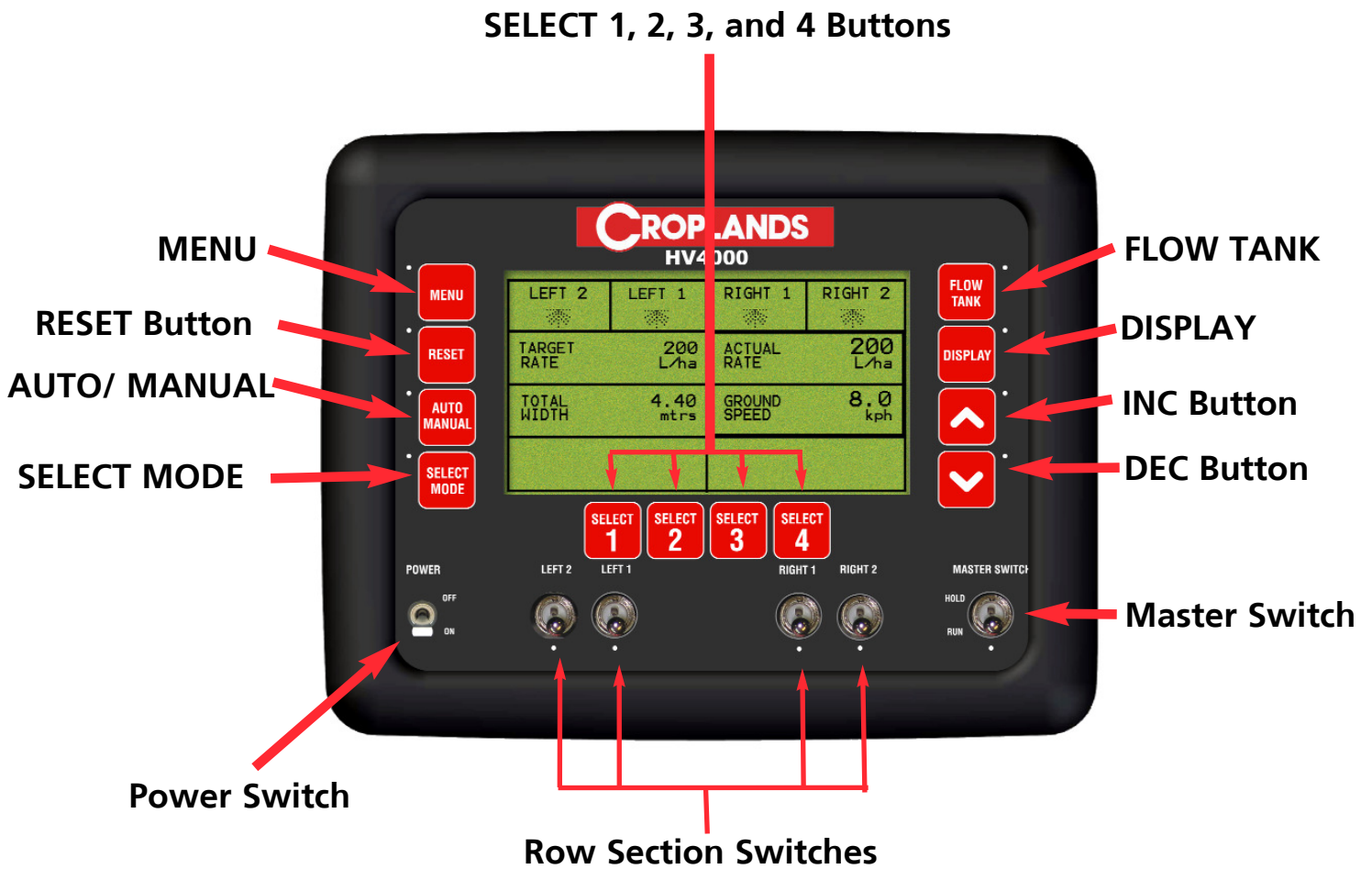
**Flow rate-** Displays the 'live' flow rate in litres/minute (L/min)

**Alarm Window-** Displays all alarms, actions or warnings in this window.

**Data Logger Window-** This window displays the Data Logger information (Job Number and Set Rate) if DATA LOGGER is ENABLED in the Sprayer Setup. Section 3.10 and the DATA LOGGER is connected to the console. The DATA LOGGER is optional.

The Data Logger window also displays the 4 Preset Rates or 4 Preset Widths when the modes are selected.

## 2.2 RUNTIME SCREEN BUTTON FUNCTIONS



### Power Switch

The Eagle console is switched ON and OFF by this switch on the front panel.

### Master Switch

The MASTER switch turns all sections selected for operation, ON or OFF.

### LED

Light Emitting Diode (LED). The LED's aligned below the Row Section Switches indicates the status of switches.

The LED's for the MASTER switch indicates the status of the switch ON or OFF.

The LED's near the AUTO/MANUAL button indicates the status whether in AUTO (LED light is ON) or MANUAL (LED light is OFF).

The LED's near the 'FLOW TANK', and 'DISPLAY' buttons indicates whether the default functions are being displayed.

If the default function is being displayed in the window then the LED light is OFF.

If the LED is ON then one of the functions other than the default is being displayed.

## **Row Section Switches**

1. These switches turn individual Row Sections ON or OFF. Down is ON.
2. The red LED's aligned below the Row Section Switches indicates the status of Sections.

When the LED light is:

- OFF- The Section switch for that section is switched OFF, temporarily.
- Flashing- The Section switch is switched ON but not spraying. Either the Master is OFF or when spraying in AUTO the ground speed is below the 'LOW SPEED CUT-OFF' value.
- ON- The Section Switch is switched ON, MASTER is ON and nozzles are spraying at the calibrated spraying rate which is displayed 'live' in the 'Actual Rate' window.

Note: The Row section switches LED's will only turn ON for the number sections setup from the factory. If the controller has been setup from the factory as a 2 section sprayer (LEFT 1 and RIGHT 1), then these will be displayed on the top of the screen and the LED's aligned below LEFT1 and RIGHT 1 will turn ON when selected. The RIGHT 2 and LEFT 2 switches won't come ON whether the switches are turned ON or OFF.

## **MENU BUTTON**

The MENU button is the gateway to the 'HV4000' MAIN MENU. When in the MAIN MENU screen the operator can view and enter all the values and alarms to make the Controller functional.

To access the MAIN MENU system the MASTER switch must be in the OFF position before the MENU button be pressed.

## **RESET BUTTON**

The RESET button allows the operator to reset the VOLUME LEFT when VOLUME LEFT is displayed in the ACTUAL RATE window. The LED next to RESET button will be ON when resetting.

## **AUTO/ MANUAL BUTTON**

1. Press AUTO/MANUAL button to select between AUTO or MANUAL mode.
2. When the sprayer is operating in MANUAL the LED near the AUTO/MANUAL button will be OFF and in the TARGET RATE WINDOW 'MANUAL' will be displayed.
3. When the sprayer is operating in AUTO the LED near the button will be ON, and in the TARGET RATE WINDOW the selected rate will be displayed.

## **SELECT MODE BUTTON**

The SELECT MODE button when the RUNTIME SCREEN is displayed, allows the operator to display the 4 preset rates and the 4 preset section widths.

The SELECT MODE button when in the MAIN MENU, allows a value to be edited, when pressed, when the value is highlighted by the focus window.

### **FLOW TANK BUTTON**

The FLOW TANK button allows the operator to select what is displayed in the ACTUAL RATE window:

1. Actual Rate in L/ha.(Default)
2. Volume Left in litres.

### **DISPLAY BUTTON**

The DISPLAY button allows the operator to select what is displayed in the GROUND SPEED window:

1. Ground Speed in kph. (Default)
2. Fan Speed rpm (*Fan Monitor has to be ENABLED, for the Fan Speed to be displayed. (See Section 3.11)*)
3. Flow Rate in L/min

### **INC and DEC BUTTONS when on the RUNTIME SCREEN**

1. When spraying in AUTO mode the INC/DEC buttons, increase or decrease the 'Target Rate' depending on the 'Rate Increment' set.
2. When spraying in MANUAL mode pressing the INC or DEC buttons opens or closes the regulator valve. Therefore increasing or decreasing the FLOW RATE.

### **The INC and DEC BUTTONS when in the MAIN MENU**

1. Allows values to be changed (by pressing INC to increase the value or pressing DEC to decrease the value) when an asterisk is in the focus window.
2. Allows the focus window to be moved around the screen.

### **SELECT 1, SELECT 2, SELECT 3 and SELECT 4 BUTTONS**

Depending which mode the controller is in, the SELECT 1...SELECT 4 buttons allow the operator to:

1. Select one of four Preset Target Rates.
2. Select one of four Preset Widths

## 2.3 MAIN MENU

- Press MENU. To enter the MENU MENU screen  
*To enter the MENU screens ensure the MASTER switch is in the OFF position.*  
*Note: All procedures assume the operator is starting from the "Runtime Screen".*
- To advance to the SETUP MENU see Section 2.5
- To advance to the OPERATING HISTORY see Section 6.0



Main Menu Screen

## 2.4 SETUP MENU

- Press MENU. To enter MAIN MENU screen
- Press SELECT MODE. To enter SETUP MENU screen
- To advance to the SPRAYER SETUP MENU see Section 3.0
- To advance to the FACTORY SETUP MENU see Section 2.5
- To advance to the ALARMS SETUP MENU see Section 4.0



