



Operating Instructions for the Cardinal 777 Indicator

777 Remote Print Application

INDEX

1. Introduction.....	3
2. 777 Indicator Main Screen.....	3
2.1. Explanation of Features on the Main Screen.....	3
2.2.1. 777 alphanumeric keypad.....	4
3. Application Setup.....	4
3.1. Explanation of Application setup.....	5
3.1.1. Possible serial settings for COM port.....	5
3.1.2. Activate/deactivate 777 output to external device.....	6
4. General Operating Procedure.....	7
4.1. Empty platform.....	7
4.1.1. Enter information.....	8
5. Output Information.....	8
5.1. Sending to remote PC.....	9
5.2. Sending data to printer.....	10
5.3. Sending data to scoreboard (SC).....	10
5.4. Working via multiple ports.....	10
6. Troubleshooting.....	11
6.1. No result of data sent to printer or pc.....	11
6.1.1. Warning messages and no print situations.....	11
6.2. Scoreboard (SC) displays nothing.....	12
6.3. Connections and cables.....	12

1. Introduction

This application is for the Cardinal 777 programmable indicator and allows the collection of data from the 777 indicator. Weighing data may be combined with manually entered information data and sent to a remote PC. Later this information may be opened in MS Excel via our special Excel link software.

2. 777 Indicator Main Screen

On power up the indicator will display the main screen.



2.1. Explanation of Features on the Main Screen

NT/GR	- Press to switch between GROSS and NET modes;
TARE	- Press to enter TARE weight;
ZERO	- Press to zero the platform;
UNITS	- Press to change weight units. Sometimes used for custom purposes;
PRT	- Used to send data to printer or to remote PC;
TM/DT	- Press to set the 777 system time and date;
FNCT	- In most cases used to exit to previous screen or cancel data input;
ID	- Press to enter ID or any other information.

The 777 also has custom buttons (four red buttons located at the bottom of the LCD screen). Depending on the application, these buttons may have different labels and individual functionality.

2.2.1. 777 alphanumeric keypad



777 keypad has 44 buttons which may be used to input alphanumeric information. Other than the alphanumeric keys there are other buttons such as: **ENTER**, **SPACE**, **SHIFT** and **BACKSPACE** (←).

- ENTER** - used to confirm end of data input.
- SPACE** - used to put spaces between characters.
- SHIFT** - used to change character's case.
- BACKSPACE** - used to delete previously entered character.

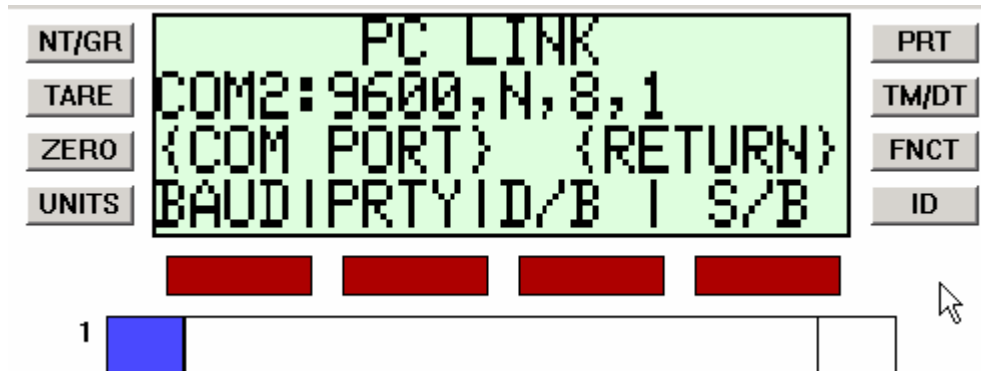
3. Application Setup



Each external device is usually connected to the 777 via a serial port. The serial port has a variety of settings. The setup in the 777 is power safe. This means that if the 777 indicator is turned off the settings entered prior to the power down will be saved.

3.1. Explanation of Application setup

Press 'S' on the 777 keypad to enter the application setup. Select the required external hardware that is to be configured with the 777 COM port settings. In the example below 'PC' is selected.



It is possible to change the following serial settings: port, baud rate, parity, data bits and stop bits. The option available for each serial setting can be scrolled through by repeatedly pressing the button beside it.

The default settings are port=2, baud rate=9600, parity=N, data bits=8, stop bits=1.

