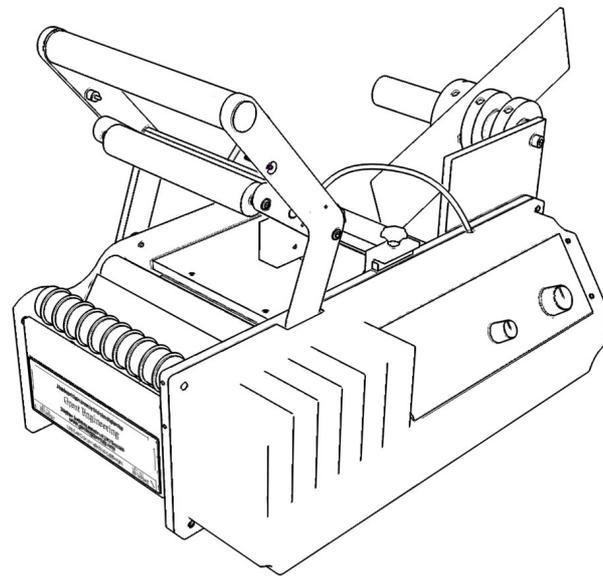
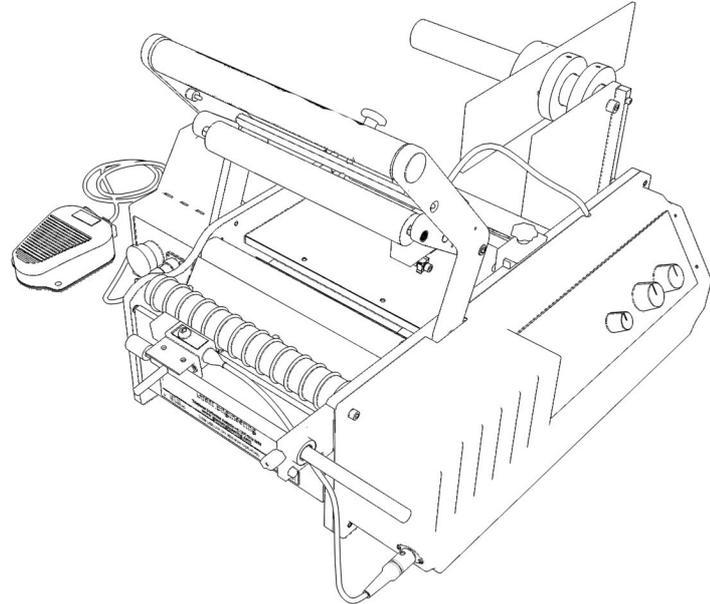




BenchMAX and BenchMARK manual



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Labels.

The **BenchMAX** uses roll formatted Die-cut, self-adhesive labels.

Labels have to be orientated on the roll with a minimum of 3 mm gap between the labels [industry standard]. The labels have to be arranged on the web “left edge leading”.

NB. Left edge leading = when you look at the label on your container we are referring to the left edge of your label. It is this edge, which has to leave the backing material first.



Roll direction: Lefthand leading edge.

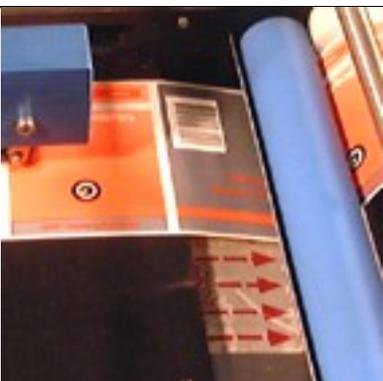
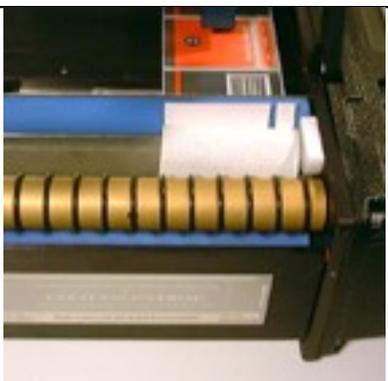
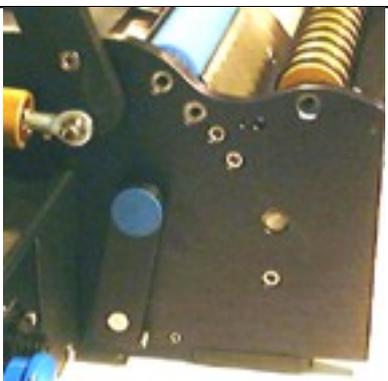
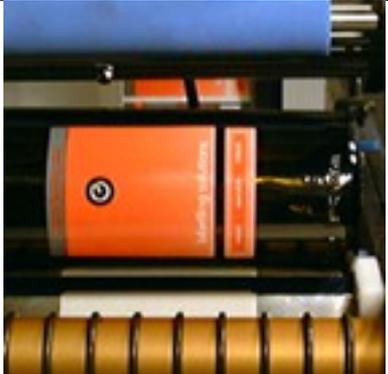
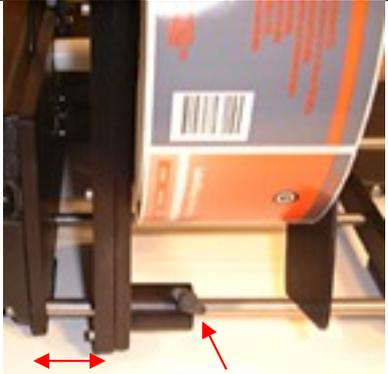
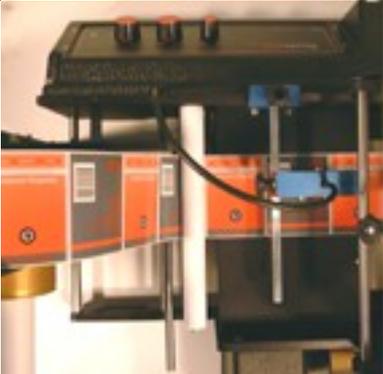
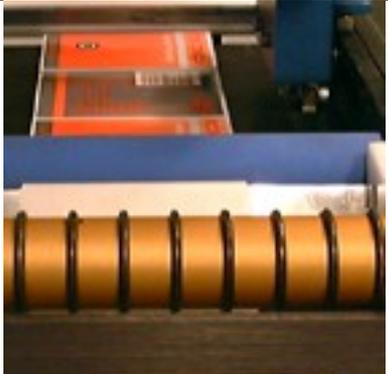
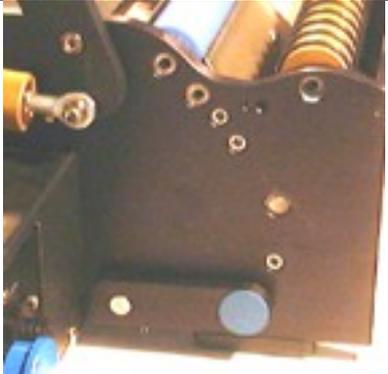
Core diameters = minimum 35mm [13/8 inches] and 76mm [3 inches]

Containers.