Setup Menu Screen

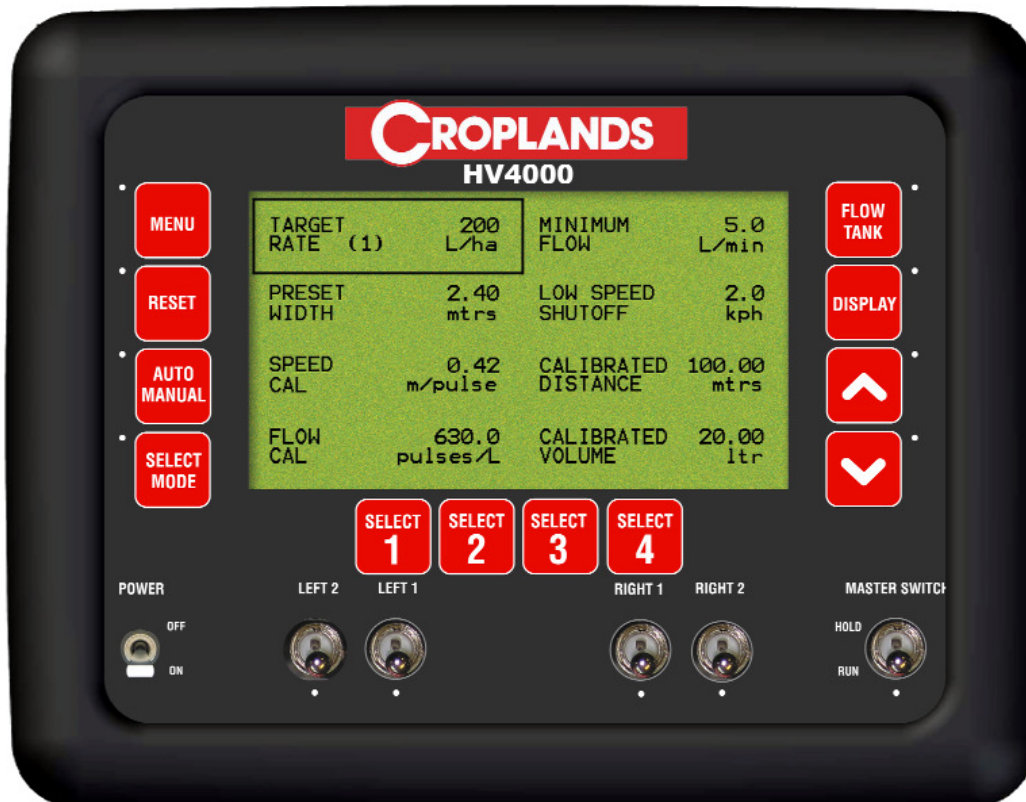
## 2.5 FACTORY DEFAULT SCREEN 1

- Press MENU. To enter MAIN MENU screen
- Press SELECT MODE. To enter SETUP MENU screen.
- Press DEC button to select FACTORY SETUP
- Press SELECT MODE to advance to FACTORY DEFAULT SCREEN 1
- To advance to the FACTORY DEFAULT SCREEN 2 see Section 2.6

*The values shown here are reference values, none of these are editable by the user.*

*If you are having problems with your sprayer operation this is a good place to look to compare your values such as Flow Cal factor and Wheel Cal factor against the values the unit came out of the factory with.*

*If the operator does a 'Cold Reset' (restore to factory defaults). See Section 7.3.1 to perform a "Cold Reset". The values shown in FACTORY DEFAULT SCREENS 1 and 2 will be loaded into the controller.*



Factory Default Screen 1

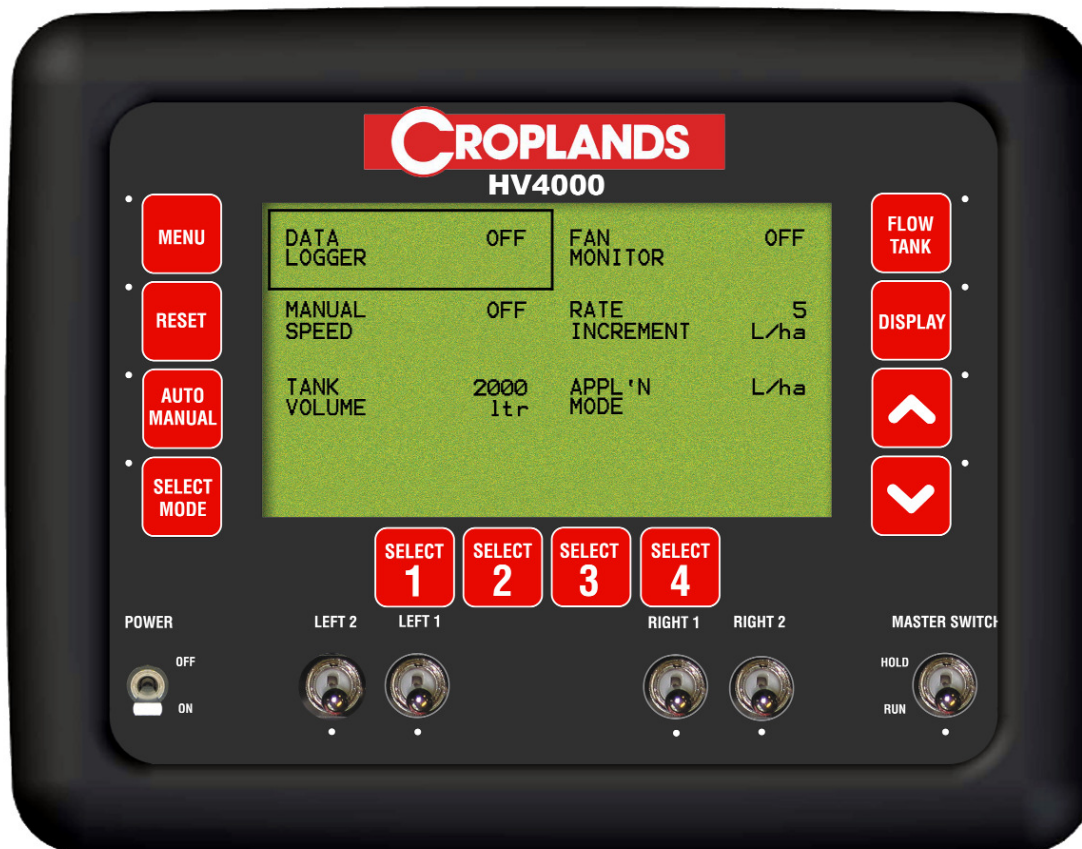
## 2.6 FACTORY DEFAULT SCREEN 2

- Press MENU. To enter MAIN MENU screen
- Press SELECT MODE. To enter SETUP MENU screen.
- Press DEC button to select FACTORY SETUP
- Press SELECT MODE to advance to FACTORY DEFAULT SCREEN 1
- Press repeatedly the DEC button (8 times) to advance to the FACTORY DEFAULT SCREEN 2.

*The values shown here are reference values, none of these are editable by the user.*

*If you are having problems with your sprayer operation this is a good place to look to compare your values such as Flow Cal factor and Wheel Cal factor against the values the unit came out of the factory with.*

*If the operator does a 'Cold Reset' (restore to factory defaults). See Section 7.3.1 to perform a "Cold Reset". The values shown in FACTORY DEFAULT SCREENS 1 and 2 will be loaded into the controller.*

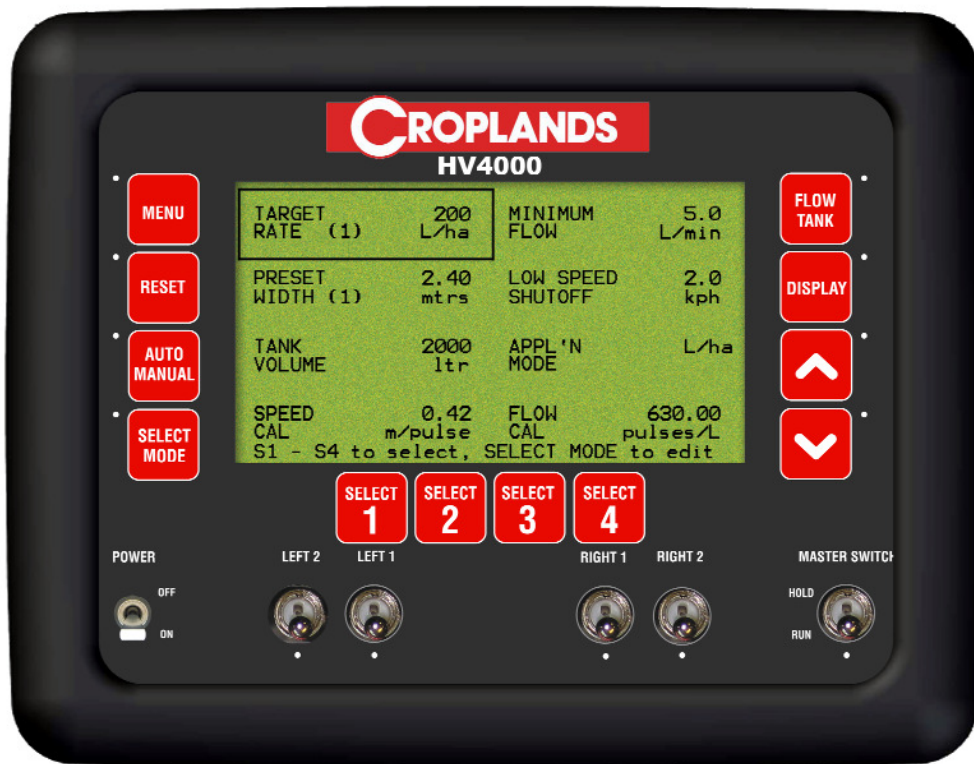


Factory Default Screen 2



### 3.0 SPRAYER SETUP MENU

- Press MENU. To enter MAIN MENU screen
- Press SELECT MODE. To enter SETUP MENU screen.
- Press SELECT MODE. To enter SPRAYER SETUP screen



Sprayer Setup Screen

### **3.1 SET THE 4 PRESET TARGET RATES**

Note: 4 Preset Target Rates can be stored and recalled from the Runtime Screen

- Press MENU
- Press SELECT MODE to select SETUP
- Press SELECT MODE to select SPRAYER SETUP

#### **Setting the 1st Preset Target Rate**

- Press SELECT 1. *The current Preset Target rate will be displayed for Select 1. Also a "(1)" will appear after RATE indicating which Preset Target Rate is displayed*
- Press SELECT MODE to edit target rate. *An asterisk (\*) should appear after "TARGET"*
- Use INC/DEC buttons to set the Preset Target Rate (1)
- Press SELECT MODE to accept the changes.

