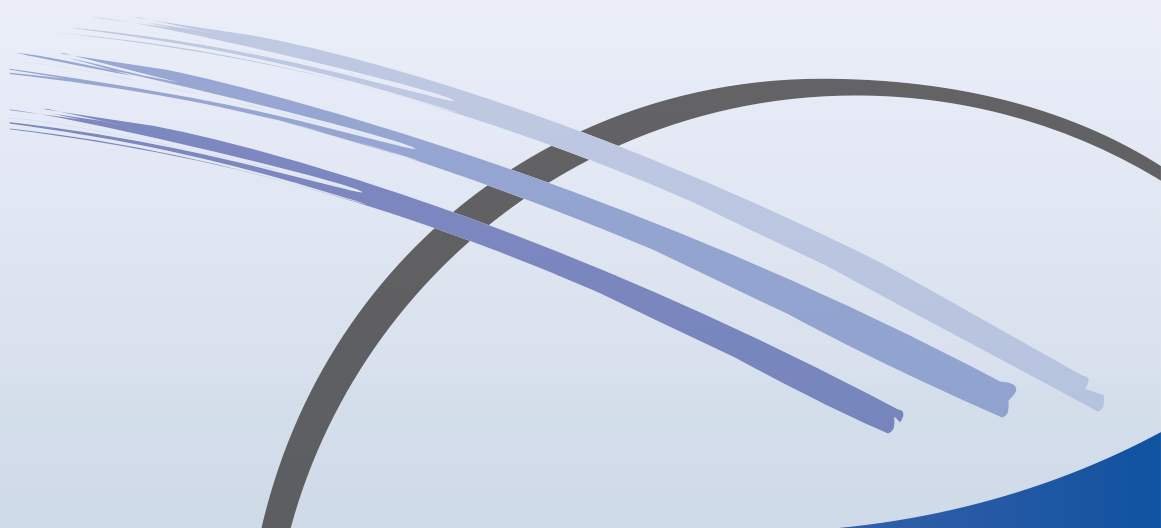


Easyprint

Product Manual

compact cm

compact im



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COMPACT THERMAL TRANSFER PRINTER PRODUCT MANUAL

This manual, Easyprint Part No. EPT033612, is for use in the operation and maintenance of the Easyprint Compact CM and Compact IM Thermal Transfer Printers.

Continuous Mode (CM).

The Compact CM is used when printing on a substrate which moves continuously.

Intermittent Mode (IM).

The Compact IM is used when printing on a stationary substrate which only moves between printing.

Users of these printers are warned that it is essential to read, understand and act according to the information given in Part 1: Health and Safety.

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Easyprint A/S

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sales@easyprint.com

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FCC NOTICE

This equipment has been tested and found to comply with the limits for Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

European EMC Statement

This product may cause interference if used in residential areas. Such use must be avoided, unless the user takes special measures to reduce electromagnetic emissions, to prevent interference to the reception of radio and television broadcasts.

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PART 1	Health and Safety
PART 2	Description and Installation
PART 3	Operation
PART 4	Maintenance, Service and Fault Finding
PART 5	Technical Reference
PART 6	Glossary of Terms

AMENDMENT RECORD

Amendment	Date
All Parts at Issue 1	March 2018

PART 1 : Health and Safety

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GENERAL SAFETY

Notes: (1) Please read through this section before operating the machine.

(2) Unless stated otherwise, information provided is applicable to all printer variants.

This printer is designed for use with AC power distribution systems TN and TT, as classified in IEC 60364:

‘TN’ (any of following - TN-C, TN-S or TN-C-S) for example; a system having one or more points of the source of energy directly earthed, the exposed conductive parts of the installation being connected to that point by protective conductors.

‘TT’ for example; a system having one point of the source of energy directly earthed, the exposed conductive parts of the installation being connected to earth electrodes electrically independent of the earth electrodes of the source.

It is not suitable for connection to an ‘IT’ system for example; a system having no direct connection between live parts and earth, the exposed conductive parts of the installation being earthed. This therefore excludes any ‘phase to phase’ connected supplies such as may be available in some factories and/or countries.

If the supply fuses (located on the rear of the printer and the printer’s power supply unit) are replaced, they must be replaced by a 2 amp T 5x20 UL fuse - 230/115V – 50/60Hz for the printer and a 4 amp T 5x20 UL fuse - 230/115V - 50/60Hz for the printer power supply unit V200006).

Installation must only be performed by qualified Easyprint personnel. For customer installations, authorisation must be obtained from Easyprint A/S. All relevant Safety Procedures must be followed. Failure to do so may invalidate warranty.

The printer and its component parts must only be used for the purpose for which they were sold, and for which they are designed and constructed. No parts may be used for other functions.

DO NOT touch the printer or the controller with wet or damp hands.

DO NOT expose the printer or controller to water.

DO NOT run the printer without ribbon material, as this may damage the print head.

DO NOT use the Cassette handle as a means of carrying or holding the printer as this may result in the printer becoming detached from the cassette causing a crushing hazard.

ALWAYS disconnect the power to the machine before removing any service covers. The power connector to the back of the printer must be removed.

ALWAYS keep hands and loose clothing away from the print head opening whilst the printer is powered on, as there is a danger that the mechanism will move without warning and present a crushing hazard.

DO NOT operate the machine with any covers removed. ALL covers must be in place using the appropriate number of fasteners. It is essential that electrical and non-electrical connector dust covers (provided with the machine) are fitted to all unused connectors to protect against dust and dirt and possible static damage to internal components.

Ensure all reasonable safety precautions have been undertaken. However, please ensure that when working with / or around the machine, every care is taken to avoid potential hazards. ALWAYS take great care around the machine not to slip, trip or fall; especially if the machine is used in areas where the floor may be wet or greasy.

Use only Easyprint ribbons.

Replace ribbons with care to avoid cutting hands or fingers.

Take care, in the unlikely event of an electronic fault causing an unexpected start up of printer drive motors, to avoid possible injury.

Read the Safety Data Sheet (SDS) for Cleaning Fluid (P/N WJ-111) before using it with any Easyprint product.

There is a danger of electrical shocks from the electrical outlet. All electronic checks must be performed by qualified personnel.

The information above is correct to the best of our knowledge, information and belief at the date of this publication. The information given is designed only as guidance for safe handling use, processing, storage, transportation, disposal and release and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in text.

HAZARD INFORMATION

This document uses the following warning signs that give warning of a hazard or danger:



Denotes Danger: Electricity



Denotes General Danger

Read the following important notices before using the printer. The hazard information is prioritised into warning and caution notices.

Warning Notices

Warning notices denote a potential hazard to the health and safety of users. These notices clearly state the nature of respective hazard and the means by which it can be avoided.

Lethal Voltages



Lethal voltages are present within this equipment when it is connected to the mains supply. Only trained and authorised personnel may carry out maintenance work.

Observe all statutory electrical safety codes and practices. Unless it is necessary to run the printer, disconnect the printer from the mains electrical supply service before removing the cover or attempting any service or repair activity, otherwise death or personal injury may result.

Replacing the Ribbon



Care must be taken when replacing ribbons to avoid cutting hands or fingers.

Heating Element



The heating element and surrounding area become very hot during use. To avoid the risk of burns, never touch the heating element area of the print head.

Organic Solvents



Cleaning fluid contains organic solvents. Always wear suitable PPE (goggles and clothes) to avoid contact with the eyes and skin. Avoid inhalation of the vapour. Do not smoke in the presence of the vapour or the vicinity of the printer.

Battery Replacement



Replaceable batteries should only be replaced using batteries of the correct specified type and rating. Failure to do so may result in an explosion hazard.

Used batteries should be disposed of according to the battery manufacturer's instructions.

Fuses Fire Hazard



To ensure continued protection against the risk of fire, replace fuses with the specified type and rating only.

Caution Notices

Caution notices denote a potential hazard to the physical integrity of equipment / software but not a danger to personnel. These notices clearly state the nature of the hazard and the means by which it can be avoided.

Damage to Print Head



Changing the print head without setting the new resistance value may cause severe damage to the print head.

Loss of Counter Data



The counter values are not retained when the printer is switched off.

Cable Routing



To avoid damage to the cables or equipment, ensure that the cables are routed clear from any moving parts.

Mains Supply Voltage



To avoid damage to the equipment, do not exceed the supply voltage stated in this manual. See [“Technical Reference” on page 5-1..](#)

Cleaning Materials for Print Head



To avoid damage to the printer components, use only soft brushes and lint-free cloths. For cleaning, always use Cleaning Pens (P/N VPR0223), Cleaning Fluid (P/N WJ-111) and Print Head Cleaning Wipes (P/N MT25215).

Do not use high pressure air, cotton waste, abrasive materials, metallic objects or degreasing cleaning fluids (e.g., Benzene, acetone).

Spare Parts and Consumables



To avoid the risk of damage to the print head use only Easyprint spares, parts and consumables.

Contact supplier for details.

For Sales and Service contact:

Easyprint A/S

www.easy-print.com

sales@easyprint.com

PART 2 : Description and Installation

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UNPACKING

Before installation, it is important to check that the printer has not been damaged during shipment, and that all parts needed for the installation and operation of the printer are present.

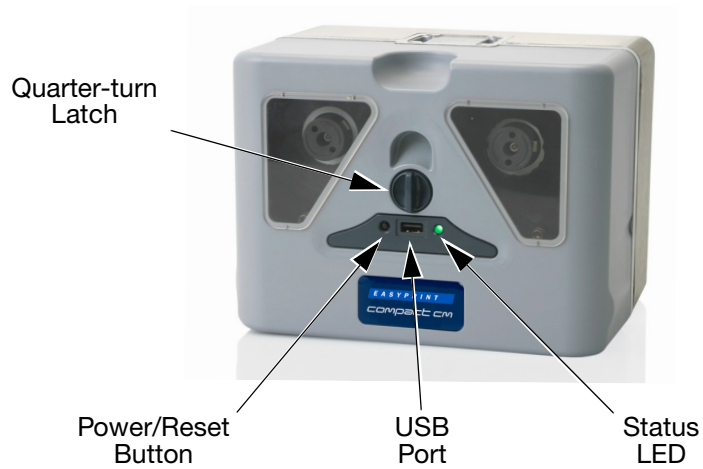
Ensure that the following items are present:

Inventory

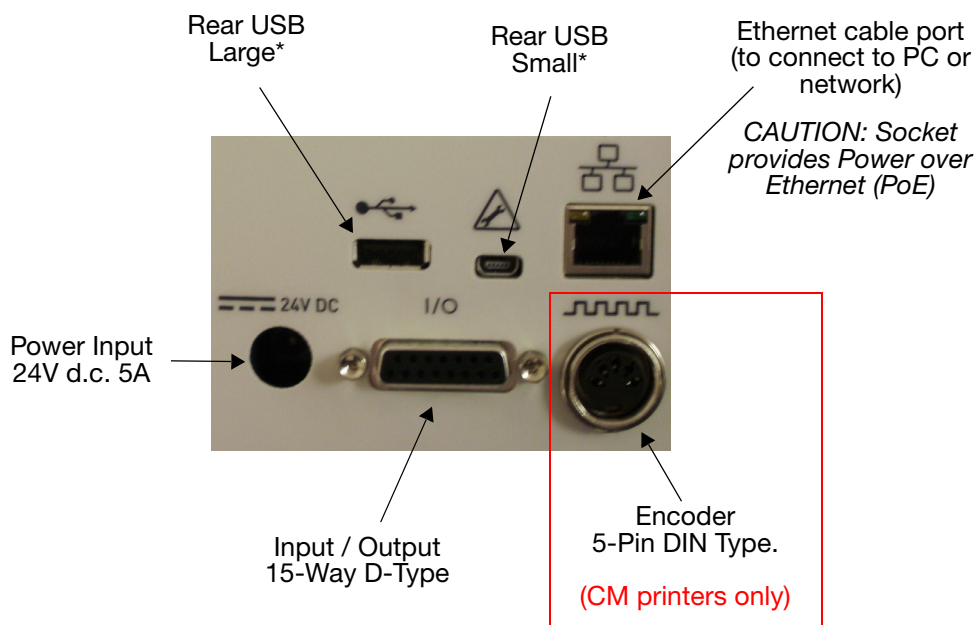
Contents	Part No.
Printer Unit (CM or IM)	TBA (CM Printer) TBA (IM Printer)
Compact Touchscreen (Optional)	EAS002113SP
Mains Power Supply Unit (PSU)	EPP002214SP
I/O Cable, 5m	EDP002215SP
Documentation Pack	Language dependent

Printer Main Parts

Printer Unit (Front View)



Printer Connections (Rear View)



*The rear USB large and rear USB small connections share a port and therefore cannot be used together.

Peripherals

Power Supply Unit



Encoder (Used for CM printers only)



MECHANICAL INSTALLATION

Installation Requirements

Ensure that the following services and control signals are available:

Note: Power: 120/240 VAC, 50/60Hz, 1.5A

- (1) A print start signal; we recommend a volt-free contact which closes when printing is required.
- (2) Sufficient space for installation and operation.
- (3) If using a CM printer, an encoder giving 12 (or a multiple of 12) pulses per mm is required to monitor the substrate speed. (This is included with the CM bracket.)

Brackets

For a list of the tools required, see the bracket instructions provided with the bracket kit.

The bracket range covers widths of up to 900mm. The available flat-pack variants are:

- Window bracket (for IM and CM versions)

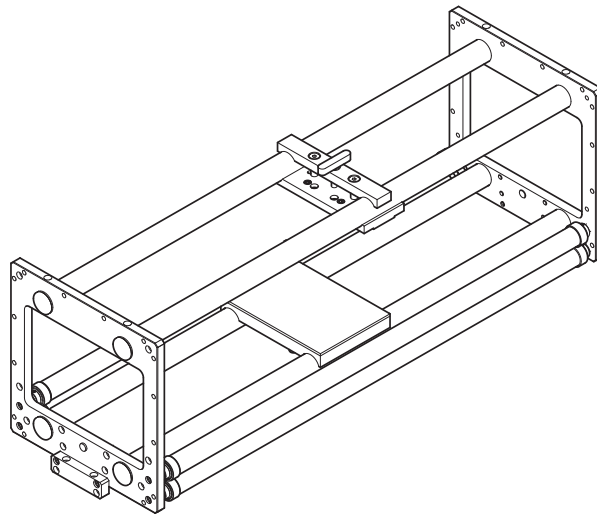
Notes: (1) The CM version includes the encoder and CM axle assembly.

(2) The CM rubber roller assemblies are available in 100mm size increments (305mm to 805mm) and must be ordered separately.

*(3) The Quick Release (QR) Carrier Assembly (P/N EPT006141) is available for mounting the printers directly onto flat pack window brackets.
(IM bracket EAS002706 and CM bracket EAS002717).
Use this assembly in wash-down environments or other situations where printers need to be removed on a regular basis.
The assembly has the same overall dimensions as the standard printer carrier (P/N 5-0460258) and can be swapped out on existing installations.*

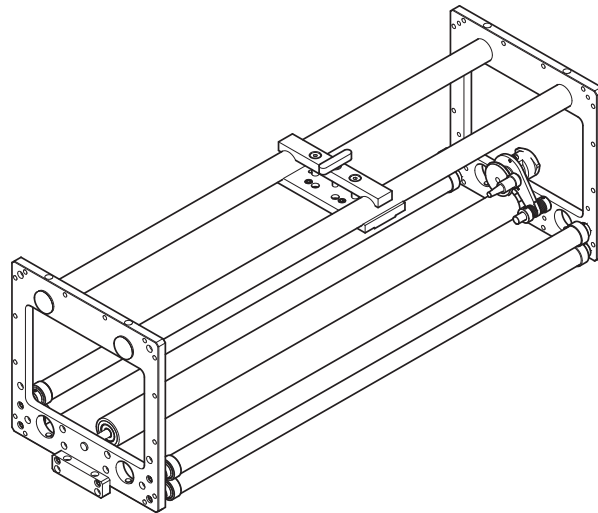
- Web positioning module
- Labeller bracket (IM only)

Description and Installation



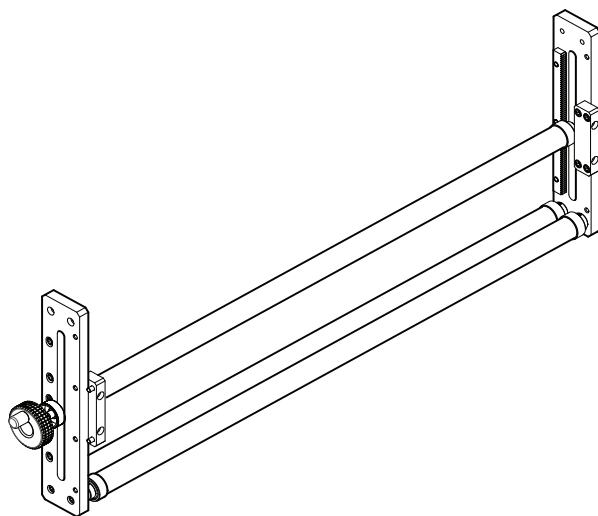
Window Bracket - (IM Version), 0.9m - Part No. EAS002706

Note: Three guide rollers are shown for illustration purposes - only two are supplied in the kit.

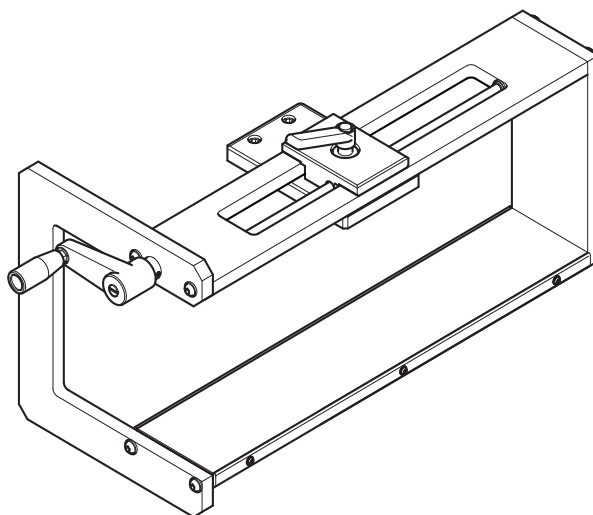


Window Bracket - (CM Version), 0.9m - Part No. EAS002717

Description and Installation

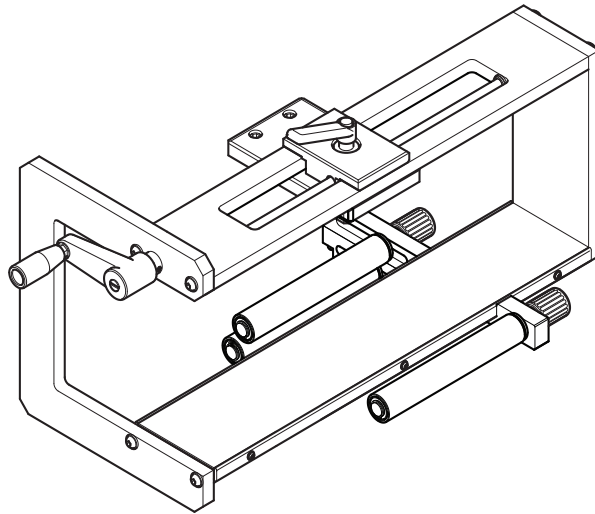


Web Positioning Module (0.9m) - Part No. 5-0460281



Labeller Bracket Assembly - Part No. EAS001626

- Notes: (1) The Labeller Bracket can be assembled in either a left-hand or a right-hand version.*
- (2) Installation drawing EAS002727 is included with the bracket kit.*



*Labeller Bracket / Guide Roller (shown mounted onto the
Labeller Bracket Assembly)*

Note: *Guide rollers can be assembled in either left-hand or right-hand orientation.*

Mounting the Printer in the Bracket System

Note: *Tool required: 5mm Allen key*

- (1) Mount the printer in the bracket system, using four M6 screws (supplied with bracket).
- (2) When mounting the CM printer in the CM bracket, ensure the print head is positioned above the top point of the rubber roller.
- (3) In order to apply the correct print head pressure, ensure that the height between the base of the printer and rubber roller or platen is approximately 3mm.
- (4) When the correct distance is obtained, tighten the screws.
- (5) Mount the power supply. [See “Connectivity” on page 2-21.](#)

Connect Cables

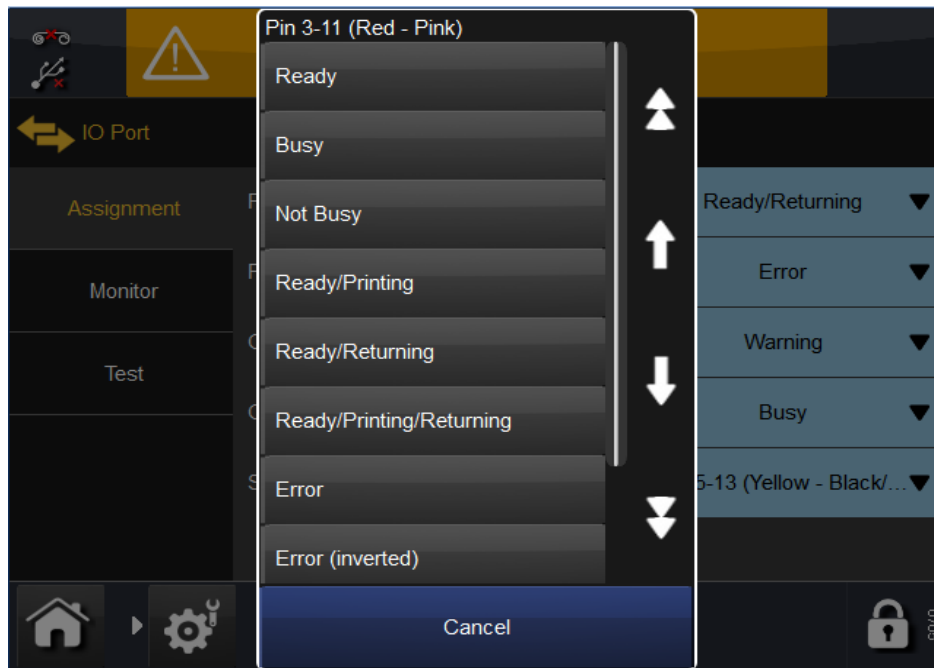
Note: [See “Connectivity” on page 2-21.](#) for Connection Diagram when connecting the printer to the mains, peripherals and network.

- Connect the cable from the PSU to the printer’s power input port
- For CM printers, connect the encoder to the back of the printer
- For IM printers, connect the start signal cable to the 15-pin D-type connector
- For CM printers which receive the start signals from an external source, the 15-way I/O cable is used
- Connect the start signal and any error signals you wish to connect
- If a Compact Touchscreen is to be used, connect the USB cable into the Compact Touchscreen’s mini USB port, then connect USB A into the USB port on either the front or the back of the printer
- If a retained connection is required between the Compact Touchscreen and the USB cable, the mini USB plug lead can be secured in place by removing the rear cover of the Compact Touchscreen and fitting a small cable tie to the mini USB plug
- If a retained connection is required between the power plug or USB plug and the printer, secure the cables to the retained I/O cable using cable ties
- If a retained connection is required between the power plug and the printer, use the power cord retaining bracket provided
- The Compact Touchscreen USB cable supplied is 2m in length. A maximum cable length of 3m can be used by either (a) fitting a 1m extension or using a new 3m cable

CAUTION: *Extensions and new cables must be sourced locally.*

- Press the reset button on the printer to turn on the printer and Compact Touchscreen.

I/O Connection Details



Inputs and outputs are made on the 15-pin D-type connector on the rear of the printer. The pin allocations follow.

- Notes: (1) **Output Volt-free contacts:** These contacts are operated and driven by a relay on the printer circuit board. They are normally open or normally closed depending on the assigned function. They serve as a switch operated by the printer to output its status.
- (2) **Input Volt-free contacts:** Their main function is to provide the start signal for printing. These contacts can be operated by a switch connected to the printer.

Pin Allocations

Name	Type	Default Function	J3 Pins	Colours
Output 1	Volt-free contacts	Ready / Returning	4, 12	Orange - Light Green
Output 2	Volt-free contacts	Error	3, 11	Red - Pink
Output 3	Volt-free contacts	Warning	2, 10	Brown - White
Output 4	Powered contact	Busy	1, 9	Black - Grey
Input 1	NPN	Encoder (duplicated on 5-pin DIN)	8, 15	Purple - Red / White
Input 2	Volt-free contacts	Start Signal	5, 13	Yellow - Black / White
Input 3	Volt-free contacts	None	6, 14	Green - Brown / White
Input 4	Volt-free contacts	Remote Trigger Front Multi-Function Button (Function cannot be changed)	7, 15	Blue - Red / White

The volt-free output contacts are each capable of handling a load of 30V 100mA.

The function of each output can be changed in the software - the defaults are listed in the table, [see “Output Connections” on page 2-17.](#) for descriptions.

For more information regarding configuration of inputs and outputs, [see “Inputs/Outputs” on page 3-51.](#)

Output Voltage

Pin 9 can be used to provide 5V or 24V with ground on pins 13, 14 or 15.

Note: Default output voltage is 24V.

Output voltage of the powered contacts is set by JP1 and JP2 on the connection board, as follows:

JP1 and JP2 Position*	Output Voltage (Pin 9)	Maximum Current
1-2	5V	100mA
2-3	24V	500mA

*Both jumpers must be moved.

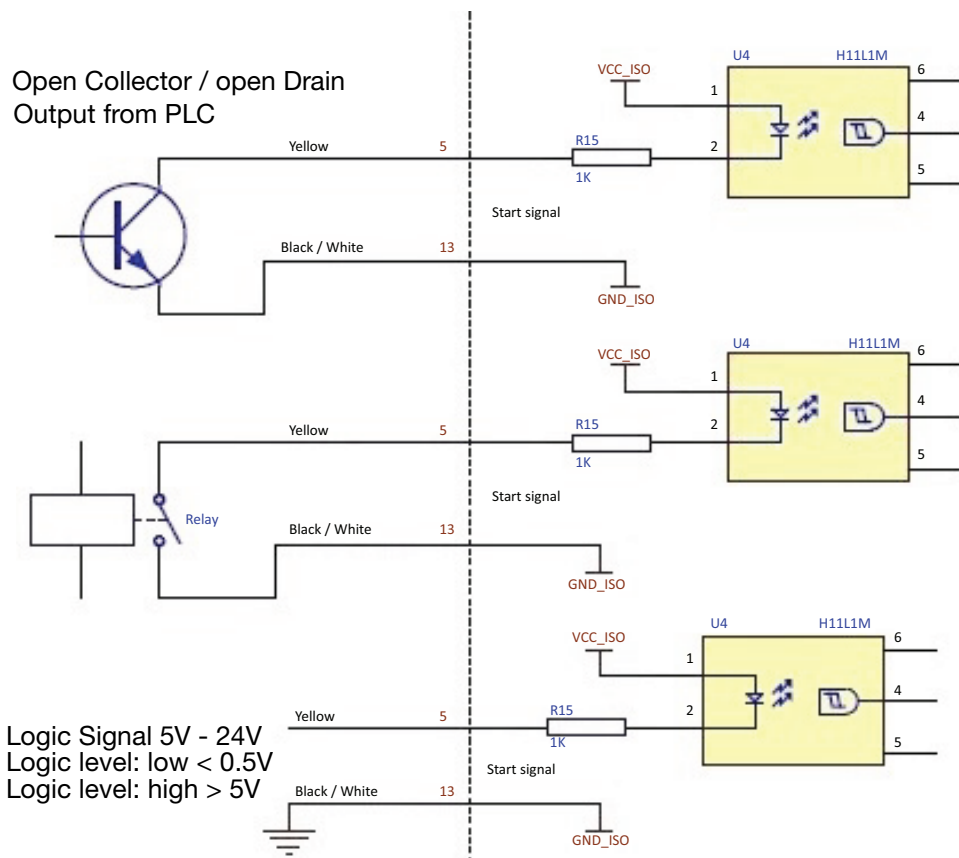
Example Connections

Start Signal

Using volt-free contacts - The start signal is the trigger for the printer to start the printing process. The signal must be a minimum of 50ms duration. The connection is made using pins 5 and 13 of the I/O connector, as shown in the following diagram:



Alternative Start Signal



Front Multi-Function Button

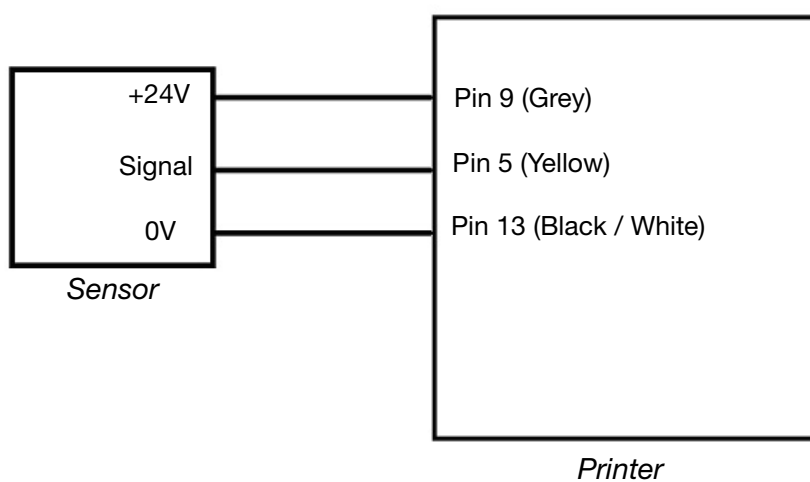
Using volt-free contacts - The front multi-function button can be triggered with a 1 second pulse which will either tension the ribbon, initialise the printer or clear error (depending on printer status). An 8 to 10 second pulse will switch off the printer. The connection is made using pins 7 and 15 of the I/O connector, as shown in the following diagram:



Using a 24V Product Detector or Proximity Sensor

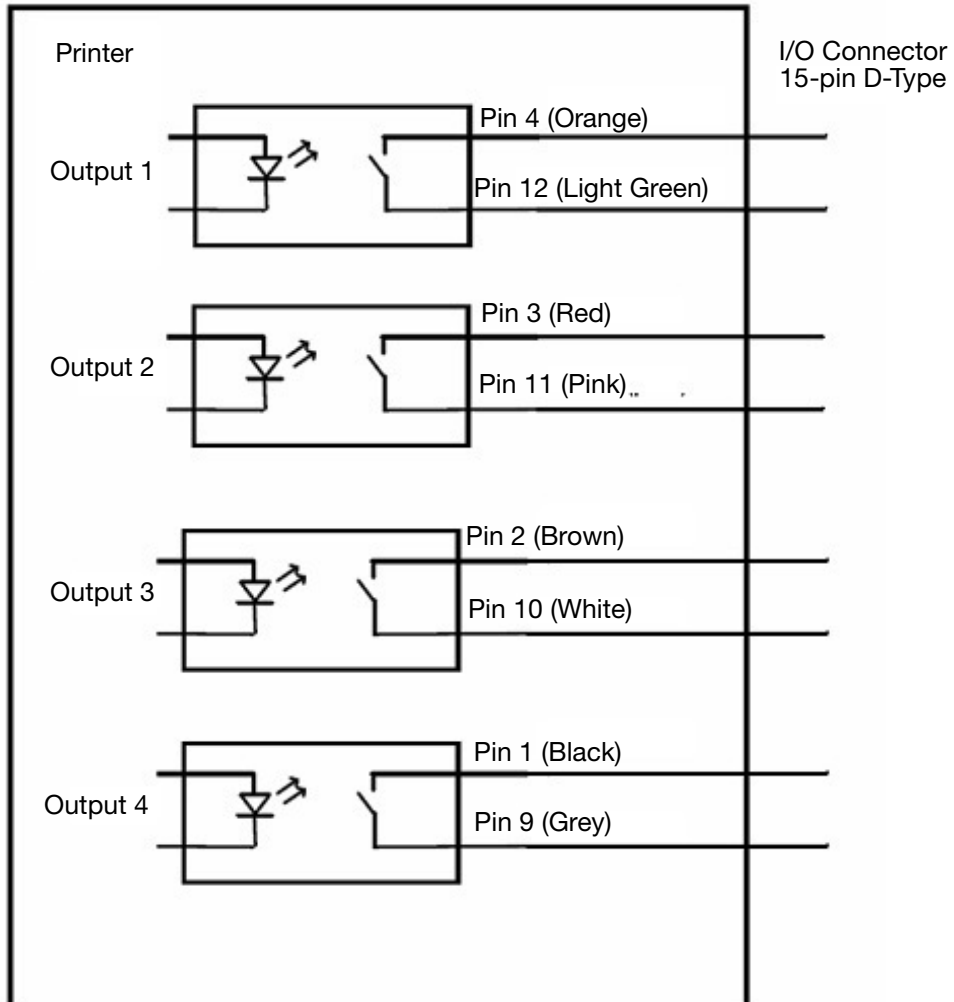
- (1) Ensure JP1 and JP2 on the connector board are set to the default position 2-3 for 24V. [See “Output Voltage” on page 2-13.](#)
- (2) Connect the NPN sensor as follows:

+24V	Pin 9
0V	Pin 13
Signal from sensor	Pin 5



Output Connections

Outputs 1, 2 and 3 are volt-free contacts with a maximum loading of 30V 100mA. Output 4 is a powered contact, Pin 9 is supplied with 24V by default. See [“Pin Allocations”](#) on page 2-12.



