



Valuweigh
7XXSoftware

Operation Manual and User Guide

ANIMAL
AUTODRAFT
SYSTEM

Cardinal 777 Indicator

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1. Introduction

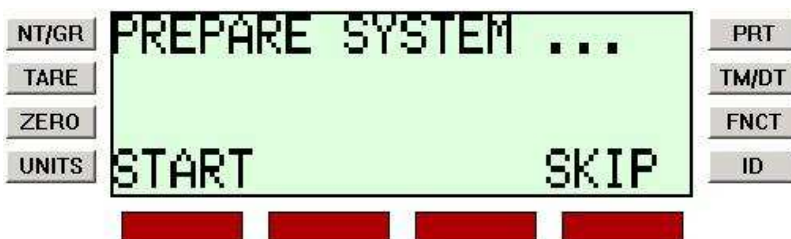
A 777/778 software is application for weighing live animals (e.g. pigs) in a stream. The system sorts pigs through a weigh crate via a race. Three individual drafting gates are supported with automatic opening and closing.

The system provides an automatic operation with a built in protection that prevents the jamming of the animals in the gates. A PC link allows any required data to be sent to Microsoft Excel and has the possibility to resume broken uploads by using a triple check of data communication protocol.

For better accuracy the program uses a sampling algorithm for averaging the weight of the moving animals in the crate. The program has a flexible set up and parameters. There is also an Excel link to a PC.

2. Start screen

Approximately 20 seconds after power up, the 777 indicator will display the following screen:

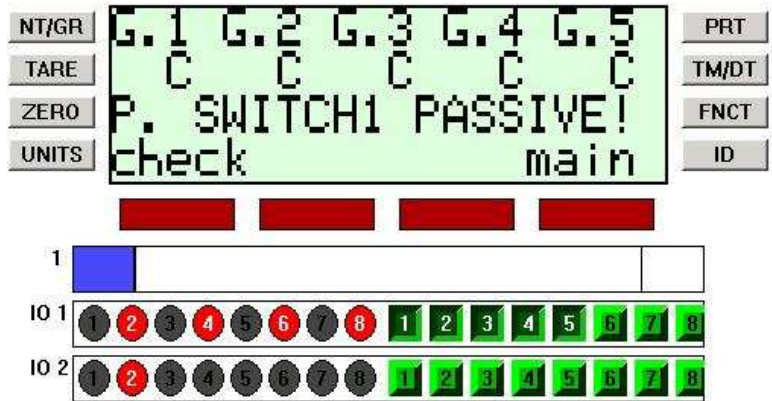


This is the **start screen**. The system should be prepared before start-up to ensure there is nothing in the crate, and nothing is blocking the gates and proximity switch in the entrance area. The power of all the external devices should be switched **ON** before the 'START' button is pressed.



After the **'START'** button is pressed the system will perform a routine check by opening and closing each gate. The status of the gates will then be checked after each operation. If the gate can't be opened or closed a message will appear on the screen with the number of tries the program has made.

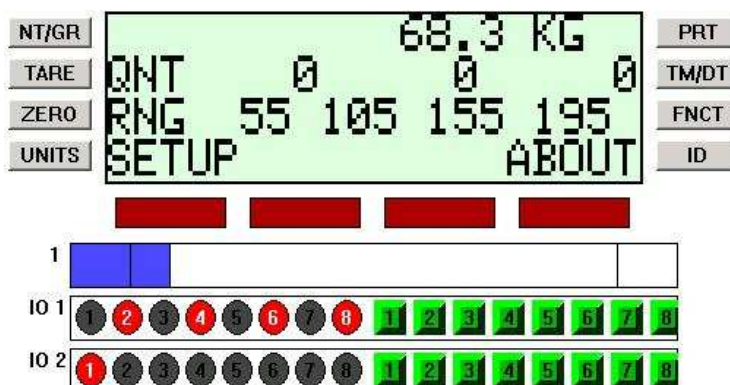
If for some reason the gate is stopped from closing, the system will detect this, and will ensure the gate is opened first and only closed again after a period of time. This ensures the safety of the animals, freeing them if they are jammed and allowing them to exit via the gate. During the retry process the program will signal that there is a fault with a short alarm signal. The whole process may be completely stopped by pressing the **'STOP'** button.



In this case after the "APPLICATION ENDED" message the indicator should be switched **OFF** and turned on again after 5 seconds. The above screen shows the result of the system's self-check operation. If there is a fault the check may be restarted or the "MAIN" button pressed to run the main screen of the program.

3. Main screen

This is 'MAIN SCREEN' of the program. When the crate is completely empty the zero button must be pressed. The main screen will show the current weight in the crate, weight ranges (RNG) for each gate, average weight (AVR), minimal weight (MIN), maximum weight (MAX), total weight (TTL), and the quantity of pigs (QNT) passing through each gate.