*The operator can now continue to view or edit the 2nd, 3rd and 4th Preset Target Rates, by selecting either SELECT 2, SELECT 3 and SELECT 4. A (2, 3 or 4) will be displayed after RATE indicating which Preset Target Rate is being edited or viewed. To edit follow the same procedure as "Setting the 1st Preset Target Rate". Except select SELECT 2, SELECT 3, and SELECT 4.*

### **3.2 SET THE MINIMUM FLOW HOLD VALUE**

Note: The MINIMUM FLOW ALARM can set ON or OFF in Section 4.1.1

- Press MENU
- Press SELECT MODE to select SETUP
- Press SELECT MODE to select SPRAYER SETUP
- Press Dec to select MINIMUM FLOW
- Press SELECT MODE to edit the value. *An asterisk (\*) should appear after "MINIMUM"*
- Use INC/DEC buttons to set the MINIMUM FLOW VALUE
- Press SELECT MODE to accept changes

### **3.3 SET THE 4 PRESET WIDTHS**

Note: The HV4000 can store 4 Preset Widths which can be displayed from the Runtime screen.

- Press MENU
- Press SELECT MODE to select SETUP
- Press SELECT MODE to select SPRAYER SETUP
- Press DEC button to highlight PRESET WIDTH

#### **To View the 4 Preset Widths**

- Press SELECT 1 the Preset Width (1) in metres will be displayed. *A (1) will be displayed after WIDTH, indicating the SELECT 1 button was pressed*
- Press SELECT 2 The Preset Width (2) in metres will be displayed. *A (2) will be displayed after WIDTH, indicating the SELECT 2 button was pressed*
- Press SELECT 3 the Preset Width (3) in metres will be displayed. *A (3) will be displayed after WIDTH, indicating the SELECT 3 button was pressed*
- Press SELECT 4 The Preset Width (4) in metres will be displayed. *A (4) will be displayed after WIDTH, indicating the SELECT 4 button was pressed*
- Press SELECT MODE to advance to the SECTION WIDTHS screen to enable the



Section Widths Screen

- Press SELECT 1 or SELECT 2 or SELECT 3 or SELECT 4 to choose the Preset Width to set. The focus must be on "PRESET NUMBER" The current Preset Width is displayed as a number in brackets, next to "PRESET". The screen also shows the Sections set up for your sprayer and the widths of each section, the TOTAL WIDTH is also displayed. The above screen shows the sprayer is setup with 2 sections (LEFT 1 and RIGHT 1). The number of Sections is set from the factory.
- Press DEC button to highlight the Section to be set.
- Press SELECT MODE. A asterisk (\*) will appear
- Use the INC/DEC buttons to set the width for the Section. As the Section changes the TOTAL WIDTH will automatically change.
- Press SELECT MODE to accept changes.
- Repeat till all Sections have been set.
- Press the INC button repeatedly, till the "PRESET NUMBER" is highlighted.
- Repeat till all PRESET NUMBERS have been set, that need changing
- Press MENU. To go back to the previous screen.

### **3.4 CHANGE THE LOW SPEED SHUTOFF**

- Press MENU
- Press SELECT MODE to select SETUP
- Press SELECT MODE to select SPRAYER SETUP
- Press DEC button until LOW SPEED SHUTOFF is highlighted
- Press SELECT MODE. *An asterisk (\*) will appear after SPEED*
- Use the INC/DEC buttons to set the LOW SPEED SHUTOFF value
- Press SELECT MODE to accept the changes

### **3.5 SET THE TANK VOLUME**

- Press MENU
- Press SELECT MODE to select SETUP
- Press SELECT MODE to select SPRAYER SETUP
- Press DEC until the TANK VOLUME is highlighted.
- Press SELECT MODE. *An asterisk (\*) will appear after TANK*
- Use the INC/DEC buttons to set the TANK VOLUME
- Press SELECT MODE to accept the changes

### **3.6 SET THE APPLICATION MODE**

- Press MENU
- Press SELECT MODE to select SETUP
- Press SELECT MODE to select SPRAYER SETUP
- Press DEC until APPL'N MODE is highlighted.
- Press SELECT MODE. *An asterisk (\*) will appear after APPL'N*
- Use the INC/DEC buttons to select between L/ha and L/100m  
Press SELECT MODE to accept the changes

### 3.7 SPEED CALIBRATION MENU

- Press MENU. To enter MAIN MENU screen
- Press SELECT MODE. To enter SETUP MENU screen.
- Press SELECT MODE. To enter SPRAYER SETUP screen
- Press DEC button repeatedly until the SPEED CAL is highlighted.
- Press SELECT MODE to advance to SPEED CALIBRATION screen.



Speed Calibration Screen

### **3.7.1 AUTOMATIC SPEED CALIBRATION SETUP**

- Press MENU. *To enter MAIN MENU screen*
- Press SELECT MODE. *To enter SETUP MENU screen.*
- Press SELECT MODE. *To enter SPRAYER SETUP screen*
- Press DEC button repeatedly until the SPEED CAL is highlighted.
- Press SELECT MODE to advance to SPEED CALIBRATION screen.
- Press SELECT MODE to begin wheel factor calculation. PULSES will be highlighted.
- Press ENTER to begin wheel factor calibration
- Drive forward a measured distance, say 100m. *The PULSES count will accumulate as you travel forwards. The DISTANCE value and ESTIMATED value will accumulate in metres as you travel forwards. These values will accumulate reflecting the current WHEEL FACTOR value; if the value is close then the ESTIMATED and DISTANCE value will also be close to the actual distance travelled. The DISTANCE value is the value to be edited and the ESTIMATED value is a display value only.*
- Once the known distance is reached, press SELECT MODE. *Focus will automatically jump to DISTANCE line of the screen*
- Use INC/DEC buttons to change the DISTANCE value to reflect the actual distance travelled
- Press SELECT MODE to accept the value. *Wheel factor will be automatically calculated and displayed, on the WHEEL FACTOR line.*
- Press SELECT MODE to accept the value. *Wheel factor will be automatically calculated and displayed.*  
*Pressing reset during calibration will abort the calibration process*

### **3.7.2 MANUAL ENTRY OF SPEED CALIBRATION FACTOR**

- Press MENU. *To enter MAIN MENU screen*
- Press SELECT MODE. *To enter SETUP MENU screen.*
- Press SELECT MODE. *To enter SPRAYER SETUP screen*
- Press DEC button repeatedly until the SPEED CAL is highlighted.
- Press SELECT MODE to advance to SPEED CALIBRATION screen.
- Press DEC until SPEED CAL is highlighted
- Press SELECT MODE to edit the value
- Use INC/DEC buttons to set the SPEED CALIBRATION factor. *Wheel factor changes in 1cm increments*
- Press SELECT MODE to accept the value
- Press MENU to go back to the previous screen.

### 3.8 FLOW CALIBRATION FACTOR

- Press MENU. To enter MAIN MENU screen
- Press SELECT MODE. To enter SETUP MENU screen.
- Press SELECT MODE. To enter SPRAYER SETUP screen
- Press DEC button repeatedly until the FLOW CAL is highlighted.
- Press SELECT MODE to advance to FLOW CALIBRATION screen.



Speed Calibration Screen

### **3.8.1 AUTOMATIC FLOW CALIBRATION**

- Press MENU. *To enter MAIN MENU screen*
  - Press SELECT MODE. *To enter SETUP MENU screen.*
  - Press SELECT MODE. *To enter SPRAYER SETUP screen*
  - Press DEC button repeatedly until the FLOW CAL is highlighted.
  - Press SELECT MODE to advance to FLOW CALIBRATION screen.
  - Disconnect one of the section lines from the spray manifold
  - Place a bucket under the output of the section valve.
  - Turn ON spray pump.
  - Ensure the relevant Section Switch is turned ON
  - Press SELECT MODE to begin Flow Calibration
  - The valve will open and fluid will begin to pump through the manifold. *The pulse count will begin accumulating as liquid is being metered out*
  - Once a sufficient volume has accumulated (20 litres is a good amount).
  - Press SELECT MODE. *Focus will automatically jump to the ACTUAL FLOW line of the screen*
  - Use INC/DEC buttons to set the volume to reflect the actual amount of liquid measured.
  - Press SELECT MODE to accept the value. *The Flow Cal factor will be automatically calculated and displayed.*
- Pressing reset during calibration will abort the calibration process*

### **3.8.2 MANUAL FLOW CALIBRATION**

*If the Flow Meter has a Flow Cal value stamped on the Flow meter than that value can be entered in here. The value must be in "pulses per litre" (PPL)*

- Press MENU. *To enter MAIN MENU screen*
- Press SELECT MODE. *To enter SETUP MENU screen.*
- Press SELECT MODE. *To enter SPRAYER SETUP screen*
- Press DEC button repeatedly until the FLOW CAL is highlighted.
- Press SELECT MODE to advance to FLOW CALIBRATION screen.
- Press Dec (down arrow) until the focus is on FLOW CAL
- Press SELECT MODE to edit the value
- Use INC/DEC buttons to set the Flow Cal Factor, to match the value stamped on the Flow Meter.
- Press SELECT MODE to accept the value



### 3.9 SPRAYER SETUP 2 SCREEN

- Press MENU. To enter MAIN MENU screen
- Press SELECT MODE. To enter SETUP MENU screen.
- Press SELECT MODE. To enter SPRAYER SETUP screen
- Press DEC button repeatedly until the FLOW CAL is highlighted.
- Press DEC button to advance to the Sprayer Setup 2 screen



Sprayer Setup 2 Screen

### **3.10 ENABLE THE DATA LOGGER**

- Press MENU
- Press SELECT MODE to select SETUP
- Press SELECT MODE to select SPRAYER SETUP
- Press DEC button until the screen advances to SPRAYER SETUP 2 screen
- DATA LOGGER is highlighted
- Press SELECT MODE. *An asterisk (\*) will appear after DATA*
- Use the INC/DEC buttons to ENABLE or DISABLE the logger
- Press SELECT MODE to accept the changes