Remote Pause

To remotely pause and resume printing, a switch can be connected to pins on the I/O connector on the rear of the printer.

Notes: (1) When remote pause is enabled the pause and resume buttons will not be shown on the home screen.

(2) When the switch is closed the printer is paused, when the switch is open the printer will resume.

(1) Select 2 available pins from the table below and connect the switch.

Printer	
Pins	Colours
5-13	Yellow - Black/White
6-14	Green - Brown/White
8-15	Purple - Red/White

(2) Select *Settings > IO Port > Assignment > Remote Pause*

(3) Choose which input the switch is connected to from the drop down menu.

Connecting Encoder to I/O Connector (CM only)

The encoder can be connected to Input 1 of the I/O Connector which duplicates the encoder connector.

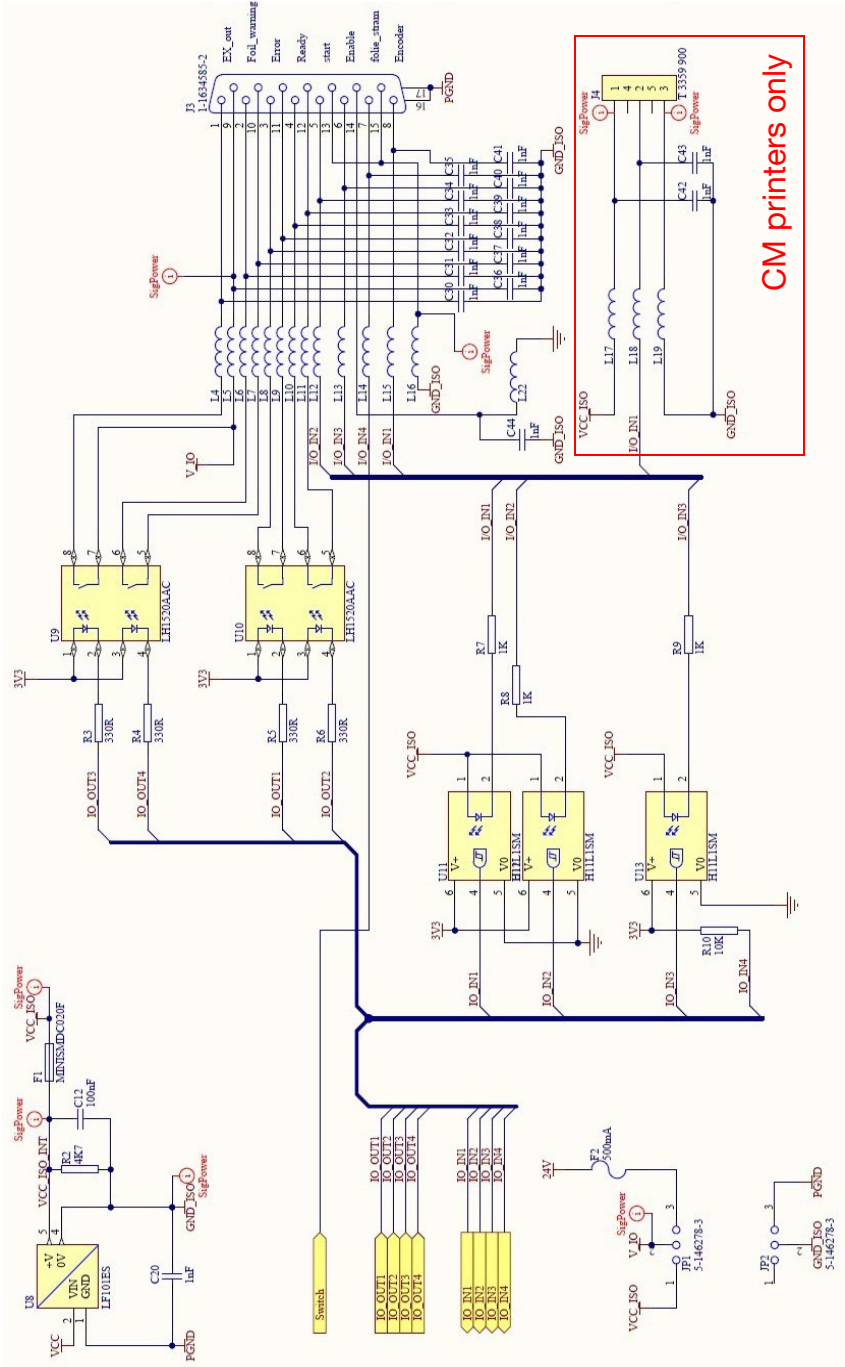
- (1) Ensure printer supplies +5VDC on pin 9. [See “Output Voltage” on page 2-13.](#)
- (2) Connect:

Pin 15 (Red / White) to Pin 3 (Blue) of Encoder (0V)

Pin 8 (Purple) to Pin 2 (White) of Encoder (Signal)

Pin 9 (Grey) to Pin 1 (Red) of Encoder (+5V)

I/O Wiring Diagram



CM printers only

Connectivity

The following diagram shows general connectivity for the printer. This example shows a Compact Touchscreen connected directly via USB.



- Notes: (1) The rear USB and Mini USB connections share a port and therefore cannot be used together.
- (2) To connect the printer to a network, see [“Compact Touchscreen to One Printer” on page 2-22](#). To connect the printer to a PC or laptop, see [“PC or Touchscreen to One Printer” on page 2-25](#).

Compact Touchscreen to One Printer

The Compact Touchscreen can be connected to the printer via direct USB connection (no network.)

- One Compact Touchscreen connects to one printer at a time
- Connect Compact Touchscreen at rear or front USB
- Compact Touchscreen can be "hot swapped" between many printers



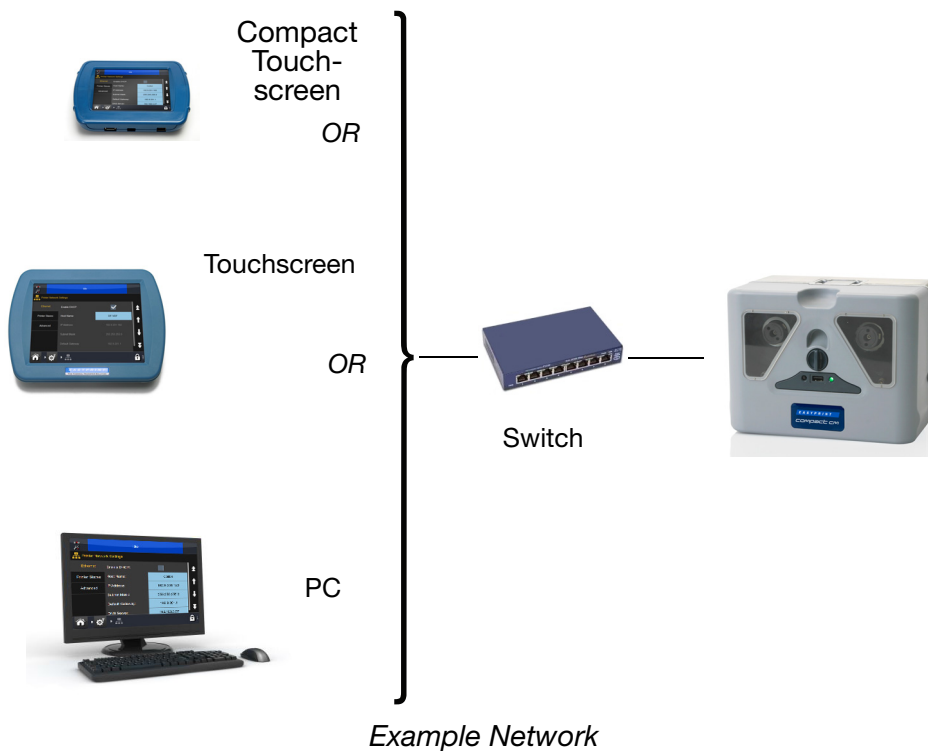
Direct USB Connection -

PC / Compact Touchscreen / Touchscreen to Networked Printers

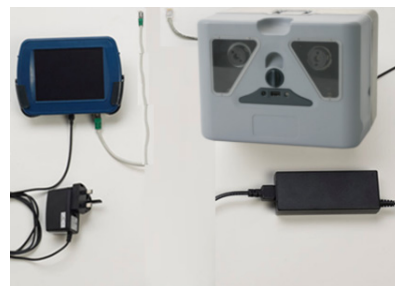
CAUTION: *Power over Ethernet. Risk of equipment damage.
Use optional adapter cable EPT031606 to provide a
DC block if the network equipment is susceptible to
damage by Power over Ethernet from the printer.*

An example network diagram follows, in which a Compact Touchscreen, Touchscreen or PC can be connected to several networked printers:

Example Network



- One Compact Touchscreen connects to many printers at a time
- Extra PSU for Compact Touchscreen is required
- Network hub and Ethernet cables are not supplied



Compact Touchscreen Connection - Networked Printers

CAUTION: *If using an Ethernet cable to connect the printer to the Compact Touchscreen, use STP (Shielded Twisted Pair) type - rather than UTP (Unshielded Twisted Pair) type - to comply with EMC regulations.*

Note: *A USB power supply is available to power the Compact Touchscreen separately to the printer. This will allow the Compact Touchscreen to control more than one printer across an Ethernet network. Additional parts such as a network switch and cables may be required, which will need to be purchased locally.*

Network Set-up

See [“Printer Network Settings” on page 2-26](#). for details on the printer network settings.


Connecting to Networked Printers

See [“Example Network” on page 2-23](#).

To log on to a powered-on printer:

- (1) Upon powering on the Compact Touchscreen / Touchscreen, select the desired printer from the list of available printers.
- (2) If displayed, at the Log In screen, enter the UserID and password.
- (3) Select Log In.

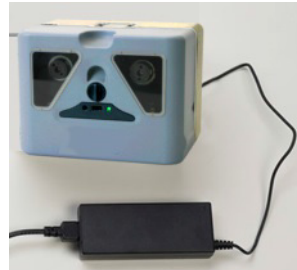
To disconnect the Compact Touchscreen from the selected printer or switch to a different available printer:

- (1) From the Log In screen: Select *Disconnect* - the Connection screen appears, where you can select another printer to connect to or power down the Compact Touchscreen.
- (2) From any other screen: Select , then select *Disconnect from printer* - the Connection screen appears, where you can select another printer to connect to or power down the Compact Touchscreen.

PC or Touchscreen to One Printer



Crossover
Ethernet Cable



Note: *Initially, ensure both printer and PC are DHCP enabled. Then, if required, set the IP settings for the printer and PC/Touchscreen.*

PC to Networked Printers

See [“PC / Compact Touchscreen / Touchscreen to Networked Printers”](#) on page 2-23.

Printer Network Settings

All printers and controllers are set up to connect to each other out of box.

Ethernet

Set the Ethernet setting as required for the connected printer.

DHCP will automatically assign IP addresses on a dynamic network.

The default settings are as follows:

- Enable DHCP (DHCP is NOT enabled by default)
- Printer IP address: 192.168.125.201
- Touchscreen IP address: 192.168.125.200.

Printer Slaves

The Printer Slaves function allows one printer to control up to 10 other networked printers performing the same task. The user can also add or remove a slave printer, as well as edit the details of an existing printer.

To employ the master/slave printer relationship, at least two printers are required on the same network. One printer is selected as the master printer, which can forward print jobs to one or more slave printers.

The Printer Slaves tab enables the user to:

- Add Printer Slave
- Select a reference name for the printer in the Name field
- Enter the IP address of the printer to be the slave printer

Enable communication to the slave by ticking the tickbox - if left unticked, the slave setting will remain inactive.

Webserver

The printer can be controlled from a desktop PC or laptop using a standard web browser.

Note: The Message Editor function is not available.

The following web browsers are supported:

- Microsoft Internet Explorer from version 9.0
- Mozilla Firefox from version 22
- Google Chrome from version 27
- Apple Safari from version 6

To connect:

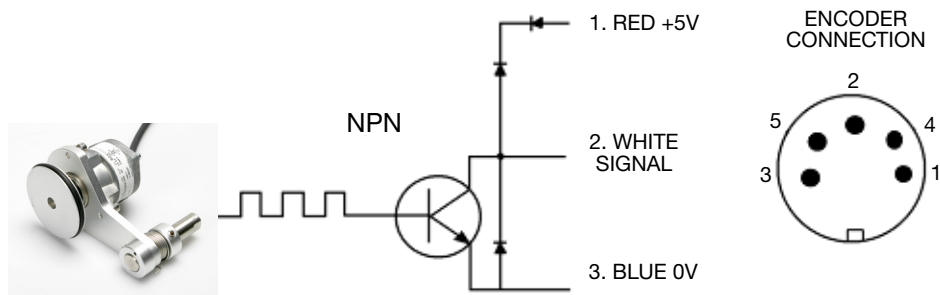
- (1) Connect the PC and Printer directly via Ethernet connection. [See “PC or Touchscreen to One Printer” on page 2-25.](#) Or through a network connection. [See “PC / Compact Touchscreen / Touchscreen to Networked Printers” on page 2-23.](#)
- (2) Power on the printer and start the PC
- (3) Start the PC web browser application
- (4) Enter “http://[IP address of the printer]” in the address field of the web browser

Notes: (1) The default printer IP address is 192.168.125.201.

- (2) *If the IP address is not known [See “Locating the Printer’s IP Address when Not Known” on page 2-42.](#)*

Encoder Connection (CM only)

For CM printers, the Shaft Encoder connection is shown.



Shaft Encoder Connections to the Printer

Compact Touchscreen

Note: *The Compact Touchscreen is optional and might not be supplied with the printer.*



CAUTION: *Due to limitations in the USB connection, do not attach devices consuming power above 100mA to the USB port of the Compact Touchscreen. If this is a requirement, use a powered USB hub.*

- If a retained connection is required between the Compact Touchscreen and the USB cable, the mini USB plug lead can be secured in place by removing the rear cover of the Compact Touchscreen and fitting a small cable tie to the mini USB plug
- The Compact Touchscreen USB cable supplied is 2m in length. A maximum cable length of 3m can be used by either (a) fitting a 1m extension or using a new 3m cable

Note: *Extensions and new cables must be sourced locally.*

- Press the reset button on the printer to turn on the printer and Compact Touchscreen.

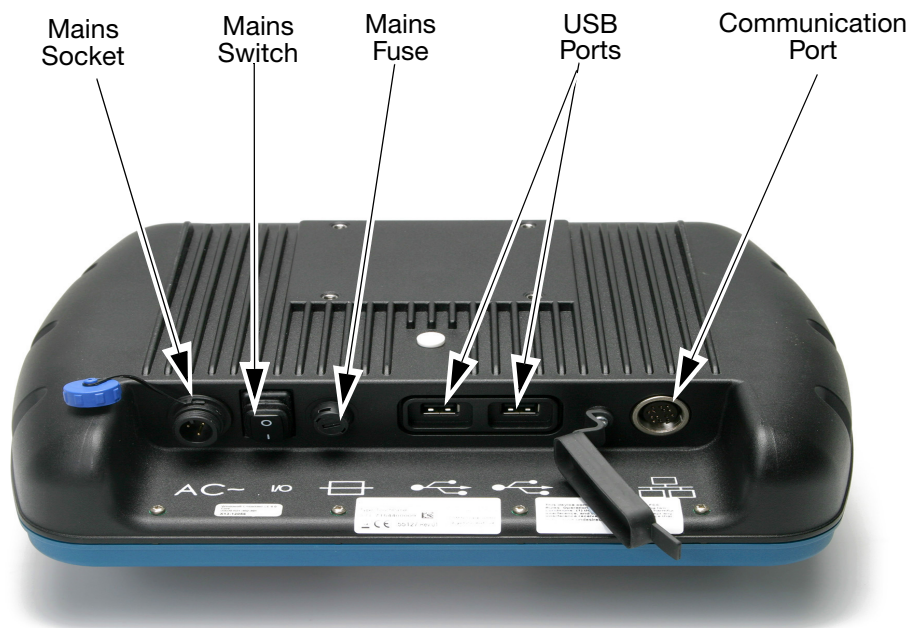
Touchscreen

- Notes:(1) *The Touchscreen is optional and may not be supplied with the printer.*
- (2) *The printers have a powered Ethernet port. This can be used to power the Touchscreen without additional power cables.*

Contents	Part No.
Optional Touchscreen (with European mains lead and crossover Ethernet cable)	EPT007715
Optional Touchscreen (with US mains lead and crossover Ethernet cable)	EPT007714
European Power Cable	VEY1414
US Power Cable	VEY1415
Cable to I/O box, Ethernet	EPT007719



Touchscreen Rear View



- Plug the crossover cable into the I/O box
- Connect the mains cable to the Touchscreen
- Connect the crossover cable to the Touchscreen
- Turn on the power to the Touchscreen
- Select the printer to connect to and log in if required
- Open the Message Store
- Highlight a design
- Press Print.

PRINTER SET-UP

Setting the Ribbon Type

The ribbon type setting is used to set the optimum print parameters for each ribbon type. This allows for faster set up, better print quality and sets the correct ribbon length.

Note: The default ribbon type is Custom, this allows the ribbon diameter and length to be set manually.

- (1) Select *Printer Status > Ribbon > Ribbon Type*.
- (2) Choose the correct ribbon type from the list.

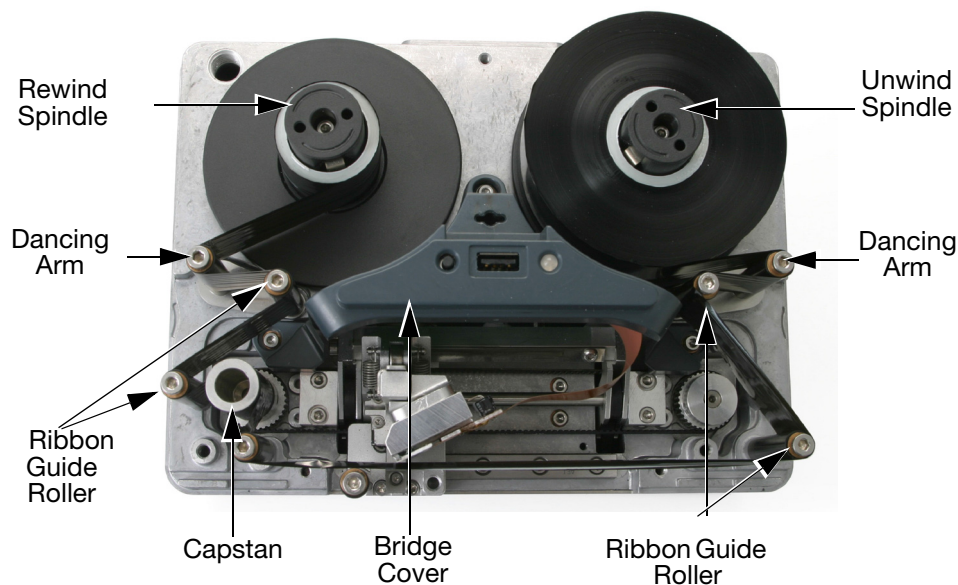
Threading the Ribbon



WARNING: Care must be taken when replacing/threading ribbons to avoid cutting hands or fingers.

- Notes: (1) To ensure good quality print, always clean the print head and capstan before fitting a new ribbon to the printer.
- (2) When fitting a new ribbon, ensure loose ribbon is wound up on the take-up spool to create tension in the ribbon path. If this is not done, the ribbon will not be fed correctly around the guides and rollers in the ribbon path. This will result in poor or no printing.

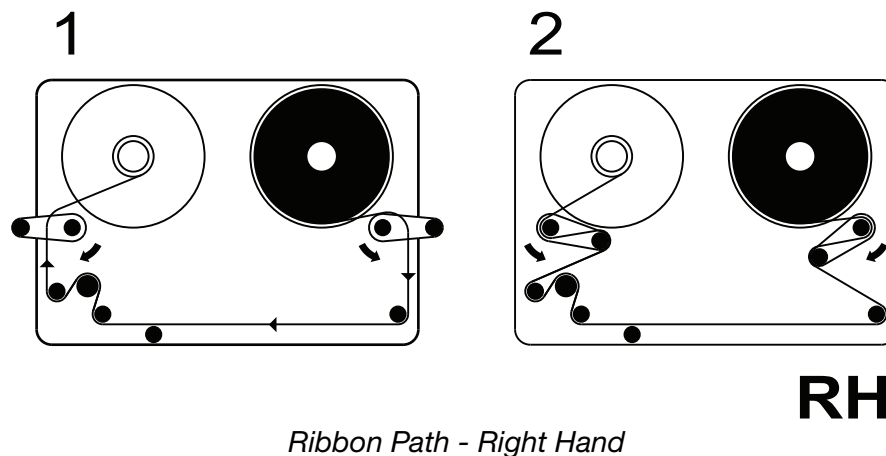
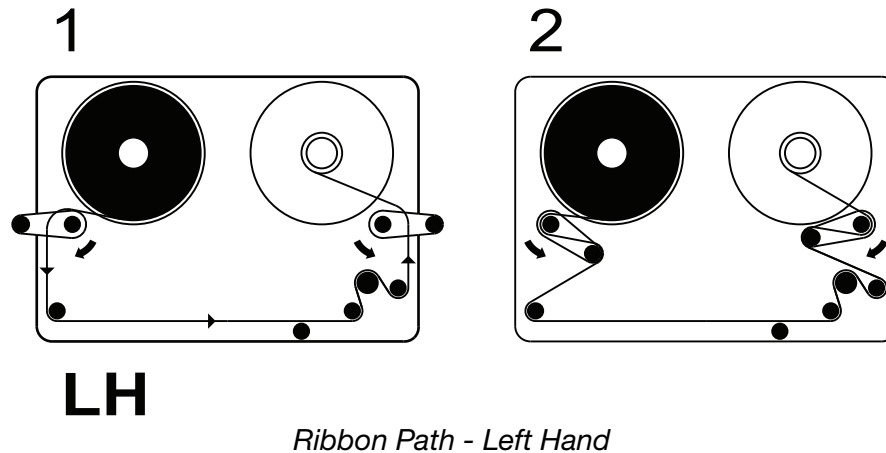
Ribbon Threading Procedure



Ribbon Threading - Right-hand Printer

- (1) Rotate the quarter-turn latch anti-clockwise. Gently pull the printer's front cover straight out towards you to remove it.
- (2) Fit the new ribbon roll on the unwind spindle and the empty core to the rewind spindle.
- (3) Open the dancing arms to aid ribbon threading.

- (4) The printer will be set up as either a right-hand printer or a left-hand printer. Referring to the ribbon path diagram labels on the printer cover or in the following diagrams, determine whether the printer is set up for left-hand or right-hand printing and thread the ribbon accordingly.



Note: To change the printer from left hand to right hand - or vice versa - see [“Changing Printer Configuration” on page 4-16](#).

- (5) Wrap the ribbon around the empty ribbon core several times, taking up any slack in the ribbon path to complete the operation. Flip the dancing arms back to the closed position.
- (6) Fit the cover. Rotate the quarter-turn latch clockwise and lock it.
- (7) Press the reset button. The printer initialises.

Set Up Printer - Final Steps

- CAUTIONS:**
- (1) *The printer must be calibrated before installing it on the production line. See below.*
 - (2) *In dusty environments, it may be beneficial to fit a Positive Air Kit (P/N EAS002970).*

Calibrating the Printer

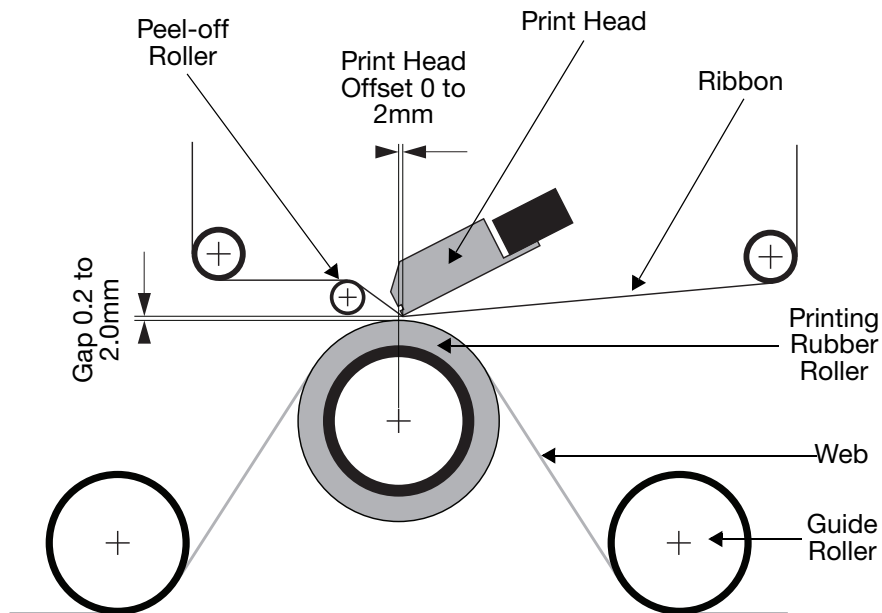
CAUTION: *When calibrating, the print head must be able to extend fully, please ensure enough space is allowed to perform this function.
For CM printers, the print head position parameter must be set to allow this.
For IM printers, the printing surface should be moved from under the printer. If neither is possible, remove the printer from the bracket.*

Calibrate at the printer operating temperature. Go to *Settings > Production Line Setup > Head Functions* and select *Calibrate*.

Optimising the Print Head

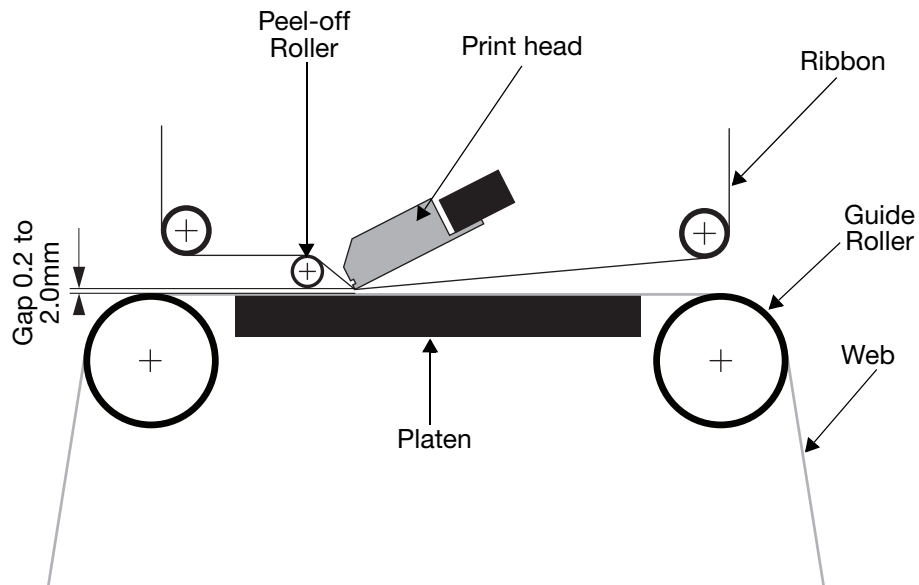
Having mechanically installed the printer in the brackets, optimise the head position for printing:

- (1) Go to *Settings > Production Line Setup > Line Movement*. Either *CM (Moving)* or *IM (Static)* will be displayed in the *Line Movement* pull-down menu. (This corresponds to the type of printer in use.)
 - (a) For CM printers, set the Encoder Divide to 0. The current read-only Line Speed is updated every few seconds.
- (2) Go to *Settings > Production Line Setup > Head Functions*. Manually adjust the Head Position and Print Head Height parameters to set the correct distance of 0.2-2mm between the print head and substrate for both CM and IM printers.
- (3) Review the following CM and IM bracket mounting diagrams:



Bracket Mounting - Continuous Mode (CM)

Description and Installation



Bracket Mounting - Intermittent Mode (IM)

- (4) Set the Print Trigger as required at *Settings > Production Line Setup > Print Trigger*. For more information, see [“Print Trigger” on page 3-48](#).
- (5) Go to *Settings > Production Line Setup > Print Head* and set the Head Position:



- (a) For CM printers, set the Head Position so that it is above the roller.
- (b) For IM printers, we recommend that the horizontal print head position is set to 0.

Test Print and Calibrate

Go to *Settings > Production Line Setup > Head Functions* and select the desired function.

For further information, see [“Head Functions” on page 3-50](#).

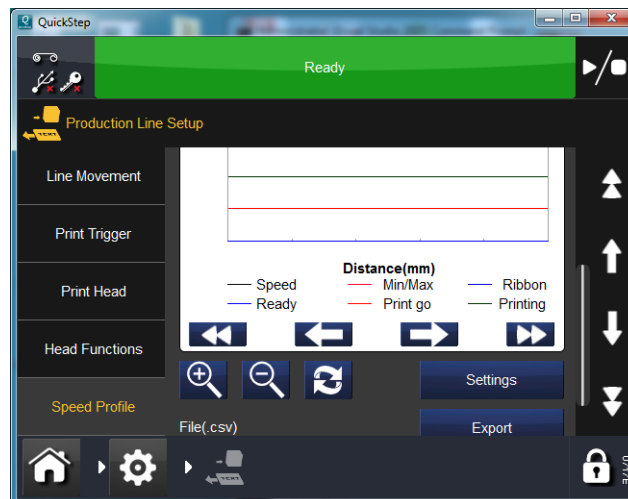
Speed Profile

The Speed Profile function allows instantaneous display of the print trigger signal alongside the substrate speed and the ribbon speed.

This allows simple and fast optimisation and fault finding on the TTO printers.

- (1) Connect to a printer.
- (2) Ensure a label is loaded to print.
- (3) Press *Home > Settings > Production Line Setup > Speed Profile*

A blank graph should be visible:




The *Settings* button allows you to set up the following:

X-Axis: (Time or distance).

X-Axis: Sample length (in mm or ms, as selected above).

