

Operating Manual for Cardinal 788 Indicator

Urea Usage System

Operating Manual.

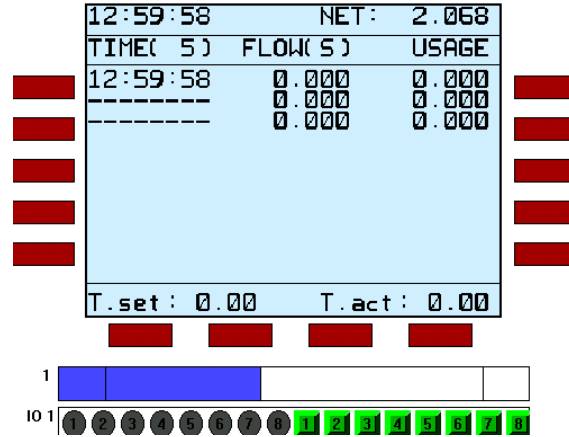
Tuesday, January 27, 2004

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Operating Instructions

Power up the 788S indicator. After approximately 10 seconds the main screen of the application will appear.



The blue bar beneath the screen simulates the weight of liquid in the weigh container. The green squares and circles beneath this bar represents the solenoid valve.

This screen has a number of hot keys to change various settings. These keys are explained below.

1. Main Screen

1.1 Explanation of features on the main screen.

1.1.1 Sample time

The time is displayed in the first column. The number in brackets is the time between each weight sample. This value can be selected in the **SETUP** menu, see **section 2.3.2**.

1.1.2 Flow rate and changing the time span.

The second column displays the flow rate, the letter in brackets shows whether the flow rate is displayed in kg/sec (S), kg/min (M) or kg/hour (H). These settings can again be changed by repeatedly pressing the **F Key** until the desired time span is shown.

1.1.3 Urea Usage and resetting the system

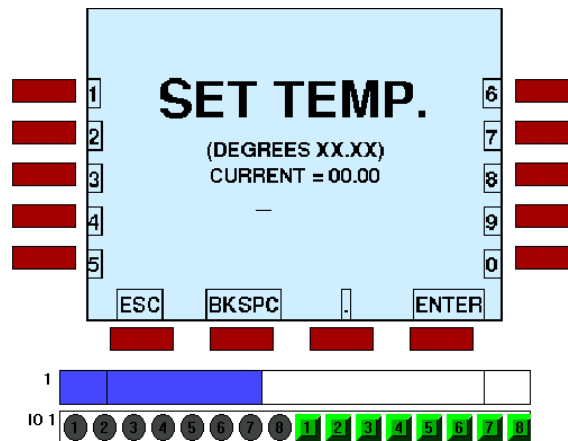
The total usage is shown in the third column. This is displayed in Kg, and is the total amount of urea used since the system was switched on or the reset button was pressed. To reset the system press the **R** key on the 788 keypad. After resetting the system the screen will be cleared but the logged data will not be deleted.

1.1.4 Start time of sampling

The time displayed in the top right hand corner is the time at which the sampling was started.

1.1.5 Requested and Actual temperature

The temperature displayed in the bottom left hand corner is the temperature of the Urea that has been set by the user, this can be changed by pressing the **T** key on the 788 keypad.



The temperature in the bottom right hand corner of the main screen is the actual current temperature of the Urea.

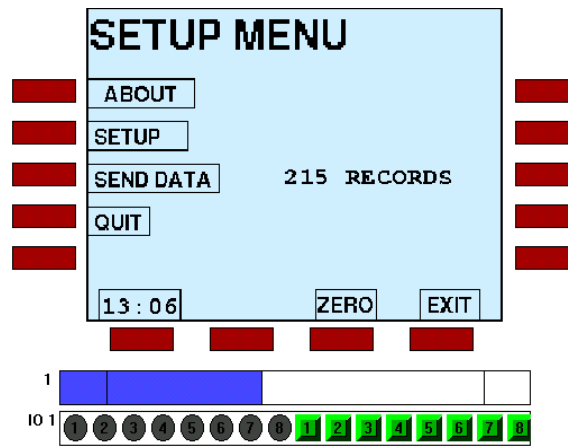
2. Setup Menu

2.1 Pausing the System

To enter the setup menu, firstly pause the system by pressing the **P** key on the 788 keypad. This can be used to pause the sampling at any time.

2.2 Explanation of features in the Setup Menu

After pausing the system press the **M** key to enter the Setup Menu.



The number of records to be sent to the PC are shown.

To Exit out of the **SETUP MENU** press the **EXIT** button. This will take you back to the main screen.

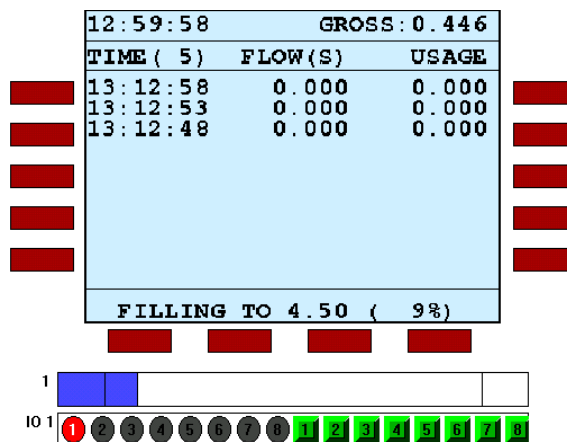
WARNING: To Quit the application completely press the **QUIT** key. This is for the use of TALENT WEIGHING service engineers only.

2.3 Customising the software

In the **SETUP MENU** press the **SETUP** key. Here there are a number of prompts:

2.3.1 Minimum and Maximum weights in the Urea container

The user will be prompted to enter the maximum and minimum weight of the Urea in the container. When the minimum weight is reached the solenoid valve is opened and Urea is poured into the container until the maximum weight is reached, at which point the solenoid valve is closed.



The open solenoid valve is simulated by the red 1 in the bottom bar. The container is filled to 100% of the maximum weight entered in the setup.

2.3.2 Sample time

The user will be prompted to enter the time period at which the screen is updated and the weight sample is taken. This can be any integer value between 5 and 60 seconds.

2.3.3 Number of Displayed lines

The user will be prompted to enter the number of lines of data that are displayed on the main screen. This can be any integer value between 1 and 10.

2.3.4 Milliamp and temperature settings (TALENT WEIGHING ENGINEERS ONLY)

The relationship between the milliamp output of the indicator and the temperature of the temperature controller are changed here.

2.3.5 Sending data via the PC Link

Here the data logged in the system can be sent to the PC. After pressing the SEND DATA key the progress bar will be shown to monitor the progress of the data transfer. (The details of this data transfer are still to be confirmed.)