### **3.11 ENABLE FAN MONITORING**

- Press MENU
  - Press SELECT MODE to select SETUP
  - Press SELECT MODE to select SPRAYER SETUP
  - Press DEC button until the screen advances to SPRAYER SETUP 2 screen
  - Press DEC button to highlight FAN MONITOR
  - Press SELECT MODE, *An asterisk (\*) will appear after FAN*
  - Use INC/DEC buttons to select between OFF, SINGLE, 2 FANS, 4 FANS, 6 FANS, 8 FANS or 12 FANS
  - Press SELECT MODE to accept changes
- If SINGLE fan monitoring is selected, the fan input is directly into Eagle.  
If more than one fan is selected, a Fan Monitor ECU is required*

### **3.12 SET A MANUAL SPEED**

- Press MENU
  - Press SELECT MODE to select SETUP
  - Press SELECT MODE to select SPRAYER SETUP
  - Press DEC button until the screen advances to SPRAYER SETUP 2 screen
  - Press DEC button to highlight MANUAL SPEED
  - Press SELECT MODE, *An asterisk (\*) will appear after MANUAL*
  - Use INC/DEC buttons to set the MANUAL SPEED
  - Press SELECT MODE, to accept changes
- Note: the manual speed will not be able to be set if there is a valid speed source present, this can only be done whilst the vehicle is stationary. As soon as a valid speed is present this will override the manual speed. This value is not saved in memory, if the unit is turned OFF this value will need to be re-entered*

### **3.13 ADJUST TO RATE INCREMENT**

- Press MENU
- Press SELECT MODE to select SETUP
- Press SELECT MODE to select SPRAYER SETUP
- Press DEC button until the screen advances to SPRAYER SETUP 2 screen
- Press DEC button to highlight RATE INCREMENT
- Press SELECT MODE, *An asterisk (\*) will appear after RATE*
- Use INC/DEC, to set the rate increment value
- Press SELECT MODE to accept the changes

## 4. ALARMS SETUP MENU

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP



Alarms Screen

## 4.1 RATE ALARMS

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press SELECT MODE to advance to RATE ALARMS



Rate Alarms Screen

### **4.1.1 SETTING THE MINIMUM FLOW ALARM**

*Note: The MINIMUM FLOW value is set in Section 3.2*

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press SELECT MODE to advance to RATE ALARMS
- Press SELECT MODE to edit the MIN FLOW ALARM.  
*An asterisk (\*) will be displayed*
- Use INC/DEC buttons to set the alarm ON or OFF
- Press SELECT MODE to accept the changes

### **4.1.2 SETTING THE APPLICATION RATE LOW ALARM**

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press SELECT MODE to advance to RATE ALARMS
- Press DEC button to highlight APPL'N RATE LOW
- Press SELECT MODE to edit APP'N RATE LOW. *An asterisk (\*) will be displayed*
- Use INC/DEC buttons to set the alarm ON/OFF
- Press SELECT MODE to accept the changes

### **4.1.3 ADJUST THE APPLICATION RATE LOW POINT**

- Press MENU
  - Press SELECT MODE to advance to SETUP
  - Press DEC button to highlight ALARM SETUP
  - Press SELECT MODE to advance to ALARM SETUP
  - Press SELECT MODE to advance to RATE ALARMS
- Note: If the alarm is OFF, turn the alarm ON as explained in Section 4.1.2*
- Press DEC button twice to highlight ALARM POINT
  - Press SELECT MODE to edit the ALARM POINT *An asterisk (\*) will be displayed*
  - Use INC/DEC button to set the ALARM POINT. *The ALARM POINT is (%) based*
  - Press SELECT MODE to accept the changes

#### **4.1.4 SETTING THE APPLICATION RATE HIGH ALARM**

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press SELECT MODE to advance to RATE ALARMS
- Press DEC button repeatedly to highlight APPL'N RATE HIGH
- Press SELECT MODE to edit APP'N RATE HIGH. *An asterisk (\*) will be displayed*
- Use INC/DEC buttons to set the alarm ON/OFF
- Press SELECT MODE to accept the changes

#### **4.1.5 ADJUST THE APPLICATION RATE HIGH POINT**

- Press MENU
  - Press SELECT MODE to advance to SETUP
  - Press DEC button to highlight ALARM SETUP
  - Press SELECT MODE to advance to ALARM SETUP
  - Press SELECT MODE to advance to RATE ALARMS
- Note: If the alarm is OFF, turn the alarm ON as explained in Section 4.1.4*
- Press DEC button repeatedly to highlight ALARM POINT
  - Press SELECT MODE to edit the ALARM POINT *An asterisk (\*) will be displayed*
  - Use INC/DEC button to set the ALARM POINT. *The ALARM POINT is (%) based*
  - Press SELECT MODE to accept the changes

## 4.2 FAN ALARMS

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press DEC button to highlight FAN ALARMS
- Press SELECT MODE to advance to FAN ALARMS



Fan Alarms Screen

### **4.2.1 SETTING THE FAN SPEED LOW ALARM**

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press DEC button to highlight FAN ALARMS
- Press SELECT MODE to advance to FAN ALARMS
- Press SELECT MODE to edit FAN SPEED LOW. *An asterisk (\*) will be displayed*
- Use INC/DEC buttons to set the alarm ON or OFF.
- Press SELECT MODE to accept the changes

### **4.2.2 ADJUST THE FAN SPEED LOW POINT**

- Press MENU
  - Press SELECT MODE to advance to SETUP
  - Press DEC button to highlight ALARM SETUP
  - Press SELECT MODE to advance to ALARM SETUP
  - Press DEC button to highlight FAN ALARMS
  - Press SELECT MODE to advance to FAN ALARMS
- Note: If the alarm is OFF, turn the alarm ON as explained in Section 4.2.1*
- Press DEC button to highlight ALARM POINT
  - Press SELECT MODE to edit the ALARM POINT *An asterisk (\*) will be displayed*
  - Use INC/DEC button to set the ALARM POINT. *The ALARM POINT is in (rpm).*
  - Press SELECT MODE to accept the changes

### **4.2.3 SETTING THE FAN SPEED HIGH ALARM**

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press DEC button to highlight FAN ALARMS
- Press SELECT MODE to advance to FAN ALARMS
- Press DEC button to highlight FAN SPEED HIGH
- Press SELECT MODE to edit FAN SPEED HIGH. *An asterisk (\*) will be displayed*
- Use INC/DEC buttons to set the alarm ON or OFF.
- Press SELECT MODE to accept the changes



#### **4.2.4 ADJUST THE FAN SPEED HIGH POINT**

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press DEC button to highlight FAN ALARMS
- Press SELECT MODE to advance to FAN ALARMS

*Note: If the alarm is OFF, turn the alarm ON as explained in Section 4.2.3*

- Press DEC button repeatedly to highlight ALARM POINT
- Press SELECT MODE to edit the ALARM POINT *An asterisk (\*) will be displayed*
- Use INC/DEC button to set the ALARM POINT. *The ALARM POINT is in (rpm).*
- Press SELECT MODE to accept the changes

## 4.3 SPEED ALARMS

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press DEC button to highlight SPEED ALARMS
- Press SELECT MODE to advance to SPEED ALARMS



Speed Alarms Screen

### **4.3.1 SETTING THE SPEED LOW ALARM**

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press DEC button to highlight SPEED ALARMS
- Press SELECT MODE to advance to SPEED ALARMS
- Press SELECT MODE to edit SPEED LOW. *An asterisk (\*) will be displayed*
- Use INC/DEC buttons to set the alarm ON or OFF.
- Press SELECT MODE to accept the changes

### **4.3.2 ADJUST THE SPEED LOW POINT**

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press DEC button to highlight SPEED ALARMS
- Press SELECT MODE to advance to SPEED ALARMS

*Note: If the alarm is OFF, turn the alarm ON as explained in Section 4.3.1*

- Press DEC button to highlight ALARM POINT
- Press SELECT MODE to edit the ALARM POINT. *An asterisk (\*) will be displayed*
- Use INC/DEC buttons to set the ALARM POINT.  
*The ALARM POINT is displayed (kph).*
- Press SELECT MODE to accept the changes

### **4.3.3 SETTING THE SPEED HIGH ALARM**

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press DEC button to highlight SPEED ALARMS
- Press SELECT MODE to advance to SPEED ALARMS
- Press DEC button repeatedly to highlight SPEED HIGH
- Press SELECT MODE to edit SPEED HIGH. *An asterisk (\*) will be displayed*
- Use INC/DEC buttons to set the alarm ON or OFF.
- Press SELECT MODE to accept the changes

#### **4.3.4 ADJUST THE SPEED HIGH POINT**

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press DEC button to highlight SPEED ALARMS
- Press SELECT MODE to advance to SPEED ALARMS

*Note: If the alarm is OFF, turn the alarm ON as explained in Section 4.3.3*

- Press DEC button repeatedly to highlight ALARM POINT
- Press SELECT MODE to edit the ALARM POINT. *An asterisk (\*) will be displayed*
- Use INC/DEC buttons to set the ALARM POINT.  
*The ALARM POINT is displayed in (kph).*
- Press SELECT MODE to accept the changes

## 4.4 TANK ALARMS

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press DEC button repeatedly to highlight TANK ALARMS
- Press SELECT MODE to advance to TANK ALARMS



Tank Alarms Screen

### **4.4.1 SETTING THE VOLUME LOW ALARM**

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press DEC button repeatedly to highlight TANK ALARMS
- Press SELECT MODE to advance to TANK ALARMS
- Press SELECT MODE to edit VOLUME LOW. *An asterisk (\*) will be displayed*
- Use INC/DEC buttons to set the alarm ON or OFF.
- Press SELECT MODE to accept the changes

### **4.4.2 ADJUST THE VOLUME LOW POINT**

- Press MENU
  - Press SELECT MODE to advance to SETUP
  - Press DEC button to highlight ALARM SETUP
  - Press SELECT MODE to advance to ALARM SETUP
  - Press DEC button repeatedly to highlight TANK ALARMS
  - Press SELECT MODE to advance to TANK ALARMS
- Note: If the alarm is OFF, turn the alarm ON as explained in Section 4.4.1*
- Press DEC button to highlight ALARM POINT
  - Press SELECT MODE to edit the ALARM POINT. *An asterisk (\*) will be displayed*
  - Use INC/DEC buttons to set the ALARM POINT.  
*The ALARM POINT is displayed (Litres).*
  - Press SELECT MODE to accept the changes

