

The Rational Labelling & Marking Systems Ltd.



# RCA II

# USER MANUAL

# RCA

## USER'S MANUAL



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<b>USER'S MANUAL.....</b>	<b>2</b>
<b>INTRODUCTION .....</b>	<b>4</b>
<b>1. RCA II OVERVIEW.....</b>	<b>4</b>
GENERAL.....	4
APPLICATION OF TWO LABELS.....	4
<b>2. OPERATION OF THE RCA II .....</b>	<b>5</b>
LABEL THREADING .....	5
SETTING UP AND USING THE RCA II.....	5
SETTINGS.....	6
<b>3. TIPS AND HINTS .....</b>	<b>7</b>
<b>4. HOW TO ORDER LABELS.....</b>	<b>8</b>
<b>5. OTHER PRODUCTS BY RATIONAL .....</b>	<b>9</b>

## **Introduction**

We are confident that the label applicator you have just purchased will become a useful and productive tool assisting you in your production for many years to come.

In order to make the most of your RCA II and to avoid possible damage to the applicator or injury, you should read the following instructions carefully.

### **1. RCA II Overview**

#### ***General***

RCA II is a modern semi-automatic self-adhesive label applicator that works for almost all kinds of cylindrical containers. The maximum label width is 145mm.

#### ***Application of two labels***

In case of a container with two labels, the RCA II applicator can be operated in one of the two following ways:

##### **A) Application of both labels in one go (recommended)**

Through proper adjustment of the settings, you can apply both front and back labels in a single application cycle. To do that, the labels should be printed alternatively (front and back) on a single roll.

The advantages of this mode of operation are:

- Increased production rate (there is no need for a second pass to apply the back label).
- High label-placement accuracy. The positioning of the second label is consistently accurate within +/- 1.5 mm of the desired position.
- Lower label cost (ordering of 5000 front and 5000 back labels to be printed alternatively on the same roll would be treated as an order for 10.000 labels).

Here we should mention that label spacing is achieved using digital electronic means which eliminates the need for big gaps between front and back labels, this in itself a significant reduction in overall cost.

##### **B) Application of a second label on a container already with one label on it.**

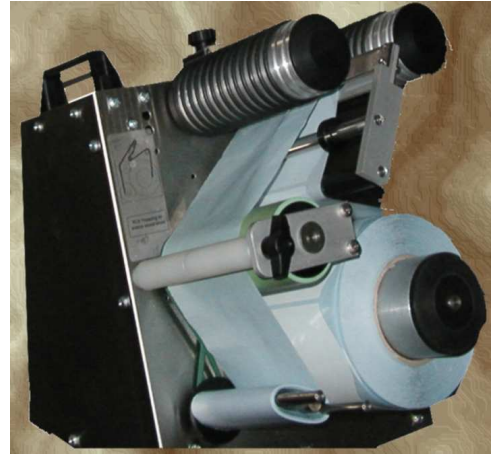
If having the front and back labels printed on the same roll is not convenient, or if the containers are already labelled, you can accurately detect the position of the existing label and apply a second label on the remaining space.

In this case an extra photoelectric sensor is required.

## 2. Operation of the RCA II

### ***Label Threading***

The label roll goes on the bottom right-hand corner of the RCA II. The paper is then passed under the bottom shaft of the dispensing arm, then over the shaft with the paper guide, through the gap between the aluminium and steel plates on the dispensing arm, around the stripping edge, between the green rubber roller and the white nylon roller and finally between the rewinding stems.



### ***Setting up and using the RCA II***

Once the labels are threaded as described, the RCA is ready for use.

Connect the Product Sensor in the Product Sensor Slot

Confirm that Switch S1 and S2 are in the Off position

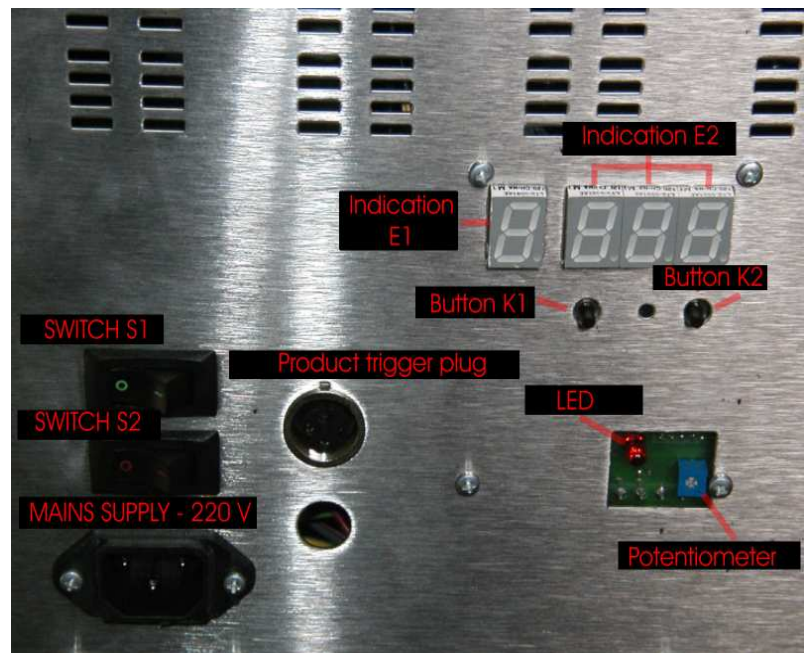
Connect the power lead to the mains

**\*\*\* CAUTION \*\*\***  
**RCA II is now connected to the mains. Do not attempt to move it, to open any covers or to insert any objects in the casing.**  
**\*\*\*DANGER OF ELECTRIC SHOCK\*\*\***

Place Switch S2 to the ON position.