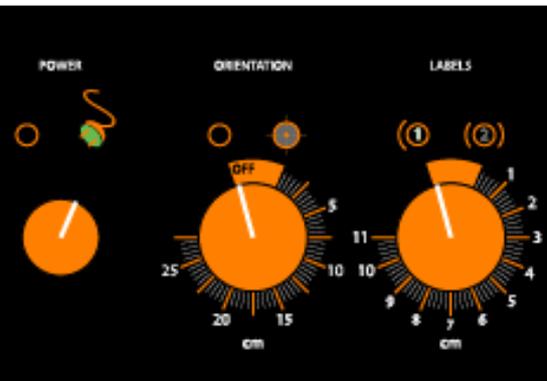
The **BenchMAX** will label cylindrical containers with diameters from 10mm [3/8 inches] to 140mm [5 1/2 inches]

Threading Labels.

<p>1. Either 38 or 75mm core Diameters can be used.</p>	<p>2. Spread the Spacers so that the label roll is evenly supported.</p>	<p>3. Place labels against side plate.</p>
<p>4. Slide Spool Holder [spring loaded] against labels.</p>	<p>5. Pass under White roller.</p>	<p>6. Lift sensor and pass labels under.</p>

		
7. Pass labels under Blue roller in direction of arrows.	8. Feed labels down to the Drive roller.	9. Lift handle to open Pinch roller assembly.
		
10. Feed labels between Drive roller and Pinch roller.	11. Move labels left across peel plate to = position on bottle.	12. Loosen knob to move label spool assembly.
		
13. Move label spool assembly so that labels are parallel with side and then lock off.	14. Pull labels through machine so that only 1mm of label is visible above Peel Plate.	15. Keep tension on labels and return handle to closed position.

Setting Label Sensor.

		
16. Position the sensor star wheel 5mm past the edge of	17. Turn machine ON. Turn Orientation OFF. Choose one label.	18. Pull the handle down and catch the label as it comes

the label that is the same as the label that is 1mm above the peel plate.		off. Allow the machine to “run on” so that you are sure that the label stops 1mm above peel plate.
---	--	--

NB Before labelling a bottle, repeat step 18 four times to ensure that the label stops 1mm above peel plate.

Tensioner.

<p>Apply a light pressure to the back of the labels using the Tensioner. The Label Tensioner, is used if the labels are tracking to one side of the labeller, move the Label Tensioner to the opposite side of the labels to the direction of the tracking. Varying the pressure and the position will greatly affect the tracking. N.B. Sometimes when labels are Die Cut, at the printing stage, they are more deeply cut on one side than the other and this will make them want to curve to one side of the machine.</p> <p>* Please note. Labels do track in, so run 20 or 30 labels through initially and make your adjustments afterwards.</p>	
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Trouble Shooting

Problem	Cause	Fix
Bottle is held and rotating but no labels are applied.	<ol style="list-style-type: none"> 1. Handle for pinch roller is in the open position. 2. Orientation is turned on but the sensor cannot see what to look for. 	<ol style="list-style-type: none"> 1. Check that labels are properly threaded. 2. Turn Orientation OFF or reset sensor to detect registration mark or label.
Bottle will not rotate.	Handle roller 9 is wound down too far.	Adjust the handle roller so that there is room for the handle to move and start the motor.



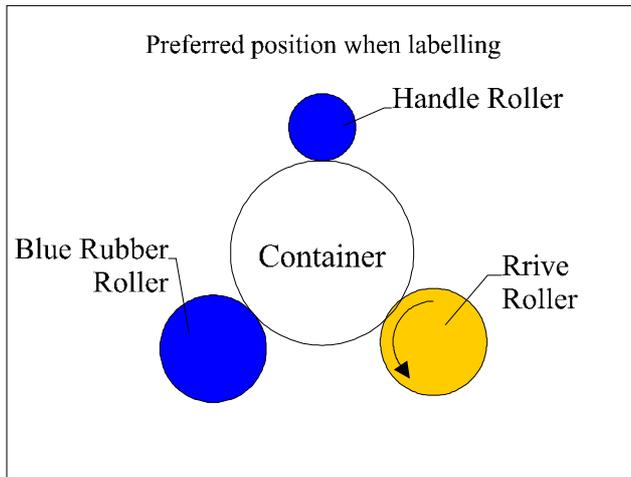
Applying two labels

a. Select **two labels**, with the Label Quantity switch, on the side of the machine, and the distance between them that you require.

b. Hold the Handle down and you should have two labels eject. They should both be stopping at the edge of the Peel Plate. If one ejects much longer, (more than 3mm longer than the other), you have set up the Gap Sensor on the wrong label, and should move onto the next label.

Positioning Rub Down Roller.

To avoid wrinkles in the labels, adjust the roller on the handle of the BenchMAX down to approx 20mm above the container. When the BenchMAX is started, the roller should touch the container forming a triangle.



Example of label set up.

1. Spool Holder. [Label carriage]
2. Spool Retainer. [Label carriage]
3. Spacer. [Label carriage]
4. Tensioner
5. White Roller.
6. Tracking Arm.
7. Gap Sensor.
8. Blue Rubber Roller.
9. Handle Roller
10. Drive Roller
11. Handle