3.1.1. Possible serial settings for COM port

Possible values for selection are as follows:

Port - 1,2,3,4 (ports 3 and 4 are available only if an additional serial card is installed, and will be available for selection automatically. If you are not able to select the required COM port see troubleshooting at the end of this manual);

Baud rate - 2400, 4800, 9600, 19200, 38400;

Parity - N=none, E=even, O=odd, M=mark;

Data bits - 7 or 8;

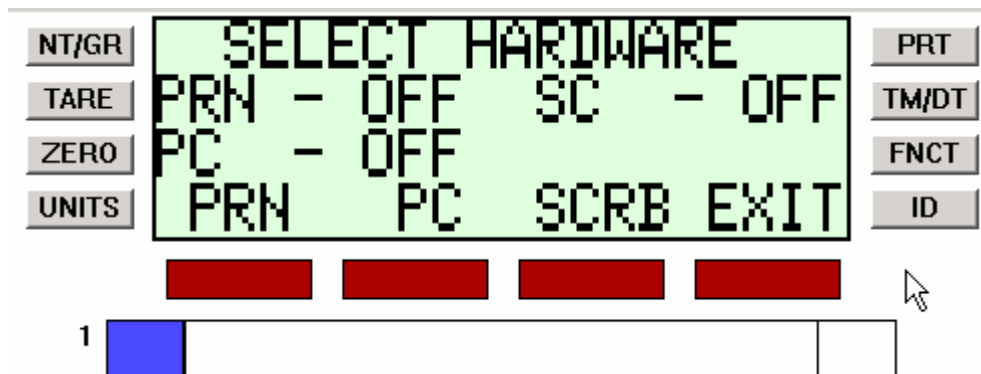
Stop bits - 1 or 2;

Press **RETURN** to save current selection and to exit to previous screen.

Please note that it is very important to set the port to which the device is connected to 777 indicator according to the serial port settings of the connected device. See the technical manual of the external device to find out its default settings.

3.1.2. Activate/deactivate 777 output to external device

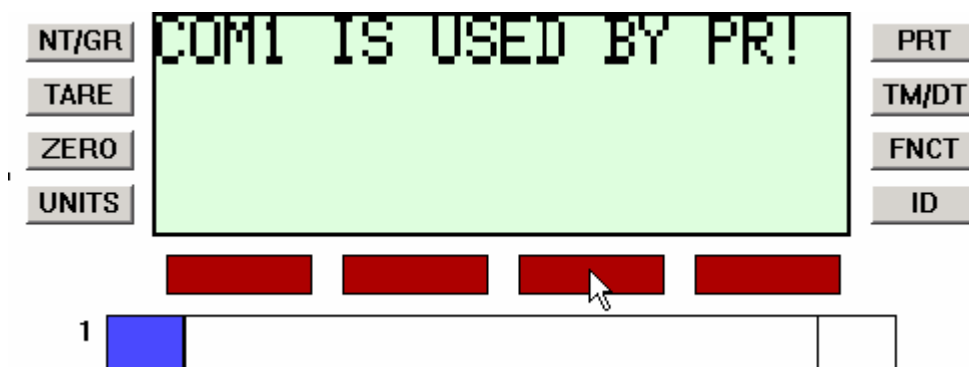
Press **EXIT** to exit from setup screen. The following screen will be shown.



Press the corresponding button to turn the output to the required device **ON** or **OFF**.

Important note:

The software will immediately block any attempt to activate more than one device configured for the same COM port number.

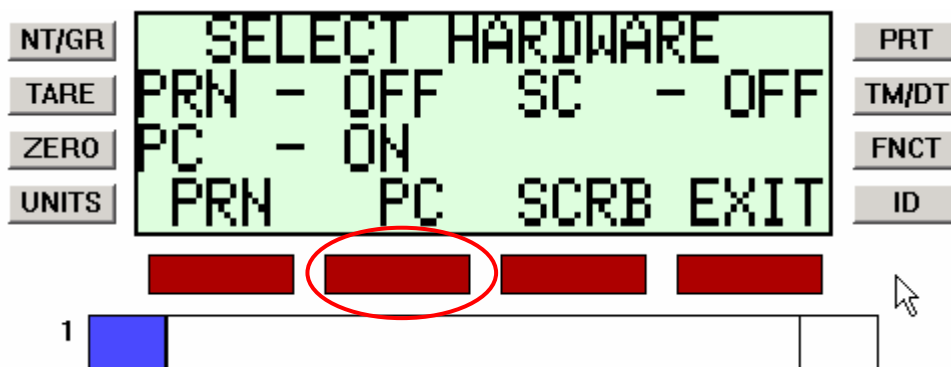


In the current example the scoreboard (**SC**) cannot use COM port 1 as it is already being used by the printer (**PR**).

