PRINTER INNOVATIONS

CR-158
COUPON PRINTER
OPERATIONS MANUAL

InnoPrint
PRINTER INNOVATIONS

1 AMENDMENTS

Revision	Date	Description	Issued By
A	15/06/2015	First issue	CH
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This manual set and the information it contains is only applicable to the model stated on the front cover, and must not be used with any other make or model.

Any features such as buttons or connectors that feature on the product but are not mentioned in this manual are currently unused and serve no function.

CONTENTS

2 COPYRIGHT

3 LIMITED WARRANTY

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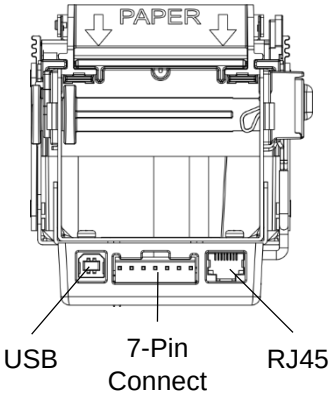
4 CONNECTING THE PRINTER

The printer has three available connections: 7 pin connector, USB or RJ45 socket.



4.1 Power & Pulse Connection

The 7-pin connector at the centre, rear of the device is for power and for controlling the device via a pulse interface. From left to right, the pins are:

1 – Red – +12-24V DC
2 – Black – Ground
3 – Brown – Coin In Pulse Signal
4 – Orange – Note In Pulse Signal
5 – Yellow – Pay Out Trigger Pulse Signal
6 – Green – Ticket Out Output
7 – Blue – Error Out Output

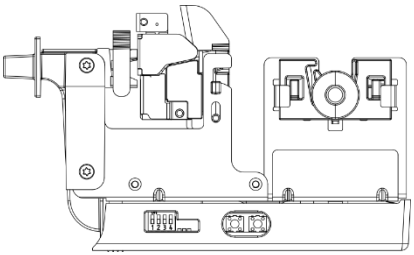
4.2 USB Data Connection

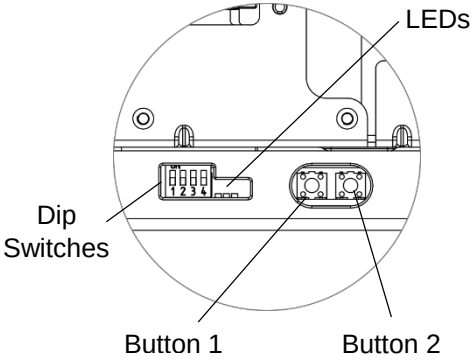
The USB connection is used to host a COM port on a connected PC, allowing the device to be communicated with through the SSP protocol. Information on this protocol can be found in a separate document (Innovative Technology manual GA138). SSP can be used to configure and control the device, as well as to download certain files onto the device via the SSP update process. The device is connected in this way like any other USB peripheral, and no special cables should be required.

4.3 Serial Connection

This connector (RJ45) is used for RS232 communication. Pot o' Gold should be connected here, using a standard Ethernet cable.

5 DIP SWITCHES, BUTTONS & STATUS LEDS





5.1 Dip Switches

Dipswitch 4 controls the cut mode of the printer guillotine. If the dip switch is in the down (off) the printer will performs a half cut. This will leave a small tab attached to the rest of the roll, and requiring a small amount of force to pull the coupon away.

In the up (on) position, the printer performs a full cut and fully detaches the printed coupon from the rest of the roll.

5.2 Buttons

Button 1 is used to test the printer. Holding Button 1 down for 4 seconds will cause the device to print a test ticket that shows a report containing some basic configuration information about the device.

Button 2 is used to set secondary interface. Press and hold for 5 seconds.

5.3 LED Status Lights

The device has 3 LEDs - green, yellow and red - which are used to display the status of the device. The standard statuses are displayed as follows:

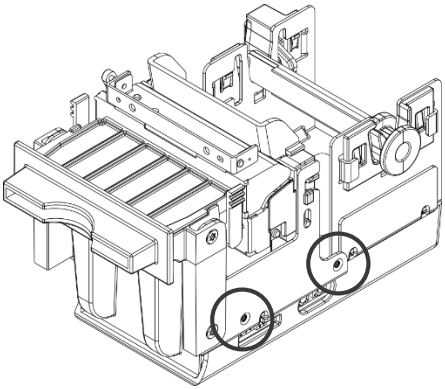
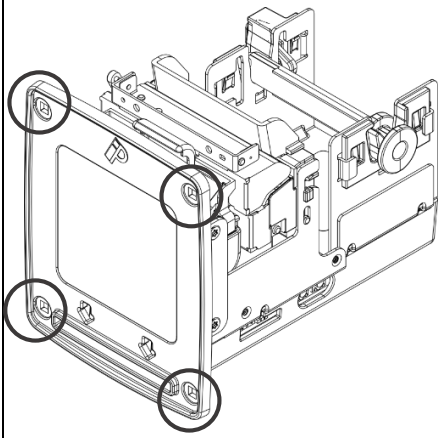
Slow pulsing yellow	Printer idle
Slow pulsing yellow and solid red	Printer idle, paper low
Slow pulsing green	Printer idle, SSP enabled
Slow pulsing green and solid red	Printer idle, SSP enabled, paper low
Fast pulsing green	Printing
Fast pulsing green, yellow, red	Printer initialising after power off/reset

The LEDs are also used to display error states. These are shown by a number of slow **red** flashes, **followed by** a number of **yellow** flashes. The number of each colour of flash indicates the error as shown in the table below:

		Yellow				
		1	**2**	**3**	**4**	**5**
Red	**1**	-	Initialisation failed	No print head	-	-
	2	No paper	-	Load fail	-	-
	3	-	-	-	Cut fail	Unknown jam
	4	Unknown error	-	-	-	-

6 BEZEL OPTIONS & FIXING POINTS

There are currently two types of bezel available, see below;

EUR Bezel	US Bezel
	
4 x fixing points (x2 on each side)	4 x fixing points (on bezel)

Note: refer to technical drawings for further installation details.

7 TECHNICAL SPECIFICATIONS

7.1 DC Voltage

	Minimum	Nominal	Maximum
Absolute limits	11 V	12 V	26 V
Supply ripple voltage	0 V	0V	0.5 V @ 100 Hz

7.2 Supply Current

Standby	100 mA
Printing	2 A
Peak	4.8 A

7.3 Interface Logic Levels

	Logic Low	Logic High
Inputs	0 V to 0.5 V	+3.7 V to +12 V
Outputs (2.2 kΩ pull-up)	0.6 V	Pull-up voltage of host interface
Maximum current sink	50 mA per output	

7.4 Functionality

Printing Method	Direct Thermal Printing
Dot Pitch	0.125 mm
Resolution	384 dots per line
Print Width	48mm
Print Speed	100mm/s
Ticket Print and Present	< 3 Seconds
Barcode Types	Interleaved 2 of 5, others by request
Graphic resources	2MB on-board SPI Flash. An micro SD card slot is available for storage of extra fonts and images
Interface: User	Ticket print button, Feed button, 4 dip-switches. LEDs: Ready, Paper, Fault
Interface: Protocols	eSSP, Pot o' Gold
Interface: Electrical	Open collector, True RS232, USB
Interface: Physical	USB (direct to printer) 7 – way power, pulse and "Pot o' Gold" RJ45 serial connector
Support tools	The firmware and interface protocol are upgradeable via USB. Ticket Template Manager software allows design of own ticket templates

7.5 Performance

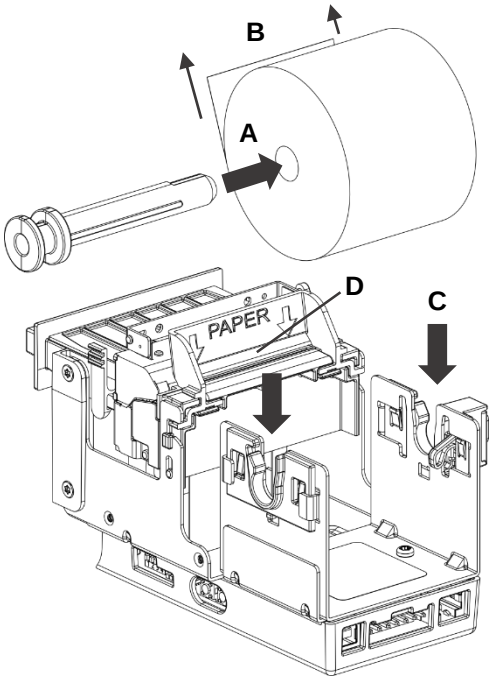
Parameter	Min (mm)	Max (mm)
Coupon Type	Thermal roll media	
Roll Outer Diameter		75
Roll Core Diameter	12.5	
Coupon Length		210
Coupon Width		58
Coupon Thickness		0.1
Print Head Reliability	320,000 coupons	

7.6 Environment

Parameter	Min	Max (Design Guide)
Operating temperature (Ambient)	+5°C	+60°C
Humidity	5%	95% Non-Condensing

8 FIELD SERVICE

8.1 Inserting a roll of paper



To insert a new roll of paper, remove the roll mandrel from the printer (reverse of **C**).