Trigger by: Either trigger on *print go*, or set to run until an error is raised.

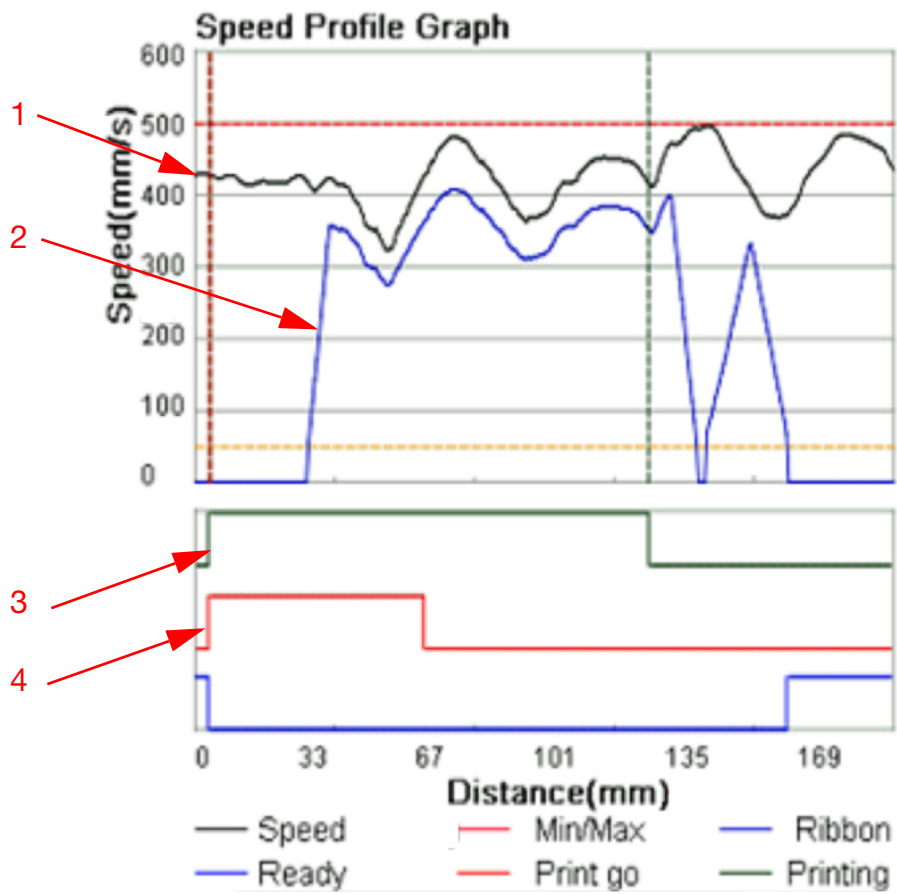
Check the tick boxes to show/hide individual graphs.

- (4) Press Refresh  to activate the speed profile.

- (5) Wait while the Speed Profile is captured.

The pop up will auto dismiss and the speed profile graph will be displayed.

CM Speed Profile Graph

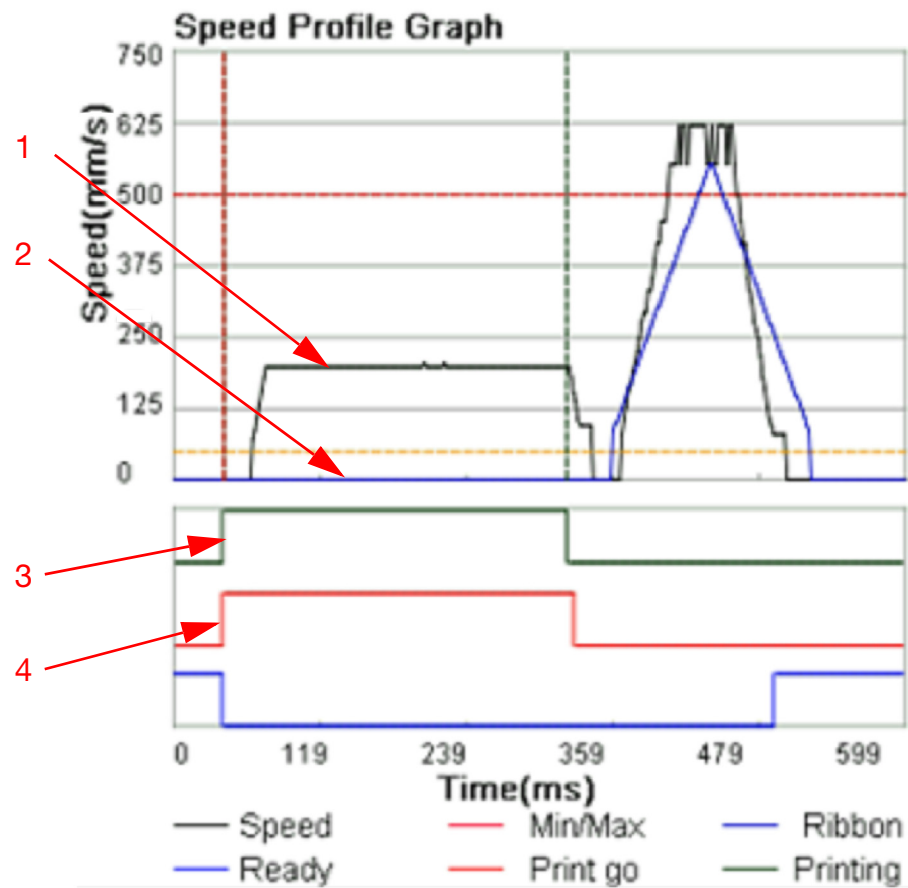


1	Substrate speed
2	Ribbon Speed
3	Printing
4	Print Go

It may be necessary to scroll up/down and left/right to see the full graph.

Press Refresh  to repeat the capture.

IM Speed Profile Graph



1	Printhead speed
2	Ribbon Speed
3	Printing
4	Print Go

It may be necessary to scroll up/down and left/right to see the full graph.

Press Refresh  to repeat the capture.







User Interface Settings

User Interface Settings are used to define the Compact Touchscreen / Touchscreen settings and connectivity to printers.

Unlock User Interface Settings

User interface settings are password protected to prevent accidental changes. To unlock the user interface settings whilst the user interface is connected to the printer follow the procedure from [step \(1\)](#). If the user interface is not connected to the printer follow the procedure from [step \(2\)](#).

- (1) From the home screen select  > Disconnect From Printer.
- (2) Select  > Unlock UI Settings.
- (3) Enter the password: QS and select .

To lock the user interface settings select  > Lock UI Settings.

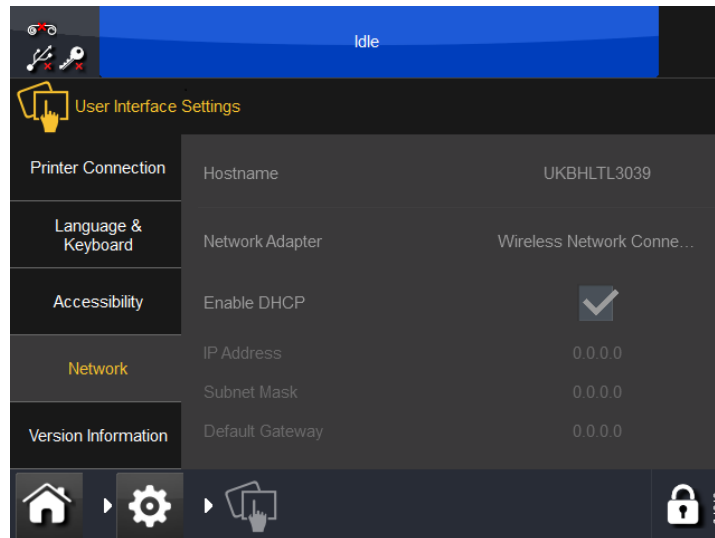
Printer Connection

Set up the method of connection between the Compact Touchscreen / Touchscreen and printers.

Select one of the following Connection Methods to connect the UI to the printer(s):

- Broadcast: Use this option if the Compact Touchscreen / Touchscreen is to be used with multiple printers on a network. In this mode, the Compact Touchscreen / Touchscreen will display a list of all detected devices to which it can be connected
- Direct: Use this option if the Compact Touchscreen / Touchscreen is to be connected directly to a printer
- Favourite: Use this option to list specific printers on the network that are used with this Compact Touchscreen / Touchscreen.

Network



Set up the network settings for the Compact Touchscreen / Touchscreen.

The IP address of the device can be changed manually or automatically. When connected to a network, always manually assign one IP address to the printer and another IP address to the Compact Touchscreen. While automatic assignment of IP addresses may seem simpler, some complications are associated with this approach. For example:

- When a printer or a Compact Touchscreen is assigned an IP address by the network it will use this address until powered down. However, when the device is powered up again, there is no guarantee that it will get the same IP address. If a PC-based interface running a standard browser such as Internet Explorer is used, re-establishing a connection is not straightforward.
- Activating automatic IP address assignment (Enable DHCP) may change the range of each device such that they can no longer connect.

Version Information

This tab displays version information for the Compact Touchscreen / Touchscreen.

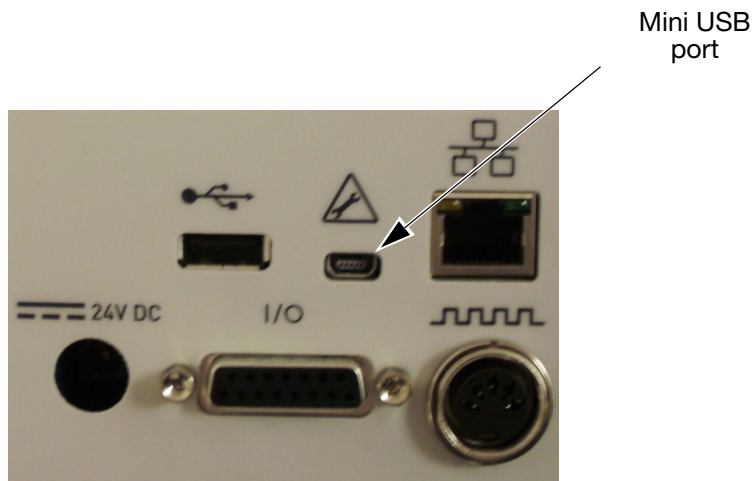
Locating the Printer's IP Address when Not Known

Requirements

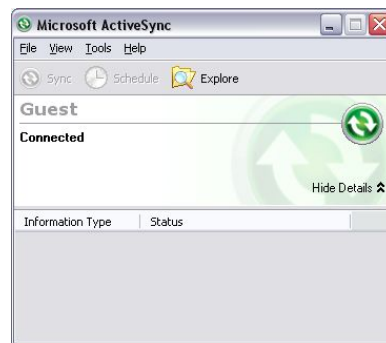
- Computer with Microsoft ActiveSync for Windows XP or Mobile Device Center for Windows Vista or Windows 7 (version 4.1 or higher). ActiveSync can be downloaded from Microsoft homepage
- USB cable with mini USB at the printer end.

Connecting

- Turn on the printer
- Wait 45 seconds
- Ensure that the standard USB connector at the rear of the printer is not being used. Use the mini USB cable to connect the PC to the printer's mini USB connector, as shown in the following images:



- Windows Mobile Device Center (or ActiveSync in Windows XP) should now activate:



- To explore the device, select *Explore*.

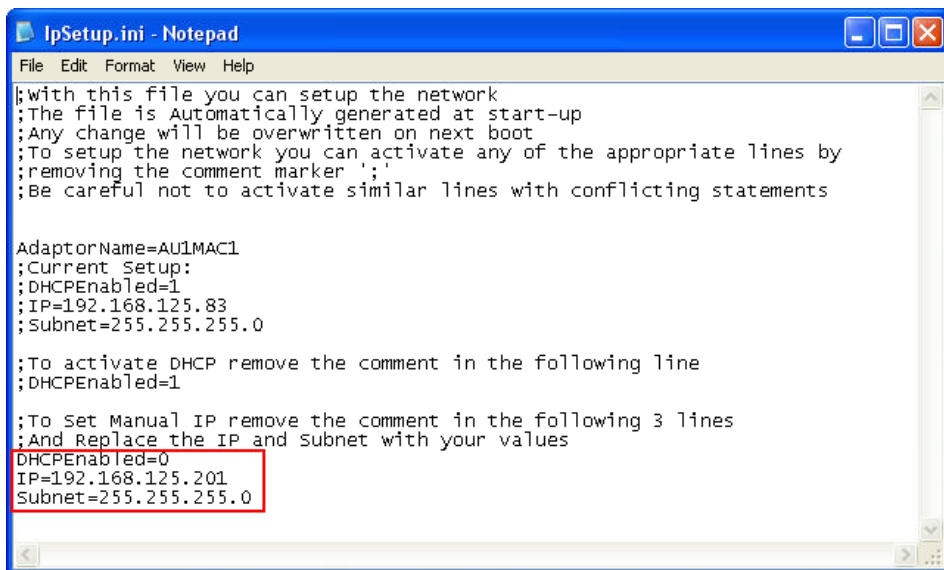
If the program does not start, remove the mini USB cable and reinsert it.

Use of USB to Find Out which IP the Printer is Using

- (1) Navigate to the root folder of the device.
- (2) If the printer software has started, a file named 'IP_Address.txt' should be there (press refresh once, as the folder is sometimes not updated).
- (3) Copy the 'IP_Address.txt' file to the PC's hard drive.
- (4) Use Notepad to open the 'IP_Address.txt' file now located on the PC.
- (5) The file shows the IP address that was used during the last connection.
- (6) Remove USB cable if no further connection is required.

Change IP Address of Printer Using USB

- (1) Navigate by using Explorer in ActiveSync to the '\Flash Disk' folder of the device.
- (2) Copy the file 'IpSetup.ini' to the PC's hard drive.
- (3) Edit the file (using Notepad on the PC) to your requirements (the file should be self explanatory). See the following image, where the text box at the bottom shows a manual IP set-up:



- (4) Save the file.
- (5) Copy the file back onto the device in the '\Flash Disk'.
- (6) Remove USB cable and reboot printer.

Changing the Compact Touchscreen / Touchscreen IP Address

Note: User interface settings must be unlocked before starting this procedure [see "Unlock User Interface Settings" on page 2-40](#).

To change the IP address of the Compact Touchscreen / Touchscreen when it is running from an external PSU:

- (1) Select *Settings > User Interface > Network*
- (2) Select the Hostname.
- (3) Untick the Enable DHCP tickbox.
- (4) Change the IP Address, which changes immediately.

Note: If the default server IP address of the Compact Touchscreen is changed, the user will be unable to reconnect to the printer via USB using the Compact Touchscreen. See the following section.

Adding More Connections

To add a new printer to the network or if an existing printer has been assigned a new IP address follow the procedure below.

Note: User interface settings must be unlocked before starting this procedure [see “Unlock User Interface Settings” on page 2-40](#).

Compact Touchscreen

Note: The Compact Touchscreen can find printers that are not in the same IP address RANGE as the Compact Touchscreen. This means that while the user may be able to locate a printer, the different RANGE prohibits making an actual connection. This will be indicated by the online indicator being red. If this is the case, modify the IP address of the Compact Touchscreen or printer. [See “Locating the Printer’s IP Address when Not Known” on page 2-42](#).

- (1) Ensure that the printer is turned on and attached to the network.
- (2) Ensure that the Compact Touchscreen is not connected via USB to any printers but is powered by the optional power supply and connected to the network via an STP ethernet cable.
- (3) Ensure that the Compact Touchscreen’s IP address is set correctly.
- (4) Select Settings > Printer Connection > Connection Method and choose one of the following connection methods:

Broadcast: Select *Broadcast* to display a list of detected devices on the network.
To refresh the list go back to the connection menu and select *Refresh*.

Direct: If the device’s connection details are known select *Direct > Add Direct*. Enter the *Name*, *Type*, *IP Address*, *Port*, *Host* and select *OK*.

If the device’s connection details are not known select *Direct > Add Direct > Get from Broadcast*. Choose from the list of detected devices on the network.

Favourite: Create a list of favourite printers. If the connection details are known select *Favourite > Add Favourite*. Enter the *Name*, *Type*, *IP Address*, *Port*, *Host* and select *OK*.

If the device’s connection details are not known select *Favourite > Add Favourite > Get from Broadcast*. Choose from the list of detected devices on the network.

Touchscreen

- (1) Ensure that the printer is tuned on and attached to the network.
- (2) Ensure that the Touchscreen is not connected to any printers.
- (3) Select *Settings > Printer Connection > Connection Method* and choose one of the following options.

Broadcast: Select *Broadcast* to display a list of detected devices on the network.
To refresh the list go back to the connection menu and select *Refresh*.

Direct: If the device's connection details are known select *Direct > Add Direct*. Enter the *Name, Type, IP Address, Port, Host* and select *OK*.

If the devices connection details are not known select *Direct > Add Direct > Get from Broadcast*. Choose from the list of detected devices on the network.

Favourite: Create a list of favourite printers. If the connection details are known select *Favourite > Add Favourite*. Enter the *Name, Type, IP Address, Port, Host* and select *OK*.

If the devices connection details are not known select *Favourite > Add Favourite > Get from Broadcast*. Choose from the list of detected devices on the network.

USB Connection Setup (Printer and Compact Touchscreen only)

Note: User interface settings must be unlocked before starting this procedure [see “Unlock User Interface Settings” on page 2-40](#).

To connect to a printer with a Compact Touchscreen via USB follow the procedure below.

- (1) Ensure that the printer is turned on and attached to the Compact Touchscreen via USB cable.
- (2) Select *Settings > Printer Connection > Connection Method > Direct*.
- (3) Tick the *Auto Connect* check box.
- (4) Select *Add Direct*.
- (5) Select *Name* and enter a value. This value is not used for connection; you may enter the host name of the printer for example.
- (6) Select *Type* and choose *TTO* from the drop down menu.
- (7) Select *IP Address* and enter *169.235.97.135*.
- (8) Select *Port* and enter *700*.
- (9) Select *Host* and enter the host name of the printer. This value will be displayed next to the IP address of the printer on the Compact Touchscreen connection screen. The value entered is not used for connection.

Reconnecting the Compact Touchscreen via USB

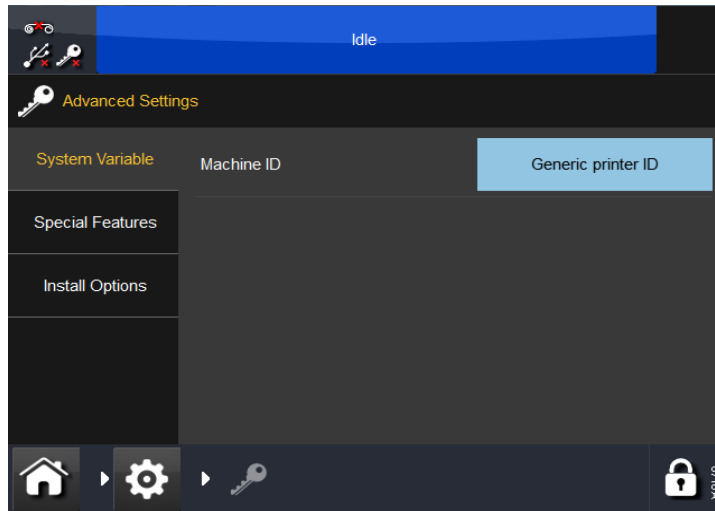
Note: User interface settings must be unlocked before starting this procedure [see “Unlock User Interface Settings” on page 2-40](#).

To reconnect the Compact Touchscreen via USB:

- (1) In the Compact Touchscreen menu, go to *Settings > User Interface*.
- (2) At the Printer Connection tab, change the Connection Method from *Broadcast* to *Direct*.
- (3) If not already shown, set the Default Server to *169.253.97.135*.
- (4) Check the *Auto Connect* checkbox.



ADVANCED SETTINGS



System Variable

- Machine ID - Use this setting to assign a name to the printer. It is this name that defines the machine ID (identity), which can be used as a variable in a message

Note: Do not confuse the machine ID with the host name.

Special Features

This tab shows the System ID.

Note: Feature Codes such as Continuous Head Down, Override Max Contrast, Override Print Position or SD Emulator can be added or removed.

Install Options

- **Hotstart** - When the system is switched on, the Hotstart function (if enabled) automatically tries to load the design that was loaded when the system was last switched off

Note: Any counters and real time variables in the design are re-initialised as they would be during a normal job load.

- **Do not Display Out of Memory** - The user can assign this setting if an 'Out of Memory' error displays
- **Disable Complex Scripting** - Complex scripting is required for displaying Arabic text and is enabled as default. However, it makes rendering of text quite slow (only noticeable for large text fields). To change the setting, set or remove the tickbox and perform a mandatory reboot of the printer. To verify if Complex Scripting is enabled, a design with some Arabic text is required. When Complex Scripting is enabled, the text is 'correct'. When it is disabled, it is 'incorrect'
- **Auto Copy Designs** - If a USB device containing design files stored in the root directory is inserted into the printer, the user is asked if the designs are to be copied to the internal store
- **Auto Copy Fonts** - If a USB device containing font files stored in the root directory is inserted into the printer, the user is asked if the fonts are to be copied to the internal store
- **Abort print at low speed** - The user can select to abort the print at the speed below the set value by ticking the box
- **Ignore Cover Sensor** - [See "Ignore Cover Sensor" on page 4-5.](#)

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PART 3 : Operation

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START-UP


With the printer connected to the power supply and the mains, see [“Connectivity” on page 2-21](#), select the Power / Reset button on the front of the printer.

The printer can be operated via a Compact Touchscreen, Touchscreen, PC or laptop.

From a Compact Touchscreen / Touchscreen:

- (1) Connect the Compact Touchscreen to the printer:
 - (a) If connection is via a USB, the Compact Touchscreen automatically powers on.
 - (b) If connection is via Ethernet, the Compact Touchscreen powers on when the USB power cable is connected or when the Touchscreen is turned on.
- (2) If the connection is via Ethernet, the *Connection* screen displays, either:
 
 - (a) Select the device to connect to, or
 - (b) Long-press the device name for details and then select either *Connect* or *Cancel*.
- (3) Enter Username and Password if requested, the Home Screen will display.

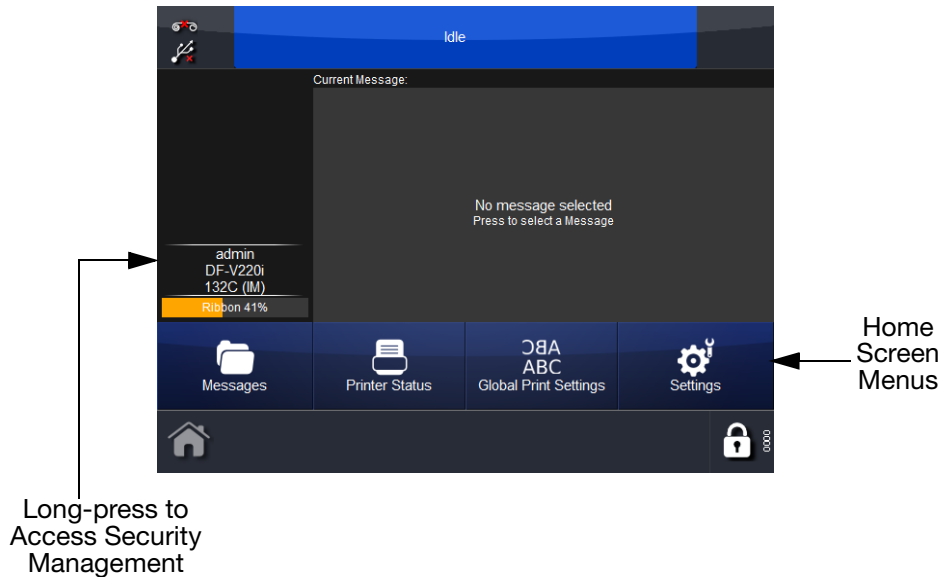
From a PC or laptop:

- (1) Launch the QuickStep PC application.
- (2) At the Connection screen, either:
 
 - (a) Select the device to connect to, or
 - (b) Long-press the device name for details and then select either *Connect* or *Cancel*.
- (3) Enter Username and Password if requested - the Home Screen will display.

Note: The default Username is 'admin'; the password field is blank.

HOME SCREENS MENUS

The default Home Screen Menus are Messages, Printer Status, Global Print Settings and Settings, as shown below:

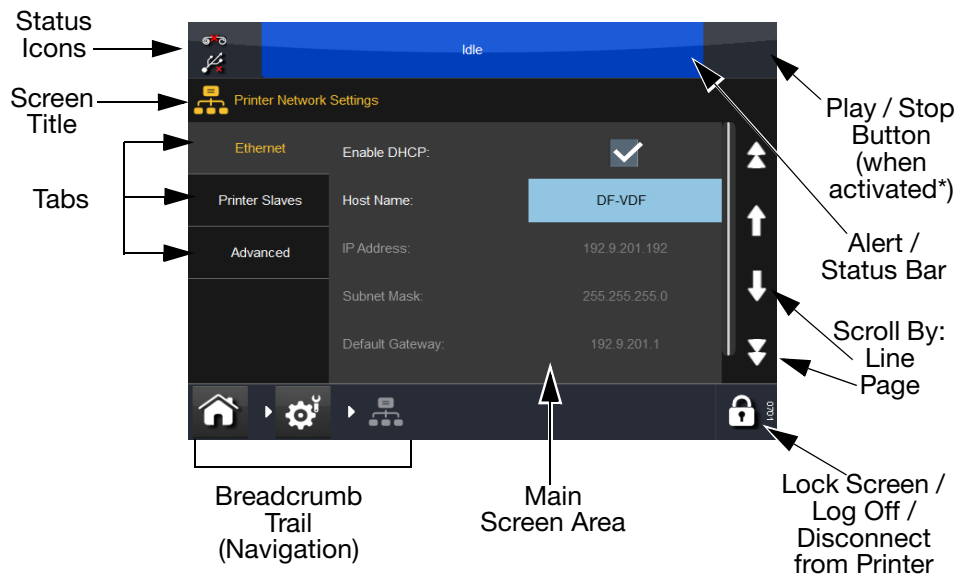


It is possible to configure the third button ('Global Print Settings' in the example above):

- Go to *Settings* and long-press the desired Menu
- At the prompt 'Would you like this button to appear on the Home screen?', select *OK* to confirm or *Cancel*.

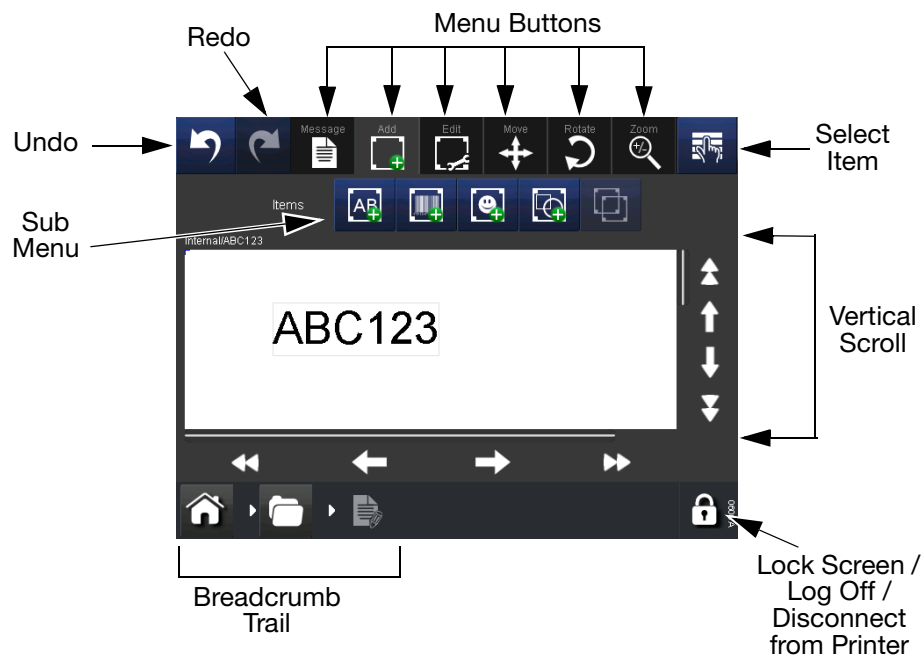
SCREEN FUNCTIONS

General



* For more information, see [“Status Bar” on page 3-8](#).

Editor Screen




- Notes: (1) Long-press can be used on most buttons to view a short description of the button's function.
- (2) When an icon is greyed out, its function is not available from that screen.

SHUT DOWN

Disconnect Compact Touchscreen / Touchscreen from Printer

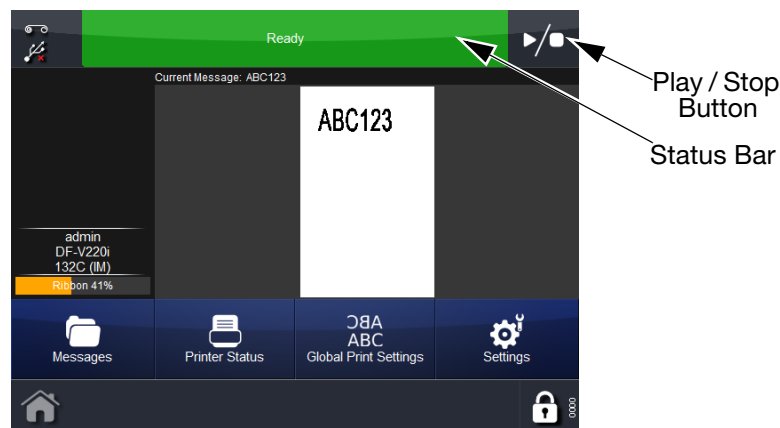


- If you are at the Log In screen, select *Disconnect* OR
- From any other screen, select  and then select *Disconnect from printer*.
- If a Compact Touchscreen is being used, it will turn off when its power is removed. If it is connected by USB, this will happen automatically when the printer is powered off.

Printer Shut Down

To shut down the printer, select and hold the Reset button until the LED changes colour, then release the Reset button.

STATUS BAR

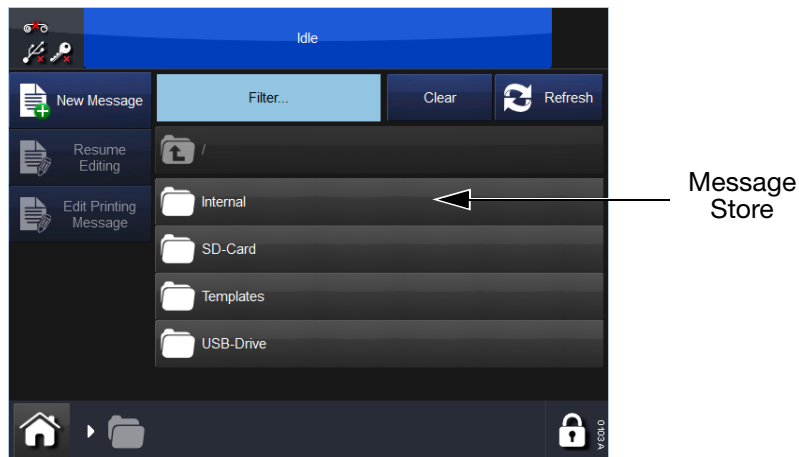


The Status Bar's colour denotes the printer's status, whilst the Play / Stop button enables the user to select a new print state for an active message. For example, if a message is selected and the Status Bar shows 'Ready', select the Play / Stop button to select a new print state. The options are Restart Print, Cancel Print or Pause Print:

- When selecting Restart Print, enter any variable data and the number of prints required if the Print Counter is enabled. Select *Next*. Select the Play / Stop button to select a new state
- When selecting Cancel Print, the print job is removed from the queue - the Status Bar turns blue and displays 'Idle'
- When selecting Pause Print, the Status Bar turns blue and displays *Paused*. Select the Play / Stop button to select a new state
- If no message is selected, the message field displays *No message selected*. The Status Bar is blue and displays 'Idle', and the Play / Stop button is not visible.