Clearly however, two devices may be activated together if they are configured for different COM port numbers.

Finally, all devices may be configured for the same port number but only one device may be active at one time. To activate another device

configured for the same COM port number, deactivate the active device first (OFF) and then activate the new device (ON).



Important note:

Please be sure that for safety, completely power off both 777 indicator and external device when connecting or disconnecting serial cables. This is especially important when the device is connected far from the 777 indicator and the cable is long.

4. General Operating Procedure

This section provides a step by step guide to completing a weighing process using this 777 software application.

4.1. Empty platform

Ensure that all external devices are connected and configured properly before starting general operations.

If the platform is empty but the display is not at the centre of zero you need to zero the platform.

Press the **ZERO** button to zero the scale. The Platform must be stable and without any motion (**MO**).

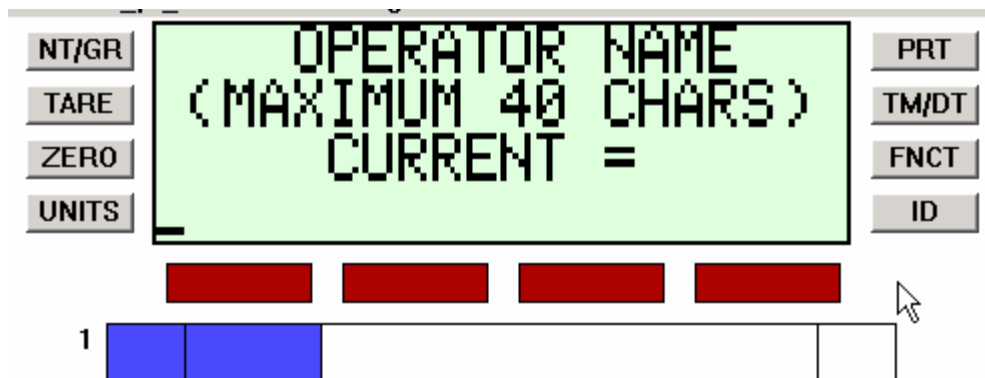
Place a weight on the platform.

Wait until the indication of the motion signal disappears (**MO**).

4.1.1. Enter information



Press **ID** button to call prompts to enter alpha/numeric information.



Use the 777 alphanumeric keypad to enter the information required. When finished press **ENTER** for next input prompt.

5. Output Information

Entered information as well as weight, date and time may be sent to an external device. This may be a printer (**PR**) or remote computer (**PC**). When all information has been entered the following instruction message will appear for a few seconds on the 777 display.

When weight data is inserted into Excel it is possible to use all of the functions of Excel to build different reports and to make data analyse.

5.2. Sending data to printer

```
21-07-2004, 19:05  
ALEXANDER  
DEP1  
2  
GROSS: 141.62 KG  
TARE: 0.00 KG  
NET: 141.62 KG
```

In the example above the data is printed on an ASCII printer.