## 4.5 DATA LOGGER ALARMS

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press DEC button repeatedly to highlight LOGGER ALARMS
- Press SELECT MODE to advance to LOGGER ALARMS



Data Logger Alarms Screen

### **4.5.1 SETTING THE DATA LOGGER INTERFACE ALARM**

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press DEC button repeatedly to highlight LOGGER ALARMS
- Press SELECT MODE to advance to LOGGER ALARMS
- Press SELECT MODE to edit INTERFACE NOT FOUND.  
*An asterisk (\*) will be displayed*
- Use INC/DEC buttons to set the alarm ON or OFF.
- Press SELECT MODE to accept the changes

### **4.5.2 SETTING THE DATA MODULE ERROR ALARM**

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press DEC button repeatedly to highlight LOGGER ALARMS
- Press SELECT MODE to advance to LOGGER ALARMS
- Press DEC button to highlight DATA MODULE ERR
- Press SELECT MODE to edit DATA MODULE ERR.  
*An asterisk (\*) will be displayed*
- Use INC/DEC buttons to set the alarm ON or OFF.
- Press SELECT MODE to accept the changes

### **4.5.3 SETTING THE DATA MODULE FULL ALARM**

- Press MENU
- Press SELECT MODE to advance to SETUP
- Press DEC button to highlight ALARM SETUP
- Press SELECT MODE to advance to ALARM SETUP
- Press DEC button repeatedly to highlight LOGGER ALARMS
- Press SELECT MODE to advance to LOGGER ALARMS
- Press DEC button to highlight DATA MODULE FULL
- Press SELECT MODE to edit DATA MODULE FULL.  
*An asterisk (\*) will be displayed*
- Use INC/DEC buttons to set the alarm ON or OFF.
- Press SELECT MODE to accept the changes



## 5. OPERATING HISTORY

- Press MENU
- Press DEC button to highlight OPERATING HISTORY
- Press SELECT MODE to advance to OPERATING HISTORY screen



Operating History Screen

## 5.1 TOTALS HISTORY

- Press MENU
- Press DEC button to highlight OPERATING HISTORY
- Press SELECT MODE to advance to OPERATING HISTORY screen
- Press SELECT MODE to advance to TOTALS HISTORY screen

*Note: When resetting the SUB VOLUME, SUB AREA and SUB DISTANCE; select the SUB AREA NUM first (there are 10 SUB AREA NUM to select from 1 to 10). Then reset the SUB VOLUME, SUB AREA and SUB DISTANCE; this only resets those values for the SUB AREA NUM selected.*

*Then select another SUB AREA NUM and then reset the SUB VOLUME, SUB AREA and SUB DISTANCE for that Sub Area.*



Totals History Screen

### **5.1.1 RESET THE TOTAL VOLUME**

- Press MENU
- Press DEC button to highlight OPERATING HISTORY
- Press SELECT MODE to advance to OPERATING HISTORY screen
- Press SELECT MODE to advance to TOTALS HISTORY screen
- Press SELECT MODE to reset TOTAL VOLUME
- Press RESET button to clear the stored value
- Press SELECT MODE to accept the changes

### **5.1.2 RESET THE SUB VOLUME**

- Press MENU
- Press DEC button to highlight OPERATING HISTORY
- Press SELECT MODE to advance to OPERATING HISTORY screen
- Press SELECT MODE to advance to TOTALS HISTORY screen
- Press DEC button to highlight SUB VOLUME
- Press SELECT MODE to reset SUB VOLUME
- Press RESET button to clear the stored value
- Press SELECT MODE to accept the changes

### **5.1.3 RESET THE TOTAL AREA**

- Press MENU
- Press DEC button to highlight OPERATING HISTORY
- Press SELECT MODE to advance to OPERATING HISTORY screen
- Press SELECT MODE to advance to TOTALS HISTORY screen
- Press DEC button repeatedly to highlight TOTAL AREA
- Press SELECT MODE to reset TOTAL AREA
- Press RESET button to clear the stored value
- Press SELECT MODE to accept the changes

### **5.1.4 RESET THE SUB AREA**

- Press MENU
- Press DEC button to highlight OPERATING HISTORY
- Press SELECT MODE to advance to OPERATING HISTORY screen
- Press SELECT MODE to advance to TOTALS HISTORY screen
- Press DEC button repeatedly to highlight SUB AREA
- Press SELECT MODE to reset SUB AREA
- Press RESET button to clear the stored value
- Press SELECT MODE to accept the changes

### **5.1.5 RESET THE TOTAL DISTANCE**

- Press MENU
- Press DEC button to highlight OPERATING HISTORY
- Press SELECT MODE to advance to OPERATING HISTORY screen
- Press SELECT MODE to advance to TOTALS HISTORY screen
- Press DEC button repeatedly to highlight TOTAL DISTANCE
- Press SELECT MODE to reset TOTAL DISTANCE
- Press RESET button to clear the stored value
- Press SELECT MODE to accept the changes

### **5.1.6 RESET THE SUB DISTANCE**

- Press MENU
- Press DEC button to highlight OPERATING HISTORY
- Press SELECT MODE to advance to OPERATING HISTORY screen
- Press SELECT MODE to advance to TOTALS HISTORY screen
- Press DEC button repeatedly to highlight SUB DISTANCE
- Press SELECT MODE to reset SUB DISTANCE
- Press RESET button to clear the stored value
- Press SELECT MODE to accept the changes

### **5.1.7 RESET THE TOTAL TIME**

- Press MENU
- Press DEC button to highlight OPERATING HISTORY
- Press SELECT MODE to advance to OPERATING HISTORY screen
- Press SELECT MODE to advance to TOTALS HISTORY screen
- Press DEC button repeatedly to highlight TOTAL TIME
- Press SELECT MODE to reset TOTAL TIME
- Press RESET button to clear the stored value
- Press SELECT MODE to accept the changes

### **5.1.8 SELECT A SUB AREA NUMBER**

- Press MENU
- Press DEC button to highlight OPERATING HISTORY
- Press SELECT MODE to advance to OPERATING HISTORY screen
- Press SELECT MODE to advance to TOTALS HISTORY screen
- Press DEC button repeatedly to highlight SUB AREA NUM
- Press SELECT MODE to reset SUB AREA NUM
- Press RESET button to clear the stored value
- Press SELECT MODE to accept the changes

## 5.2 FAN HISTORY

*These values are display values only, they are not editable by the user*

- Press MENU
- Press DEC button to highlight OPERATING HISTORY
- Press SELECT MODE to advance to OPERATING HISTORY screen
- Press DEC button to highlight FAN HISTORY
- Press SELECT MODE to advance to FAN HISTORY screen



Fan History Screen

## 5.3 MACHINE HISTORY

To enter the Machine History screen you must enter the machine unique pin number. If the number is entered incorrectly, you will be returned to the operating history screen.

The numbers displayed are machine totals, these can't be edited or reset.

### 5.31 ENTER THE MACHINE HISTORY SCREEN

- Press MENU
- Press DEC button to highlight OPERATING HISTORY
- Press SELECT MODE to advance OPERATING HISTORY screen
- Press DEC button repeatedly to highlight MACHINE HISTORY
- Press SELECT MODE to select MACHINE HISTORY
- Enter your pin number

## 6. OPERATIONS: SPRAYER & DATA LOGGER



Runtime Screen

## 6.1 OPERATION OF THE SPRAYER

### 6.1.1 DISPLAY THE VOLUME REMAINING IN THE TANK

- Press the FLOW/TANK button *The LED will turn ON next to FLOW TANK button when displaying VOLUME LEFT*
- The ACTUAL RATE changes to display VOLUME LEFT
- To change back, press the FLOW/TANK button

### 6.1.2 FILL THE TANK

- Press the FLOW/TANK button, to select to VOLUME LEFT
- Press RESET button. A prompt appears in the bottom left of the screen, "RESET TANK VOLUME, PRESS (SELECT MODE)
- Press SELECT MODE to reset the volume. The Volume will now be reset to the Tank Volume set in Section 3.5

### 6.1.3 SELECT BETWEEN MANUAL AND AUTO MODE

- Press AUTO/MANUAL button.
- If the Spray console is in AUTO mode, the LED next to the AUTO/MANUAL button is illuminated and the TARGET RATE window will display the selected TARGET RATE in L/ha.
- If the Spray console is in MANUAL mode the LED is NOT illuminated and MANUAL is displayed in the TARGET RATE window. When the Spray console is first switched ON the console is in MANUAL mode.

### 6.1.4 SELECT BETWEEN GROUND SPEED, FAN SPEED and FLOW RATE

- Press DISPLAY button to switch between the display modes; Ground Speed, Fan Speed and Flow Rate
- By default the Ground Speed is displayed in the Ground Speed Window. If the unit is in GROUND SPEED mode, the LED next to the button is not illuminated, GROUND SPEED is displayed and the actual ground speed is shown in km/h.
- Press the DISPLAY button. The console is in FAN SPEED mode, the LED is illuminated near the DISPLAY button, FAN SPEED is displayed and the actual fan rpm is displayed  
*Note: If fan monitoring is not enabled, the console will not display a fan speed*  
*Note: If 2 fans are selected, both fan speeds are in the display box*  
*Note: If more than 2 fans are selected, the screen will change to display multiple fans. Operation of the sprayer is as normal while fans screen is displayed*
- Press the DISPLAY button. The console is in FLOW RATE mode the LED is illuminated, and FLOW RATE is displayed and the actual flow rate is displayed in L/min.
- Press the DISPLAY button, Ground Speed is displayed and the LED near the DISPLAY button is turned OFF.