MESSAGES

Selecting the *Messages*  button will open the messages screen:

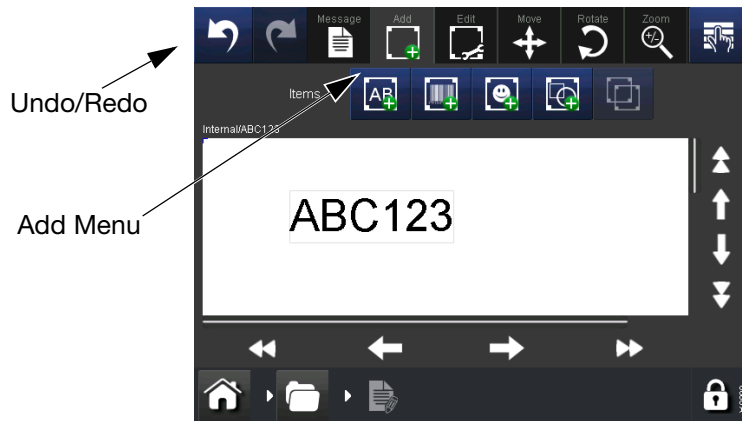


In the screen above, the message store called *Internal* and a list of messages it contains are displayed. Select any saved message from within a message store or from the list of messages. You can then edit, preview, cancel or send the message to print.

To edit a message while it is printing, go to *Home Screen > Messages* and select *Edit Printing Message*.

NEW MESSAGE

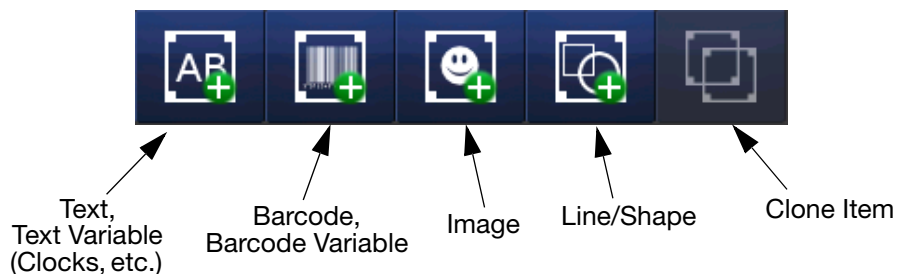
Select *Messages > New Message* to open the Message Editor - note that for new messages, the default menu will be *Add*:



- Notes:*
- (1) *The Undo/Redo buttons can be used at any stage of the message creation or editing process to undo or redo the previous action.*
 - (2) *To see a brief description of a button, long-press the button.*
 - (3) *It is possible to select the message area to locate the cursor - adding an item will then place the item at the cursor point.*

Add

Add various items into the message.



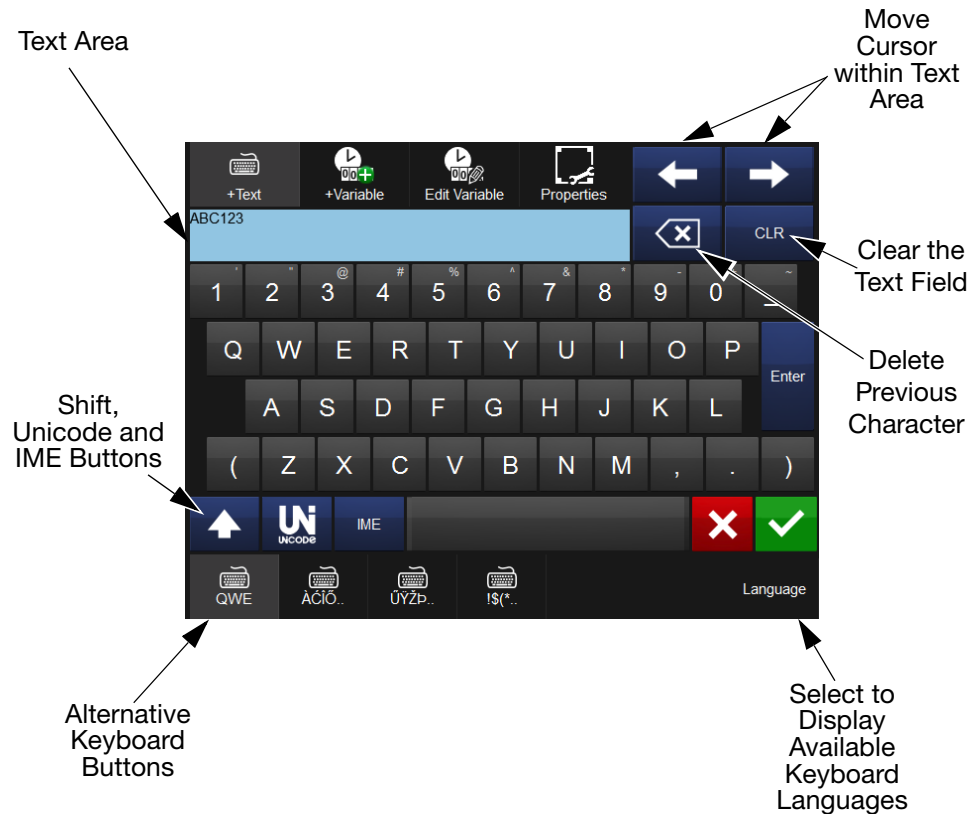
Items Available to Add into a Message

- Notes:*
- (1) *When an icon is greyed out, its function is not available from that screen.*
 - (2) *Long-press an item within the message to open its properties menu.*




Text

To enter text into the message, select the Add Text icon. Enter the required text using the keyboard.




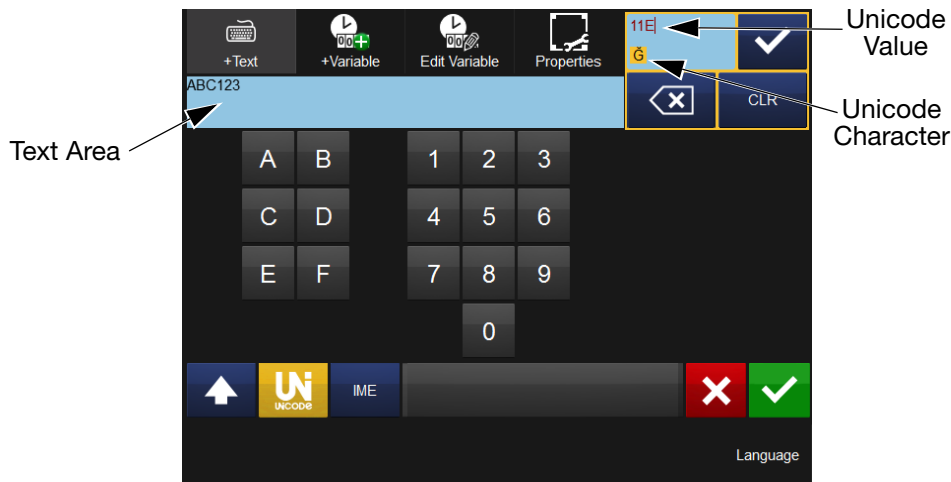
To add lines of text into the message, enter text into the Text Area and select Enter.


It is also possible to include variables, such as clock information, within a text item. If required, select the  variable button, select the variable from the list, or create a new variable.

Alternative characters are available via the Unicode, IME or alternative keyboard buttons at the bottom of the screen.



Operation


Unicode characters can be entered by selecting the  Unicode button (the button will change to amber). Enter the Unicode value - the responding character (and value) will be displayed in the top right of the screen:



Select  to enter this character into the text area - add more Unicode characters as required.



Select the  Unicode button again to revert to the text screen.

Once all characters are added, select  to include the text item in the message. Selecting the  will revert to the *Add* menu without adding the text item into the message.

IME (Input Method Editor), in a similar manner to entering Unicode characters (above), select the  button to display the IME entry area (the button will change to amber)

Enter the required characters.

Select  again to revert to the text screen.

Once all characters are added, select  to include the text item in the message. Selecting the  will revert to the *Add* menu without adding the text item into the message.

Using the Move/Size  and Rotate/Flip  functions, arrange the item as required within the message area.



Variable

Variables such as clocks, counters, prompts, links, etc. can be included in the message.

Select the button and select *+Create New...* to display a list of new variables that can be created.

Clock

Create a new clock variable - enter any offsets required.

The following properties are available for editing:

Format: Click the *format* field to display a list of possible clock formats.

Supported Date Formats		
Value	Description	
d	Day of month as digits with no leading zero for single-digit days.	
dd	Day of month as digits with leading zero for single-digit days.	
ddd *	Day of week as a three-letter abbreviation.	
dddd *	Day of week as its full name.	
M	Month as digits with no leading zero for single-digit months.	
MM	Month as digits with leading zero for single-digit months.	
MMM *	Month as a three-letter abbreviation.	
MMMM*	Month as its full name.	
y	Year as last digit, with no leading zero for single-digit year.	
yy	Year as last two digits, with a leading zero for years less than 10.	
yyyy	Year represented by full four digits.	
For example, to get the date string “Wed, Aug 22 12” use the following format string: “ddd, MMM dd yy”.		
* By adding a letter in front of the date and month, the result will be written in upper or lowercase.		
Example:	Write MONDAY (MON) in Uppercase	Use “U” write UMMM
	Write MONDAY (mon) in Lowercase	Use “L” write LMMM
	Write Monday (Mon) First character in uppercase, and rest in lowercase	Use “u” write uMMM

Supported Time Formats	
Value	Description
h	Hours with no leading zero for single-digit hours; 12-hour clock
hh	Hours with leading zero for single-digit hours; 12-hour clock
H	Hours with no leading zero for single-digit hours; 24-hour clock
HH	Hours with leading zero for single-digit hours; 24-hour clock
m	Minutes with no leading zero for single-digit minutes
mm	Minutes with leading zero for single-digit minutes
s	Seconds with no leading zero for single-digit seconds
ss	Seconds with leading zero for single-digit seconds
t	One character time marker string, such as A or P
tt	Multi character time marker string, such as AM or PM
For example, to get the time string "11:29:40 PM", use the following format string: "hh':'mm': 'ss tt"	

Supported Special Formats	
Value	Description
JJJ	Day of year, always three digits (29th of February = 060)
WW	Week of year, always two digits (The first 4 day week in the year = 01)
D	Day of week (Sunday = 0, Monday = 1...Saturday = 6)

Language: To define the date or month with letters, this menu allows a choice of various languages.

	English	Spanish	Finnish	Italian
Example	November	Noviembre	Marraskuu	Novembre

Name: The name of the variable is entered here. Selecting the name field will call up a keyboard with which to key in the desired name.

Note: *No two variables can have the same name. If the name of an already used variable is changed, the items in which the variable is used must be manually updated.*

Offset Policy: If a clock is required showing a later (or earlier) date than the current one, an offset may be applied. The time which will be printed is then the current time plus (or minus) the offset. The value of the offset can be set in three ways:

	<p>A defined offset is applied. Set the offset as shown in “Offset” below.</p> <p>The time printed will be the current time plus the fixed offset.</p>
Prompt offset	<p>The offset to be applied is supplied by the operator. When the label is sent to the printer, the operator will be prompted to enter the value of the offset.</p> <p>The time printed will be the current time plus the prompted offset.</p>
Pick a date	<p>When the label is sent to the printer, the operator will be prompted to choose a fixed date. The input screen offers the choice of Year, Month and Day, displayed in a calendar format.</p> <p>The time printed will be the fixed date, in place of the variable clock.</p>

Certain parts of the prompt can be customised.

- (1) Open the message in the editor.
- (2) Click *Message > Orphaned variables > Edit Variable* and edit the variable corresponding to the date picker.

Here you can set the text of the prompt and if the last used value is retained.

Offset: When a clock is required showing an earlier or later date than the current one, a fixed offset is entered here. The value entered will determine how many years, months, days, hours or minutes the clock should skip.

Sub Language: When another Language is selected, Sub Language displays the available regional variants of the main Language selected.

Truncate Date: Clock variable always uses the correct numbers of days in a specific month.

The Truncate Date settings determine the behaviour when an illegal date (like 31st of February) is reached.

If Truncate Date is active, the day is set to the maximum day in the specific month.

If Truncate Date is inactive, the date enters the next month.

Operation

Truncate Date is only active for offsets with months and years.

The different types of offset are applied in the following order:

Year

Month

Week, Day, Hours and Minutes.

Example: Current day = 31.01.2013, plus 1 month = 31.02.2013

Truncate Day active:

Since 31.02.2013 is an invalid date, it is truncated to

Date: 28.02.2013

Truncate day inactive

Since 31.02.2013 is an invalid date, it goes to

Date: 01.03.2013

Update Policy: The time can be updated in three ways:

- **On Jobstart:** When the label is loaded into the printer memory the actual time when loading will be stored and this time will be printed at each label when printing.
- **Realtime:** If the clock is required to be updated after every print, this box must be activated. Printing speed will not be affected if this option has been selected.
- **Specify Time:** Day and time can be specified for when the variable should be updated. This is done by going back to the specified day, and then calculate the offset:

Actual day is Wednesday. Update should be done on Mondays.

The variable will update the output as if today was Monday.

Operation

This way an entire week's production that is made on a single day can be simulated.

- **Update Day:** The update day can be set.
- **Update Hour:** The update hour can be set.
- **Update Minute:** The update minute can be set.

Example:

Actual day:	Monday the 15 Apr 2013
Update Day:	Friday
Friday (12 th) output is:	Friday 12 Apr 2013
Saturday (13 th) output is:	Friday 12 Apr 2013
...	...
Thursday (18 th) output is:	Friday 12 Apr 2013
Friday (19 th) output is:	Friday 19 Apr 2013

Counter

Create a new counter variable. This will increment/decrement according to the parameters set.

The following properties are available for editing:

Fixed Start Check this box for the counter to start at the value set in the Value property. If this box is not checked, the user will be prompted to enter a start value.

Input Use the drop down menu to choose a numerical system for the input. The following numerical systems are available: Numeric, Hex, Alpha, AlphaNumeric and Arabic.

Length Define the maximum number of digits for the counter.

Name: The name of the variable is entered here. Selecting the Name tab will call up a keyboard with which to enter in the desired name.

Note: No two variables can have the same name. If the name of an already used variable is changed, the items in which the variable is used must be manually updated.

Output Use the drop down menu to choose a numerical system for the output. The following numerical systems are available: Numeric, Hex, Alpha, AlphaNumeric and Arabic.

Padding use the drop down menu to choose between Leading Zeros or Leading Spaces to fill spaces in the number string.

Prompt Prompt the user to input a counter value before the printer can start a job. When a job is to be started, a short message will appear on the display which must be answered before the printer can start up. Selecting Prompt opens a keyboard which is used to change the message. The prompt will only appear if the Fixed Start check box is unchecked.

Repeat Count Choose how many times a number is repeated.

Example:

If the number has been set to 1 the number sequence would be:
"1,2,3,4,5..."

If the number is set to 3 the number sequence would be:
"1,1,1,2,2,2,3,3,3,4,4,4,5,5,5..."

Resume Check this box and the counter will resume from the last printed number.

Roll Over Check this box to set a minimum and maximum range for the counter.

Example: If the minimum value is 0 and the maximum value is 5 the sequence would be: "0,1,2,3,4,5,0,1,2,3,4,5,0,1,2,3,4,5....."

Step The counter will increment by the number set here.

Example: If the step is set to 5 the sequence would be "5,10,15,20,25,30..."

Value Set the starting value of the counter here.

Prompted Field

Create a prompted field variable, this will prompt the user to input the required data before the printer can start a job. When a job is to be started, a short message will appear on the display which must be answered before the printer can start up.

The Message to appear on the display is defined using this menu, and other attributes may be defined at the same time to provide greater assurance that inappropriate information is not entered at the start of a print run.

The following properties are available for editing:

Input Type: Select AlphaNumeric to enter letters and digits, or Numeric to enter only numerical values.

Length: The maximum number of letters is set here. For example, if it is known in advance that all answers consist of a maximum of eight digits, then only enter a maximum of eight digits.

Name: The name of the variable is entered here. Selecting the Name tab will call up a keyboard with which to key in the desired name.

Note: No two variables can have the same name. If the name of an already used variable is changed, the items in which the variable is used must be manually updated.

Retain: Check this box to store the entered data for reuse. When next prompted, this data will auto-fill the input box.

Note: Avoid storing personal or sensitive data.

Prompt: Enter the actual message, which should appear on the display when the printer is started. Answer the message accurately before the printing can commence.

The variable name is also shown on the display when prompted.

Link

It is possible to link to another variable contained within the message, for example the data contained in a barcode can be linked and included as text within the same message.

External Data

This menu is used to set up data transmission of variables from an external PC to the printer.

The following properties are available for editing:

Default Text: Once the *Use Default* check box has been ticked, the user can then enter any value.

Fixed Length: Select the check box to activate this feature.

Input Definition: This field can be used if the input device (i.e., scale) is not compatible with the protocol used by the controller.

Four types of entries are supported:

- (1) \xNN: A single character. NN is the key code of the character. Use this form to input a character not found on the keyboard (for example, SOH, ETB, STX and ETX).
- (2) \vNN: NN characters to be printed.
- (3) \dNN: NN characters as “don’t care”.
- (4) Clear text: There must be a direct match between the text and the info that the device sends.

NN is to be considered a number in the range from zero to 255 typed in as hexadecimal. For example, to denote the number 77 (decimal), type in 4D (hex).

Example:

The printer expects data in the following format:

```
[SOH]FillSerialVar=[STX]VarName[ETX],[STX]Value  
[ETX][ETB]
```

This can be achieved by the following input definition:

```
\x01FillSerialVar=\x02Serial\x03,\x02\v06\x03\x17
```

Explanation:

\x01 (SOH = Hex 01)

FillSerialVar= (Must make an exact match)

\x02 (STX = Hex 02)

Serial (We assume that this particular variable is called "Serial".)

\x03 (ETX = Hex 03)

(Must make an exact match)

\x02 (STX = Hex 02)

\v06 (The input data is exactly (Hexadecimal)6 characters)

\x03 (ETX = Hex 03)

\x17 (ETB = Hex 17)

If the software libraries are used, the transfer is UNICODE as opposed to the example (which is ANSI). To make the input definition UNICODE enter \x00 after each character

(Result:

\x01\x00F\x00i\x00l\x00l\x00S\x00e\x00r\x00i\x00a\x00l\x00V\x00a\x

00r\x00=\x0

0\x02\x00S\x00e\x00r\x00i\x00a\x00l\x00\x03\x00,\x00\x02\x00\v01\

x00\v01\x00\

v01\x00\v01\x00\x03\x00\x17\x00)

Note: If the input definition fails, it is ignored - if the preceding libraries were used, the user would not be able to tell if the input definition was typed incorrectly.

Name: The name of the variable is entered here. Selecting the name field will call up a keyboard where the user simply enters in the desired name and selects *OK*.

Note: *No two variables can have the same name. If the name of an already used variable is changed, the items in which the variable is used must be manually updated.*

Updating: This variable can be set up in one of five ways:

- (1) On Request: When the value is sent the variable is updated and printing will continue with this value until a new value is sent.
- (2) Each Print: A new value has to be sent for each print (buffer capacity 1000 Values).
- (3) Each print (No Buffer): A new value has to be sent for each print.
- (4) First Time Only: One (and only one) variable is received. The variable does not change until the print job is loaded again.
- (5) Weight Input: Use this setting if you have a scenario where the input is generated by a scale and the input needs to be delayed by a certain amount of prints. Choosing this setting shows the Buffer size input field where you set the delay. For each print pulse the internal buffer (FIFO) is updated. No prints are made until the internal buffer is filled, as the product associated with the weight is not yet under the printer).

Use Default: The user can enter any text as default setting by ticking the selection box.

Note: *This function is only available when using “on request”.*

Printer Data

Add the Printer ID or User ID to the message.

Shift Code

Create or edit shift code data within the message.

The following properties are available for editing:


Name: The name of the variable is entered here. Selecting the name field will call up a keyboard where the user simply enters in the desired name and selects *OK*.

Note: No two variables can have the same name. If the name of an already used variable is changed, the items in which the variable is used must be manually updated.

Shift-code Table: Use the drop down menu to select a previously created shift-code table. New shift-code tables are created from the file menu [See “File” on page 3-30](#).




Edit Variable

Edit variables contained within the selected item. A list of the variables contained is displayed, select from the list to edit, or select  to delete from the list.



Properties

To view a message item's properties, select the item within the message and long-press it.

To edit an item's property, select its text field or pull-down menu, enter or select the desired data and select  to confirm.

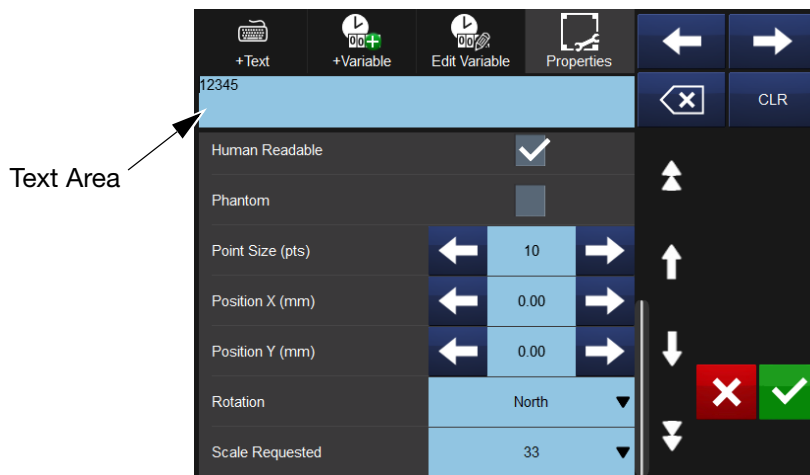


Barcode

Select the *Add Barcode* button, type the name of the message and select the ☒ button. Select the *More* button. On the barcode's list of Properties, enter the barcode data as appropriate, then select the ☒ button to insert the code into the message.

To display / edit properties, either:

- Highlight the barcode within the message and select the *More* button
OR
- Select and long-press the barcode to find its properties.



To delete a message's selected item whilst in the barcode's Properties screen, select the *Delete Item* button.

Using the Move/Size and Rotate/Flip functions, arrange the item as required within the message area.

The following barcode properties are available for editing:

Height (mm): This allows the height of the barcode to be indicated.

Note: This is not applicable for all types of barcodes.

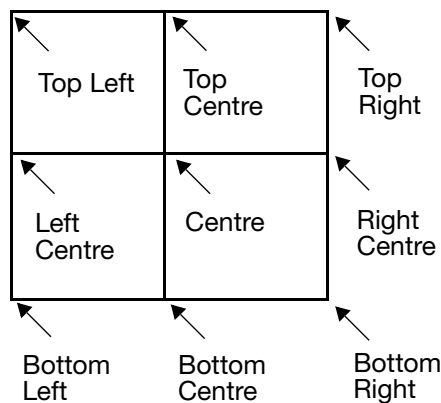
Numerical values can be entered.

Bold: The barcode can be formatted in bold.

Invert: Selecting Invert will convert the black lines of the barcode to spaces, and the gaps between the original black lines of the barcode will be printed instead.

Use this selection when using a white ribbon on black web material (this way the barcode will still look normal for a barcode scanner).

Anchor: Each item is surrounded by a virtual rectangle. The anchor point determines where the x and y coordinate touches this rectangle. The anchor point is also used as the point of orientation. The default is Top left.



See ["Rotate" on page 3-28](#)

Barcode Type: Use the drop-down menu to select the desired type of barcode. The type of barcode determines which options are available on the screen.

Font: If the Human Readable box is active, the option of choosing the font used to show the barcode's human readable interpretation appears.

Show Human Readable Code: To show the values contained in the barcodes, this box should be active. The human readable interpretation will be printed under the actual barcode.

Human readable interpretation for the 2D composite component will be printed above the code (one application identifier per line).



Invert: Select the checkbox to invert the barcode. Black lines become white and white becomes black.

Phantom: Select the checkbox to hide the barcode from the message.

Point Size (pts): The size of the human readable text can be set in points.

Position X (mm): Defines the x-position (across the print head) of the item.

Numerical values can be entered.

Position Y (mm): Defines the y-position (longitudinally with the print head) of the item.

Increasing this value moves the item in the writing direction.

Numerical values can be entered.

Rotation: Used to select the desired rotation, the item can be rotated to 0°, 90°, 180° and 270°. In combination with the anchor point the item can be rotated to suit requirements.


Scale Requested: The scale defines the width of the barcode.

Certain barcode standards (EAN128 for example) define how large a 100% sized barcode should be. The narrow bars in the code must be an integer value and therefore the scales available are determined by the physical resolution of the print head.



Shape

To insert a shape into the message, select the Shape button from the *Add* menu, select the required shape from the list.

A properties box will open, define the properties of the shape and select the  button to insert into the message.

Using the Move/Size  and Rotate/Flip  functions, arrange the item as required within the message area.



Image

To insert an image into the message, select the Image button from the Add menu, the printer will open an images folder stored in the printer. Either:

- Browse for the required image or
- Go to *Settings > File Manager > Printer* and select USB drive to view the images on the USB drive. Import an image from either the USB or a remote source by entering the pathname of the image's location.

Note: Imported images must be monochrome .bmp format.

Using the Move/Size  and Rotate/Flip  functions, arrange the item as required within the message area.



Copy/Clone

To copy an item within the message, select the Copy/Clone button from the Add menu. Select the item to copy from the list, the printer will add a copy into the message.

Using the Move/Size  and Rotate/Flip  functions, arrange the item as required within the message area.




Move/Size


Once an item has been added to the message, select the Move /Size Menu to move or resize the item within the message field.

To move an item in the message:

- Select the desired item within the message, then, using the directional *Move* arrows, move the item as required, or,
- Select and hold the item within the message and move it to the desired location (drag and drop).

To resize an item's box in the message:

- Select the item's box to resize, then, using the resize buttons , make the box larger or smaller as required, or
- Select the item's box, select and hold the small red rectangle (note, it will turn yellow) then drag the corner out to resize it.

Note: The resize buttons will only resize the entire item box. To change the font size of the item, select the item and then the  button.



Rotate

Once an item has been added to the message, select the Rotate Menu to rotate the item.

To rotate an item in the message:

- (1) Select the item.
- (2) Select the appropriate directional Rotate button:





Zoom

Select the Zoom Menu to change the magnification of the message area.

Use the Zoom Toolbar:

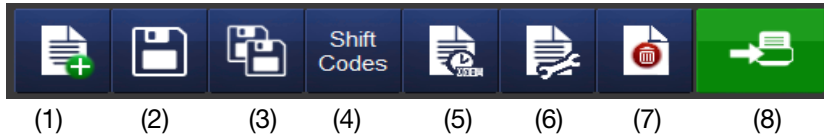


To view the item(s) in the Message field or the whole Message field in a different size, select the item(s) and then select the appropriate button from the above toolbar:

- (1) Incrementally zoom in on the message area
- (2) Incrementally zoom out of the message area
- (3) Fit whole message height to area
- (4) Fit whole message width to area
- (5) Zoom to 100% (actual size) of Message
- (6) Zoom selected item to fit into message area.


File

At the File Menu screen, the user can select from the following Message Options:



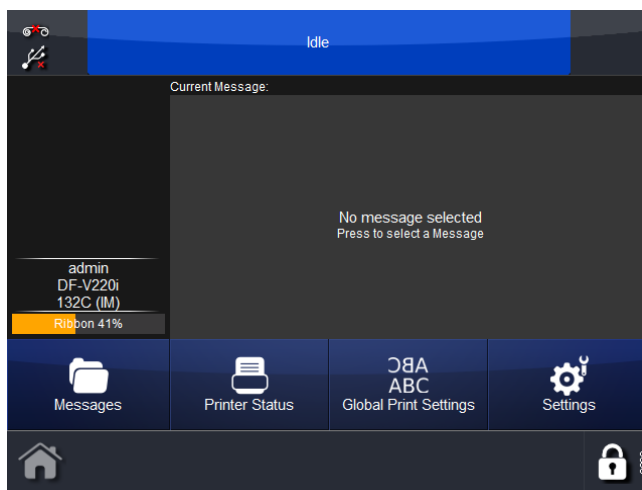
- (1) Create new message
- (2) Save message
- (3) Save as a new message
- (4) Add new Shift Code table
- (5) View/edit variable properties
- (6) View/edit the message properties
- (7) Delete item from message
- (8) Send to print

Save Message

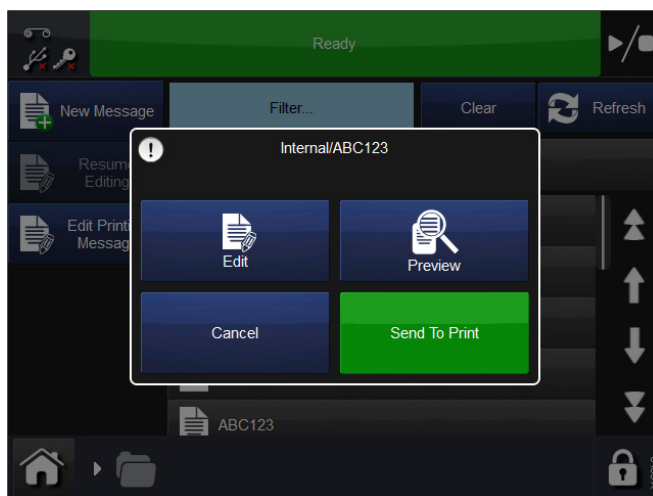
Once the message has been created/changed, select the Save Button  to save the message. Enter the message name required and select the message store if appropriate.

SELECTING AN EXISTING MESSAGE

Where no message is selected, no message will be displayed in the Home screen:



Selecting the *Messages* button will open the Message Store or stores. Select the required store and then the required message from the list. The following screen will display:



Choose to *Edit*, *Preview*, *Send to Print* or *Cancel*.

To change the selected message, select *Messages*, then open the required message store and select the required message. The screen as shown previously will display, select *Send to Print*. The printer will revert to the Home screen and the selected message will be displayed.

Edit

To edit an existing message:

- (1) Select *Messages* and select the Message Store required.
- (2) From the list of messages that appears, select the message to edit.

Operation

(3) Select *Edit*.

(4) The message will then open in the Message Editor, note that the *Edit* toolbar is open.

Note: Long-press an item within the message to open its properties menu.

(5) The message can now be edited, using any of the following edit functions:



(1) Display Keyboard

(2) Display / Change Font Size

(3) Select Font

(4) Bold

(5) Italic

(6) Underline

(7) Text Alignment

(8) Display / Change Line Spacing

(9) List All Settings

(10) Clone Item

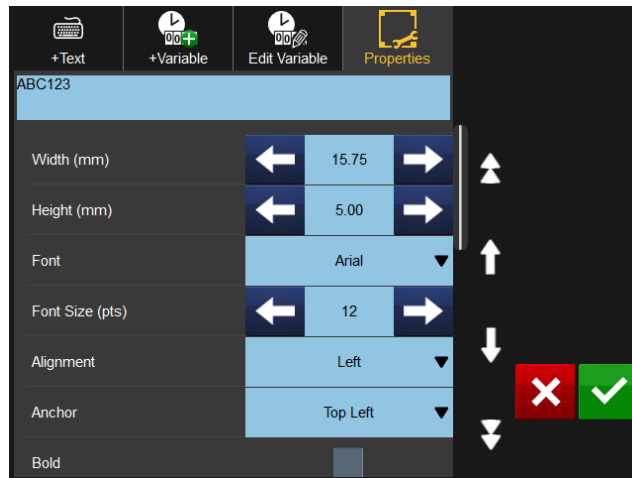
(11) Delete

Notes: (1) The Edit functions are the same for new messages.

