

MSSC, LLC

ULTIJET QUICK START

Getting to Know Your Printer



Congratulations on the purchase of your ULTIJET Printer. This new printer is the first to use Thermal Ink Jet Technology which is an extremely clean maintenance-free product marking technology combined with a fast drying ink. This permits printing on almost any material including most non-porous substrates like plastics, aluminum etc ULTIJET is also able to drive up to four print heads with the use of one controller. This multi-head management allows coding of different information on different production lines at different speeds, all with the same controller. It is an ideal solution for several marking/coding requirements in the same production location or for multi-side coding.

60500 REV 16408

ULTIJET Quick Start Guide

1) Safety

2) Mechanical Setup

- a) Controller
- b) Print head
- c) Auxiliary
 - i) Photocell
 - ii) Light Stack

3) Software Setup

- a) Head – Group Installation
- b) Print Parameters

4) Quick Start

- a) Start/ Stop
- b) Setup Message Parameters
- c) Select / Print a Message
- d) Changing User Type
- e) Creating and Printing New Message
 - i) Examples of Fields
- f) Cartridge Change

Safety Using ULTIJET

1. Read the relevant Material Data Sheets before storing, handling, transporting or using the ink cartridges.
2. Make sure the power on the underside of the printer is OFF before connecting the power cord to the printer or the power source.
3. Protect the printer's electronics from electrical surges and low voltage conditions by using a surge protector
4. Disconnect the power before making any external wiring connections.
5. Disconnect the power before opening the printer cabinet.
6. To maintain the environmental rating of the cabinet, route external wiring cables through the seals and strain relief provided on the underside of the cabinet.
- 7. Switch OFF or disconnect the power before inserting or extracting a Compact Flash card.**
8. Switch OFF or disconnect power before connecting or disconnecting a print head.
9. Disconnect power before changing back up battery.
10. Use only lint free wipes when cleaning cartridge nozzles.
- 11. Protect the print head from damage by proper adjustment of side rails and product guides.**
12. Recycle empty ink cartridges responsibly.
13. Do not open any enclosure components of the printer or print heads(s). They do not contain any user serviceable parts.

Mechanical Setup

Mounting equipment

1. Mount the controller to floor stand or a chosen rigid pedestal using 3 mounting holes in the rear of the panel of the controller. Make sure cable lengths will work with location selected.
2. If the message height to be printed requires more than one print head, (12.7mm) more print heads can be mounted side by side. To align the print heads to one another use the dowel pine and machined hole in the side of the head. Attach the print head guard plate to the print head(s) using the machined holes. *(Note: to make sure faceplate is aligned correctly, insert cartridge prior mounting face plate, and use the dowel pin.)*
3. Install the print trigger into the print head guard plate using the machined holes in the back and use jam nut to secure print trigger
4. Set up the print head mounting kit to a mechanical fixture according to the required print direction and orientation.(see page 4) The relationship of the print head to the product is critical to a high quality mark. Product presentation is critical.
5. Fix the print head securely to the mounting kit, adjusted to height and distance accordingly.
6. Install a print cartridge in each print head. *(Note: be sure to select the correct ink for the particular substrate.)*