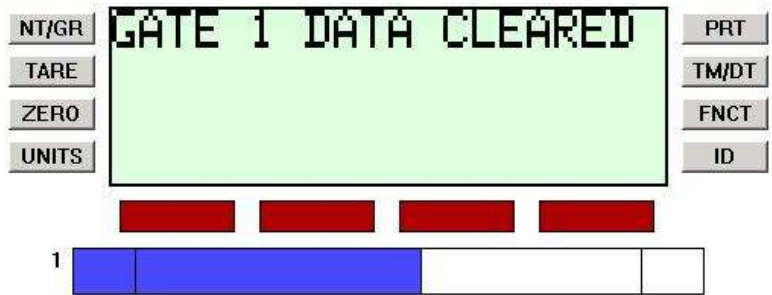
The information is updated in real time. All the information is stored in the 778 memory and **no** data is lost if the indicators power is cut for any reason, i.e. the indicator is switched off or there is a power cut. However, switching the indicator off without reason is not recommended.

4. Setup

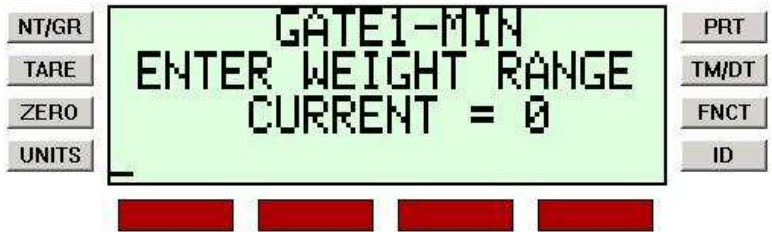
The picture shows the 'Setup' screen. On this screen it is possible to select and change the weight ranges for each gate and reset the gate counters separately. (See the gate counters description on the previous page.)



After pressing the reset “gate1” button the screen will show:



After pressing the “RANGE” button the screen will show:

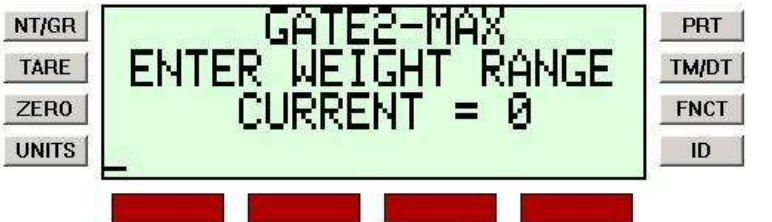


The minimum weight can then be entered for the weight of an animal that will pass through gate 1.

The user is then prompted to enter the maximum weight of the animals that will pass through gate 1. The screen will show:



The user is then prompted to enter the minimum weight for the animals that will pass through gate 2. A weight that is less than the maximum weight for gate 1 cannot be entered. The screen will show:



Similarly the maximum weight for gate 3 is then requested. The screen will show:



After all the information has been entered the indicator displays a confirmation screen to check the edited information is correct. Press YES to accept. The screen will show:



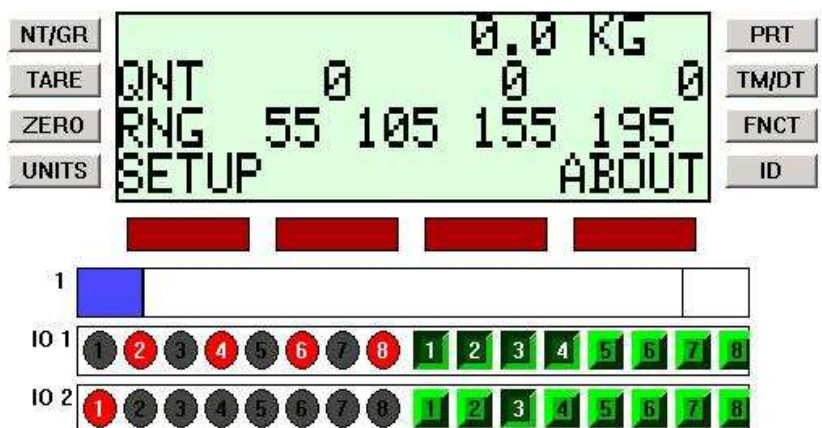
The consecutive number of animals can be manually changed by pressing the “CONSEC” button. The user may enter any number between 1 and 99999. After 99999 the number will return to 1.