(2) Available functions vary, depending on message content.


Operation

To edit the content within an item, select the item and select the *More* button. The following screen will display:



Note: The above screen will differ slightly for Barcode items.

The Properties area will be open as default. Dimensions and location details can be changed, as well as rotation, font and italicisation.

Select the *Add Text* button  to open the keyboard and amend the content.

Select the *Add Variable* button  to add a variable into the item - either select from the list or create a new variable.

Select the *Edit Variable* button  to edit or remove variables within the item.

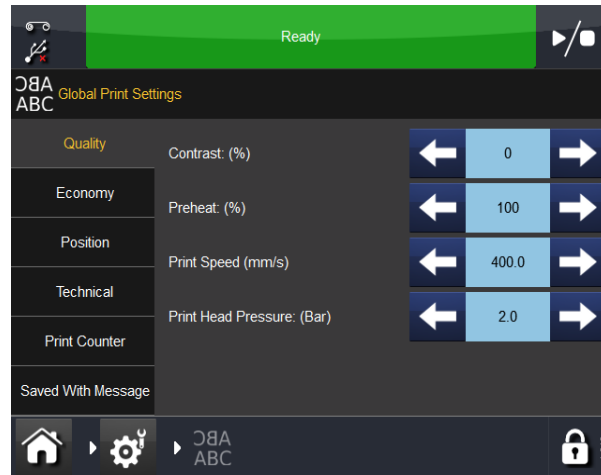
ADJUSTING PRINTING PARAMETERS



Global Print Settings

This sets the print settings for new messages and any parameters that are not saved with the messages.

To adjust the print settings, go to *Settings > Global Print Settings*:



Quality

The Quality menu allows the alteration of those parameters that will normally affect print quality. It should be noted that other parameters such as Economy can also influence quality.

Contrast This feature controls the contrast at which the print head prints. The recommended settings for this are between 80% -100%. Higher values require more energy when printing. The contrast required is dependent on the type of material being printed on and the type of ribbon used for printing. If a low quality ribbon is used, it may be necessary to increase the contrast but the life of the print head will be considerably reduced.

Note: When increasing the level of ribbon economy, it is necessary to reduce the Contrast value setting to compensate for extra friction forces that are applied on the ribbon during printing. Reducing the Contrast value reduces energy used and prevents the print from being smudged.

Preheat The preheat settings increase the contrast on the leading edge of the print, which can be useful when printing in a cold environment.

Slope Type (CM only) Controls the acceleration and deceleration of the ribbon motor. The acceleration and deceleration is determined by the speed of the web. A higher web speed yields a slow and smooth acceleration, whereas a low web speed yields an almost instantaneous acceleration.

When slope type is set to auto, the printer will monitor the current web speed and calculate an appropriate acceleration.

Under some circumstances, it is not possible to measure the web speed (if printing during the web's acceleration). A broken ribbon may result. For such instances, set it to manual and type in the maximum web speed in the edit box that follows.

Print Speed (IM only) Use this setting to adjust the Print Speed. The Print Speed is in the range of 50-400mm/s.

Print Head Pressure Print head pressure controls the pressure that is applied to the print head during printing. The pressure required is dependent on the type of material being printed on. The default value is 1.0 bar. This value will need to be reduced if the ribbon economy function is being used and may need to be increased if printing onto rough surfaces such as paper labels.

Note: When increasing the level of ribbon economy, it is necessary to reduce the Print Head Pressure value setting to compensate for extra friction forces that are applied on the ribbon during printing. Reducing the Print Head Pressure value reduces the friction forces. If the friction forces are too high, the ribbon will not move under the print head and can cause the ribbon to crease, stick to the substrate or break.

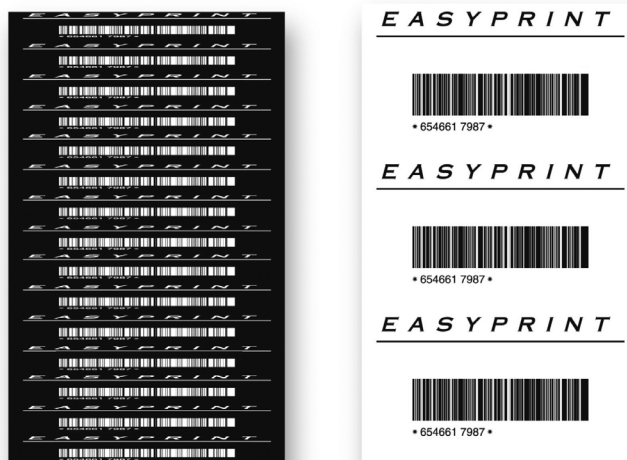
Economy

The Economy menu enables the definition of some of the parameters that have a direct cost savings effect for the print run. All the values entered in this menu will therefore influence the consumption of ink ribbon.

Ribbon Economy This feature uses the FADING technique, which is one of the printer's patented features. If this feature is set to 0%, the printer will use exactly the same area of ribbon as the area of the actual print, i.e. a 1:1 ratio. By increasing the value of Ribbon Economy, the consumption of ribbon will be reduced, but this will not affect the size of the print. Higher Ribbon Economy values will lower the print density. This feature depends on the type of material being printed on. There are very few cases where the FADING technology cannot be used. It is recommended to experiment with this feature when installing the printer.

The printer and the print head cannot be overloaded in any way by entering high values in this menu, but if increasing the Ribbon Economy, reduce the contrast and head pressure settings accordingly, thus increasing the lifetime of the print head.

The illustration below shows an example printed output, together with the corresponding used ribbon. These simulate an economy of 60% in order to illustrate how the economy is achieved. The Compact printers are capable of up to 20% economy.



Note: *A high head pressure will cause the web to drag the ribbon (due to friction) and can cause a “flopping” noise. If this occurs, lower pressure accordingly.*

Retraction Type (CM only) This setting is very important in reducing consumption of ribbon.

The thermal transfer printer normally works at very high speeds, and in many cases the ribbon will be pulled a few millimetres too far with a resultant waste of ribbon. To compensate for this, the printer can pull the ribbon either way and thus compensate for the extra ribbon that can get pulled at high speeds.

The RETRACTION feature defines how much the printer should pull back the ribbon. This feature can be set to Off, Auto or Manual.

If it is set to **OFF**, there will be no reverse feed of the ribbon.

If this item is set to **Auto**, enter a Retraction Offset, which is used to fine-tune the ribbon pull back.

If it has been set to **Manual**, the number of millimetres the printer should pull back the ribbon must be defined. Measure the desired pull back before entering a value to avoid entering an overly high value causing prints to overlap on the ribbon.

Retraction Length (CM only) The way in which this field is displayed on the screen depends on how Retraction Type has been set. If it is set to off, the field is greyed out.

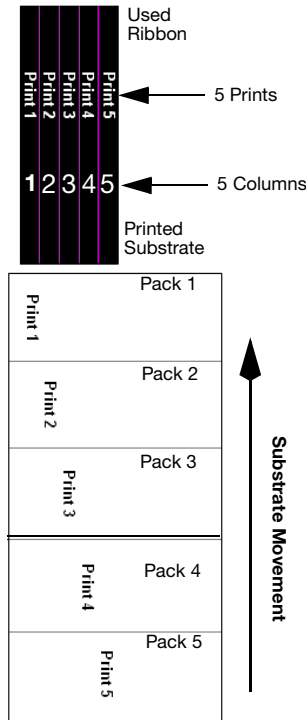
If Retraction Type has been set to Auto, Retraction Offset must be set in this menu.

If Retraction Type has been set to Manual, Retraction Length must be set in this field.

Retraction Offset A Retraction Offset of -1 is recommended.

Column Mode Ribbon Economy Column Mode Ribbon Economy can be used with both IM and CM printers.

When using Column Mode, the printer retracts the ribbon after each print, allowing the next print to be made next to the previous one on the used ribbon. In the following example, the ribbon is divided into five columns, and five prints are made using the ribbon usually needed for one print.



The substrate is marked with a print on each pack. However, the position of each print across the substrate will change.

Column Mode is particularly useful when the message to be printed is significantly narrower than the ribbon width and where the printed position of the code across the ribbon is allowed to vary.

Column Mode can also be used with the Ribbon Retraction and Ribbon Economy features. However, Column Mode has some limitations and cannot be used if:

- The appropriate length of ribbon cannot be retracted. This is determined by the operating movement of the dancing arm and cannot be adjusted. Print lengths of 10-20mm can usually be retracted successfully.
- The ribbon cannot be retracted in the time available between prints. This will depend upon each application.
- The retraction function is compromised by a dirty capstan roller. The drive roller must be kept clean with Head Cleaning Wipes (P/N MT25215)

Column Mode is set up by varying the Number of Columns and Column Width parameters, as follows:

- **Number of Columns:** This is the number of columns into which the user wants to divide the ribbon width into (five columns in the preceding example). If this is set to one, the Column Mode function is turned off. The number of columns multiplied by the column width cannot exceed the print head width.
- **Column Width:** This is the maximum width of each column. This is not always the same as the width of the print as the width of the print may be smaller. Usually 'Column width' = Print head width / Number of columns. However, this parameter must be a whole number. So in the preceding example using a 32mm print head, Column Width = $32/5 = 16.4 = 6$.

Position

The following settings can be adjusted or set from this tab:

X-Offset Displaces the print across the print head. By entering a negative value the print will be displaced towards the middle of the printer, and entering a positive value will displace the print away from the middle of the printer.

Note: The width of the print head must not be exceeded.

Y-Offset Y-Offset is a virtual white space area prepended to the printout. If Y-offset is too small there may not be enough time to move the print head into the head position. The error 'Y offset too small' will be displayed.

Start Pulse Offset There may be reasons to displace the print in the Y direction, but such a displacement is prevented by printing starting in the middle of the packaging machine signal.

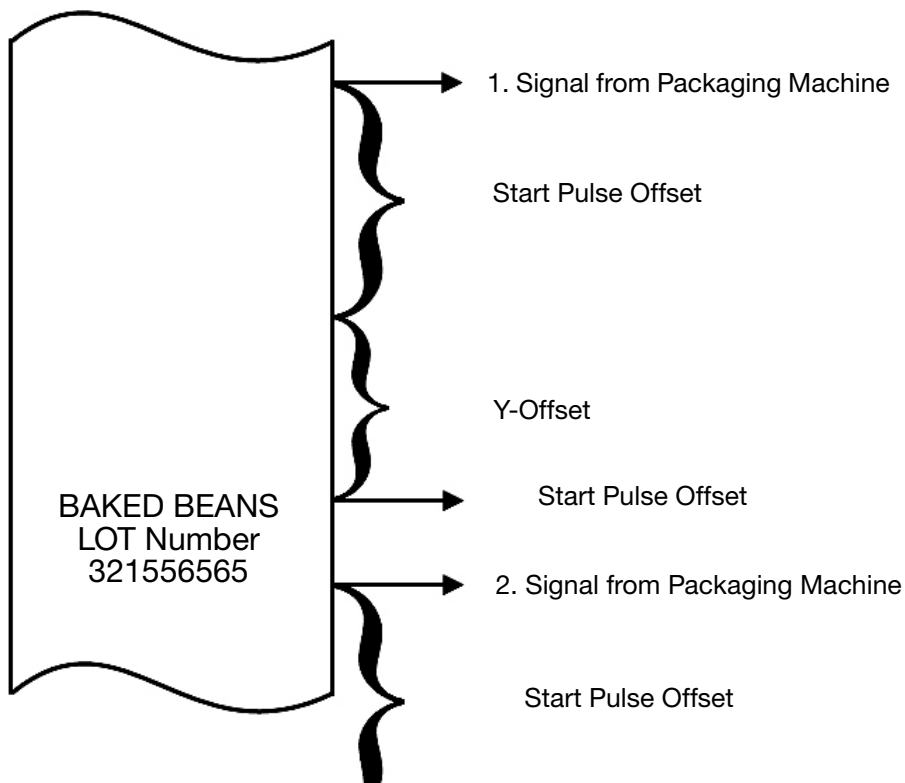
If this occurs, an error or warning will be displayed on the screen and the machine will only print every other print. The solution to the problem is to add the Start Pulse offset to the Y-Offset.

This function displaces the print like an ordinary Y-Offset, but also allows the printer to receive a start signal from the packaging machine “sending signals” in the middle of printing.

Note: For CM, the offset is defined in millimetres (mm).
For IM, the offset is defined in milliseconds (ms).

In the following example, the print would normally be interrupted by the second signal, with the result that the printer will only print every other print. By setting Delay Type instead, the printer will not be interrupted in the middle of printing and will print each print in the required position.

Note: This function should only be selected if the packaging machine sends a signal while the printer is printing.

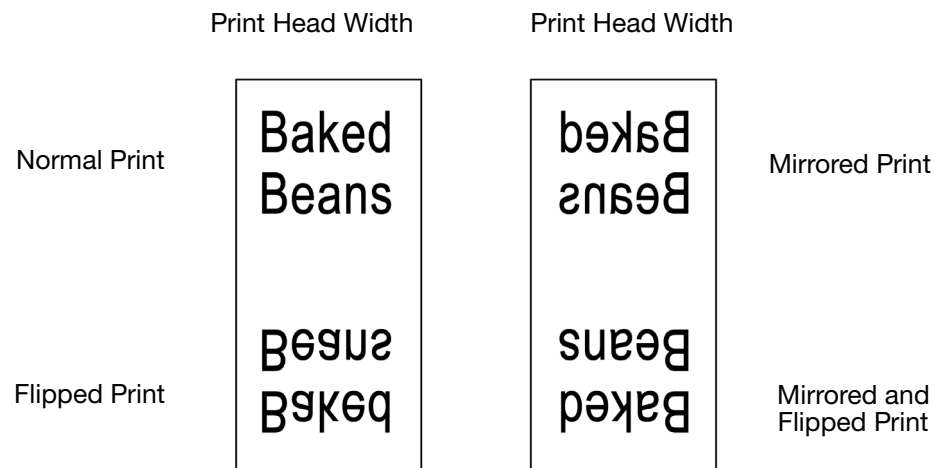


Head Position Offset This option adjusts the horizontal position of the print head. Set the value at *Production Line Setup > Print Head > Head Position Offset*.

Mirror / Flip Message Both the Mirror and Flip Message features produce a mirror image of the print and may be used to advantage when printing on the inside of transparent material.

The Flip Message function produces a mirror image around the X-axis and the Mirror function produces a mirror image around the Y-axis.

The total 180° rotation is produced when the Mirror and Flip Message functions are activated at the same time.



Technical

The Printer uses default settings for the application. Settings can be manually adjusted.

Head down When the print head needs to be lowered, i.e. at the start of a print, the printer's software sends a signal to the twin-shafted motor, thus lowering the print head.

There is normally a delay whilst the print head is lowered. To compensate for this delay, the Head Down value can be increased, thus causing the signal to be transmitted earlier, i.e., the number of milliseconds defined in this setting is the number of milliseconds earlier that the signal will be sent. If the first part of the print is missing, it is usually because this setting is too low.

Head up When the print head must be raised, i.e. at the end of a print, the printer's software sends a signal to a motor, thus raising the print head.

There is normally a delay whilst the head is physically raised, to compensate for this delay, the Head Up value can be increased, thus causing the signal to be transmitted earlier. If the last part of the print is missing, it is usually because this setting is too high.

Current adjust This allows the adjustment of the power to the stepper motor pulling the ribbon. If the stepper motor is having problems pulling the ribbon (which may be due to insufficient current to the motor), the value should be increased. At high speeds it may be necessary to increase the current to the stepper motor.

If the printer is running very slowly, the stepper motor will not need as much current. If this value is too high relative to the speed, the stepper motor will start to vibrate, resulting in small horizontal lines being printed across the direction of printing.

Motor start offset (CM only) This defines when the stepper motor should start pulling the ribbon relative to the start of the print. To obtain good quality print, the ribbon should be moving when the print head is lowered. If the ribbon is not moving when the print head is lowered a black line may occur at the start of the print.

The default setting is sufficient in most applications. At extremely high speeds (550mm per second) or printing on rough material like paper, it may be advantageous to increase this value.

Motor stop offset (CM only) This setting defines when the stepper motor must stop pulling the ribbon relative to when the print head is raised. Best quality printing is achieved when the ribbon stops at exactly the same moment that the print head is raised, or by allowing the ribbon to move when the print head is raised. If the ribbon is not moving while the print head is still lowered, undesirable smudging of the material being printed will occur. By increasing this value the pull on the ribbon will be increased. The recommended setting for this value is 5mm, and seldom needs to be adjusted. At extremely high speeds (550mm per second) or printing on rough material like paper, it may be beneficial to increase this setting very slightly.

Print Counter

During message selection, the Print Counter prompts the user to enter a number of prints to be printed. For example, if you have selected that 100 labels are printed, once printing is complete you will be prompted to select the next action. The 'Action When Done' pull-down menu allows the user to select the next action when the count is completed. Available actions are 'Ask', 'Quit', 'Restart' or 'Cancel'.

Saved With Message

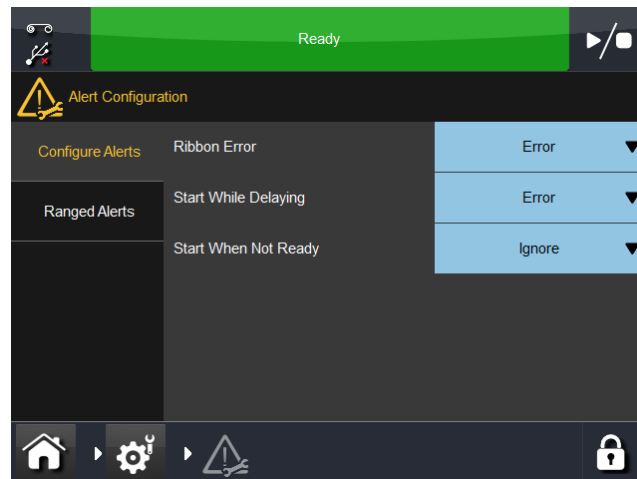
Here the user can save specific settings with a message simply by ticking the feature's tickbox. If the feature is not ticked, the software will use the Global Print Settings.

ALERT CONFIGURATION

Configure Alerts



Go to *Settings > Alert Configuration* to configure errors / warnings:



*Note: The screen above shows configurable alerts for IM printers.
There are more alert configuration options for CM printers.*

It is possible to change the alert level for some alerts. In the above example, the *Ribbon Error* is currently a *Warning*. By selecting this pull-down menu, the error can be changed to:

- Warning - Status bar will change to amber, select the status bar to see more details or clear the alert. The printer will continue to operate on an amber alert
- Error - Status bar will change to red, select the status bar to see more details or clear the alert. The printer will cease to operate until the alert is cleared.

Note: Use the 'Ignore' feature ONLY for test purposes. When an error occurs and the operator selects this feature, the printer continues to operate and no alert / warning screen appears.

Use the pull-down menus to configure alerts for 'Start When Delaying' and 'Start When Not Ready'.

For a full listing of possible errors, see ["List Of Errors" on page 4-27](#). Also see ["Print Problems" on page 4-47](#).

For a full list of configurable alerts see below:

Ribbon Error: When the ribbon is used or broken, the system has two independent ways of detecting the fault.

- A dancing arm activates the ribbon alarm sensor
- The ribbon roll has rotated without any movement of the dancing arm.

Y-offset (Head and Motor): If the distance between the label start and the first line is too short, a warning or error signal will be displayed on the screen. If the Y-offset is too short, the print head cannot print the first pixels and hence the print may not comply with the desired quality standards. The minimum Y-offset depends on the print speed and the actual design to be printed.

Note: "Y-offset too short" can be triggered if the print head needs more "Y-offset" or if the motor needs more "Y-offset".

Speed Too Low: If while printing the speed of the substrate falls below the value that the user sets, either a "Warning" or "Error" will be issued dependent on this setting. See ["Speed Too Low Limit \(CM only\):" on page 3-45.](#)

Start When Speed Low: For CM printers, the substrate needs to move before a print can be started. The printer runs at a minimum speed of approximately 10mm/sec (depending upon application), eliminating the chance of unprinted products when the production speed drops. Where the substrate speed is low, a larger number of printing applications is now available.

If required, the print quality can be 'fine tuned' at low speeds by increasing the ribbon speed compared to the substrate. To do this, set Ribbon Economy to a negative value (typically -5% to -10%).

Start While Delaying: If a start signal is detected while the start delay mechanism is active the signal is either ignored or an alarm will be raised.

Start When Not Ready: The Start When Not Ready setting determines the printer's behaviour if a print pulse is detected at a time where the printer is not ready to print.

The printer is not ready to print if a print sequence is already running or a print job is not loaded. If the Start when not ready is set to Warning, any print pulses detected while not ready will be ignored. Depending on the application, this may result in some products missing a print and is generally not recommended.

Ranged Alerts

Select this tab to adjust the following ranged alerts:

Speed Too Low Limit (CM only): The user can change this limit by selecting it and entering a new speed in mm/s between a range of 0 to 100.

Ribbon Low Limit: The user can change this limit by selecting it and entering a new limit in meters between a range of 20 to 200.

Error and Ready Signals

See ["Connectivity" on page 2-21.](#)

PRINTER SETUP



Production Line Setup

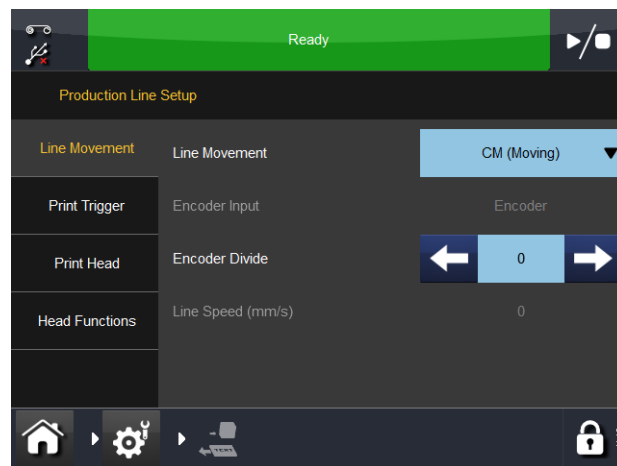
To add a printer to a production line or change the setup, select *Production Line Setup*. If the Home screen buttons are not set to default, the Production Line Setup can be found at: *Settings > Production Line Setup*.

Line Movement

Set details of the Production Line:

Whether the substrate / printer are Continuous Mode (CM) or Intermittent Mode (IM):

- **Line Movement:** The pull-down menu will show CM (Moving) or IM (Static) depending on the printer type.



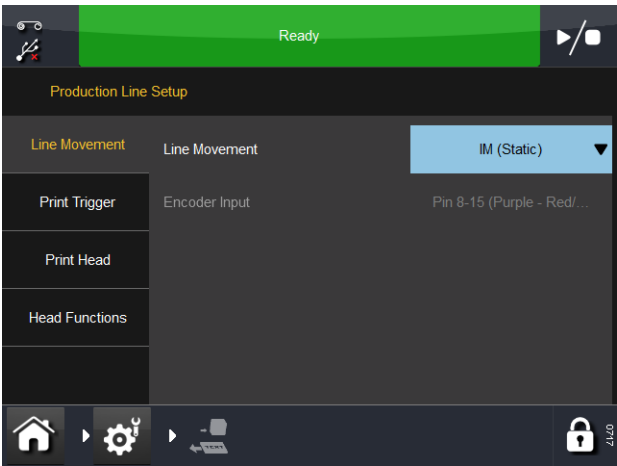
Line Movement - CM (Moving)

For CM printers, the following features will be displayed:

- **Encoder Divide:** This is the factor by which the encoder signal is divided by. The default value is 0.
- **Line Speed (mm/s):** This is the figure as measured by the encoder. The current read-only Line Speed is updated every few seconds.

For IM printers, the encoder input settings are displayed but cannot be changed.

Operation



Line Movement - IM (Static)

Print Trigger

This menu changes for CM printers and for IM printers.

Set details of how printing is triggered:

(1) Trigger By:

- (a) For CM printers, from the pull-down menu, select the source for the print trigger - External Input, Internal (Distance) (which prints continuously while the print trigger is closed) or Internal Continuous (which prints continuously while a valid message is selected and there are no errors or warnings active).
- (b) For IM printers, the source options for the print trigger are External Input, Internal (Time) or Internal Continuous.

Note: When using the Internal (Distance / Time) option, the distance / time is set by the extra parameter.

- (c) When the print trigger is open, voltage is low - when it is closed, voltage is high.

(2) Active Level: The default is to start printing when the voltage is rising (i.e., when the contacts are closed). It only triggers when the voltage rises.

(3) Start on External Trigger: For IM printers, this setting is available if *Trigger By* is set to Internal (Time).

(4) Product Queueing: Some message editors such as EasyDesign have a print count setting. This defines the number of times the message should be printed.

Check box enabled	If the current message contains a print count value, the next message will be queued until the required number of messages has printed.
Check box disabled	When the next message is sent to print it will not be queued and will replace the current message immediately.

Print Head

CAUTION: *The printer must be calibrated before installing it on the production line. Go to Settings > Production Line Setup > Head Functions and select Calibrate. When calibrating, the print head must be able to extend fully, please ensure enough space is allowed to perform this function. For CM printers, the print head position parameter must be set to allow this. For IM printers, the printing surface should be moved from under the printer. If neither is possible, remove the printer from the bracket.*

Set the following print head parameters:

Heater State

Use this function's pull-down menu to change the Heater State to Enabled, Disabled when Printing or Disabled.

Print Head Set Temp

Use this menu to set a warm-up temperature for the print head.

For applications where the ambient temperature is low (less than 15°C), the print quality can sometimes improve if the heater is activated.

Print Head Resistance

The resistance of the print head varies from head to head. Each time the print head is changed, remember to key in the resistance of the print head. Print head resistance consists of four digits and is indicated on the bottom of the print head as 'R=XXXX', where 'XXXX' is the print head resistance.

CAUTION: *Setting an incorrect value may decrease the lifetime of the print head.*

Print Head Height

Use this setting to adjust the print head 0.2 - 2mm above the substrate. For further information, see ["Optimising the Print Head" on page 2-35](#).

Head Position

Use this field to set the start position of the print head for IM and CM printers.

For CM printers, the user can align the print head manually with the top of the print roller.

For IM printers, the user can move the start point of the IM print sweep (which will reduce the maximum print length by the amount moved).

Head Position Offset

This option adjusts the horizontal position of the print head.

Note: This value must be set to zero at install and at any time that the Align function on the printer is used.

The offset can also be saved in each message, allowing a degree of adjustment when the message is loaded.

Head Functions

Select the appropriate button to perform the following functions:

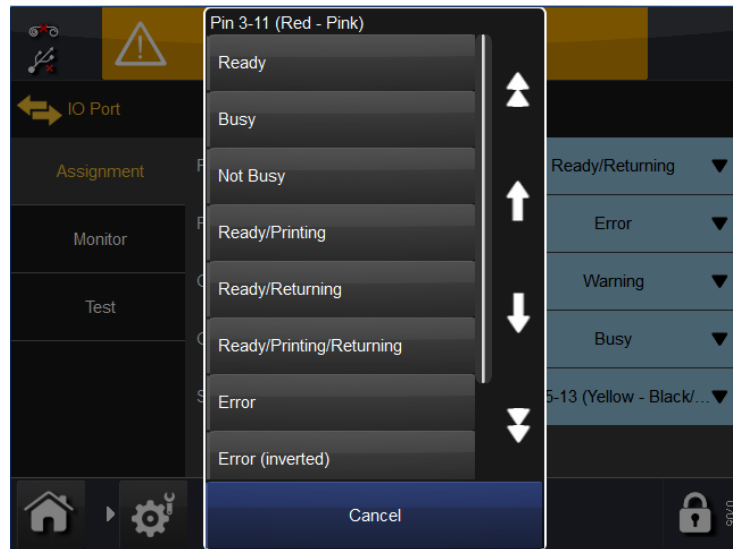
- **Test Print:** Perform a single print of the selected message

Note: For CM printers, the encoder must be turning in order to make a print.

- **Calibrate:** Calibrate the printer.

CAUTION: *Failure to calibrate the printer at the appropriate time can result in print head damage. See [“Set Up Printer - Final Steps” on page 2-34](#) for additional information.*

Inputs/Outputs



Assignment

This tab shows the pin, input and output assignments. Pull-down menus accompany each assignment.

For a detailed pin allocation table, see [page 2-12](#) and [page 2-13](#).

For a table of functions / behaviours for each output, see [page 2-18](#).

Monitor

This tab allows the user to monitor inputs, outputs, interrupts, sensors and items such as ribbon speed. See [“Sensor Test Procedure” on page 4-23](#).

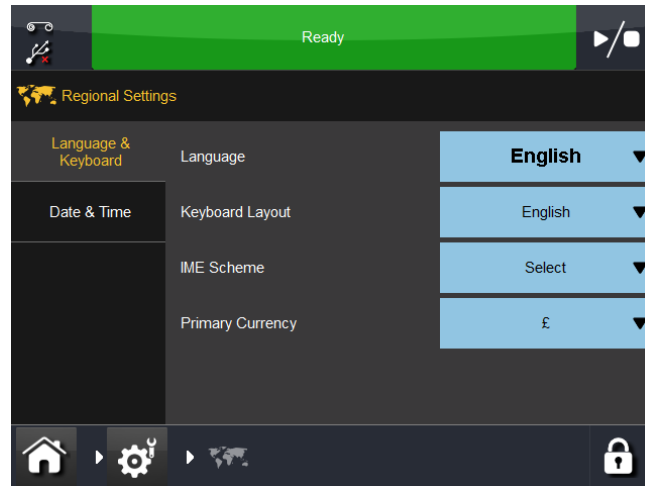
Test

See [“IO Test” on page 4-25](#).



Regional Settings

To change the UI Language or Keyboard layout, go to the following:
Settings > Regional:



Language and Keyboard

From this tab, the user can access pull-down menus to select the printer's defaults for the following: Language, Keyboard Layout, IME Scheme and Primary Currency.

- Notes:** (1) *The language, when set here, will be overridden by the language of the UI (Settings > User Interface > Language & Keyboard). Setting the language here is necessary only for things like alerts, which on some printers comes back pre-translated from the printer.*
- (2) *The keyboard layout language can also be changed from the keyboard itself by selecting 'Language' from the Add Text screen.*
- (3) *The primary currency determines which symbol is on the main keyboard (other symbols are available on the symbol keyboard).*

Date and Time

Select either the displayed System Date or System Time to edit.




FILE MANAGER

This menu allows the user to add new stores and manage existing Local and Printer directories and files. To access the File Manager, go to *Settings > File Manager*.

Printer

From this directory, the user can access files and directories that reside on the printer.

To see available actions for a directory or one of the files contained within, select  beside directory's / file's name.


To return to the previous screen, select .

Local

- If a local device (such as a USB device) is connected to the printer, this directory is populated and works identically to that of the printer
- If a local device is not connected to the printer, a blank grey screen is displayed.






Create a Message Store on the Printer

To create a new message store on the printer follow the procedure bellow:

- (1) From the home screen select *Settings > File Manager > Printer > Printer Stores > New Store*.
- (2) Enter a name for the new message store, then select  and select *OK*.
- (3) Select *Home > Messages > Refresh*. The new message store will now appear in the list of available message stores.