**Fan Speed Monitoring Screen**

*The above screen shows the Fan Speed Mode screen. The above screen shows that 6 Fans are enabled and each of the Fans from 1 to 6 are showing 1500 rpm fan speed.*

### **6.1.5 CHOOSE A PRESET WIDTH**

- Switch the Master Switch OFF.
- Press SELECT 3, the TOTAL WIDTH window will be highlighted.
- Press SELECT MODE
- The four preset widths (S1, S2, S3 and S4) will appear in the bottom left hand window, *the four preset widths are displayed in brackets, (the displayed widths are the total widths)*
- Press the SELECT 1, 2, 3 or 4 buttons, which displays the correct width for your current operation.
- The TOTAL WIDTH window will change based on the number of Sections switched ON.

### **6.1.6 SWITCH A SECTION ON**

- Switch the required Section to the ON (down) position.
- If the Master switch is OFF, the indicator LED for the Section will flash.
- If the Master switch is ON the indicator LED will be illuminated and a spray nozzle will be shown at the top of the screen.



### **6.1.7 ADJUST THE SCREEN CONTRAST**

- Adjust the screen contrast by adjusting the Contrast Knob, situated at the back of the console, ( See Section 9.1 for location of Contrast Knob), by turning the knob clockwise or anti-clockwise to suit the operator.

### **6.1.8 BEGIN SPRAYING**

- Select a Sub Area
- Electronically fill the Tank Volume.
- Start the Pump
- Switch any required sections ON. Corresponding LED's will Flash
- Switch the Master Switch ON.
- Drive off.
- When the LOW SPEED SHUTOFF value has been reached, the Corresponding Section LED's will stay ON and the sprayer will start spraying.

### **6.1.9 INCREASE OR DECREASE THE APPLICATION RATE (Manual Mode)**

- Ensure the Master Switch is ON and any required sections are ON
- Press INC/DEC. *The regulator valve will operate and you will see the Actual Rate change accordingly in the ACTUAL RATE window.*

### **6.1.10 INCREASE OR DECREASE THE APPLICATION RATE (Auto Mode)**

- Ensure the unit is in AUTO mode as previously described
- Press INC/DEC buttons. *The target rate will change by the selected increment amount. The Actual Rate will be displayed in the ACTUAL RATE window.*

### **6.1.11 CHOOSE A PRESET APPLICATION RATE (Auto Mode)**

- Ensure the console is in AUTO mode as previously described
- Press SELECT 2 to highlight the TARGET RATE window.
- Press SELECT MODE
- The four preset rates (S1, S2, S3 and S4) will appear in the bottom left screen, the four preset RATES will be in brackets.
- Press the SELECT 1, 2, 3 or 4 button that corresponds to the required rate.
- The TARGET RATE will change to the chosen preset rate.

## 6.2 OPERATION OF THE DATA LOGGER

**WARNING: ALWAYS TURN OFF THE SPRAY CONSOLE BEFORE CONNECTING OR DISCONNECTING DATA LOGGER MODULES**



Runtime Screen with Data Logger enabled

### **6.2.1 CONNECT THE DATA LOGGER INTERFACE TO THE EAGLE**

- Switch the Eagle console OFF
- Connect the circular 9 pin plug from the Data Logger Interface to the matching plug on the rear of the Eagle
- Switch the Eagle console ON
- Ensure Data Logger Interface is ENABLED. See Section 3.10
- If there is an error connecting to the interface, a Logger Interface Not Found alarm will be displayed, in the ALARM WINDOW.

### **6.2.2 CONNECT A MODULE TO THE DATA LOGGER INTERFACE**

- Switch the Eagle console OFF
- Connect the Data Logger Module to the designated plug on the Data Logger Interface
- Switch the Eagle console ON, Data Logger Module is connected
- If there is an error connecting to the module, a DATA MODULE ERR alarm will be displayed, in the ALARM WINDOW.

### **6.2.3 REMOVE A MODULE FROM THE DATA LOGGER INTERFACE**

- Switch the Eagle console OFF
- Remove the Data Logger Module from the Data Logger Interface
- It is now safe to switch the Eagle console back ON

### **6.2.4 SPRAY TO A PREPROGRAMMED RATE**

- Connect the programmed module to the data logger interface
- Set the SUB AREA (see Section 5.1.8) on the console to the SUB AREA shown on the job sheet that relates to the required 'Job Number'.
- Return to the 'Runtime Screen'
- The 'Job Number' and 'Set Rate' will be displayed in the bottom left hand corner of the screen, check against the job sheet to ensure you have loaded the correct 'Job Number'.
- Set the Eagle console to AUTO, activate the required sections, switch the Master Switch ON. and begin spraying. The pre-programmed rate will be set as the TARGET RATE. The Rate can be adjust by using the INC/DEC buttons. Any changes in Rate will be logged.
- If a new module is attached or the SUB AREA number is changed, the new pre-programmed set rate will be loaded in. The preprogrammed set rate will always be displayed in the bottom left hand corner of the screen for reference.

### **6.2.5 CHANGE THE JOB NUMBER**

- Connect the programmed module to the data logger interface
- Set the sub area on the console to the sub area shown on the job sheet that relates to the required job number as previously described

### **6.2.6 SPRAY WITHOUT USING PREPROGRAMMED RATES**

- Connect a module to the interface as previously described
- If the module has been pre-programmed with set rates, spraying in SUB AREA NUMBER **10** will log only, it will not load in any pre-programmed set rates.
- If the module has no preprogrammed set rates, any of the 10 sub area numbers can be used for logging purposes.

## 7. CONFIGURATION OPTIONS

*To access the extra console related configuration options. Switch the POWER switch to the ON position, while Pressing and Holding down the RESET button, until the screen below is displayed.*

- To advance to the GENERAL CONFIG see Section 7.3
- To advance to the KEY CONFIG see Section 7.1
- To advance to the ALARM CONFIG see Section 7.2



General Configuration Screen

## 7.1 KEY CONFIGURATION

- Press DEC button to highlight KEY CONFIG
- Press SELECT MODE to advance KEY CONFIGURATION screen



Key Configuration Screen

### **7.1.1 ENABLE THE KEY BEEPER ON or OFF**

- Press DEC button to highlight KEY CONFIG
- Press SELECT MODE to advance KEY CONFIGURATION screen
- Press SELECT MODE to edit the KEY BEEPER. *An asterisk (\*) will be displayed*
- Press INC/DEC buttons, to select the beeper state ON or OFF
- Press SELECT MODE to accept changes

*The KEY BEEPER when switched ON will mean every time the key buttons on the console are pressed a beep will sound. When switched OFF, there is no beep when the key is pressed.*

### **7.1.2 SET THE KEY BEEPER TIME**

- Press DEC button to highlight KEY CONFIG
- Press SELECT MODE to advance KEY CONFIGURATION screen
- Press DEC button to highlight KEY BEEPER TIME
- Press SELECT MODE to edit KEY BEEPER TIME.  
*An asterisk (\*) will be displayed*
- Press INC/DEC buttons, to SET the KEY BEEPER time
- Press SELECT MODE to accept changes

*When the KEY BEEPER is selected ON, then the KEY BEEPER TIMER determines how long the beep sound lasts for. The default is 300mS which is a (1/3) of a second.*

### **7.1.3 ENABLE THE KEY REPEAT**

- Press DEC button to highlight KEY CONFIG
- Press SELECT MODE to advance KEY CONFIGURATION screen
- Press DEC button repeatedly to highlight KEY REPEAT ENABLE
- Press SELECT MODE to edit KEY REPEAT ENABLE.  
*An asterisk (\*) will be displayed*
- Press INC/DEC buttons, to select the KEY REPEAT, ON or OFF.
- Press SELECT MODE to accept changes

*The KEY REPEAT ENABLED when selected ON allows the operator when using the INC/DEC buttons to change values on the console during setup; to hold the Inc or Dec button down and the value will change without having to continually pressing the button to change the value. When switched OFF the operator will have to repeatedly press the Inc or Dec buttons to change the value.*

### **7.1.4 SET THE KEY REPEAT DURATION**

- Press DEC button to highlight KEY CONFIG
- Press SELECT MODE to advance KEY CONFIGURATION screen
- Press DEC button repeatedly to highlight the KEY REPEAT DURATION
- Press SELECT MODE to edit the KEY REPEAT DURATION  
*An asterisk(\*) will be displayed*
- Press INC/DEC buttons, to set the KEY REPEAT DURATION
- Press SELECT MODE to accept changes

*When the KEY BEEPER ENABLED is switched ON, the KEY REPEAT DURATION determines how long when the Inc or Dec button is held down how quickly the value changes. The default is 300mS.*

## 7.2 ALARM CONFIGURATION

- Press DEC button twice to highlight ALARM CONFIG
- Press SELECT MODE to advance ALARM CONFIGURATION screen



Key Configuration Screen



### 7.2.1 Alarm Beeper Overview-

- This ALARM BEEPER screen allows to change the settings on how the alarm will beep when an alarm appears in the ALARM WINDOW on the Working Screen.
- The ALARM CYCLE TIME sets how long in milliseconds (mS) the alarm stays in the ALARM WINDOW.
- The ALARM CYCLES is how many times the alarm will cycle beep and flash, in the 'Alarm Window'
- The ALARM DUTY CYCLE is the percentage of time the beeper will beep, when the alarm is flashing in the 'Alarm Window'. I.e. When the ALARM DUTY CYCLE is set at 50% the beep will sound for half the time (50%), the alarm flashes in the 'Alarm Window.' The ALARM BEEPER needs to be switched ON.
- The ALARM BEEPER can be switched ON or OFF. When the beeper is turned ON, the console will beep as well as display what the alarm is. When the beeper is turned OFF, the alarm will be displayed on the screen but without the beep
- I.e. The default settings are displayed on the screen, see Section 7.2.
- The alarm will appear in the ALARM WINDOW.
- The alarm will flash for 1 second.
- The alarm will beep for 1/2 a second (50% of the alarm cycle time), and the alarm will cycle (flash and beep) 5 times.
- After the 5 cycles the beep will stop and if the alarm is still present, then the alarm will cycle through in the ALARM WINDOW with no beep.