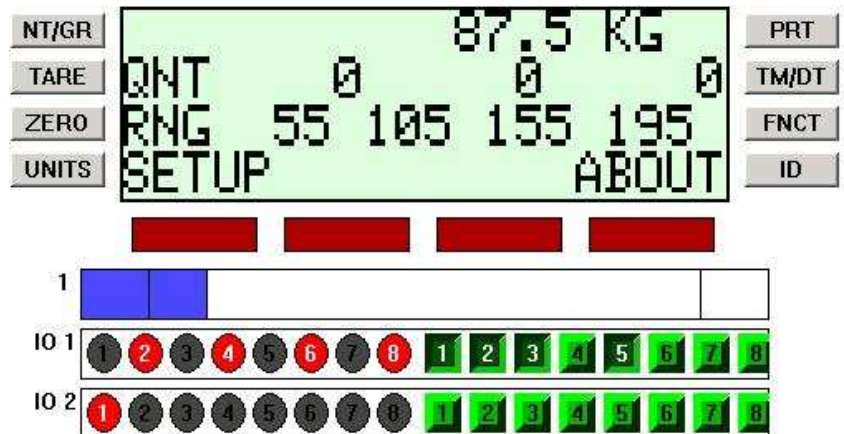
5. Working process of the system

The bar that is directly beneath the red buttons of the indicator is a weight simulator and is representative of a weight being put into the crate.

(For interest, the numbered circles and buttons are an Input/Output simulator and, in this case, are representative of the gates being open and closed or the proximity switch being active or passive.) The proximity switch detects an animal. Gate 5, the control gate behind the animal is immediately closed and gate 4, the gate in front of the animal is opened.



The animal enters the crate. After gate 4 has been closed the weighing process can begin. The screen will show:



The program then begins sampling the weight data, this takes approximately 5 seconds. The appropriate gate, depending on the ranges entered in the **setup** menu, will then be opened, the data will be stored, and the animal free to move through the open gate.



After the animal exits the crate the appropriate gate will be closed and gate 5 (the control gate) will be opened again to let the next pig in. Transaction data such as, **DATE**, **TIME**, **WEIGHT** and **CONSECUTIVE NUMBER** is stored to be transferred to a PC in the future. For the information to be sent to a remote PC the indicator must be on its **MAIN SCREEN**' and the system must be in waiting mode. The 778 indicator cannot accept the data transfer demand signal from the PC if it is in the weighing mode. Weighing processes cannot be done during the data transfer.

6. Troubleshooting

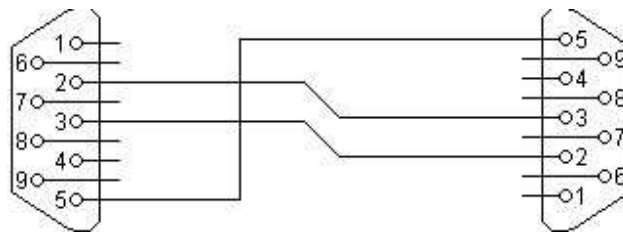
This section covers any problems that may arise when using the system.

- The indicator needs to see zero weight to register a change of weighing object
- The weight is more than zero and less than 20 intervals of the calibration of the 777 indicator. The weight may be too small for the system to register it as a valid weight to be printed

- Platform was unstable and in motion when the button was pressed
- The weight was not in the normal operation range, i.e. it was below zero or the platform was over capacity
- COM port settings of the printer on the 777 are different from the actual printer connection.

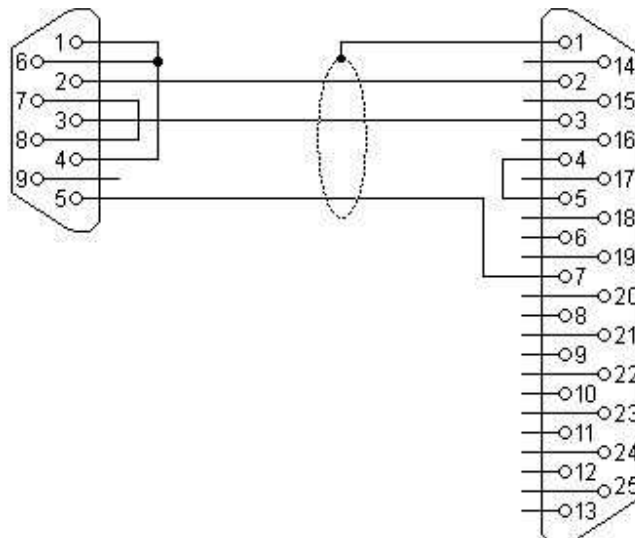
7. Connections and cables

The cable that should be used to connect the external device to the 777 indicator has a 9 pin female connector on both sides.



Download cable 9 pin female 788 to 9 pin female PC

However, some PC models use a COM port which may have 25 pin connector.



Download cable 9 pin female 777 to 25 pin female PC

In some cases there is a chance that the hardware port from the PC or the 777 is damaged or has internal problems. Please be sure that the port is physically working before requesting any software changes.

The easiest way to check both ports is to load the software into the 777 indicator from the PC via a download cable. If the download is successful then there is a bi-directional connection between the PC and the 788 indicator and all communications should work as expected.



**Unit 17/18 Mercers Road, Chapel Pond Hill, Bury St. Edmunds,
Suffolk, IP32 7HX**

Tel: 01284 701222 Fax: 01284 703559