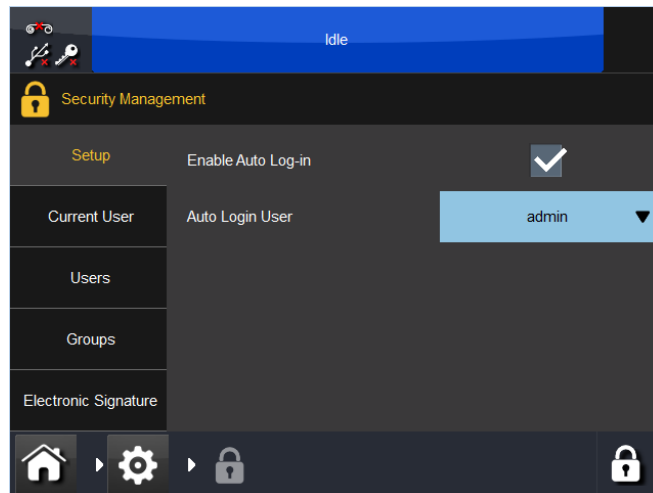
Create a Message Store on the Network

To create a new message store on a network follow the procedure bellow:

- (1) From the home screen select *Settings > File Manager > Printer > Network Stores > New Store*.
- (2) Enter a name for the new message store, then select  and *OK*.
- (3) Select *Path*, enter the network path of the message stores network location and select .
- (4) Select *Login*, enter a login name which has access to the network location and select .
- (5) Select *Password*, enter the login password and select .
- (6) Select *Domain*, enter the network's domain name and select  then select *OK*.
- (7) Select *Home > Messages > Refresh*. The new message store will now appear in the list of available message stores.

SECURITY MANAGEMENT

Security management allows users and groups to be setup and access levels set accordingly. To access the Security Management menu, from the Home Screen long-press the user / printer ID area or go to *Settings > Security*:



Setup

This screen configures the printer's Auto Log in feature.

Select the *Enable Auto Log-in* check box and no password will be required to control the printer via Touchscreen or other Ethernet connected devices.

The *Auto Login User* drop down menu defines which user will be logged in.

Current User

This screen displays the user that is currently logged in. The current user can change the password or log out from this screen.

Users

Create and manage users.

To add a new user, select Add new user and enter Username, Full Name, Password and Group - select Save.

Groups

Create and manage groups - this will allow the access level to be set for each group. For example, Operators can be set such that they can only select and send messages to print, whereas the Operator Supervisor could be created and set such that they can create and manage messages.

To add a new group:

- Select *Add new group*
- Enter a Group Name, e.g. Level 1 Operator
- Enter the Description, e.g. Select and send messages only
- Select *Save*
- From the list, select the required actions that this group can perform
- Select *Cancel, Save or Delete Group*.

To view, edit or delete existing groups:

- Select the Group from the list
- Edit the description and select the actions required as necessary
- Select *Cancel, Save or Delete Group*.


User Policy

To enable Auto Log-in, select the tickbox and select the Auto Login User type from the pull-down menu.

Electronic Signature

This tab allows the user to enable the following functions by selecting tickboxes:

- Enable Upgrades
- Start Backup
- Start Restore
- Start Migrating
- Purge Migrated Data.

Select  beside the desired electronic signature to rename the signature or Use Default.

SD EMULATOR

The SD Emulator is a special feature which allows the printer to print messages that have been created using CoLOS. It also allows messages to be saved on the printer converting them into EasyDesign format.

Unsupported Functions

The emulator provides most common functionality, however the following functions are not supported:

Font Matching. The closest font match will be used, but this may not be an exact match. Where no match is found the font used will be Arial, there is the capability to edit the font substitution table.

Variable Data. The following variable data types are currently supported: Time/date fields, Offset time/date (BBE) fields, User input variable, and sequential number fields.

Printer Status. 'Printer Open' on is reported as 'Cassette Open' in CoLOS Control. 'Ribbon Alarm' is reported as 'Ribbon Break Detected' in CoLOS Control.

Message Store. The printer will only show the first 150 messages downloaded to the message store. Messages added after the first 150 can only be accessed using remote protocol commands.

Inverted Barcodes. The printer automatically adds the correct quiet zone to the inverted barcode, this results in the barcode width being greater on the printer when the barcode is inverted.

GSI Expanded Stacked Barcodes. The content of the barcode data does not appear to be sent from CoLOS therefore the barcode is not correct.

Merged Fields. Fixed and variable length merged fields are supported.

Formatted Strings. These are a special feature of certain SD printers that allow limited functions to be carried out on text data. This feature is not supported.


User Codes. These codes modify the behaviour of various data fields. This feature is not supported.

Enable the SD Emulator

The SD Emulator must be enabled with a feature code before it can be used. A feature code can be obtained from Easyprint by contacting the technical help desk and providing the system ID of each printer.

- (1) From the home screen Select *Settings > Advanced > Special Features*. Make a note of the System ID number.
- (2) Contact the Easyprint technical help desk and request a feature code for the SD emulator.

Note: Contact details for the Domino technical help desk can be found at: www.easy-print.com

- (3) Select *Feature Code*, enter the code provided by the help desk and select .
- (4) Select *Add Feature*.
- (5) From the home screen select *Messages*. "Print SD Message" should now be available on the left side of the screen.

Connect to the Printer Using CoLOS Create

The CoLOS software must be set to communicate with the Compact printer via Ethernet using the printers IP address and port 9104. This tells the printer to request the appropriate files from the PC which are then sent, the printer will then interpret the files and print the required data. The message will be saved in the printer's internal message store in the printer's native format.

- (1) In CoLOS Create select *File > Download*.
- (2) Under the Printers window select *Add*.
- (3) Select *8000 Series*.
- (4) Choose the SD 2 or 3 that most closely matches the Compact being used (i.e for 53mm head V-Series choose an SD with a 53mm head) then select *Next*.

Note: If the message had previously been designed for an SD5, X40 or X60 see "[Use Messages Designed for SD 5, X40 or X60](#)" on [page 3-58](#).

- (5) Enter a name for the printer and select *Next*.
- (6) Choose *Associate New Connection With Device* and select *Next*.
- (7) Select the connection type *Ethernet*, enter the IP address of the printer, enter the port number *9104* and select *Next*.
- (8) Enter *1* as the Node ID and select *Next*.
- (9) Select *Finish*.

Note: The red cross will disappear once communication is established.



Use Messages Designed for SD 5, X40 or X60

Messages designed for SD 5, X40 or X60 machines have some different functionality, but when being used with CoLOS Create they can be loaded and sent to an SD 3 printer and CoLOS will convert the features as needed. Alternatively the message can be permanently converted in CoLOS Create by loading the message and selecting *File > Change Target Device* then choosing an SD 3.

Download a File to the Printer

- (1) Open the required file in CoLOS Create.
- (2) Select *File > Download*.
- (3) Click on the printer that the file is to be sent to.
- (4) Right click on the job name and select *Download and Select*.
- (5) Select *Send*.


Note: If the variable data is entered at this point CoLOS converts it to fixed data, to avoid this select 'Download Only' in step 4 above.

Request a Message at the Printer

- (1) Set CoLOS Create to communicate to the printer, see ["Connect to the Printer Using CoLOS Create" on page 3-57](#) Then enable the tick box *Host PC Mode* in CoLOS Create.

Note: The printer must be allocated to a job source in CoLOS Control. See ["Allocating a Job Source to a Printer" on page 3-59](#).

Note: The SD Emulator must be enabled with a feature code. See ["Enable the SD Emulator" on page 3-57](#).

- (2) From the Compact home screen select *Messages > Print SD Message > Enter format to fetch*.
- (3) Enter the name of the message (JobID) to print and select .

Note: The JobID must exist in the job source allocated to the printer in order to be successfully selected and downloaded.

- (4) Select *Fetch* to load the message to the printer.

Setting the Host PC Mode in CoLOS Create

- (1) In CoLOS Create select *File > Download*.
- (2) Click on the printer to be modified.
- (3) Select *Configuration*.
- (4) Tick the *Host PC Mode* check box and select *OK*.

Allocating a Job Source to a Printer

- (1) In CoLOS Control right click the printer to be changed and select *Properties*.
- (2) Select *Job Sources > Configuration > Browse*, this will display a list of available job sources.
- (3) Select *Default Job Source* (or as applicable), then select *OK*.
- (4) The device properties will now show the selected job source.

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PART 4 : Maintenance, Service and Fault Finding

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PREVENTATIVE MAINTENANCE

Front Cover Sensor

The printer is fitted with a front cover to protect the internal mechanism of the printer from dust. During normal use, the cover should be fitted at all times to ensure that the mechanism is protected.

A sensor within the printer detects if the cover is fitted. At default / factory setting, the sensor will detect if the cover has been removed and stop the printer from operating. The front status LED will turn red and the Compact Touchscreen will report that the printer is open.

Ignore Cover Sensor

There may be some occasions where the printer is required to operate with the cover open, such as during service, maintenance, fault finding or product demonstration.

- (1) To view the value that the sensor is returning, go to *Settings > IO Port > Monitor* and scroll to 'Cover Sensor'.
- (2) To ignore the Cover Sensor:
 - (a) Go to *Settings > Advanced Settings > System Variable*.
 - (b) Select 'Ignore Cover Sensor'.

Rear Cover

CAUTION: *The rear cover MUST be in place while the printer is being operated or tested. The rear cover supports the PCBs and holds the sensors for the head position stationary with respect to the printer base plate.*

Vertical Print Head Calibration

CAUTION: *After changing a PCB or the head actuator mechanisms, the user MUST perform a vertical print head calibration. Go to *Settings > Production Line Setup > Head Functions* and select *Calibrate*.*

Maintenance falls into the following categories:

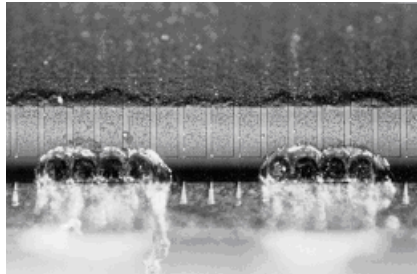
Maintenance Schedule

The printer does not require component replacement as part of a preventative maintenance routine. We recommend regular checks to ensure optimum performance is maintained and to allow any parts requiring future replacement to be identified early.

Frequency	Recommended Actions
Regularly (or if print quality deteriorates)	Check condition and clean Print Head and Rubber capstan roller each time the ribbon is replaced (or at least once per day).
	Check condition of the rubber platen / rubber roller within the printer bracket. the rubber surface must be smooth, flat and free of debris. This should be a weekly check.
	As part of any fault finding routine, check that settings such as 'Contrast' and 'Print Head Pressure' have not been modified in away from the original values. Once set, these settings do not generally need to be changed. Any changes may have been made to compensate for other problems. For example, the contrast or pressure settings may have been set higher to compensate for a print head that needs cleaning.
Every Year	Check condition of the Ribbon guide rollers (including those on the dancing arms). Check that the plastic rollers rotate smoothly.
Every 2 years	CAUTION: <i>The following actions should be performed with the printer switched off.</i>
	Check the motion of the print head for horizontal and vertical movement. Check that movement is smooth and free from resistance. There should be no lateral movement from the bearings.
	Inspect condition of the Carriage drive belt, checking for signs of fraying.
	Check for and remove any debris that may have accumulated around the print head / carriage mechanism.
	Apply grease to the linear bearings (only required if in a dusty or high temperature (35°C - 40°C) operating environment).

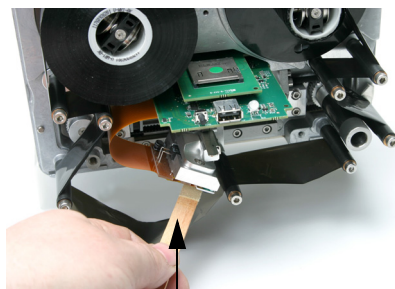
Cleaning The Print Head

Note: Always clean the print head after replacing it or a ribbon.



Damaged Print Head

Some of the dots on the print head can get damaged during use. Overheated dots can result in disintegration of the ceramic material as shown in the picture on the left. Follow the instructions below to prevent this and prolong print head life.



Cleaning Pen Impregnated
with Cleaning Fluid

During the printing operation the print head temperature will be increased, and label debris, adhesive and scraps of paper will melt and clog the surface and the corners of the print head. A dirty print head will result in poor print quality or can even result in total print head destruction. Move the cleaning pen from side to side over the print head as shown in these pictures to clean the head.

Note: Do not try to solve the problem of poor quality print by increasing the contrast settings.

Print Head Cleaning

For cleaning, always use these parts:

- Cleaning Pens (P/N VPR0223)
- Cleaning Fluid (P/N WJ-111)
- Print Head Cleaning Wipes (P/N MT25215)

REPLACING THE PRINT HEAD

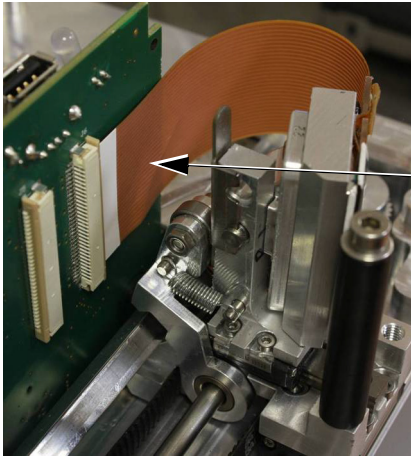
Notes: (1) *This procedure is applicable for all printer variants, although the 32mm print head appears in the following photographs.*

(2) *Tool required: 2.5mm Allen key.*



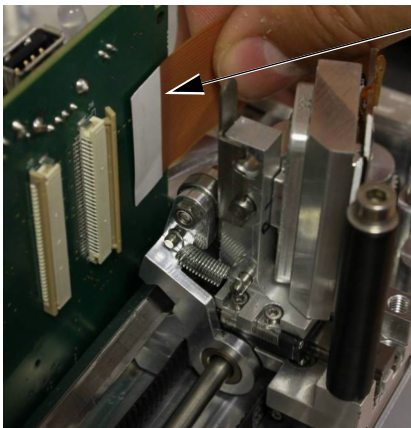
WARNING:

Ensure printer is switched off and disconnected from the power supply before following this procedure.

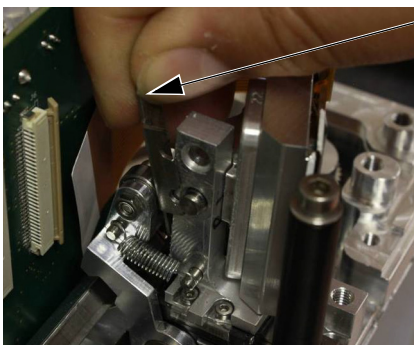


Note: Removal of the printer from the bracket may be necessary to ease this process.

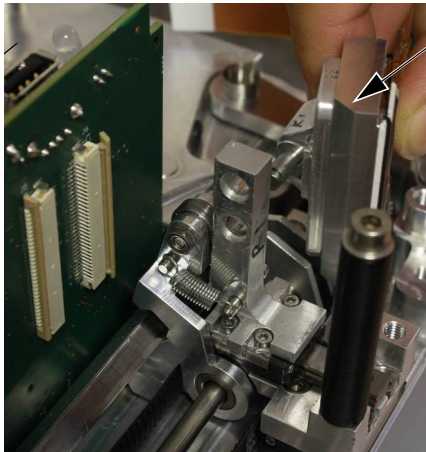
Disconnect the head cable by gently opening the connector.



Remove the head cable out of the connector.



Move the retaining clip upwards.

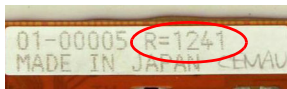


Slide the old print head out.

Record the new print head resistance value.

Slide in the new print head assembly and fit a new retaining clip.

Fit the head cable back into the connector and gently close the connector.



Turn on the printer. Go to *Settings > Production Line Setup > Print Head* and enter the 'Print Head Resistance' figure recorded earlier.

Head Resistance

Note: *The resistance of the print head varies from head to head. Each time the print head is changed, the resistance value of the print head must be keyed in. Print head resistance consists of four digits (R=XXXX) and is printed on the bottom of the print head assembly.*

CAUTION: *Setting an incorrect value may decrease the lifetime of the print head.*

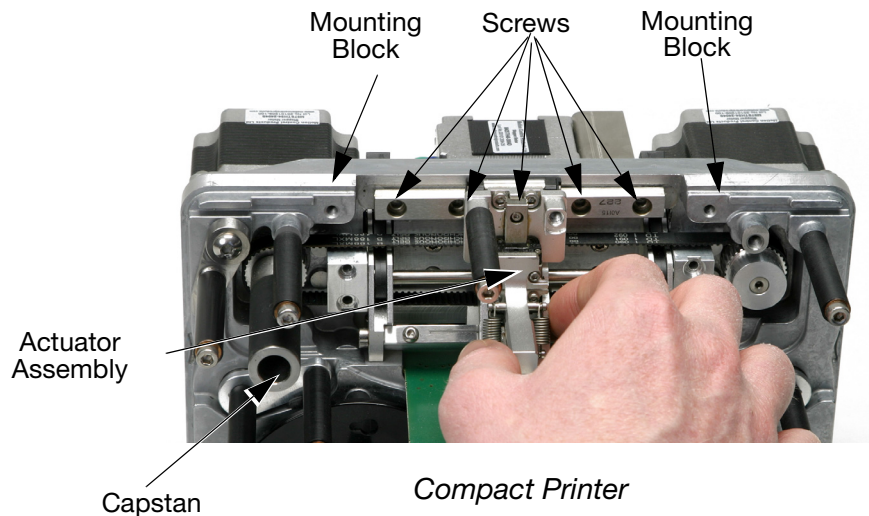
REPLACING THE PRINT HEAD ACTUATOR

Notes: (1) The print head actuator is supplied without the print head and print head adaptor board.

(2) Tools required: Flat-head screwdriver, Threadlocker (medium strength), 2.5mm and 3mm Allen keys, TX20 Torx driver, 5.5mm nut spinner, long-nosed pliers.

To change the print head actuator:

- (1) Remove the bridge cover.
- (2) Remove the print head.



- (3) Remove the four screws that retain the two mounting blocks.
- (4) Remove the mounting blocks.
- (5) Remove the five screws that retain the linear slide.
- (6) Remove the rear cover from the machine area.
- (7) Loosen the three screws that hold the capstan stepper motor to the back of the printer.
- (8) Pull the actuator assembly out.

CAUTION: *Do not remove the linear slide from the rest of the assembly - doing so renders the assembly unserviceable.*

- (9) Mount the new actuator.
- (10) Align small stepper motor gears - see [page 4-11](#).

Align Small Stepper Motor Gears

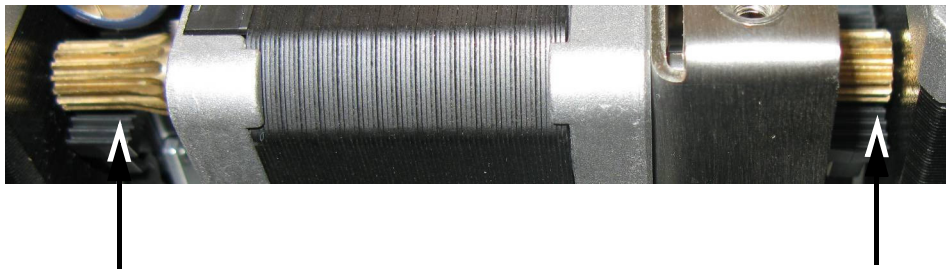
Fitting the small stepper motor gears onto the plastic side arm teeth is crucial to proper printer operation.

Perform this procedure after changing either:

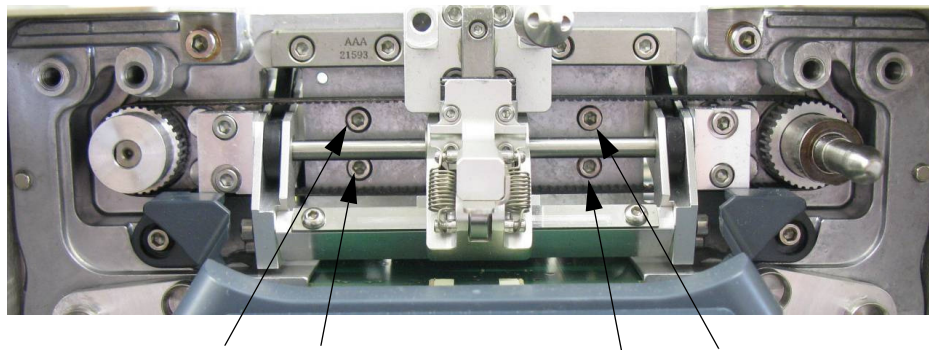
- Any parts of the print head actuator mechanism OR
- The small stepper motor.

To align the gears on the plastic side arm teeth:

- (1) Push the side arms towards the inside of the printer until they stop, as arrows show in the following photo:

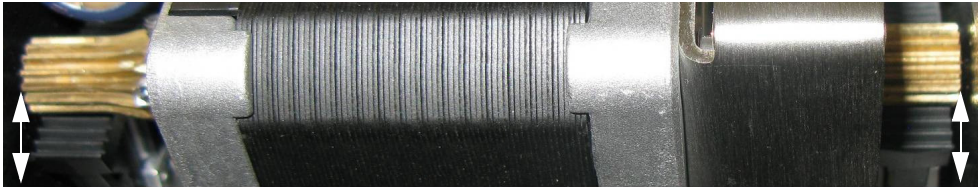


- (2) As shown in the following photo, loosen the four screws that hold the small stepper motor bracket on to the printer baseplate:



Note: In the above photo, the print head has been removed.

- (3) Lift the stepper motor and position the gears so that the plastic side arm teeth are even on both sides of the stepper motor, as shown in the following photo:



- (4) Hold the stepper motor in place and retighten the four screws.
- (5) Refit the printer back cover and print head.
- (6) Go to *Settings > Production Line Setup > Head Functions* and select *Calibrate*.

Adjusting the Print Head Angle

Note: *Tool required: 2.5mm Allen key*

The print head angle may be used to adjust print quality. In most cases the default head position is suitable but for high-speed applications increasing the angle may help. Conversely, for slow applications reducing the angle may increase print quality.

The print head angle is embossed on the side of the print head angle block, the default is 27°.

To adjust the print head angle:

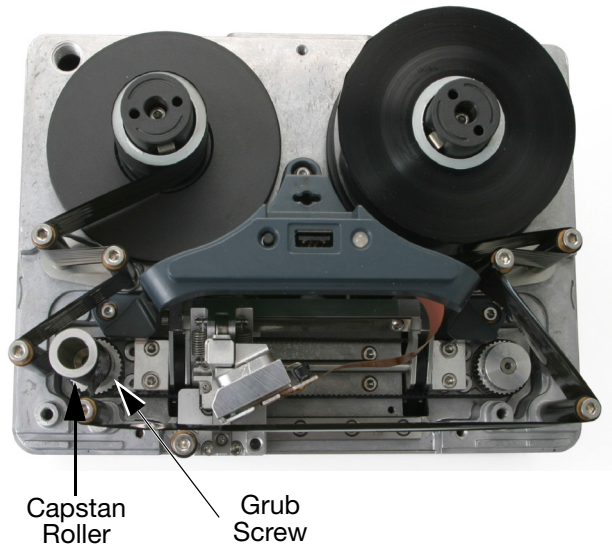
- (1) Remove the print head, as described in [“Replacing The Print Head” on page 4-8](#).
- (2) Replace the mounting block with the desired angle.
- (3) Refit the print head.

REPLACING THE CAPSTAN ROLLER

Note: *Tools required: 2mm Allen key*

To replace the capstan roller:

- (1) Turn the grub screw behind the capstan anti-clockwise.



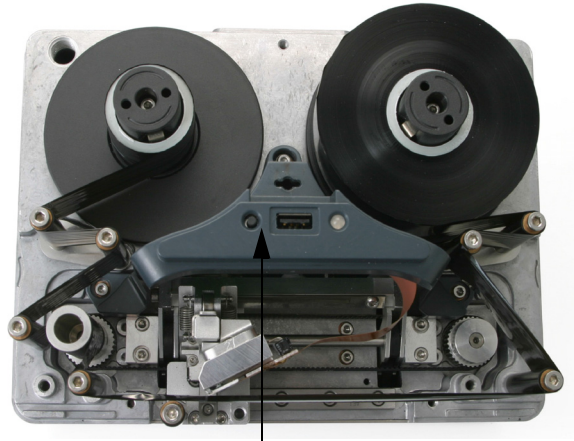
Printer

- (2) Pull the capstan roller assembly out.
- (3) Fit the new capstan roller onto the motor shaft.
- (4) Lock the capstan assembly into place with the grub screw.

CHANGING THE DRIVE BELT

Note: *Tools required: 2.5mm Allen key.*

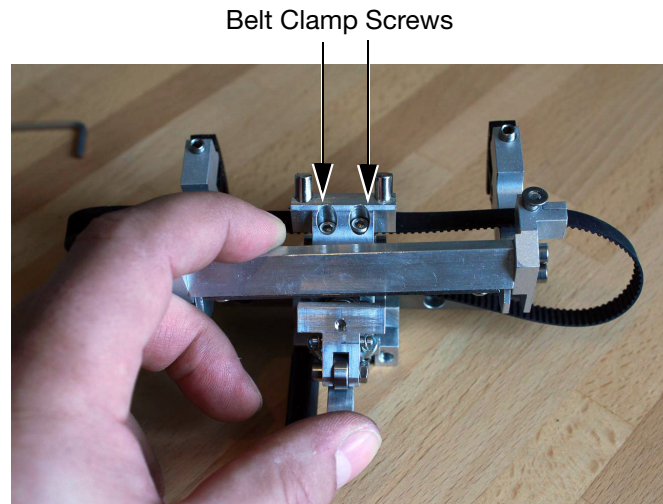
- (1) Remove the bridge cover.



Bridge Cover

- (2) Remove the actuator assembly, as described in [“Replacing the Print Head Actuator”](#) on page 4-10.

- (3) Lift the print head mounting arm to expose the two screws.



- (4) Loosen the two belt clamp screws.
(5) Remove the belt.
(6) Fit the new belt.
(7) Tighten the belt clamp screws.
(8) Refit the actuator assembly onto the printer.
(9) Replace the bridge cover and calibrate the printer.

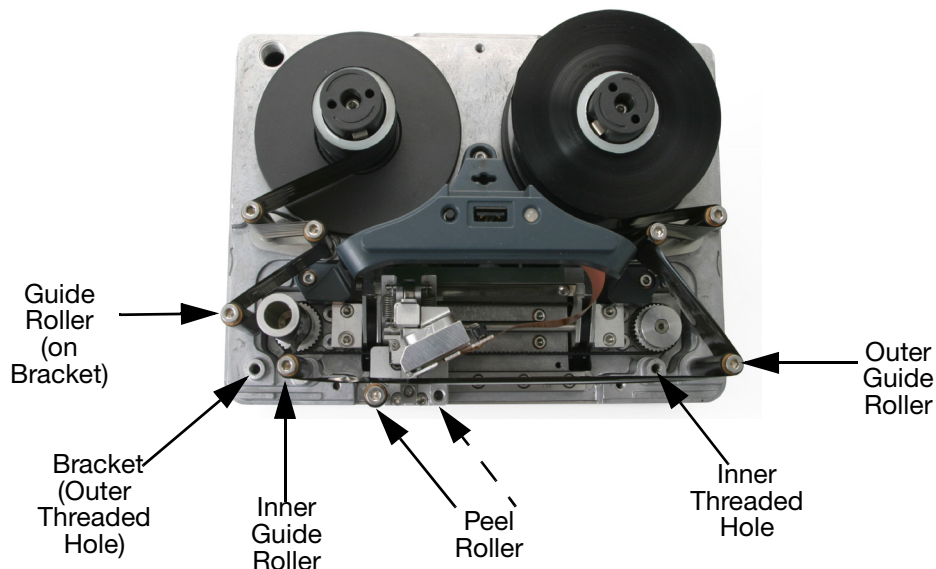
CHANGING PRINTER CONFIGURATION

This procedure details how to change a right-handed printer set-up to a left-handed printer set-up or vice versa.

- Notes:* (1) *Parts required for non-cassette printer: EDP003942 Rehanding Ribbon Path Labels (10 LH and 10 RH)*
- (2) *Parts required for cassette printer: EDP003941 Rehanding Ribbon Path Labels (10 LH and 10 RH)*
- (3) *Tools required: 2.5, 3mm and 4mm Allen keys, 5mm spanner, TX20 Torx driver, 5.5 nut spanner, long-nosed pliers.*

Printer

- (1) Power off the machine.
- (2) Remove the bridge cover.
- (3) Remove the print head.



- (4) Move the peel roller to the alternate position.
- (5) Move the outer guide roller to the inner threaded hole.
- (6) Move the bracket and guide roller to the outer threaded hole on the other side.
- (7) Move the inner guide roller to the outer threaded hole.
- (8) Install the print head into the opposite connector.
- (9) Re-space the gap between the spindles and base plate, using 4mm or 5mm Allen key.

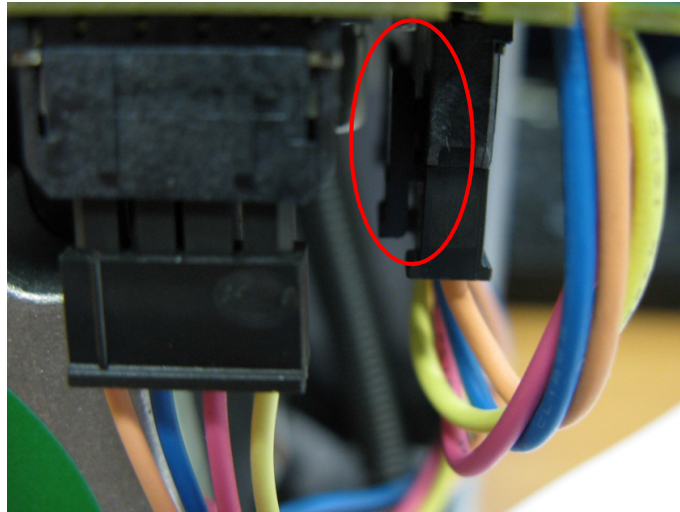
Note: The rewind spindle has the smaller gap.

(10) Remove the back cover.

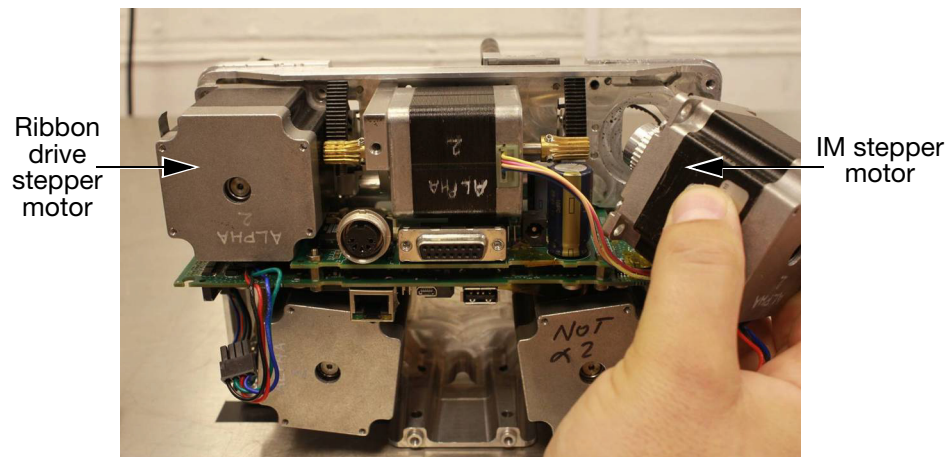
(11) At the back of the printer, disconnect the IM stepper motor and the capstan stepper motor.