### **7.2.2 SET THE ALARM CYCLE TIME**

- Press DEC button twice to highlight ALARM CONFIG
- Press SELECT MODE to advance ALARM CONFIGURATION screen
- Press SELECT MODE to edit the ALARM CYCLE TIME.  
*An asterisk (\*) will be displayed*
- Press INC/DEC buttons, to set the ALARM CYCLE TIME
- Press SELECT MODE to accept changes

### **7.2.3 SET THE ALARM DUTY CYCLE**

- Press DEC button twice to highlight ALARM CONFIG
- Press SELECT MODE to advance ALARM CONFIGURATION screen
- Press DEC button to highlight ALARM DUTY CYCLE
- Press SELECT MODE to edit the ALARM DUTY CYCLE.  
*An asterisk (\*) will be displayed*
- Press INC/DEC buttons, to set the ALARM DUTY CYCLE
- Press SELECT MODE to accept changes

### **7.2.4 SET THE NUMBER OF ALARM CYCLES**

- Press DEC button twice to highlight ALARM CONFIG
- Press SELECT MODE to advance ALARM CONFIGURATION screen
- Press DEC button twice to highlight ALARM CYCLES
- Press SELECT MODE to edit the ALARM CYCLES.  
*An asterisk (\*) will be displayed*
- Press INC/DEC buttons, to set the number of ALARM CYCLES
- Press SELECT MODE to accept changes

### **7.2.5 SWITCH THE ALARM BEEPER ON or OFF**

- Press DEC button twice to highlight ALARM CONFIG
- Press SELECT MODE to advance ALARM CONFIGURATION screen
- Press DEC buttons repeatedly to highlight ALARM BEEPER
- Press SELECT MODE to edit the ALARM CYCLES.  
*An asterisk (\*) will be displayed*
- Press INC/DEC buttons, to switch the alarm beeper ON or OFF
- Press SELECT MODE to accept changes

## 7.3 GENERAL CONFIGURATION

- Press SELECT MODE to select GENERAL CONFIG
- To advance to the DIAGNOSTICS MODE see Section 8.0

### 7.3.1 COLD RESET

- Press DEC button to select COLD RESET
- Press SELECT MODE. A screen will appear
- Press RESET button. *This will restore ALL settings in the console back to Factory Defaults as displayed in Section 2.5 and 2.6. The console will automatically power down and restart automatically to the "Runtime Screen" with the Default settings loaded*

OR • Press MENU button to exit back to the GENERAL CONFIGURATION screen.



General Configuration Screen

## 8. DIAGNOSTICS MODE

- Hold the RESET button down (for about 5 seconds) while switching the console POWER switch ON.
- Press SELECT MODE to advance to the GENERAL CONFIG screen
- Ensure the DIAGNOSTICS MODE is highlighted
- Press SELECT MODE to advance to the DIAGNOSTICS MODE screen
- Press DEC/INC buttons to move around the screen, till the TEST that required is highlighted
- Press SELECT MODE to advance the selected test screen
- Press MENU to exit from any of the test screens



Diagnostics Menu

## 8.1 LED TEST

- Select this to check the operation of the Light Emitting Device (LED)'s on the front panel. Diagram below shows the positions of the LED,s
- If operating correctly the LED's will cycle consecutively around the front panel, starting from the:
  - 1)- Left hand side of console from top to bottom, then
  - 2)- Right hand side of console from top to bottom, then
  - 3)- The LED's below the Section switches from left to right and then the MASTER SWITCH
  - 4)- then once, one cycle has been completed, all the LED's will flash together. If all the LED's flash means they are all operating correctly.
- Press MENU to exit



LED Diagnostics Screen

## 8.2 SWITCH TEST

- Select this to check the operation of the switches
- If operating correctly:
  - The MASTER switch when in the OFF position;
    - “MASTER SWITCH = OFF will be displayed on the console screen
  - The MASTER switch when in the ON position;
    - “MASTER SWITCH = ON will be displayed on the console screen
- Status of the Section switches (LEFT 2, LEFT 1, RIGHT 1 and RIGHT 2) will be indicated by SW2 ,SW3, SW6 and SW 7. When the position of the Section switch is in the DOWN position the corresponding SW indicator will point DOWN. When the Section switch is in the UP position the corresponding SW indicator arrow will point UP
- The number “2” next to the corresponding SW# will indicate the switch is in the OFF position.
- The number “253” next to the corresponding SW# will indicate the switch is in the ON position.
- Press MENU to exit



Switch Diagnostics Screen

## 8.3 KEYS TEST

- Select this to check the operation of the buttons on the front panel
- If operating correctly:
- Press any button and the button that is 'pressed', will be displayed on the console screen
- Press MENU to exit



Keys Diagnostics Screen

## 8.4 SENSORS TEST

- Select this test to check the operation of the sensor circuitry
- The current period (time between pulse, measured in mS) for each sensor will be displayed on the screen.
- During operation the period between the pulses should be constant (mS), if this figure isn't constant and is jumping around then this suggests there is a magnet missing or a sensor distance isn't set properly. For the Flow Sensor this may suggest the unit is faulty or needs cleaning.
- The pulse count for each sensor keeps accumulating as each magnet goes past the sensor.
- The battery volts should be between 12.5 -16 volts, if not check the battery connections and looms and rectify.
- Press MENU to exit



Sensors Diagnostics Screen



## 8.5 RELAYS TEST

- Select this to check the operation of the all relay circuitry
- This test, cycles through each relay within the console; and each of the three states of each relay
- During the RELAY TEST regardless of the position of the Console switches; section valves, etc are turned ON and OFF in sequence.
- This test isolates whether it is a relay problem in the console or an actual relay switch problem in the console.
- Press MENU to exit



Relays Diagnostics Screen

## 8.6 REG VALVE TEST

- Select this to check the operation of the REGULATOR valve
- The valve will, if operating correctly will automatically open and close.  
If the valve is closing when the 'test' says it should be opening (or vice-versa) then the Regulator valve may be wired up incorrectly.
- Press MENU to exit



Reg Valve Diagnostics Screen

## 8.7 EEPROM TEST

- Select this to check the operation of the read/write to memory chip.
- When operating correctly the EEPROM memory test, the lines will keep scrolling. If it stops on a particular line, there is a problem, and the information is not being saved properly to the memory chip in the console.
- Press MENU to exit



EEPROM Diagnostics Screen

## 8.8 DISPLAY TEST

- Select this to check each pixel of the screen
- When operating correctly the screen will slowly blacken from left to right and the screen should be completely black. If there are pixels that are not black then this would suggest there is a problem with the screen and the console may have parts of the screen that are unreadable.
- Press MENU to exit



Display Diagnostics Screen

## 9.0 SPECIFICATIONS

### 9.1 CONSOLE

- **Supply Voltage** 12.5 - 16 volts Negative earth system.

The Console's power leads must be connected directly to the tractors battery terminals.

No attempt should be made to connect the system to positive earth vehicle. Damage will result and Warranty will become void.

- **Supply Current Console** 0.9 amps approximately.

**Maximum Solenoid supply current** 2 Amps each

**Maximum Electric Regulator Valve Motor Current:** approx. 250milli-amps

### 9.2 GROUND SPEED and FAN SPEED SENSORS

**Ground Speed Sensor,;  
Fan Speed Sensor and  
Auxiliary Shaft Sensors:** Hall effect type sensors  
3 pin weather-pak plug (Pin A, B and C)

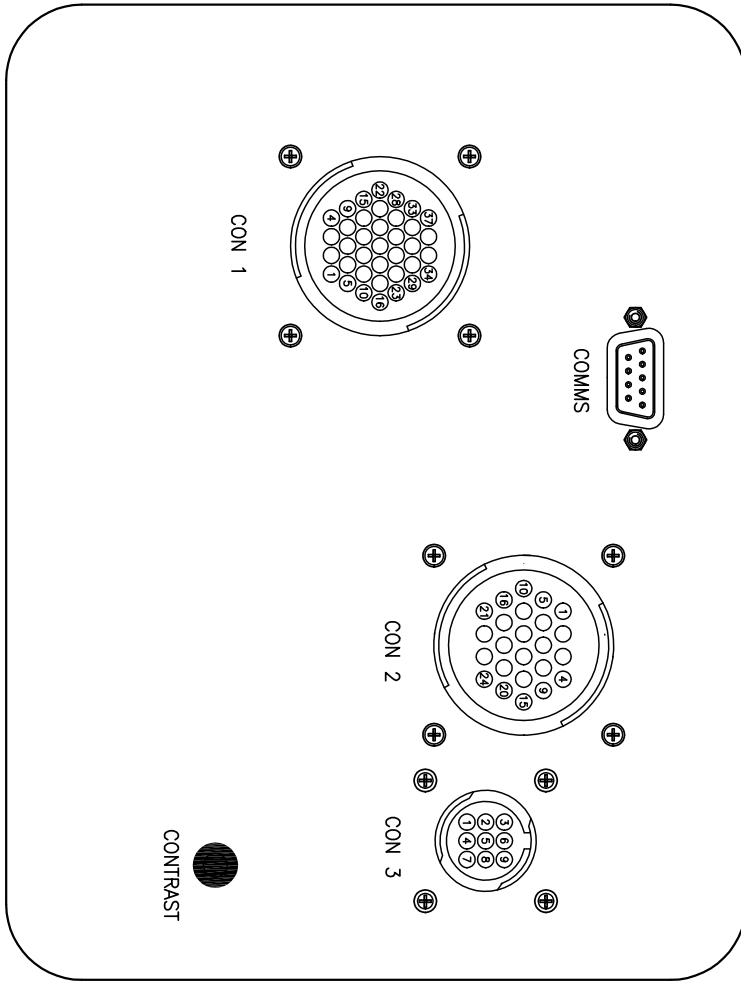
**Sensor to Magnet Distance** 2-3 millimeters (mm)