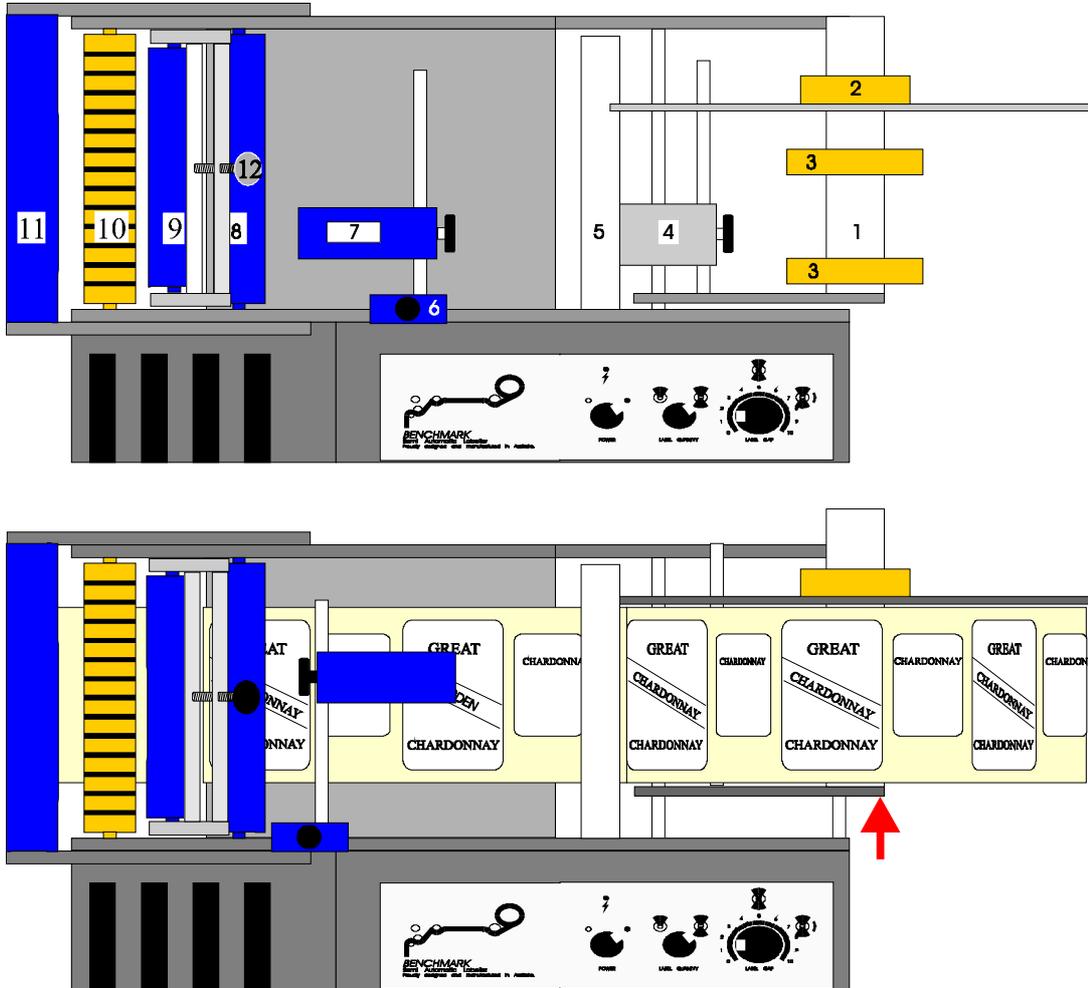
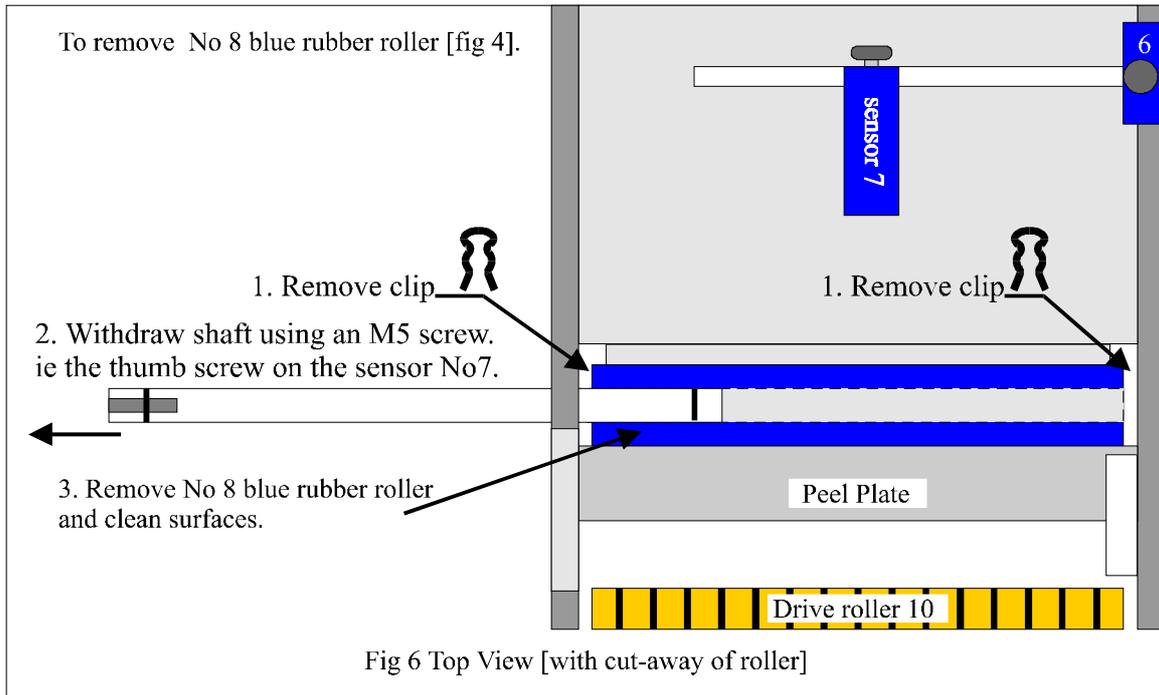


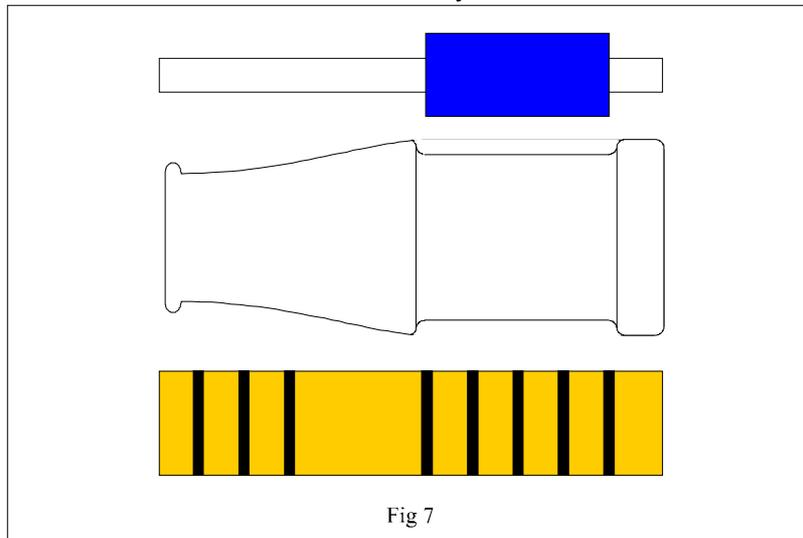
Fig 4.

Labelling containers with recessed areas.

To label into the recessed area of a cylindrical container such as poison bottles, whisky & port bottles, honey jars, etc [see example in fig 7], the label must travel at the same speed as the surface to be labelled. Therefore **it is essential** to cut Blue Rubber Roller [8 & 9] to fit inside the recessed area and to remove 'O' rings on Drive Roller [10].