CAUTION:

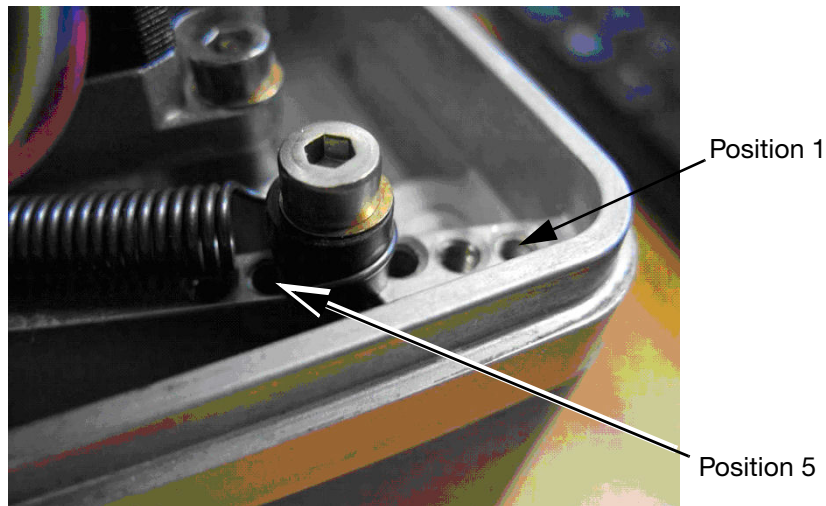
When unplugging the stepper motor connectors from the PCB set, fully press the clip on the inner part of the connector before pulling it out (see the following photograph). Failing to do so may damage the PCB's connector, and replacement of the PCB set will be necessary.



(12) Remove the IM stepper motor and the capstan stepper motor.



- (13) Adjust the ribbon tension. Ribbon tension is controlled by springs fitted to each of the two dancing arms. Dancing arm springs can be fitted in a number of defined positions, allowing the spring force and ribbon tension to be varied if required - see the next photograph. The default / factory fitted dancing arm spring positions are as follows: (a) unwind dancing arm spring position: 2 (b) rewind dancing arm spring position: 4.



Dancing Arm Spring Positions

Note: In most circumstances, the default dancing arm spring positions should be used. To change from the default dancing arm spring positions, see [“Changing from Default Dancing Arm Spring Positions”](#) below.

- (14) Note the present position of the dancing arm spring anchors. When refitting for the opposite hand, ensure that the position of the anchors mirrors the original position of the anchors.

- (15) Swap the motors over, reconnect them and re-tension the belt.

Note: Ensure that ALL cables from the stepper motors are fitted back into the cable-retaining slot before fitting the back cover.

- (16) Replace the covers and test.

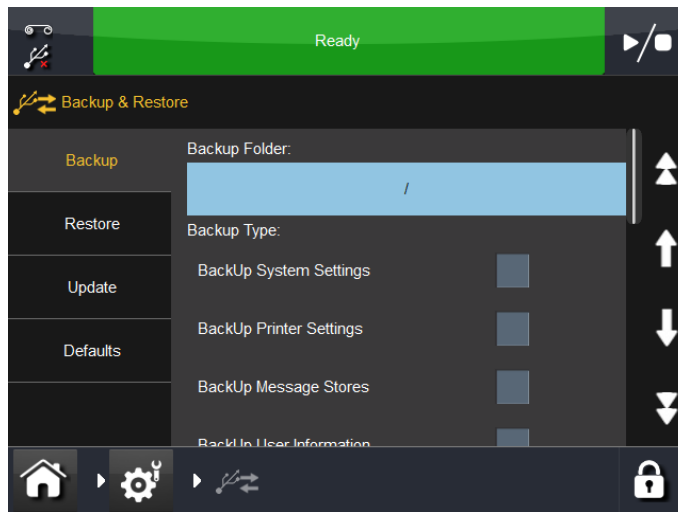
Changing from Default Dancing Arm Spring Positions

Dancing arm spring positions may need to be changed from the default positions in the following conditions only:

- If using 22mm wide R1 Grade ribbon, the ribbon tension must be reduced by changing the rewind dancing arm spring to position 6 and the unwind dancing arm spring to position 4. If the ribbon tension is not reduced, ribbon breakage may occur
- If the printer is used in temperatures above 30°C with WR1 ribbon, it may be necessary to increase the rewind tension to ensure the ribbon separates correctly from the substrate. Increased noise and the ribbon sticking to the substrate are indicators that the ribbon is not separating correctly. To correct the problem, increase the rewind tension one position at a time until the problem is resolved.

BACK-UP & RESTORE

Go to *Settings > Backup & Restore*:



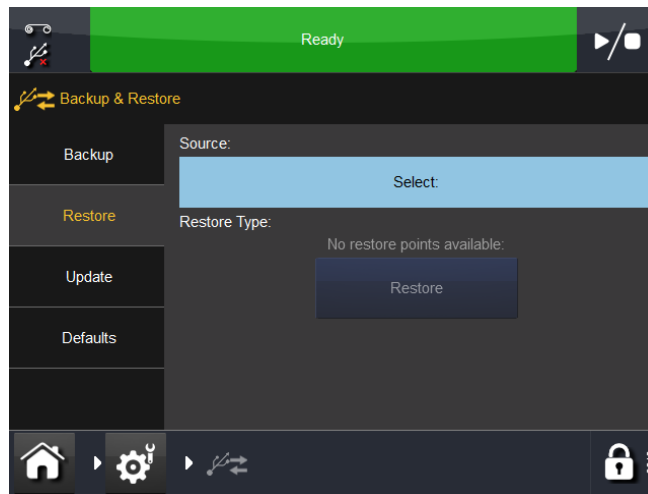
Backup

On the Backup tab screen:

- (1) Review and note the list of back-up types that are required.
- (2) Go to *Settings > Security > Electronic Signature* and view / edit / add Electronic Signatures so that the list matches that of the desired back-up types. For information regarding Electronic Signatures, see [“Electronic Signature” on page 3-55](#).
- (3) Go to *Settings > Backup & Restore* and select:
 - (a) The Backup Folder
 - (b) The Backup Type(s) as appropriate
 - (c) Export All Settings as appropriate
 - (d) The Migrate option(s) as appropriate
 - (e) The Backup button.
- (4) At the prompt(s) for the Electronic Signature(s), enter the Name and Password for the selected option(s).
- (5) Select *OK*. A message box appears when the back-up is complete.

Restore

The Restore tab screen follows:



From the Restore tab:

- Select the Source
- Select an available Restore Type and select the Restore button.

Update

From the Update tab, if updates are found on this screen, you can manually restart the update.

Defaults

Select the Defaults tab to reset the defaults.

To load defaults:

- (1) Select a value from the list.
- (2) When the Load Defaults screen appears, review the list of default values that will be loaded and select either *Cancel* or *OK*.

FAULT FINDING

Front Cover Sensor

See [“Front Cover Sensor” on page 4-5](#).

Sensor Test

Note: To test the sensors, the printer needs to be connected to the Power Supply Unit (PSU) and the unit switched on. When you are ready to perform the test, see [“Sensor Test Procedure” on page 4-23](#).

Sensor Descriptions

Note: Except for the Cover Sensor, all other sensor values displayed are analogue based on detection of a magnet.

Arm 1 (Left and Right) - The arm sensor monitors the position of the dancing arms in the dynamic range, i.e. where the dancing arms are positioned when the printer is operating correctly. See [“Arm ‘Sensors’” on page 4-23](#).

Cover Sensor - This sensor detects the presence of the protective cover that goes around the printer. A value of, or close to 512, means that the cover is not present.

For more information, see [“Front Cover Sensor” on page 4-5](#).

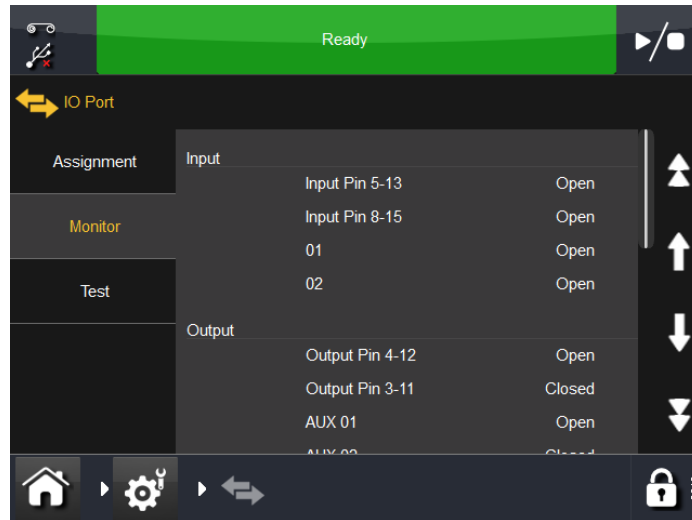
Ribbon Alarm Left and Right - The ribbon alarm is activated if the dancing arm reaches the magnetic sensor. To manually activate the sensor, place a magnet in front of the sensor and verify that the sensor is activated.

Home Sensor (Left, Middle and Right) - This detects the position of the print head carrier. See [“Home ‘Sensors’” on page 4-24](#).

Height1, Height2 and Height3 - This monitors the height of the print head in relation to the substrate.

Sensor Test Procedure

To access the menu that assists in testing the printer, select *Settings > IO Port > Monitor*. The following screen will display:



Scroll down to Sensor and observe the display readings obtained.

Note: All sensors are Hall Effect devices.

The values obtained are as follows:

- 0 = No value read
- 1-99 = Background noise
- 100-1000 = Working range
- 1024 = Saturated reading

Note: The Ribbon Alarm sensor must be above 400 when the dancing arm is in the topmost position.

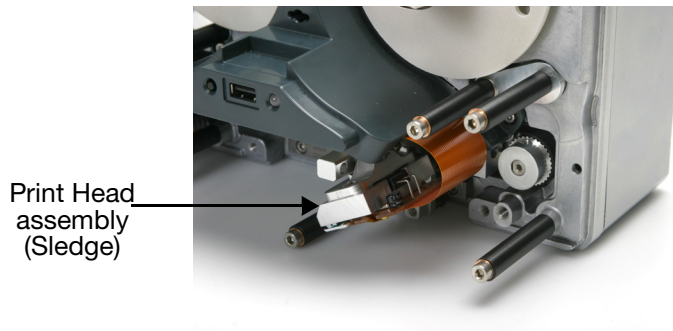
Arm 'Sensors' - Remove the cover to gain access to the dancing arms, with the power switched on.

Physically move one dancing arm at a time and observe the readings on the screen.

The ribbon alarm sensor must activate when the dancing arm is in the upper position.

See also [“Arm 1 \(Left and Right\)” on page 4-22](#).

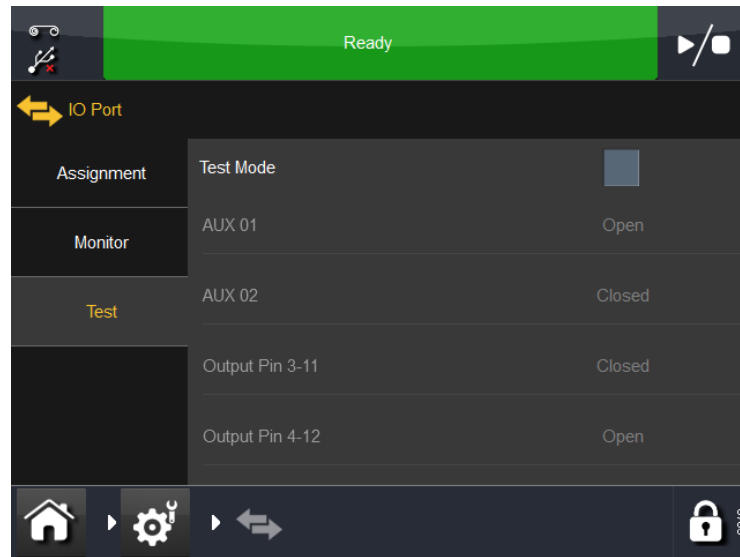
Home 'Sensors' - To test the home sensor, move the print head carrier (sledge) 'horizontally' slowly and gently from one side to the other while observing the sensor readings on the screen.



See [“Home Sensor \(Left, Middle and Right\)”](#) on page 4-22.

IO Test

Select *Settings* > *IO Port* > *Test*. The following screen appears:



Select Test Mode to check the input / output settings to ensure that they are wired correctly.

Printer LED Status

The LED indicator on the printer is used to indicate the various states of the printer. The indicator is on the front of the printer.

Printer Status	LED Colour
Idle	Blue
Ready	Green
Printer Open	Red
Printing	Green
Ribbon Tensioning	Blue
Zero Adjust	Blue
Park	Blue
Error	Red
Busy	Yellow
Initialising	Red
Retraction	Green
Speed too Low	Yellow
Undefined Status	Yellow
Returning	Green
Heating Print Head	Blue
Waiting for Prompt Input	Blue

Note: For the specific printer state, refer to the Status Bar at the top of the screen. See [“Status Bar” on page 3-8](#).

ERRORS / WARNINGS

See [“Alert Configuration” on page 3-44](#).

List Of Errors

Use this list for quick troubleshooting problems with the printer.

Note: All error codes in the following list can trigger an error signal EXCEPT for the ones in Error/Warning settings that have been set to Warning or Ignore. For further information regarding Error/Warning settings, see [“Alert Configuration” on page 3-44](#).

If any of the errors persist please contact qualified personnel or the supplier.

Error No.	Error Text	Action
3	Open while printing	The cassette has been opened during a printing operation.
4	LVDS data not ready	LVDS is the system used to send print information from the controller to the print unit. A poorly grounded cable may cause this error (especially when printing fast). Try lowering the print speed.
5	P/H interface not done	The print speed exceeds the limitations of the print head. Lower the print speed or enable Fast Mode.
6	Label too long	The total print length (Y-offset + label) is longer than the supported print length. Use a lower Y-offset or shorten the label.
7	Still ready after EOC	Communication error between controller and print unit.
8	Event buffer overflow	To reduce ribbon consumption, the printer stops the ribbon motor if there is a section of white space in the print out. Too many sections of white space can cause this error. Redesign label.
9	Event data timeout	Communication error between controller and print unit.
10	Event data parity error	Communication error between controller and print unit.

Error No.	Error Text	Action
11	Speed Too Low	Adjust the minimum line speed setting. For CM printers: Go to <i>Alert Configuration > Ranged Alerts</i> and set the print speed in the range of 10 to 550 mm/s.
12	Y-offset too short	The Y-offset is too short. Some parts of the print out may be missed. Increase the Y-offset or reduce speed.
13	Ribbon Alarm	The dancing arm has reached the top of its travel usually because the ribbon is broken or there is no more ribbon left. Check remaining ribbon. In some scenarios an excessive retraction (or mechanical maladjustment) can cause the unwind dancing arm to touch the ribbon alarm sensor. A ribbon alarm can also be triggered by the ribbon warning sensor. If the ribbon alarm comes in fixed intervals (such as every 5 prints) the ribbon warning sensor may be damaged. Use diagnostics to check ribbon warning and ribbon alarm sensor. Check remaining ribbon.
20	Init: print head voltage	A security system measures the voltage to the print head. If the voltage is too high or too low this error comes up. Check for shorts in the cable that end in the print head itself. DO NOT REPLACE ANY PARTS - call for qualified Easyprint personnel or contact the supplier.
21	Init: Main power supply	The voltage supplied by the external power supply is tested during start. If the voltage is out of specification (24V±6V), this error is shown. Check the power connection.
28	Empty Label	The field contains no data or there are no fields in the label. Redesign the label.
30	24V Low	Power loss or damaged power supply.

Error No.	Error Text	Action
102	Start when printer not ready	The printer has received a start signal while printing. Reduce speed or increase distance between start signals.
103	No acknowledge on start pulse	Communication error between controller and print unit. Check settings and try again.
104	Step command timeout	Communication error between controller and print unit. Check settings and try again.
105	No response	Communication error between controller and print unit. Check settings and try again.
107	Print pulse while delaying start pulse	A print pulse was detected while the Start pulse delay system was active. Check the start pulse input signal and the start pulse offset value.
108	Buffer empty	The print buffer in the printer's memory was not ready to feed the print head with data. Contact supplier.
109	Stepper motor voltage overload	One of the stepper motors has drawn too much current. This could be caused by faulty motor or print head card error.
110	Print head voltage overload	Print head has drawn too much current. Could be caused by faulty print head, damaged cables or stepper motor card error.
111	Start when speed too low	The web speed was not fast enough when the start signal was applied. Make sure the web is running before applying the start signal. Alternatively verify the signal is correct for the application.
112	Ribbon speed too high	The speed of the print ribbon was too high. Slow down the web speed or increase the ribbon economy.
1001	User program not started	Contact service technician.
1002	Step user program not started	Contact service technician.
1003	Step status undefined	Contact service technician.

Error No.	Error Text	Action
1004	Step programming cancelled	Contact service technician.
1005	Main FPGA not started	Contact service technician.
1006	Main FPGA still not loaded	Contact service technician.
1007	Main FPGA not loaded	Contact service technician.
1008	Step driver malfunction	Verify stepper motor is connected correctly. Stepper card error.
1009	Initialising interrupt failed	Problem with CPU board
1010	Loading CPU32 failed	Problem with CPU module.
1011	Initialising FPGA Failed	Problem with CPU module or stepper card.
1012	Detecting print head adapter failed	The print head adapter is not inserted or damaged. Stepper card problem.
1013	IM position error	The print head carrier could not locate home position. Make sure the carrier is not obstructed in its movements. Check the magnets on the carrier (using the sensor test). Check the timing belt.
1014	Solenoid out of range	The solenoids may not be properly connected or damaged. Check stepper motor card.
1015	Calibration Failed	Check ribbon path. Check sensors are working properly.
1016	Printing Timeout	Manually cancel print job and try reloading it.
1018	Head Position error	Set the correct distance of 0.2-2.0mm between the print head and substrate for both CM and IM printers. Adjust the print head by selecting <i>Settings > Production Line Setup > Print Head > Print Head Height</i> .

Error No.	Error Text	Action
1019	Calibration required	<p>CAUTIONS: (1) When calibrating, the print head must be able to extend fully, ensure enough space is allowed to perform this function.</p> <p>For CM printers: The print head position parameter must be set to allow this.</p> <p>For IM printers: The printing surface should be moved from under the printer, if not possible, remove the printer from the bracket.</p> <p>(2) Prior to installing the printer, calibration of the vertical print head movement is required: Go to Settings > Production Line Setup > Head Functions and select Calibrate.</p> <p>1019 error indicates that vertical print head movement requires recalibrating - follow the path above.</p>
1021	Burst Done Timeout	FPGA related.
1022	Block Function Timeout	FPGA related.
1023	Transfer still busy	Contact service technician.
1024	Transfer failed	Retry operation. If problem persists, contact service technician.
1025	Not ready to transfer	Contact service technician.
1026	Ribbon Warning	<p>The remaining ribbon has reached the limit specified in the Error/Warning screen. On the same screen the event is set to cause an error.</p> <p>Check the Error/Warning screen.</p> <p>Check the remaining ribbon.</p>
1040	Setting out of range	The setting is out of range. Set to correct range
1041	Undefined Error	Reserved
1042	Unknown Error	Reserved
1043	Design Pointer Not Set	Reserved
1044	Design Delete Timeout	Reserved
1045	Label Size Too Big	The label is too large. Edit the design and reduce the label size.
1046	No Text Defined Yet	Reserved

Error No.	Error Text	Action
1047	Upgrade Failed	Upgrade failed. Check the Software Versions screen.
1048	Special Action Not Found:	Error in firmware/software. Contact supplier and supply information on how the error occurred.
1049	CRC Error	All files on the controller have a CRC checksum. The CRC checksum does not match. Either the file has been modified by an unauthorised person, or the file is damaged. Contact supplier.
1051	Error incompatible version	Only on non-21CFR_Part 11 controllers: The design being loaded is too new (and hence the controller does not know how to handle it). Upgrade the controller to a newer version.
1052	Error incompatible version	Only on 21CFR - Part 11 compliant controllers: The design being loaded is too new (and hence the controller does not know how to handle it) or too old (created without CRC checksum). Upgrade the controller to a newer version.
1053	Error unknown log type	Problems with the log feature.
1054	Error log id missing	Problems with the log feature.
1055	Nothing to save	Saving of design file is not required.
1056	Saving design	Ensure the user has proper access rights to save the file and that the destination is accessible.
1057	Not authorised to...	Log in as a user with appropriate access rights and retry operation.
1059	Unsupported feature	Will continue to print but without the unsupported feature that is being disputed.
1060	File not found	A file is not found. Check the filename.

Error No.	Error Text	Action
1061	No external flash detected	Some operations require an external flash card. No external flash card is detected. Abort the operation. If required insert a Compact Flash Card while the power is switched off.
1062	Error Writing File	Error while writing a file to disk. Check for free space.
1063	Low Space on System Disk	The system disk is running low on free space. Images transferred to the controller can consume a lot of space. Lost fragments in the file system (i.e., if an upgrade fails due to power loss) can also be the case.
1064	Critical Low Space on System Disk	The system disk is running critically low on free space - see above.
1065	Not Enough Space on System Disk	Reserved
1066	Not Enough Space	Reserved
1070	Unable to open log file	The log file could not be opened. If the log is located on the LAN check access rights.
1071	Unable to rename Log file	The log file could not be renamed. If the log is located on the LAN check access rights.
1072	Unable to delete old Log file	The log file could not be deleted. If the log is located on the LAN check access rights.
1074	Maximum log size reached	Reserved
1075	Could not write to log because of this error:	See the remaining text on the display.
1076	Unable to get file status	The file status could not be obtained. If the log is located on the LAN check access rights.
1077	Unable to create log sub dir	The log sub dir could not be created. If the log is located on the LAN check access rights.
1078	Unable to access Network log file	The network file could not be accessed. If the log is located on the LAN check access rights.

Error No.	Error Text	Action
1079	Recursive log write, log disabled	Error in firmware. Contact supplier and supply information on how the error occurred.
1080	Image not found	The image could not be found. Check the filename (If design is saved on network by EasyDesign check the Save to SRAM field). If the filename is generated by a variable check that the variable yields the correct path/name.
1081	Image Not Monochrome	The controller only supports images with 1 bit per pixel (Black/white no greyscale).
1082	Invalid Graphic File	Check if the file exists. It is either damaged or incompatible with the controller.
1083	Only BMP and PCX supported	The controller only supports BMP and PCX images. Use a paint program to convert any other formats to either BMP or PCX.
1084	Error Reading Image	Check if the file exists. It is either damaged or incompatible with the controller.
1090	Help file not found	Help files are not installed. Refer to the user documentation instead.
1091	Invalid help screen file	The installed help file is damaged. Contact service technician.
1092	Helptext empty	Help files are not installed. Refer to the user documentation instead.
1093	Helptext tag not found	Help files are not installed. Refer to the user documentation instead.
1100	Circular Reference	A variable depends on another variable that in turn depends on the first variable. None of the variables can thus be evaluated. Check the variables dependencies
1101	Out of range	The value typed in at the prompt is out of the range specified in the variable. Type in a number within the range, or modify the design to accept another range.

Error No.	Error Text	Action
1102	Invalid Value	The typed in value could not be interpreted.
1103	Too many characters	More characters have been typed in than are specified by the variable. Type in fewer characters, or modify the design to accept more characters.
1104	Only numeric characters allowed	Only numeric characters are allowed. Type in a number or modify the design to support standard text.
1105	Variable Not Supported	A design is loaded that contains a variable type that is no longer supported. The variable is removed. Use the original program to salvage the variable or save the design to permanently remove the variable.
1106	Error writing continuous sequence file	The sequence variable can be set to resume count. Check for access rights.
1107	Error loading continuous sequence file	The sequence variable can be set to resume count. Check for access rights.
1108	Set edit variable tokens	Retry operation. If problem persists, contact service technician.
1110	Illegal destination variable	A statement can be like this: Destination variable = Source Variable. A destination variable in a macro can be d0 to d19 (integer values) f0 to f19 (floating point values) s0 to s19 (string values) output (Keyword) Optionally{Name of a Macro out variable}
1111	Illegal Source variable	A statement can be like this: Destination variable = Source Variable. A source variable in a macro can be d0 to d19 (integer values) f0 to f19 (floating point values) s0 to s19 (string values) Optionally {Name of another variable}
1112	"=" Expected	A "=" was expected during the syntax check of the macro.

Error No.	Error Text	Action
1113	Illegal compare	A variable is compared to another variable using an unrecognised compare operator. Use one of the following compare operators: =, ==, !=, >=, <=, < or >.
1114	Label Missing	Check the goto command. A goto command was found but the label to jump to was not found.
1115	Error in if Statement	Check the "if" statement. An if statement is build up like If (Test) then statement Example: If d0=0 then goto The Value Zero
1116	Error in format definition	Error in format statement. See section concerning macro programming
1117	Error in format var.	Error in format statement. See section concerning macro programming
1118	"}" Expected	A "}" was expected during the syntax check of the macro.
1119	">" Expected	A ">" was expected during the syntax check of the macro.
1120	Constant number or var. Expected	A constant or a variable was expected.
1121	" Expected	A " (quote) was expected during the syntax check of the macro.
1122	Illegal operator	An unknown operator was found The following operators are supported +: Add two numbers (string concatenation) -: Subtract two numbers *: Multiply two numbers /: Division &: Logic AND : Logic OR ^: Logic XOR %: Modulo
1123	"then" Expected	A "then" was expected during the syntax check of the macro.
1124	Illegal operator for strings	Operator does not support strings.
1125	Illegal operator for float	An operator was used that does not support floating point values.

Error No.	Error Text	Action
1126	Illegal compare for strings	Use single or double equal (= or ==) to test if two strings are equal. Use exclamation mark equal (!=) to test if two strings are different.
1127	Can't compare string and number	A string can't be compared to a number. If needed, first convert one type to another type using a temporary variable. To compare d0 and s0, do one of the following: Compare as strings (using s1 as temp) :s1 = d0 If s1==s0 then... OR Compare as numbers (d1 as temp) d1=s0If d1==d0 then...
1128	Max Loop Count	If any of the statements in the macro is executed more than 1000 times and a result is not yet achieved, the macro has entered a deadlock. The error comes up to prevent a faulty macro stopping the entire unit. Check for endless loops.
1129	Variable Not Found	A reference is made to another variable using the {Variable Name} syntax. Check that the referenced variable exists
1130	"output" Expected	The keyword output was expected. Check for syntax errors.
1131	Variable or Const Expected	A variable or a constant (number or text) was expected. Check for syntax errors.
1133	Unknown System Var	A reference is made to a system variable using the <Variable Name> syntax. Check the name.
1134	Macro Value Overwritten	Not used
1135	Variable index out of range	A local variable is indexed out of range. Range is from 0 to 19 (i.e. d0-d19)
1136	Label not found	The label referred to by a goto statement was not found. Check syntax

Error No.	Error Text	Action
1137	String Value overflow	The maximum length of a string variable is 0x7FFF (32767) characters. Check the macro. There may be a programming error that causes the string's maximum length to be exceeded.
1138	Floating point Value overflow	A floating point value has exceeded its maximum value. Check the macro. There may be a programming error that causes this error
1139	Division by zero	You can't divide with zero. Check the macro. There may be a programming error that causes this error
1140	Unreferenced Macro Output variable	A macro output variable is inserted into a field (Text field), but is never calculated by any macro. Check the macro and the macro output variable for any inconsistency. (You can't have a macro output variable on its own; it needs a macro to calculate its value).
1141	Macro Out Variable already ref.	A macro output variable can only be updated by one macro. This error is raised if multiple macros try to access the same macro output variable.
1142	Read only destination var.	The destination variable is read only.
1143	Too Few Parameters	The function used needs more parameters
1144	Too Many Parameters	The function used needs fewer parameters
1145	Parentheses	Ensure that placement of parentheses in the macro is correct.
1146	Item description not found	Ensure that the "Item Descriptions" used in the macro refer to an actual element in the design.
1148	Redefinition	User is trying to redefine a variable. Please verify variable naming.
1149	Macro out expected	A variable of type "Macro output" was expected as destination. Check syntax and destination variable.

Error No.	Error Text	Action
1172	CodePage file not found	The codepage specified by the variable could not be found. Please check the codepage selection.
1173	Interrupt Not Initialised	A part of the printing software was not started correctly. Restart unit.
1200	Serial variables buffer overflow	The serial variables input buffer overflowed. Check the device that sends info into the buffer.
1201	No active serial variables named:	An external device tries to access a serial variable that does not exist. Check design and the external device.
1202	No active serial design	A variable definition was transferred out of scope. Check the transmission.
1203	Error in input definition	Syntax error in the input definition
1220	Error Creating Design Item	The item could not be created.
1221	Error Creating Variable	The variable could not be created.
1222	Unknown Barcode Type	The barcode item contains info about a type currently unknown. Check the design.
1223	Bad Label Design Version	The design version could not be read correctly. Design could be damaged. Check design.
1224	Error Reading Design	The design could not be loaded. Design could be damaged. Check design. Possibly an incorrect filename was specified. Check filename.
1225	Unable to start printing due to an error	At least one error was encountered during the loading of the design. Printing cannot take place. Check the preceding errors.
1226	Printing halted due to an error	An error was encountered in the printing process that has halted the print. Check the preceding errors.
1227	Error Reading Design	Field(s) could not be read. Design could be damaged. Check design.
1228	Unknown error while reading design	Design could be damaged. Check design.

Error No.	Error Text	Action
1229	Unable to print. System log failed	On a 21 CFR - Part 11 compliant system, printing cannot start if the system log fails. Check free space.
1230	Invalid anchor point	The anchor point setting could not be set. Check transmission.
1231	Error receiving design item	Error encountered while receiving a label. Check transmission.
1232	Item Did Not Fit Label	The item could not be inside the label border. Check the field.
1233	Set edit item tokens	Retry operation. If problem persists, contact service technician.
1241	Text Did Not Fit Block	The text entered does not fit into the specified rectangle. Check the design item.
1242	Word Did Not Fit Max Width	A word was longer than the line length. Check the field size and the text.
1243	Block Did Not Fit Label	The rectangle around the field does not fit the label. Check the size of the field and the data.
1244	Text Did Not Fit Label	Too much text is typed into the label. Check the field.
1245	X-pos Greater Than Label Width	The x position is set outside the label border. Check the field.
1246	Y-pos Greater Than Label Height	The y position is set outside the label border. Check the field.
1247	Barcode QR	Internal error in QR rendering. Check input for QR code.
1250	Error Already editing	Editor is busy. Try again or restart the printer.
1251	Error File already exists	Try saving using a different name.
1261	Access to network denied.	Check user name / password of the network shortcut. Consult the network administrator.
1262	Already connected to network.	The network thinks connection has already been made.
1263	Shortcut name is invalid.	The name of the network shortcut is invalid. Please check the name.
1264/ 1265	Network path not acceptable/invalid, or cannot be located.	Problem with the network path. A network path syntax is: “\\ServerName\ShareName”

Error No.	Error Text	Action
1266	Network busy. Try later.	
1267	Network connection was cancelled.	Cancel was selected before the connection was established.
1268	Device is already remembered.	The network connection is already established.
1269	The specified password is invalid.	
1270/ 1271	Shortcut not connected, or could not be handled.	The shortcut is currently not connected. Check status of the shortcut.
1272	There is no network present.	The network is no longer available. Check the cable.
1273	Bad network path.	Problem with the network path. A network path syntax is: “\\ServerName\ShareName”
1274	Shortcut is no longer available.	The network is no longer available. Check the cable.
1275	CRITICAL: More entries are available.	General network error.
1276	CRITICAL: The handle is not valid.	General network error.
1277	CRITICAL: Parameters contain invalid values.	General network error.
1278	CRITICAL: Does not point to a container.	General network error.
1279	A network error occurred	General network error.
1280/ 1281	Shortcut has files open or requests pending.	The connection cannot be closed because a file is not closed yet. Close all files and try again.
1282/ 1283	An unexpected network error occurred.	General network error.
1284	Network connection Timeout	The network connection timed out. Try again
1290	Invalid IP Address	Check the IP address.
1291	IP Conflict!	Check the IP address or use DHCP
1292	Unable to register host name	Check the host name.