**Supply Voltage** Supply 12 volts from MDECU

**Signal Voltage:** 4 -5- volts sensor inactive  
< 1 volt sensor activated by magnet

# 10.1 HV4000 CONSOLE PINOUTS

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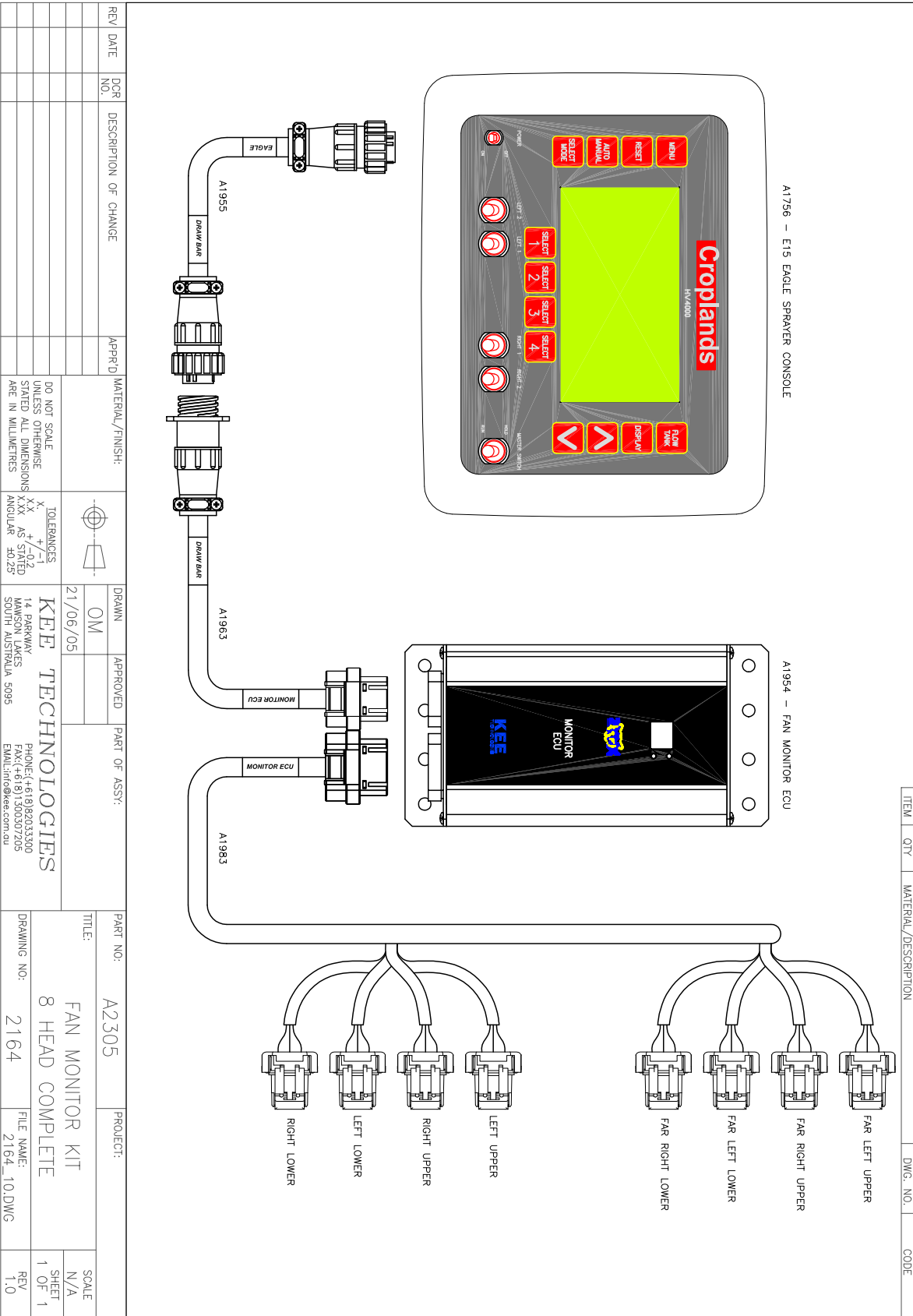
CONNECTOR 2	
PIN NUMBER	FUNCTION
1	LEFT 2
2	LEFT 1
3	RIGHT 1
4	RIGHT 2
5	BATTERY +13.8V
6	PRESSURE 1
7	GROUND
8	SPEED
9	DUMP
10	BATTERY +13.8V
11	BATTERY +13.8V
12	GROUND
13	GROUND
14	GROUND
15	FLOW SENSOR 1
16	BATTERY +13.8V
17	BATTERY +13.8V
18	GROUND
19	FAN SPEED
20	SENSOR POWER
21	REG. VALVE 1A
22	REG. VALVE 1B

ITEM	QTY	MATERIAL/DESCRIPTION	DWG. NO.	CODE
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REV	DATE	DCR NO.	DESCRIPTION OF CHANGE	APPR'D	MATERIAL/FINISH:	TOLERANCES	DRAWN	APPROVED	PART OF ASSY:	PART NO:	PROJECT:	SCALE
					00 NOT SCALE UNLESS OTHERWISE STATED ALL DIMENSIONS ARE IN MILLIMETRES	X X X AS STATED ANGULAR ±0.25	OM			HV4000 PINOUTS	1977_10.DWG	N/A
							18/11/04			14. PARKWAY MAMSON LAKES SOUTH AUSTRALIA 5095		1 OF 1
										KEE TECHNOLOGIES		REV
										PHONE:(+618)82033300		1.0
										FAX:(+618)1300307205		
										EMAIL:info@kee.com.au		
										DRAWING NO: 1977		

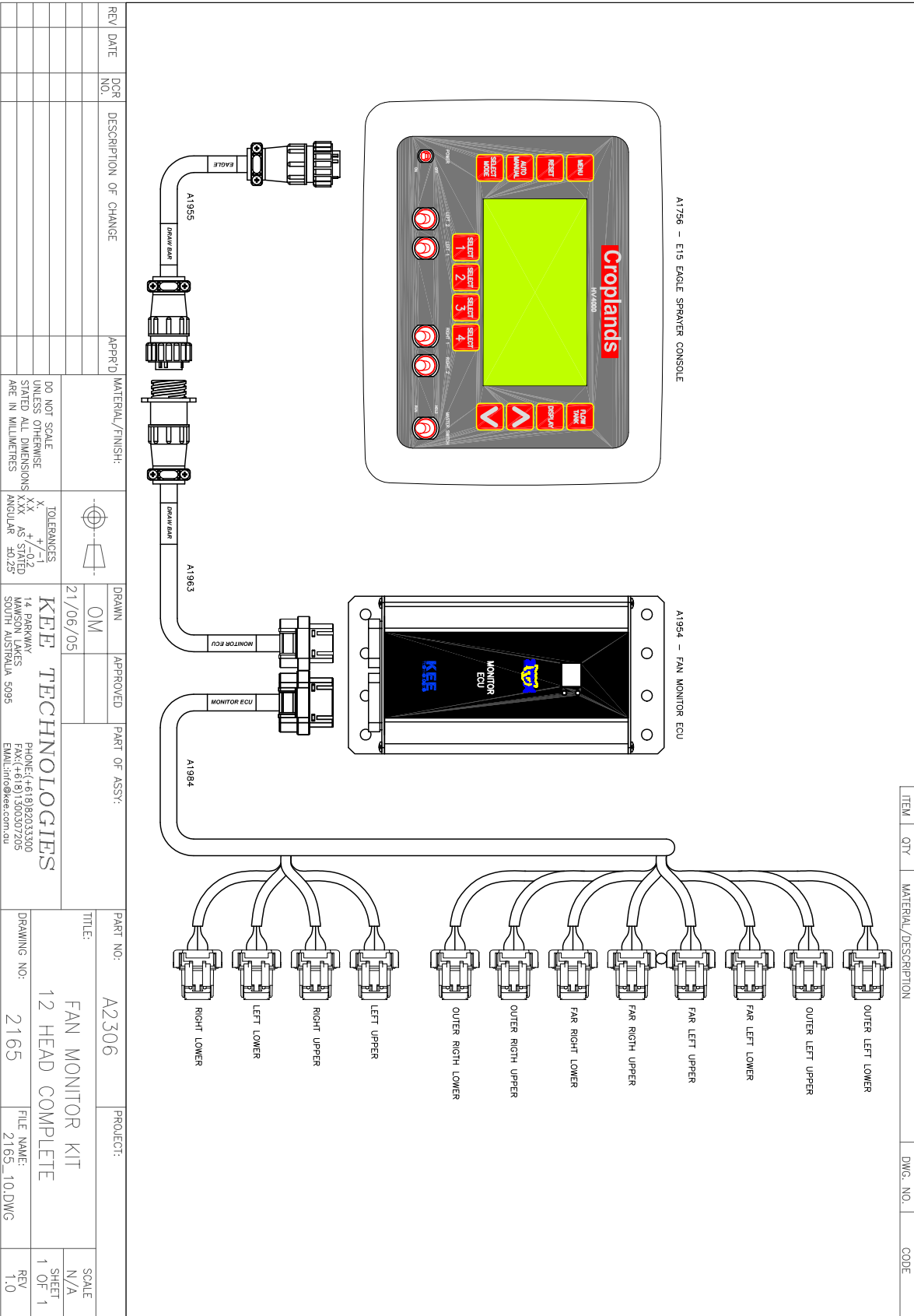
# 10.2 '8' HEAD FAN MONITOR KIT

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# 10.3 '12' HEAD FAN MONITOR KIT

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REV	DATE	DCR NO.	DESCRIPTION OF CHANGE	APPR'D	MATERIAL/FINISH:	TOLERANCES X, X.X, X.XX, AS STATED ANGULAR ±0.25	DRAWN OM	APPROVED	PART OF ASSY:	PART NO.: A2306	PROJECT:	SCALE N/A
					DO NOT SCALE UNLESS OTHERWISE STATED ALL DIMENSIONS ARE IN MILLIMETRES		21/06/05			FAN MONITOR KIT 12 HEAD COMPLETE		SHEET 1 OF 1
										DRAWING NO.: 2165	FILE NAME: 2165_10.DWG	REV 1.0

ITEM	QTY	MATERIAL/DESCRIPTION	DWG. NO.	CODE
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**Email:** [sales@croplands.com.au](mailto:sales@croplands.com.au)  
**Website:** [www.croplands.com.au](http://www.croplands.com.au)

### **AUSTRALIA**

**Freecall** 1800 999 162  
**Free Fax** 1800 623 778

### **NEW ZEALAND**

**Freecall** 0800 106 898  
**Free Fax** 0800 117 711