Follow the instructions above to remove Roller No 8. [fig 6] Please note that cutting the Rubber Roller [8] before withdrawing it's shaft will allow accurate assembly at a later date should a full roller be required.



Fault	Cause	Remedy
Wrinkle or bubbles in the centre of the container	<ol style="list-style-type: none"> 1. The walls of the container are not parallel or are concave/convex. 2. Container is slipping. 3. There is a delay of approx 0.5 to 0.8 seconds before labels are ejected. If the handle roller is not down in this time the label can lift the container off the rollers and cause wrinkling. 4. Container is being squashed out of shape. 5. Too much pressure can stall the container. 6. The 'O' rings on Drive Roller [10] are slipping or worn. 	<ol style="list-style-type: none"> 1. Change containers. Labels will not stretch in two directions. Try narrower labels and/or dividing into back & front. Thicker labels can lessen the effect. 2. Check that drive roller is fitted correctly.[see fig 5 replacing grub screws or Small Bottle Adaptor pg 9] Check handle roller is correctly adjusted: if not it can lift the container off the drive roller [see fig 9]. 3. Speed up the operation. Do not apply undue force. 4. Do not apply undue force. 5. Do not apply undue force. 6. Clean or replace.
Labels are crooked	<ol style="list-style-type: none"> 1. Base of container is not true to sides. 2. Container is tapered. 3. Labels are tracking to one side. 	<ol style="list-style-type: none"> 1. Change containers. 2. The BenchMAX only labels round containers. 3. Apply the Tensioner to the opposite side of the backing web.
Front edge of the label folds under.	<ol style="list-style-type: none"> 1. Label is affected by static electricity. We have tested this effect and measured static on some plastic labels as high as 4000 volts. Static in some regions will be worse on days with low humidity and when the wind is from a certain direction. 	<ol style="list-style-type: none"> 1. Test by ejecting about 15mm of label and lowering a container towards it. If the label moves toward the container you will need to use an ionising airflow directed at the label. However if you can pre peel more label and attract it to the Blue rubber roller without it touching the product to be labelled you can overcome this effect. Alternatively change the label stock.
Labels & backing material are dragged onto the container. Most common problem	<p>Incorrect set up. There is 0.8 second to enable the operator to pull the handle down into contact with the product before the label ejects. If too much label is pre-peeled it will stick to the container and drag all the backing and labels with it. Likewise once your label has been applied, the next label is sticking to the container and dragging the backing and labels over the container.</p>	<p>Carefully follow the instructions in this manual on 'Setting the Gap sensor' .</p>

Attention should be paid to the labels as the following affects all label applicators.

Roll out 10 meters of labels and check for faults:

- varying gaps between the labels - gaps should be consistent.
- missing labels.
- backing material should not be cut and/or nicked - caused through poor 'die-cutting'.

- labels sticking to the back of the web [backing material].

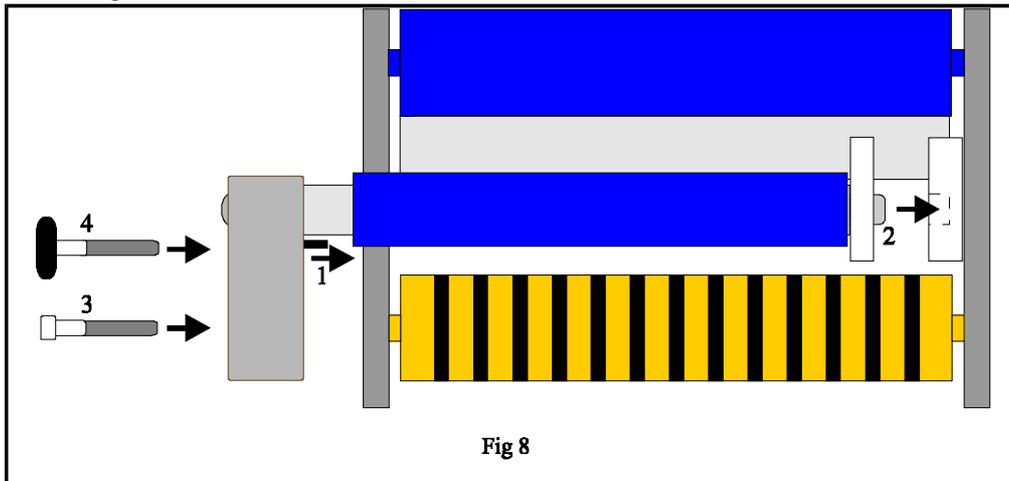
Small Bottle Adaptor.



WARNING - always turn machine OFF when fitting Adaptor, threading or removing labels.

A Small Bottle Adaptor Kit can be easily fitted for labelling small containers diameters between 14mm and 55mm diameters.

Kit comprises: Geared drive roller and assembly
30mm M5 cap screw
Locking Knob



Assemble as follows referring to figure 8 above:

The adaptor fits between Drive Roller [10], with the 'O' rings, and the Blue Rubber Roller [8] at the front of the BenchMAX.

- Insert the locating pin [1] into the side of the BenchMAX.
- Guide the end [2] of the adaptor into the mounting hole of the white friction pad on the side of the BenchMAX.
- Insert 30mm cap screw [3] into Drive Roller [10] ensuring that it is locked firmly.
- Insert Lock off knob [4]. Do not over tighten.

Test by pulling handle of BenchMAX down. The Adaptor's roller should turn. If not, then the cap screw has not been tightened.

Orienter.

The Orienter can be fitted to accurately place a label at specified positions on your product eg. between ribs on poison bottles, beneath embossed areas, beneath capsule or lid neck labels, or for relabelling and over labelling eg. applying new bar codes, changes in product requirements, medallions, awards, product information and warning labels.

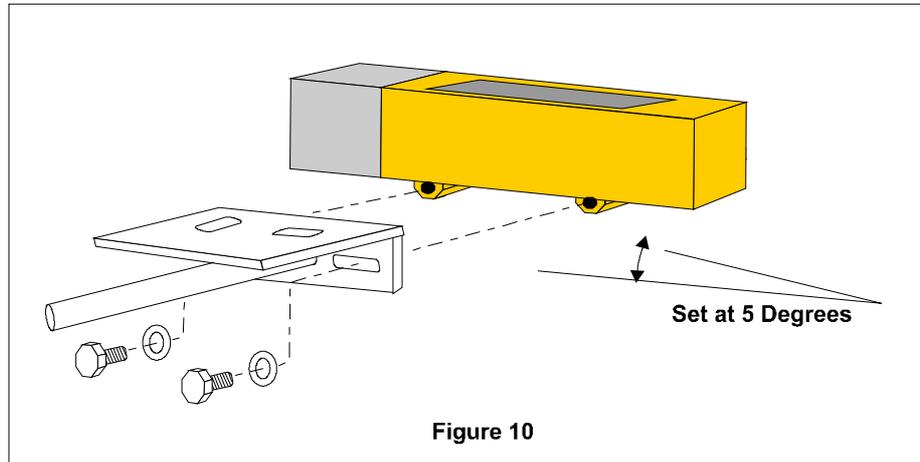
Instructions for Orientation Circuitry

If you are a first time user of a BenchMAX label applicator, please refer to the Operation Manual for set up and become familiar with its operation.