Error No.	Error Text	Action
1293	Disconnection Failed	Try again.
1294	Error Disable Network Thread	Switch off unit
1400	Windows Socket Init Failed	Could not initialise networking features. Reboot unit.
1401	Unknown Error	Unknown protocol error.
1402	Unknown Receive Id	The information received was not recognised. Check transmission.
1403	Unknown Send Id	The information to send is not recognised by the protocol. Check transmission.
1404	ETB Missing	A control character is missing. Check transmission.
1405	Unable to start receive thread	Could not initialise networking features. Reboot unit.
1406	Init Serial port	Could not open serial port. Try to reopen the port by switching baud rate.
1407	Read Timeout	The start of a command was read, but the remainder of the command was not received within a period of time. Check the sending device.
1408	Memory Allocation Failed	Could not allocate enough memory.
1409	Write Timeout	The receiver does not accept data. Check cable.
1410	Invalid Handle	The internal handle used for the transmission is invalid. Either the port was not opened properly or another device is blocking the port.
1411	Error Creating send block	Any transmission is sent in blocks. One such block could not be created. Check transmission.
1412	Error Reading String	A string was supposedly sent but the receiver could not recognise the format. Check transmission. Lower the baud rate. Enable Hardware handshake.
1413	Error Reading Integer	An integer was supposedly sent but the receiver could not recognise the format. Check transmission. Lower the baud rate. Enable Hardware handshake.

Error No.	Error Text	Action
1414	Error Reading Double	A floating point number was supposedly sent but the receiver could not recognise the format. Check transmission. Lower the baud rate. Enable Hardware handshake.
1415	Error Reading data	A block of raw data was supposedly sent but the receiver could not recognise the format. Check transmission. Lower the baud rate. Enable Hardware handshake.
1416	Version Conflict	The software in the unit or the external device is too old.
1417	Unexpected Answer	Communication error. Try again.
1418	Failed To Receive Command	Check communications cable.
1419	Error Parsing Block Buffer	Check transmission.
1420	Invalid Socket Data Block	Check transmission.
1421	Failed To Send Command	Check communications cable.
1422	Handshake failed closing connection	Check communications cable.
1423	Socket ident is not valid	The internal handle used for the transmission is invalid. Either the port was not opened properly or another device is blocking the port
1424	Client protocol is too old	Check versions. Upgrade external device if required.
1425	The socket is already in use	Try later
1426	Invalid host address	No unit with the specified name or address could be found. Check name and network connection.
1427	Unable to create new socket	Try again. Reboot unit.
1428	Unable to connect socket	Try again. Reboot unit.
1429	The socket is not connected	Try again. Reboot unit.
1430	Invalid socket package	Try again. Reboot unit.

Error No.	Error Text	Action
1431	Unable to start listen thread	Reboot unit.
1432	Error terminating listen thread	Reboot unit.
1433	Unable to accept socket	Not used
1434	Printer protocol is too old	Check versions. Upgrade unit if required.
1435	Error starting network socket	Reboot unit.
1436	Unknown Setting Id	Check transmission
1437	Failed to allocate socket command data block	Could not allocate enough memory. Try again. Reboot unit.
1438	Command is not supported by actual version	An attempt to send data not supported by the actual version used. Check capabilities of used version. Upgrade if required or modify the transmission.
1439	Id not supported for this array	An attempt to send data not supported by the actual version used. Check capabilities of used version. Upgrade if required or modify the transmission.
1440	Failed to save command to file	Check data to store. Check file-access rights.
1441	Failed to read command from file	Check data to read. Check file-access rights.
1442	Socket may not be connected while file operation	Close any connections and try again.
1443	Error receiving format specific server	An error was detected in the reception of data to a serial variable with a specific input definition. Check the serial variable and the data sent by the external device.
1444	Error starting Human readable network socket	Try using the standard port 9100 or another available port.
1500	Not enough memory	The printer is out of memory. Printer needs to be rebooted.
1602	More that one upgrade found	You have more than one file named upgrade*.zip

Error No.	Error Text	Action
1603	Could not load file information	Could not extract the file information from the archive. Check for valid upgrade file.
1604	Could not read service pack	Could not extract the service pack information from the archive. Check for valid upgrade file.
1605	Could not read platform	Could not read platform information from the archive. Check for valid upgrade file.
1606	Upgrade not allowed	The upgrade required that an authorised user has approved the upgrade. Make sure upgrade is allowed.
1607	Could not validate versions	Check for valid upgrade file.
1608	Could not initiate upgrade	Check for valid upgrade file.
1609	Upgrade path invalid	If upgrading, make sure the upgrade file can be located. If backing up, make sure the destination folder is valid.
1611	Archive invalid	Check for valid upgrade file.
1612	Unknown error in archive	Check for valid upgrade file.
1613	Failed upgrading operating system	Verify that there is enough space in the internal storage to install the new operating system.
1614	One or more items failed	At least one item failed during the upgrade procedure. Check upgrade file and repeat process.
1615	Only CFR21 part 11 upgrades supported	CFR21 part 11 upgrade needed.
1616	CFR21 part 11 upgrades not supported	Non CFR21 part 11 upgrade needed.
1617	Incorrect platform	The software in the unit did not meet the requirements for the upgrade. Check which version is installed, and which version is required by the upgrade file.

Error No.	Error Text	Action
1618	Unsupported version	The software in the unit did not meet the requirements for the upgrade. Check which version is installed, and which version is required by the upgrade file.
1619	Failed reading CFR21 Part 11 info	Could not determine if the upgrade was made for CFR21 part 11. Verify the upgrade file.
1620	Failed reading Platform info	Could not determine which platform the upgrade was made for. Verify the upgrade file.
1621	Failed reading Service Pack info	Could not determine which Service Pack the upgrade was made for. Verify the upgrade file.
1622	Failed renaming file	Try using another filename.
1623	Failed deleting old backup file	Restart printer and try again.
1625	Upgrade script failed	Retry operation. If problem persists, contact service technician.
1626	Could not read upgrade info	Verify that the upgrade file is not damaged and that it is created for this device. Also ensure that the device can read the media.
1627	Upgrade is not for this device	The upgrade file was not created for this device. Ensure that the user has the correct upgrade file.
1650	Error detected at slave printer	See "Printer Slaves" on page 2-26 . If required go to the slave printer to amend any issues.
1651	Slave printer has active slaves	One of the slave printers is already set up to be a master. Either remove the slave printer from the list or ensure that the slave does not have any slaves of its own.
1652	Slave list contains this printer	One of the slave printers has the master in its slave list. Either remove the slave printer from the list or ensure that the slave does not have any slaves of its own.
1653	Slave IP already in list	The same slave printer is added twice to the list. Remove one of the instances.

TROUBLESHOOTING GUIDE

Print Problems

When poor print quality occurs, check the following list to ensure that settings/conditions are correct:

Setting/ Condition: IM Printers	Setting/ Condition: CM Printers	Setting/Condition to Check
✓	✓	Is the printer in 'Ready' mode and able to print?
✓	✓	Is the print head clean?
✓		Is the print base rubber clean and undamaged?
	✓	Is the print roller clean and undamaged?
✓	✓	Is the printer level in its frame?
✓	✓	Is the gap between the print head and substrate about 0.2-2.0mm in pre-print position?
✓	✓	Is the print head gap even along its length compared to the substrate?
	✓	Is the print head parallel to the print roller?
	✓	Is the print head set to 'Top Dead Centre' on the print roller? Bear in mind the printer may operate slightly better 1 – 2mm before or after 'TDC'
✓	✓	Is the print head set at the correct / optimum angle?
✓	✓	Is the print head damaged?
	✓	Is the speed of the parent machine set too high? Up to 30M/min is acceptable.
	✓	Is the speed of the parent machine set too low? Above 3M/min is acceptable.
✓	✓	Is the ribbon correctly wound on the spindle?
✓	✓	Are the ribbon guide rollers clean, running freely and unmarked?
✓	✓	Is the tension on the ribbon set correctly?
✓	✓	Is the ribbon of the correct specification for the printer and substrate?
✓	✓	Is the substrate surface clean and suitable for Thermal Transfer printing?

Setting/ Condition: IM Printers	Setting/ Condition: CM Printers	Setting/Condition to Check
✓		Is the dwell time sufficient for the amount of print required?
✓	✓	Is the parent machine giving the printer a print signal?
✓		Is there too much / not enough start pulse offset? Is the substrate still moving when printing?
	✓	Is the encoder wheel turning and sending pulses to the controller?
✓	✓	Is the parent machine advancing the substrate correctly?
✓	✓	Check that contrast is set to 80 - 100%
✓	✓	Check that preheat is set to 90 - 100%
✓	✓	Check that Ribbon Economy is initially set to 4%
✓		Check that Retraction Offset is set to 1mm
	✓	Check that Retraction Offset is set to -1mm
✓		Check that Y-Offset is set to 1 - 2mm
	✓	Check that Y-Offset is set to 30mm (dependent upon speed)
✓		Check that Head down is set to 30ms
	✓	Check that Head down is set to 40ms (dependent upon speed)
✓		Check that Head up is set to 15ms
	✓	Check that Head up is set to 15ms (dependent upon speed)
✓		Check that Motor start offset is set to 6mm
	✓	Check that Motor start offset is set to 12mm (dependent upon speed)
✓		Check that Motor stop offset is set to 2mm
	✓	Check that Motor stop offset is set to 5mm (dependent upon speed)
✓	✓	Is the print head resistance set correctly?

Maintenance, Service and Fault Finding

Setting/ Condition: IM Printers	Setting/ Condition: CM Printers	Setting/Condition to Check
	✓	Is the print head heater being used and set appropriately (that is, 30° for cold environments)?
✓	✓	Is the peel-off roller in the correct position, parallel to head and clean?
✓	✓	Is the print design correctly made and stored?

Print Quality and Print Head

Problem	Action
No Information is Printed	<p>If the printer appears to be operating correctly but no data is printed, check the following: Is a valid message selected?</p> <p>Check the print speed and contrast values are at appropriate levels for the thermal ribbon and substrate.</p> <p>Is the print head coming into full contact with the print platen / roller across its full width? Is the correct ribbon loaded with the inked surface away from the print head and is it advancing correctly?</p> <p>For CM printers, the encoder signal may not be providing the correct speed information.</p> <p>The print head may be faulty.</p> <p>Ensure that the printer is ready to print, as the print head retracts when the printer is not ready (for example, if no design has been selected).</p>
Poor Print Quality	<p>The most common cause of poor print quality is a dirty print head. Clean the print head using Cleaning Pens (P/N VPR0223), Cleaning Fluid (P/N WJ-111) and Print Head Cleaning Wipes (P/N MT25215). Wipe the print head and try again. Take care not to damage the print head during cleaning. Always allow the print head to cool prior to cleaning.</p> <p>A dirty, worn or badly misaligned print platen / roller. Produce a full size test print to establish the quality of the print.</p> <p>The ribbon is not advancing correctly. Clean the ribbon rollers and check that the ribbon is loaded correctly.</p> <p>The ribbon is not fitting correctly over the top of the print head guide roller(s).</p>

Problem	Action
Poor Print Quality (continued)	<p>Excessive vibration of the packaging machine. Improve the mounting of the printer. If possible increase the print delay so that vibration has reduced by the time printing starts.</p> <p>For IM printers: The substrate is still moving when printing starts. Increase the print delay.</p> <p>For CM printers: The encoder speed is not providing an accurate measurement of the speed of the substrate.</p> <p>The matching of the ribbon and the substrate is very important. An incorrect match will not give good print quality. Contact your local Easyprint distributor for further details.</p> <p>If lines of dots are not printing and cleaning the print head and platen / roller does not resolve the problem, replace the print head.</p>
	<p>Print contrast levels should be set in relation to the print speed.</p> <p>For example, if the print speed is high, the print contrast may have to be raised to achieve good print quality.</p> <p>If the print speed is lowered, the print contrast should be reduced accordingly. As a general rule contrast levels should be kept as low as the line speed and print quality requirements will allow. This will ensure that the print head life will be used to its optimum.</p> <p>Contrast levels that are too high may also contribute to poor print quality or ribbon breakage (especially when printing barcodes or horizontal lines).</p> <p>The maximum contrast level for any print speed is 120%.</p>

Problem	Action
Faded print	<p>Print quality is dependent on the following:</p> <p>Quality of the substrate and ribbon being used, print contrast, print speed combination and the condition of the machine being used to print.</p> <p>The age and storage conditions of the ribbon can also affect the print quality.</p> <p>Keep the print head clean by using Cleaning Pens (P/N VPR0223), Cleaning Fluid (P/N WJ-111) and Print Head Cleaning Wipes (P/N MT25215). Never touch the print head with an abrasive material or metallic object.</p> <p>Recommendations:</p> <p>Clean the print head and platen</p> <p>Increase the pressure</p> <p>Increase the contrast</p> <p>Reduce the print speed</p> <p>Review ribbon.</p>
Faded on one side	<p>This is generally due to a misalignment of the printer to the platen roller/ pad.</p> <p>The print head will move down to print on the substrate and touch one side of the roller/ pad first. Recommendations:</p> <p>Check that the print head is fitted correctly, especially if it has just been replaced.</p> <p>Align the printer correctly.</p>

Problem	Action
Print rubs off	<p>This can be for a number of reasons: Not enough energy is going to the head. This is more apparent in cold environments. Increasing the contrast - and in extreme conditions the head heater on the head - can make a difference to the permeability. In environments of high temperature and humidity, the applied ribbon may still be warm and could rub off. Use a different ribbon grade. The ribbon/ substrate may be mismatched. Some substrate has coatings that make it very difficult to adhere to. The coatings may be, for example, a wax/ resin mix similar to the actual ribbon. If this is the case, use another ribbon grade. Ask your local Easyprint distributor for ribbon advice.</p>
Print smudges	<p>Reduce the Contrast value setting to compensate for extra friction forces that are applied on the ribbon during printing. Reducing the Contrast value reduces the heat and prevents the print from being smudged.</p>
Ribbon Creasing	<p>Ribbon creasing is generally due to the ribbon attempting to 'track' across the print head. The most common causes are: Bent ribbon guide pins. This may occur if the printer is dropped. It is not usually possible to bend a pin back into position. Remove and replace the guide pin. A bent peel off roller. Remove and replace the peel bar. Poor print platen / roller alignment can in some cases cause ribbon creasing as the substrate tries to pull the ribbon across the print head.</p>
Print roller/ platen	<p>A damaged print roller will cause print quality problems. A flat spot on the roller will appear as a repeated blank area on the Test pattern.</p>

Problem	Action
Encoder (CM printers only)	Check that the encoder is rotating freely. The CM printer, it will not print unless the encoder is moving. Check that the encoder signal is sending a signal back to the controller.
Ribbon Drive Problems	If the print contrast is too high or the print speed too low, the ribbon can be weakened and break. This can be eliminated by reducing the contrast or increasing the speed. The ribbon rewind is not taking up the waste ribbon correctly. Check that there is no interference between the accumulated wasted ribbon and any other part of the printer body. Ensure that the waste ribbon spool is gripping the core firmly.
Missing front edge of the print out	Head down time is too short. Increase the head down time step by step in 'run settings' until the front edge is included. Should the controller report that the Y-offset is too short, increase its value. The reaction length is too long, thus creating an overlap between two prints on the used ribbon.
Rear edge of print out is missing	Head up time is too long. Decrease the time in run settings.
There are unprinted lines in the print	Clean the print head using Cleaning Pens (P/N VPR0223), Cleaning Fluid (P/N WJ-111) and Print Head Cleaning Wipes (P/N MT25215). Perform a thorough cleaning. Any scratches on the rubber platen or rubber roller affects the print. Thoroughly clean the rubber platen and rubber roller. If scratches remain on the platen or roller, replace one or both accordingly. One or more defect print dots are present. Move the design in position x to an area where the defect dot is not being used. If this is not possible, change the print head.

Problem	Action
Printout is periodically missing and the printer creates a flopping sound while printing	The pressure is too high. Lower the pressure until the sound stops.
Unclear or non-existent printout	<p>The pressure is too weak. It is important not to raise the pressure too much, as doing so may decrease the print head life.</p> <p>The contrast is too weak or non-existent. Control the contrast by increasing it step by step in 'Print Parameters' until a satisfying quality has been achieved. Obtain good print quality using as low a contrast as possible.</p> <p>There is a mismatch between the ribbon and packaging material. This is a common error when using a ribbon other than a Easyprint ribbon.</p> <p>After changing a print head, an incorrect print head resistance value was input. When changing the print head, it is important to enter the new resistance value by going to settings, selecting hardware and choosing the printer type.</p> <p>The print head cable is incorrectly installed after changing the print head. Ensure all power is off before checking this.</p> <p>The print head is worn out.</p>
Print does not stick to the material and is not resistant to soft scratching	<p>Contrast is adjusted incorrectly.</p> <p>Incorrect ribbon is being used on packaging material.</p> <p>It is not uncommon for the print to be affected by heat or cold after printing takes place.</p> <p>Use of an incorrect ribbon has a negative effect on the print resistance.</p>
A large part or parts of the print out is missing	The ribbon is folded. Remove the cassette and make sure there are no folds on the ribbon.

Problem	Action
There is shading/smudging on the first part of print out	Head down time is too long. Reduce this in Print Parameters until the front edge is clean. Should the smudging still appear, increase the Motor start offset step by step until a satisfying result is obtained.
There is shading/smudging on the last part of print out	Head up time is too short. Increase this in run settings until the rear edge is clean. Should the smudging still appear, increase the Motor stop offset step by step until a satisfying result is obtained.
Ribbon keeps breaking	Upon activating ribbon economy, reduce pressure. The ribbon spool is damaged. The contrast is too high. The ribbon is not fitting correctly over the top of the print head guide roller(s). If using 22mm wide R1 Grade ribbon, the ribbon tension must be reduced by changing the Rewind dancing arm spring to position 6 and the unwind dancing arm spring to position 4. <i>Note: It is very important to follow this through when activating the ribbon economy functionality.</i>
WR1 ribbon sticks to substrate; noise levels increase	If the printer is used in temperatures above 30°C with WR1 ribbon, the ribbon is not separating correctly. To correct the problem, increase the rewind tension one position at a time until the problem is resolved.
Ribbon sticks to the substrate	When increasing the level of ribbon economy, reduce the Print Head Pressure setting to compensate for extra friction forces that are applied on the ribbon during printing. Reducing the Print Head Pressure reduces the friction forces that can cause the ribbon to crease, stick to the substrate or break.

Problem	Action
The packaging machine is signalling print go but nothing happens	Incorrect connection of the print signal. Check the colours in the I/O cable. There is no closed contact from the packaging machine on print signal. Check the packaging machine signal. The I/O is set to 'continuous' on the printer.
The packaging machine continues running on ribbon error	The ready signal or the error signal from the printer is not connected correctly. Test from the diagnostic menu on the printer. The signal from the printer is incompatible with the packaging machine.
Display shows "Printer open"	The printer detects whether the cover or cassette is fitted.
Display shows "Ribbon error"	A sensor within the printer body checks how much of the ribbon is used. If this error is displayed when the ribbon is loaded check the ribbon path. Check any slack in the ribbon. Check that the ribbon core is not slipping on the re-winder. Ensure that the pressure is not too high for the ribbon, as the print head may burn through the ribbon.
Display shows "Temperature too low"	The print head thermistor detects that the print head has not achieved the correct temperature. This indicates that the print head thermistor, print head cable or one of the connectors is faulty. It will also occur if the print head heater is activated but the heater is defective.
After a fault condition has been rectified, ribbon cannot be fitted	The print head is in the extended position and needs to be manually retracted.

Network

Problem	Action
There is no network connection	An incorrect IP address has been selected. Check network settings or contact network administrator. Check all cables and plugs.

Printer

Problem	Action
Printer constantly shows ribbon error	Ribbon core has incorrect specification. Use original Easyprint ribbon. Sensor arm may be defective. Verify the sensors using the sensor test located in the diagnostics menu.
Print head does not move up and down	The print head motion is driven by the stepper motor. Check the contacts between the side arm gear segments and the fifth stepper motor gears. Check the side arm gears for damage. Check that the print head up / down motion is smooth.
Worn peel-off roller	If the peel-off roller is difficult to spin due to a build up of material debris between the inner roller body and shaft, change the roller. If the peel-off roller is worn and running loose on the shaft, change the roller. Ensure that all ribbon guide pins are square to the base plate.

Problem	Action
The print head carriage does not move	<p>A stepper motor, drive belt and linear slide are used to move the print head. If the head does not drive, check the following:</p> <p>The drive belt and drive pulleys.</p> <p>Are the stepper motor connections correct? Check the condition of the linear slide. With the power to the unit turned off, is the print head free to move along the slide?</p> <p>If the fault persists, board replacement may be required.</p> <p>Ensure that the printer is ready to print, as the print head retracts when the printer is not ready (for example, if no design has been selected).</p>
Roller alignment	<p>Pick up the printer and rotate the ribbon by hand by winding on the rewind spool or cassette. Look at the ribbon that goes around the rollers and visually note whether the ribbon is pulling to one side. If this is the case the rollers may be out of alignment. Contact the supplier.</p>

Ribbon Breaks

Problem	Action
Ribbon breaks may be caused by one of the following issues:	<p>Check that the encoder matches the substrate speed correctly, otherwise the ribbon may be dragged out of the printer and eventually break.</p> <p>For IM printers:</p> <p>Check that the printer is printing whilst the substrate is stationary.</p> <p>For CM printers:</p> <p>Check that the energy to the print head is not too high.</p> <p>When increasing the level of ribbon economy, reduce the Print Head Pressure value setting to compensate for extra friction forces that are applied on the ribbon during printing. Reducing the Print Head Pressure value reduces the friction forces that can cause the ribbon to crease, stick to the substrate or break.</p>

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PART 5 : Technical Reference

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SYSTEM SPECIFICATION

Compact Touchscreen

Type	5.7 inch, full colour Compact Touchscreen (640x480 resolution), handheld, with docking station.
Compact Touchscreen Dimensions (mm)	170(W) x 127.9(H) x 33.7(D)
Weight (kg)	0.385kg
Connectivity	USB, Ethernet, (Mini USB for power / data connection to printer)
Network Interface	Ethernet 10/100 base TX
Accessories	Wall brackets
Operating environment	5 - 40°C
Humidity	20 - 80 % RH non-condensing

Printer Specification

Printing Mode	For IM printers: Intermittent For CM printers: Continuous
Left hand / Right hand	Both options available (convertible with no extra parts in 15 minutes)
Print resolution	300 DPI
For IM printers: Maximum print area	32mm x 45mm
For CM printers: Maximum print area	32mm x 100mm
Print Speed (max) IM	400mm/s
For CM printers: Speed Range	10mm/s - 550mm/s
Print repeat rate (max)	4 prints/s (with a 10mm long print)
Ribbon drive technology	i-Tech Ribbon Drive with unique dancing arm tension control
Max ribbon length	770m (up to 960m effective length with Economy mode)

Technical Reference

Ribbon save modes	
<i>Economy mode:</i>	Variable up to 20% with no reduction in print resolution
<i>Retraction mode:</i>	Less than 1mm gap between prints
<i>Column mode:</i>	For CM printers: 15mm max printed ribbon per print. For IM printers: 45mm max printed ribbon per print
Print features	Date code format, offsets, shift codes, serial number generation
Fonts	Most TrueType fonts
Controller / hardware interface options	No dedicated controller required. Hardware interface options: Easyprint Compact Touchscreen (via USB cable- hot swappable), Shared Compact Touchscreen (via Ethernet cable or network), PC-based interface (via Ethernet cable or network)
Connectivity	Ethernet / USB x 2 / mini USB (service)
CAUTION: <i>The ethernet socket includes Power over Ethernet output (PoE)</i>	
Inputs	Print Go, Encoder
Outputs	Error, Ready, Ribbon Low, Spare (volt-free contacts)
Special features	Master / slave, password
Label creation	Onboard or via EasyDesign or QuickDesign
Electrical requirements	90V - 264V AC 50/60Hz, OR 24V d.c. (+/- 2%) at 5A (if direct)
Dimensions:	
Width:	218mm
Height:	160mm
Depth:	148.5mm
Weight:	5.6kg
Temperature requirements	5°C to 40°C
Humidity requirements	20-80%, RH non-condensing

Power Supply Unit

Dimensions:	135mm x 58mm x 35mm
Weight:	0.5kg
Rated Input Voltage Range:	90-264V; 1.5A
Output Voltage:	+24V d.c.
Rated Output Power:	120W subject to de-rating
Working Temperature:	0 to +50°C subject to de-rating
Storage Temperature:	-20°C to +85°C

Optional Touchscreen

Display	10.4 inch SVGA Full Colour Touchscreen
Operating System	Windows CE 7
Dimensions (mm)	307(W) x 232(H) x 75(D)
IP Rating	Designed to IP55
Mounting Accessories	Full range of brackets
Temperature	5 - 45°C
Humidity	10 - 90% non-condensing
Electrical supply voltage	100 - 230 VAC
Electrical supply frequency	20W 50-60 Hz
Weight	2.85 kg
Mounting	VESA 75 Mounting Standard
Ethernet Cable	5m and 10m

PRINTING DATA

Material	PE - PP - PA - PET - paper, Tyvek™, cellophane, etc.
Print resolution	Normal mode: 12 x 12 dots / mm = 300 x 300 DPI Fast Mode: 6 x 12 dots / mm = 150 x 300 dpi
TrueType Fonts	Arial, Arial black, Arial Narrow, Comic Sans MS, Courier New, Gautami, Georgia, HYGothic Extra, Impact, Kino MT, Latha, Microsoft Logo, MS Gothic, MS PGothic, Mangal, NSimSun, Raavi, Shruti, SimSun, Symbol, Tahoma, Times New Roman, Trebuchet MS, Tunga, Veranda, Webdings, Windings; The fonts MRV OCRA I, MRV OCRA III, MRV OCRA IV, MRV OCRB I, MRV OCRB III, MRV OCRB IV, OCR A and OCR B are distributed under a licensing agreement with Morovia Software Inc. <i>Note: Additional fonts can be added as options.</i>
Barcodes	Aztec, Codabar, Code 128, Code 39, Data Matrix, GS1 Data Matrix, DUN 14, EAN 128, EAN 13, EAN 8, EAN Add on, Interleaved 2 of 5, ITF 14, ITF SCC 14, GS1 DataBar, GS1 DataBar Truncated, GS1 DataBar Stacked, GS1 DataBar Stacked Omni directional, GS1 DataBar Limited, GS1 DataBar Expanded, Han Xin, PDF417, QR, UPC A, UPC E.

PART 6 : Glossary of Terms

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GLOSSARY OF TERMS

Alphanumeric	Letter or number characters.
Attribute	A characteristic or distinctive feature.
Breadcrumb Trail	A sequential set of icons that allows the user to view where they are, where they've been and how to return to previously visited areas.
Column Mode Ribbon Economy	Printer feature which retracts the ribbon after each print, allowing the next print to be made next to the previous one on the used ribbon.
Compact Flash	A memory card used to store vital printer information. It is located on the SBC.
Continuous Mode (CM)	Printing mode in which the substrate is moved continuously. The print head is stationary and prints onto the moving substrate.
DHCP	Dynamic Host Configuration Protocol. A protocol used to assign dynamic IP addresses on a dynamic network.
DIN Connector	Type of connector that widely conforms to one of the standards defined by a German standards-setting organisation.
DNS	Domain Name System. This system converts domain names into IP addresses.
EasyDesign	Label creation / message designing software package that runs on a standard PC.
EOC	End of cycle
Ethernet	LAN technology used to connect the printer to other devices.
Hot Swapping	The function of replacing computer system components without shutting down the system.
IDC	Insulation Displacement Connector. A type of connector that strips off the insulation of the wire to make contact with it.
Intermittent Mode (IM)	Printing mode in which the substrate is moved intermittently. Whilst the substrate is stationary, the print head is moved over and prints onto the substrate.

Glossary of Terms

IME Scheme	Input Method Editor. Software feature that enables user to select a keyboard language (Simplified Chinese, Traditional Chinese, Japanese or Korean).
I/O Box	Input/output device used by a person (or other system) to communicate with a computer, where inputs are the signals or data received by the systems, and outputs are the signals or data sent from it.
LAN	Local Area Network. See <i>Ethernet</i> .
Long-press	Holding down a button or function trigger for more than a few hundred milliseconds. Some functions change behaviour if they are initiated with a long-press.
QuickStep	Common user interface that will be used across Easyprint's technologies.
Range	Information presented by the printer - the range between which the value should appear.
Ribbon Economy	Patented feature that enables user to select how much ribbon will be used for each print. If this menu is set to 0%, the printer will use exactly the same area of ribbon as the area of the actual print, i.e. a 1:1 ratio.
RTC	Real Time Clock. Computer clock that keeps track of the current time.
SBC	Single Board Computer. This PCB manages the User Interface (keyboard and display) and performs the error reporting, monitoring, USB, data storage and networking functions of the printer.
Shaft Encoder	A mechanical device that emits X amount of pulsed signals per revolution of the shaft. This is typically attached to a production line to ensure that the print width is kept constant to varying line speeds.
Slope Type	Print parameter that controls the acceleration and deceleration of the ribbon motor.
Start Pulse Offset	Function that displaces the print like an ordinary Y-Offset, but also allows the printer to receive a start signal from the packaging machine "sending signals" in the middle of printing.
Status	Information presented by the printer - the current value, setting or adjustment in the printer.

Glossary of Terms

SVGA	Super Video Graphics Array. A graphics display system for PCs that supports 800 x 600 resolution (480,000 pixels). SVGA can support a palette of 16 million colours, depending upon the amount of video memory installed in a system.
USB	Universal Serial Bus. This is defined as a “plug and play” device that can be fitted into the printer. In the printer, a USB socket is provided to enable a USB mass storage device to be inserted. The device can contain information that the printer can use to restore, or can be used to create back-ups, etc.
Unicode	An international coding scheme for written characters and text, each of which is identified by a 16-bit code between 0000 and FFFF. The code conforms to a Standard maintained by the Unicode Consortium and ISO organisation.
VGA	Video Graphics Array. A graphics display system for PCs that provides a resolution of 720 x 400 pixels in text mode. In graphics mode, the resolution is either 640 x 480 (with 16 colours) or 320 x 200 (with 256 colours).
Webserver	Program that allows users to view information on the printer from a remote connection using a web browser such as Internet Explorer.
X-Offset	Printer setting that displaces the print across the print head.
Y-Offset	Printer setting in which virtual white space area is prepended to the printout.

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Easyprint CM & IM Product Manual

Easyprint A/S has a policy of continuous product improvement, the Company therefore reserves the right to modify the specification contained within this document without notice.

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Easyprint A/S

Bar Hill
Cambridge CB23 8TU
England
Tel: +44 (0)1954 782551
Fax: +44 (0)1954 782874
Email: sales@easy-print.com



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