Indications E1 and E2 should illuminate.

Place Switch S1 to the ON position. The motor will start running.



## Settings

All possible adjustments on the RCA are made through the digital control panel on the back plate of the machine.

The control panel has two sets of digital displays. The first set (E1) is a single digit display while the second set (E2) is a three-digit display

E1 shows us the selected item of the menu and E2 shows the value of the particular item.

To change the menu item on E1 the two buttons (K1 and K2) must be pressed simultaneously.

The value, on E2, is increased by pressing K2 and decreased by pressing K1.

E1	Description	E2
<b>c</b>	Counter (counts bottles, not labels)	Reset when RCA is switched on
0	Number of labels per bottle	1>One label is applied 2>Two labels are applied 3>With Keyence
1	Application Delay	0,00 to 2,55 (usually 0,03)
2	First label overhang	0,00 to 2,55 (usually 0,03)
3	Second label position	0,00 to 2,55 (usually between 0,20 and 0,50)
4	Second label overhang	0,00 to 2,55 (usually 0,03)

- The counter counts the application cycles (number of bottles) since power up. Maximum count is 255. If this is exceeded the counter starts from zero again.
- Application delay is the time interval between placement of the bottle on the RCA and actual label application. This should be increased for large containers which might not settle easily immediately upon placement on the product rolls. It might also prove useful to use a slightly higher setting (i.e. 0,15) for "beginners" in the use of the RCA. When the operator is familiar with the machine, the lower setting of 0,03 can be used to speed up production.
- Label overhang is the amount of label that hangs freely past the stripping edge. A value of 0,03 should be appropriate for most cases. However, if the label has a swept-back leading edge or there is an unusually large gap between the labels, slightly higher values might be needed.
- Second label positioning is achieved by applying the second label after a certain time interval from the end of the first label application. This interval is varied by item 3.

This setting is only relevant when two labels are applied on a container.

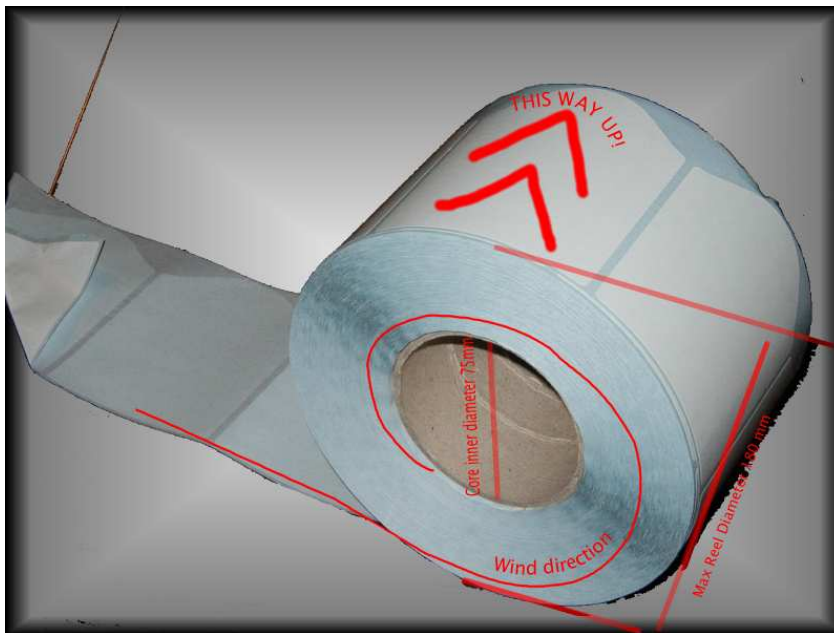
### **3. Tips and hints**

- It is useful to note down the settings used for each container, especially when applying two labels, so that they can be used again when labelling a particular container. A small variation of the second label registration (menu item 3) is possible, but this should amount to less than 5 to 10 units and is mainly due to variations in the mains supply and operating temperatures.
- Settings are kept in the RCA's memory and will be restored when powered up. The settings are stored after the first application cycle is completed.
- If the containers used are bulky and prove difficult to place on the RCA, we offer the option of having a foot switch instead of the product trigger. This will give ample time to place the container on the RCA without worrying if the application cycle will begin before the container has been properly positioned.
- If high mains supply fluctuations are normal in the area, it is useful to use some sort of voltage regulating device, such as a UPS. This will provide smoother running of the RCA and some protection from surges.
- If you need any further information, or feel that you are not using the RCA to its full capacity, please do not hesitate to contact us to see how we can help you make the most of this machine.

#### 4. How to order labels

If you are buying labels from other sources and not Rational Labelling, there are several things you should keep in mind:

- The label core's inner diameter must be 75mm.
- The reel's outside diameter must be 180mm maximum.
- Label orientation should be as shown in the following picture, where the inverted Vs show the "up" direction. The red line shows how the labels are wound.





## 5. Other products by Rational

- **Label Applicators:**
  - o Automatic label print-and-apply systems, for top or side apply. Available in various models, depending mainly on label size.
  - o Semiautomatic label applicator (similar to the RCA) for application on containers with flat sides.
- **Printers**
  - o Inkjet for use with label or marking on porous surfaces.
  - o Thermal printers for either direct thermal printing on thermal paper, or thermal transfer printing on regular paper. These can be configured to work in-line with your RCA II.
  - o Inkjet for marking directly on various products.
- **Automation Systems**
  - o Custom-made automation applications, including conveyors, QC systems etc.
  - o Weighing and marking systems.
- **Software**
  - o Warehouse and Stock-control applications.
  - o Order following and production control applications.
  - o Website design and hosting.
  - o e-shop applications.
  - o on-line ordering systems.

For more information on any of the above products please do not hesitate to contact us.