It is important to select a suitable photoelectric sensor/switch, as all sensors are limited, eg. some are not good with browns and greens, some don't like transparent objects, some need reflectors etc. The type of Photoelectric sensor/switch must be a 10 - 30 VDC Diffusive Reflective type and must have an NPN output signal.

In these instructions we will use the Omron E3S-VS5E42R Photoelectric switch, as supplied. This switch has proven very effective on a variety of containers and labels and we are confident that it will perform well in most applications. However it is important to select a sensor, which will work with both your container and the registration point from which you wish to orientate the new label.

Attach the sensor/switch to the bracket supplied with the Orientation circuitry [see Figure 10]. Fit it with a slight angle [5°] to horizontal to avoid errors created with reflections.



Ensure that the appropriate din plug is fitted and firmly inserted into the din socket in the front of the control panel. [refer to circuit diagram].

To avoid damage to the Photoelectric switch read the manufacturers instructions carefully and check the wiring before turning the BenchMAX ON. Incorrect wiring will **void** any warranty.

Set up

1. Release the handle on the side of the BenchMAX so that labels are not ejected while setting up.
2. Turn ON the Orientation circuit and position at zero.
3. Place the container to be labelled onto the BenchMAX and face the orientation mark [edge of a label, ribs of a poison bottle, embossed logo etc] to the front of the BenchMAX. Move the Photoelectric sensor along to a position, which can only detect this mark.
4. Position the Photoelectric switch so that it is 50mm from the surface. [Check manufacturers specifications for the switch you have selected]. Tighten knurled knob.
5. Remove the container. Place a ruler vertically on the stainless steel Peel plate [the point where the labels eject onto the product], and focus the Photoelectric beam to 25mm on the ruler. [see Figure 11]

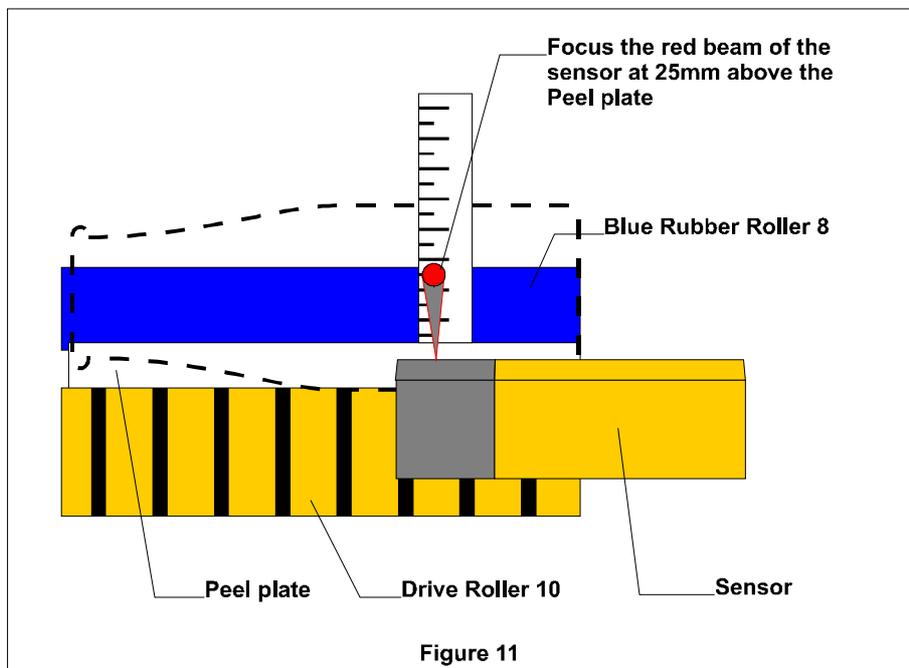


Figure 11

6. Replace the container and rotate until the sensor detects the orientation mark. Continue to turn the container and adjust the photoelectric sensor [see Figure 12 and also refer to the sensor manufacturers instructions] until all errors in detection are eliminated. Detecting with our sensor, the Green light and the Red light are ON together when we detect the orientation mark. The Green light is ON and the Red light is OFF when we are not detecting the orientation mark.

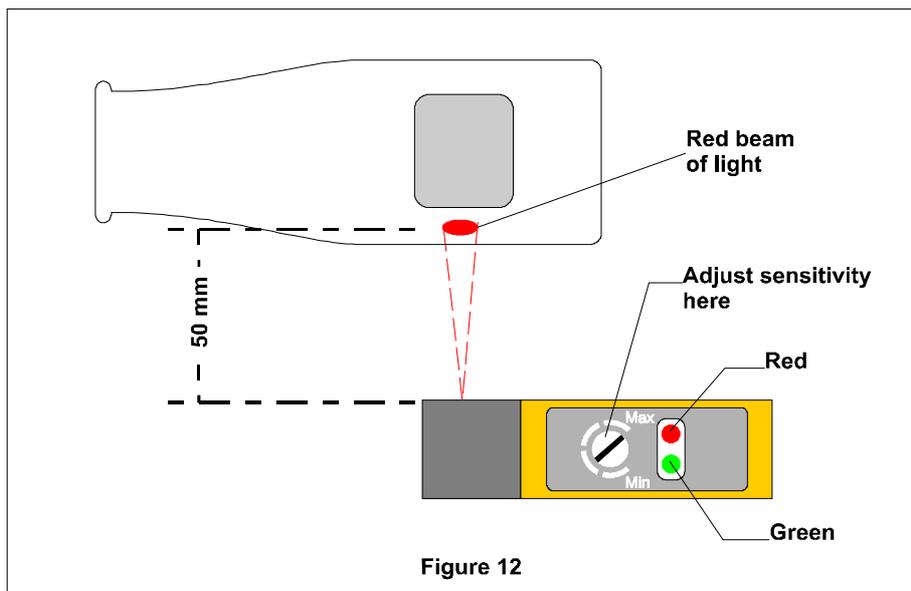
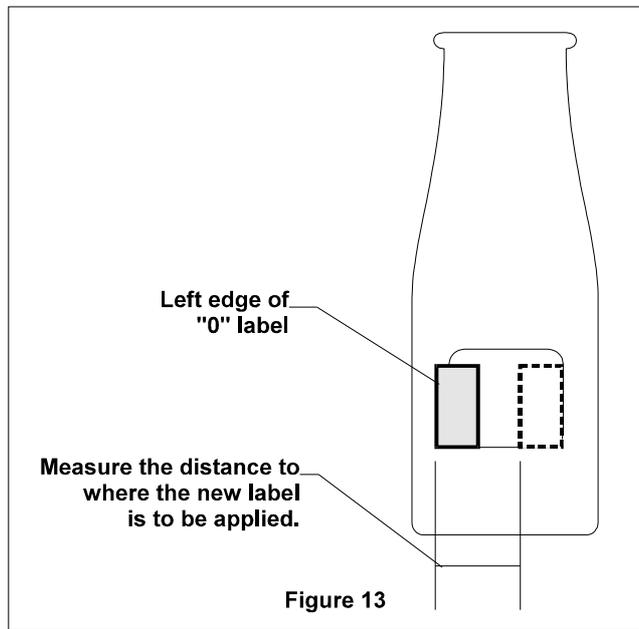