Position the roll so that the paper edge comes from below the roll (**B**).

Insert the mandrel into the roll of paper. The spool of the mandrel should be on the left hand side of the roll (as shown, **A**).

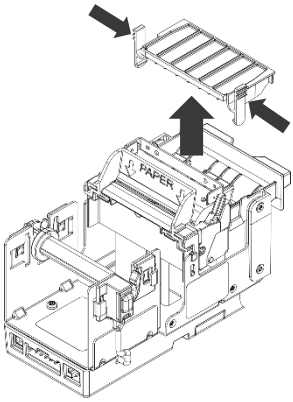
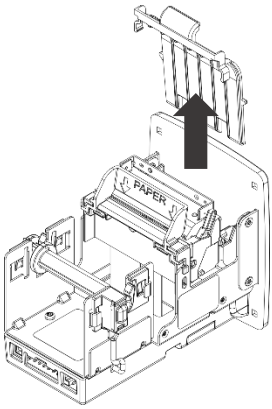
Push the mandrel (with roll) down onto the clips until secure (**C**).

With the unit powered on, feed the paper into the mechanism (**D**). When the paper triggers the sensor, the unit will auto-feed the paper. Remove the excess paper when the unit has completed the paper feed.

If required, you can now do a test print (see **Buttons**).

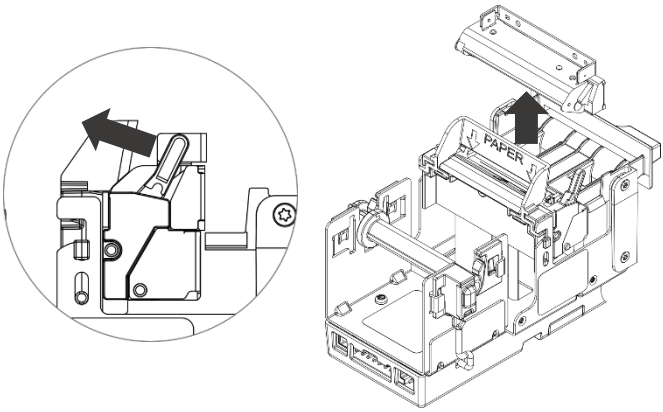
8.2 Removing the paper guide

For maintenance or clearing a paper jam, the paper guide may need to be removed.

EUR Bezel	US Bezel
	
For the EU bezel, squeeze latches inwards and lift paper guide.	For the US bezel, simply lift upwards to remove.

8.3 Removing the print head roller assembly

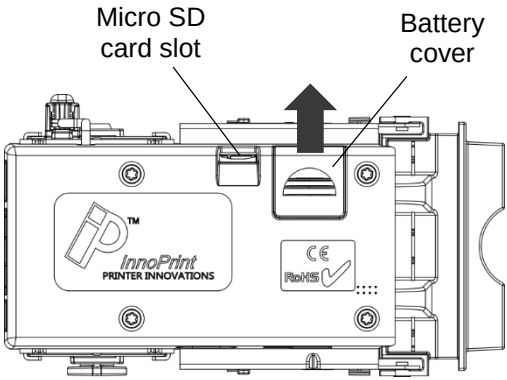
The print head roller assembly can be removed to allow access for cleaning and removal of jammed paper. Firstly remove the paper guide (see 8.2).



Pull the release handle on the print mechanism to release the roller assembly. The roll assembly can be fitted back in place with a 'push fit.' Note: Fit the roller assembly before reinserting the paper guide and paper roll.

8.4 Micro SD card slot and battery compartment

The micro SD card slot and battery compartment are located on the left hand side of the unit. The battery is accessed via the removable cover.



Inserting a micro SD card expands the memory of the printer, allowing extra fonts, images and coupon templates to be stored.

The battery powers the units internal real time clock, which can be used to provide and date and time stamp on coupons.

Note: Battery Type: CR1225, 3 Volt, 50mAh (BA00100)

9 CREATING TEMPLATES & TESTING

9.1 Ticket Template Manger

To fully maximise the potential of the CR-158 printer and its printing capabilities, and to test the unit fully, we recommend you install Ticket Template Manager.

Ticket Template Manager is a software tool that allows users to create and edit ticket/receipt designs, and upload them to InnoPrint printer products.

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