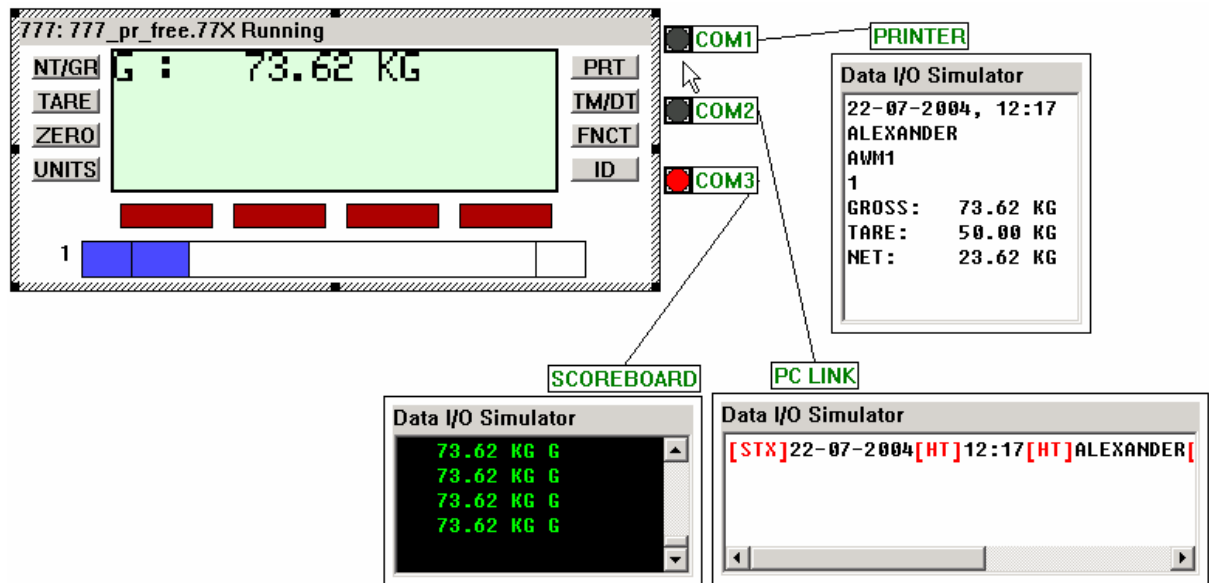
5.3. Sending data to scoreboard (SC)

```
73.62 KG G  
73.62 KG G  
73.62 KG G  
73.62 KG G
```

In the example above the data is sent to a scoreboard. The supported scoreboard format here is the Cardinal SB80.

5.4. Working via multiple ports

The following example shows how all the devices may be used at once, if they are configured to work via different COM ports on 777 indicator.



The Printer (**PR**) is connected to COM1, PC link (**PC**) is connected to COM2, and the scoreboard (**SC**) is connected to COM3.

6. Troubleshooting

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

6.1. No result of data sent to printer or pc

Check that there are no warning messages on the indicator screen when the print key is pressed.

6.1.1. Warning messages and no print situations

- 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
- Selected device was not activated via the 777 application setup and currently is in OFF status
- Device is mapped to a different port than it is actually connected
- COM port settings of the device on the 777 are different from the actual settings of the external device

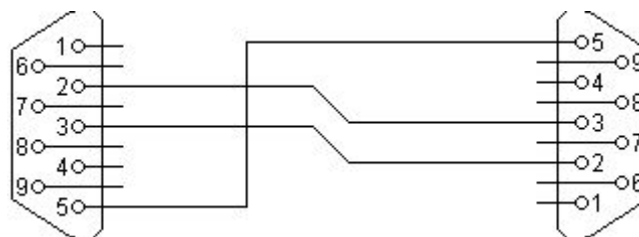
6.2. Scoreboard (SC) displays nothing

If scoreboard shows nothing or shows an error:

- The scoreboard supports different data format than 777 indicator sends. Please note that at the moment the SB80 format is supported as the default format of 777 indicator
- COM port settings of the scoreboard are different to the serial settings for the corresponding port on the 777

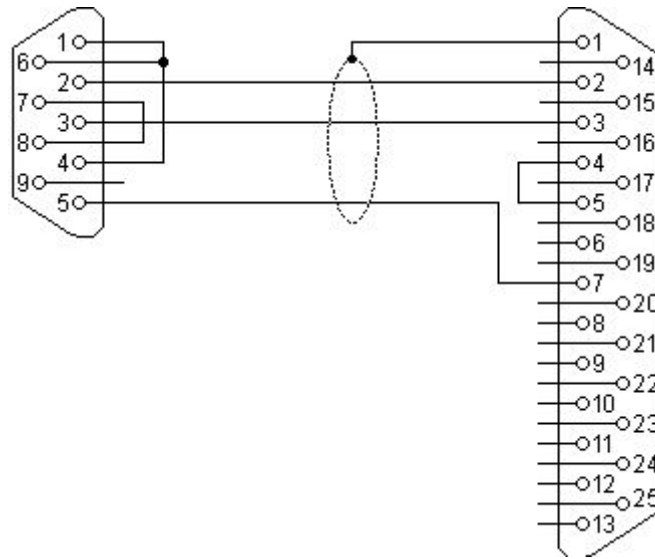
6.3. Connections and cables

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 777 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 777 indicator and all communications should work as expected.