Figure 12

7. Bring down the handle and watch the indicator lights on the photoelectric switch as the container rotates. Adjust out any error signals with the sensitivity dial on the Photoelectric [See Figure 12], eg Red light flashing ON at locations other than the required orientation mark, which is a result of surface defects etc.
8. Return the handle on the side of the BenchMAX to the closed position.
9. Manually rotate the container so that the orientation mark on the container to be labelled is not facing the photoelectric switch.
10. Pull down the handle and apply a label. This label is the Zero position label.
11. Measure the distance from the front left hand edge [see Figure 13] of this label to the left edge of the position you want the new label to appear. The orientation circuitry is calibrated to approximate millimetres and each increment is equal to approximately 5mm. Adjust the dial to the distance you require the new label to appear.



Orientation Trouble shooting

Problem	Cause	Remedy
Photoelectric switch doesn't detect orientation/registration mark	<ol style="list-style-type: none"> 1. Incorrect set up 2. Wrong wiring 3. Incompatible with the container. 	<ol style="list-style-type: none"> 1. Go through instructions taking care that, a) switch is correct distance from container, b) Beam is not obstructed and is clean, c] correctly adjusted. 2-3. Switches can be changed to read Light objects or Dark objects. Refer to manufacturers instructions Refer to point 5 of manual and adjust to 50mm.
Two labels are ejected	The BenchMAX can orientate and accurately position one or two labels.	Select one label on control panel.
Error in positioning of the label	<ol style="list-style-type: none"> 1. switch is incorrectly adjusted. 2. starting with the switch already seeing the orientation mark. 3. container is slipping 4. Some containers [eg 50mm brown glass] may require the sensor to be adjusted at a higher angle. 	<ol style="list-style-type: none"> 1. Read manufacturers specifications. 2. Load the container onto the labeller with orientation mark away from the beam of the switch. 3. Adjust the pressure being applied to the container. 4. Refer to point 5 of manual but adjust to 50 or 70mm.
No labels eject	<ol style="list-style-type: none"> 1. Handle on the side of the BenchMAX has not been closed. 2. Photo Switch is unplugged or not seeing anything. 	Read instructions carefully

OPTIONAL EQUIPMENT.

COUNTER.

We recommend an OMRON H7EC-N [6 digit]

Cut out a section of the control panel next to the handle and parallel to the fins. Wire to the optocoupler.

Automatic Label Attachment.

To increase production, the Automatic Labelling Attachment is a valuable ancillary. Operated by switch, foot pedal or external input eg a signal from a hopper feed, it quickly grips, labels and releases containers automatically. Pressure on the container is adjustable to suit the application.

Operating.

- Adjust the Handle Roller [9] in fig 4 to approximately 20 mm above the container to be labelled.
- The handle in fig 2 should be in the up position.
- Press the Start Button or press the Foot Pedal Start.

The handle of the BenchMAX will come down and the Handle Roller [9] should contact the container and turn as the container turns. If it is not then adjust to suit.

- Return the handle [fig 2] to the closed position.
- Press Start. Labels will eject onto the container. Note. Do not force the handle to return.
- Adjust the Pressure Knob [fig 14] as desired. Note Over adjusting of the Handle Roller [9] will not allow the Automatic Label Attachment to complete its cycle. If this occurs undo Handle Roller adjusting Knob 12 [fig 4]

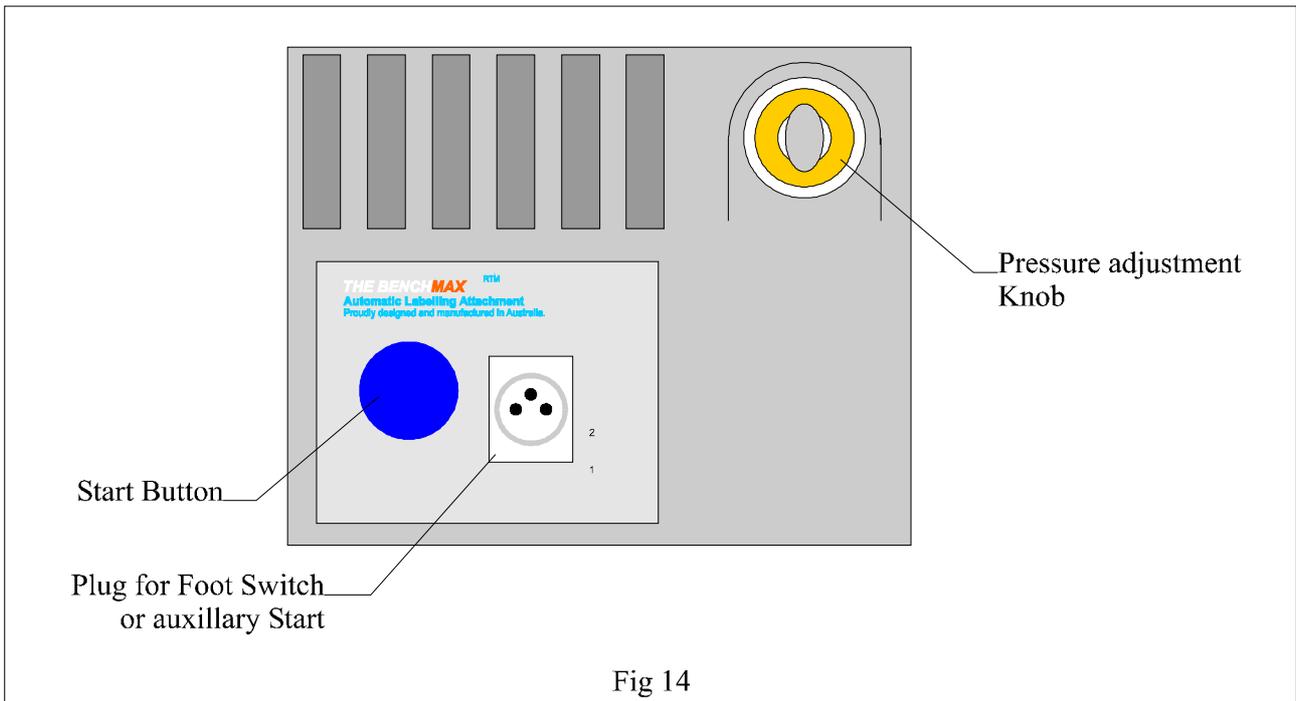


Fig 14

Automatic Label Attachment - Trouble Shooting

Fault	Cause	Remedy
Wrinkles on labels when labelling thin walled plastic containers or small containers.	Too much pressure is being applied and the container is squashing out of shape or is stalling.	Reduce the pressure by turning the Pressure Knob [fig 14] anti-clockwise and adjusting the Handle Roller [9] so that the container is held but not squashed or stalling.
Handle will not release container or will not turn OFF	1. Incorrect adjustment of Handle Roller [9] and Pressure Knob [fig 14].	1. Adjust as per instructions.

Maintenance.

* **Disconnect from power supply** when carrying out any maintenance.

- Do not** - spray or splash fluids over machine
- Do not** - oil/lubricate the Teflon coated Bushes
- Do not** - remove or adjust the factory preset Peel Plate

- Do** - keep all surfaces clean.
- Do** - tension and oil/lubricate the drive chain periodically, located inside the side cover.
- Do** - clean and lubricate Gap Sensor [7] square wheel.

The BenchMAX semi automatic labeller has been designed so that the user can be self reliant. All parts can be easily maintained or dismantled and replaced. The major wearing components, on this or any

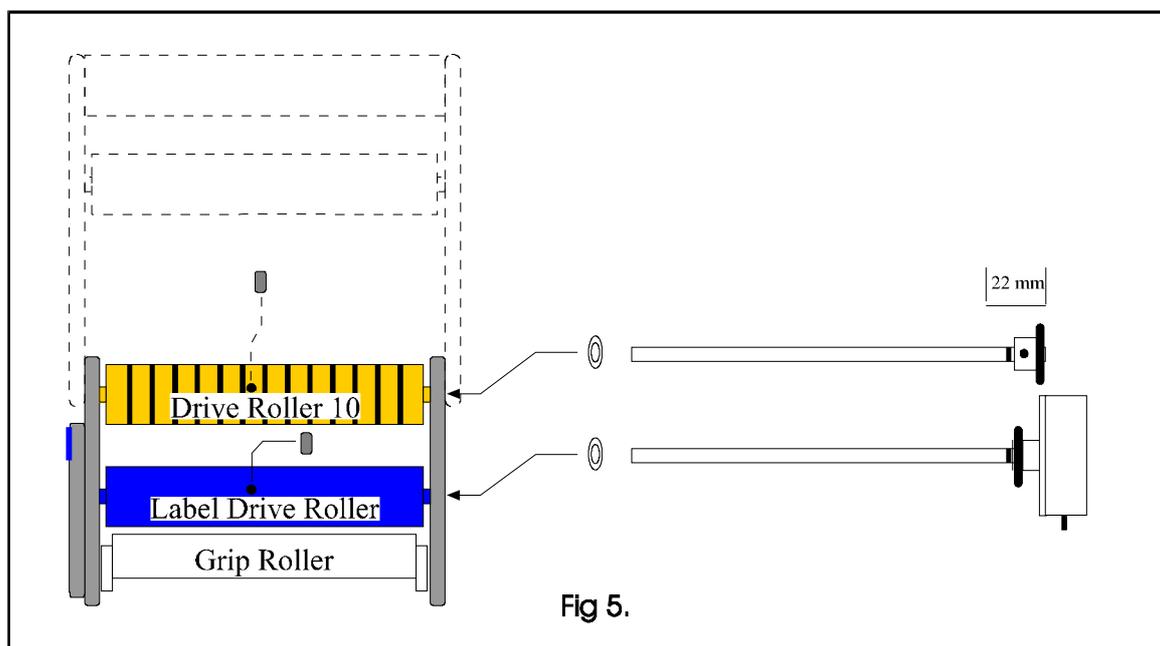
other labeller, are the rollers that drive the label web or the container. You will notice that on the roller that drives the container we have used "O" rings 216 E70 [216 = size, E = Ethylene Propylene, 70 = shore hardness]. These are available from all major Bearing supplies around the world. To replace these refer to Fig 5 below. You will also notice that the Label Drive Roller is a fully rubberised roller. This needs to be kept clean using a light detergent and warm water.

To replace 'O' rings:

- remove the side panel.
- hand lever on the left hand side [fig 2] should be in the up position.
- loosen the motor.
- disconnect the leads to the clutch.
- locate and loosen the 2 grub screws [set screws] in the Drive Roller [10] and the 2 grub screws [set screws] in the Label Drive Roller.
- extract the shafts.

Assembly is simply the reverse of the above with particular attention to the following:

- ensure that the locating pin on the bottom of the clutch is inserted into its bracket.
- before tightening the grub screws push both drive rollers toward the clutch side of the machine. This will stop any "floating" of the assembly. Tighten the grub screws on the "flat" of the shaft. NB. The top Drive Roller shaft has to be set into the left side plate by 4mm and the outside of the cog has to be 22mm from the right hand side plate.



To maintain the machine, regular cleaning of all surfaces is advised with particular attention to the following:

- the gap sensor [7]
- the 10mm spindle roller [fig 2] underneath Rubber Roller [see fig 6 for access]
- the stainless steel Peel Plate
- Drive roller [10], the Label Drive Roller and the Grip Roller [see fig 5 above].
- base plate under the Gap Sensor which the labels run across, often depositing excess glue or varnish.

Ensure that the Gap Sensor [7] wheel spins freely and is kept lubricated.

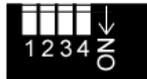
Specifications.

Power	240 Volt AC or 110 Volt AC.	Construction	Aluminium & Stainless steel
Consumption	max 0.5 Amps.	Settings	Linear.

Protection Motor	Fuse. Single Phase Induction.	External signal Labels	24 Volts DC. Die-cut self adhesive on a roll
Dimensions	525mm x 330mm x 360mm high.	<ul style="list-style-type: none"> • Roll diameter • Inner core 	310mm OD. 75mm or 37mm.
Weight	19 Kg.	Control	Micro processor

Specifications are subject to change without notice.

Programing options.



The BenchMAX™ has several programing options to assist you to maximise your labelling. These programing options are set via the switches at the back of the control panel.

Switch 1:

OFF = Orientation for dark objects such as wine bottles.

ON = Orientation for light objects such as white medicine bottles.

Switch 2:

OFF = short rub down time after the label has been applied.

ON = long rub down time after the label has been applied.

Switch 3:

[see Printer wiring diagram and program options below]

Switch 4:

OFF = normal labelling.

ON = Single long label [use when labels are longer than 230mm]. Inserts a delay of approx 130mm after the sensor finds the label gap. Fine tune the label flag before applying a label to a product, by the usual method of sliding the gap sensor along the side panel.

Printer wiring diagram and program option.

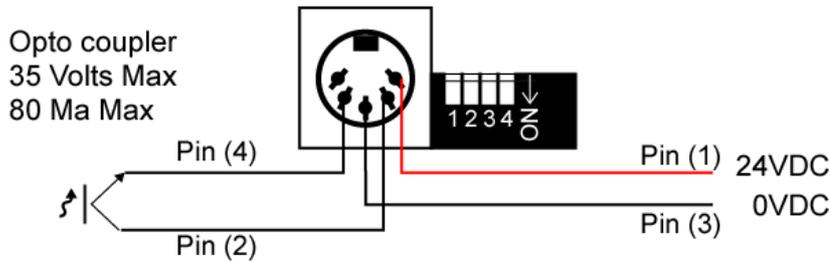
Switch number 3 selects printer options:

a). When OFF the printer will print on every label.

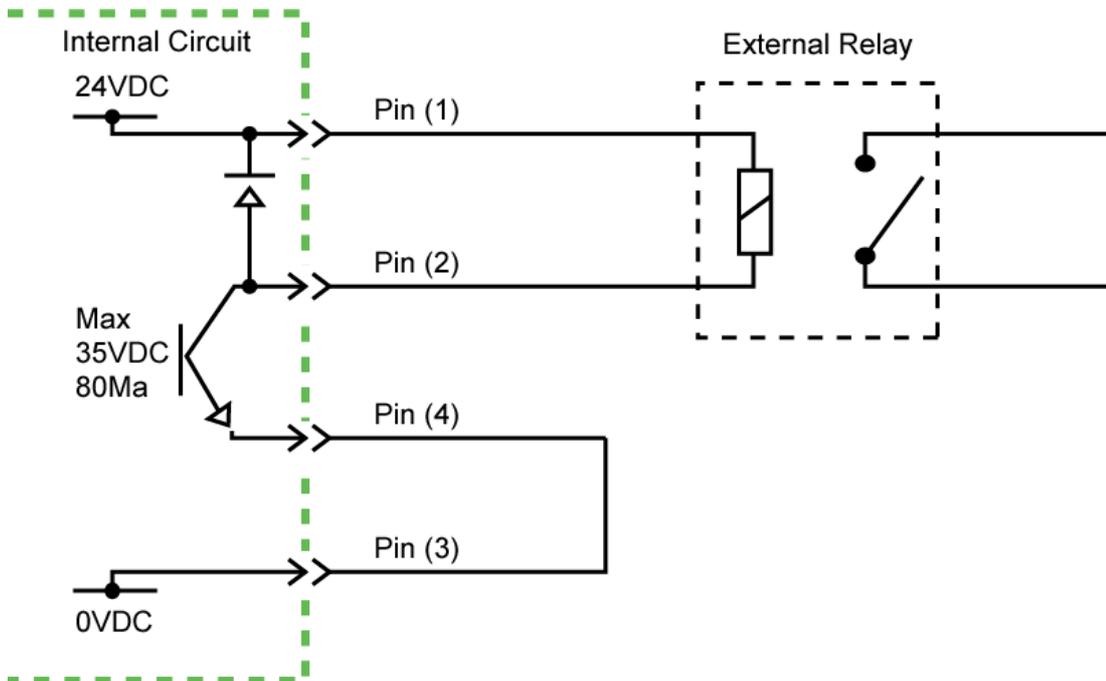
b). When ON the printer will print only once regardless of whether one or two labels are being applied.

ON is ideal if you are applying both a front and a back label and you only want to print on one of the labels.

For example: use this option for printing "best before", "batch numbers", "export compliance" etc. and format your 2 labels as only one large label [some printers cannot print nothing on one as a sequence].



EXAMPLE.



The equipment supplied has been manufactured under licence for Great Engineering by P&G HERN Engineering. The warranty supplied below is the only warranty given with this equipment.

Customer Services

IMPORTANT

Please complete the attached reply card and return to P&G HERN ENGINEERING AND FABRICATION immediately. If your machine is not registered, there will be a delay in providing service in the event of a warranty failure.

This offer to provide warranty services is limited to equipment manufactured or supplied by P&G HERN Engineering and Fabrication. This offer does not apply to any other products or peripheral devices, which may have been supplied with your system by your dealer.

During the **12-month** warranty period, P&G HERN Engineering and Fabrication will affect warranty repair, or at its option, replacement of nominated products at no charge to the owner, should they prove defective in materials or workmanship (proof of purchase required). Warranty service is provided at the P&G HERN Engineering and Fabrication *Service Centre* listed below. This warranty does not include the cost of transportation to or from the service centre.

EXCLUSIONS The above warranty shall not apply to defects resulting from: improper or inadequate maintenance by customer; unauthorised modification or misuse; or improper site preparation and maintenance.

To obtain warranty service, product must be returned to a P&G HERN Engineering and Fabrication service centre. P&G HERN Engineering and Fabrication may repair on-site at the option of the customer. Customers responsible for travel charges when on-site repair is requested.

Kindly fill in the Serial Number where indicated **. The serial number can be found at the back left hand side of the labeller.

****SERIAL NUMBER BM**

**Victorian SERVICE CENTRE
27 Forest St, Whittlesea 3757 Australia. PH (03) 9716 2590**

THIS SECTION OF THE CARD SHOULD BE RETAINED

WARRANTY REGISTRATION

****SERIAL NUMBER BM**

Complete this card and return to P&G HERN Engineering and Fabrication urgently in order to register your machine for WARRANTY REPAIR. Please read the attached conditions of warranty in the section retained by you.

Dealers Name _____ Date of Purchase _____
Dealers Business Name _____
Customer _____
Address _____
Suburb/Town _____
Contact name _____ Purchase date _____
Installation address of Machine (if different to above) _____

Please identify your Machines model and configuration, Listing all devices, together with serial numbers, below :-

FOR OFFICE USE ONLY

Victorian SERVICE CENTRE 27 Forest St, Whittlesea 3757 Australia. PH (03) 9 716 2590