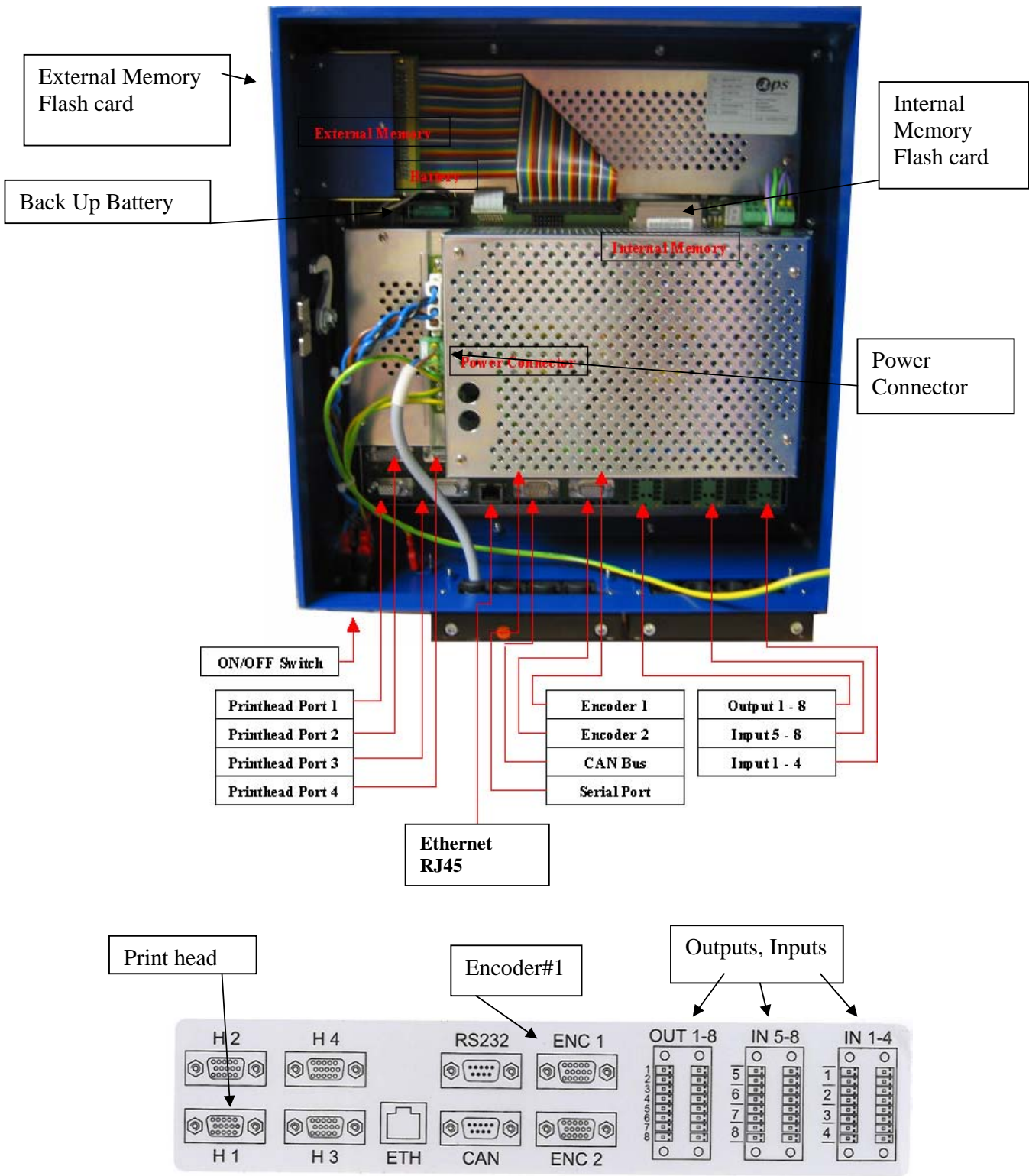
Terminating cables in the cabinet

1. Before installing any cables in the controller, disconnect power source. This part of the installation should be performed by a professional skilled in electronics and electricity.
2. Connect the print head data cables to the sub d female connector on the left hand side of the controller. *(Note: must be installed in numerical order 1-4, see fig 1 page 3)*
3. Connect the photocell according to photocell type, always follow the manufactures instructions. *(Note: se page for sample wiring diagrams.*
4. Optional: Connect the encoder to the printer with the 15 pin sub D connector. *(Note: Be sure to note the port the encoder is installed,(see below encoder 1, encoder2)*

Inputs and outputs

1. Optional: connect any inputs such as print enable, plc etc.
2. *Optional: connect any outputs that will be used such as light stack, horn PLC etc.*

Connect the power source to the printer (note be sure the polarity is correct before connecting.





Understanding Print Position

Objective: Easy and Quick set up of the print heads print position in regard to the mechanical installation.

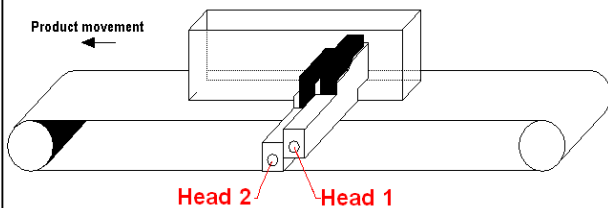
Instruction: Please look at your situation and compare it to the drawings below. Select the corresponding drawing to your situation then set up your printer with the parameters.

“Service “ key / Config -F5 / Group set – up -F2. (Note: must be in service mode to access config, see changing current user profile in Quick Start)

Re-start or reboot the printer and verify the correct printing

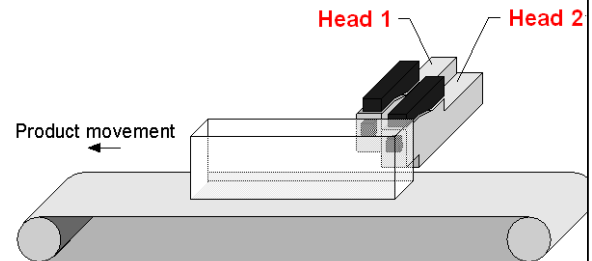
1) Head-Group installation:

- Vertical installation: **Normal**,
- Horizontal installation: **Normal**



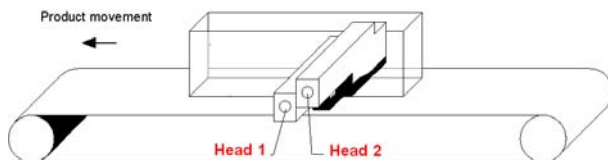
3) Head-Group installation:

- Vertical installation: **Normal**,
- Horizontal installation: **Backward**



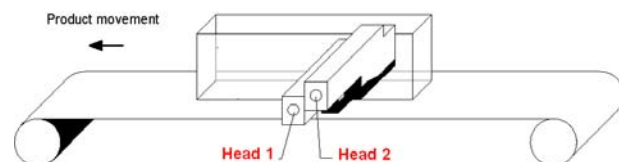
2) Head-Group installation:

- Vertical installation: **Upside down**,
- Horizontal installation: **Normal**



4) HEAD-GROUP INSTALLATION

- **VERTICAL INSTALLATION: UPSIDE DOWN**,
- Horizontal installation: **Backward**



Understanding Print Parameters

Default Print Definition: encompasses all messages saved in the library, when a new message is created it will automatically take on the default definition until changed in its message definition.(see page 8 and 9)

Message Definition: effects only that message, the filter indicates if the parameter is yes same as default or no has been changed from the default setting. *Note: only effective after message is reloaded*

Production Adjustment: temporary overrides the three most commonly used definitions of the current loaded message for fine tune adjustments while printing. When a new message has been selected and loaded this will reset to that messages setting (Forward Margin, End Margin and Speed Modification)



Default Print Definition

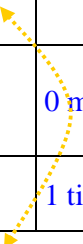
Message Definition

Production Adjustments



Default Print Parameters

Parameters	Factory Default	Description
Message height:	12.7 mm	Define height and width of the print Area. Print area is the frame where Text, Logo, Counters, or barcode field can be positioned. Max Height: 50.8 mm, 2 inches, total of 4 12.7mm heads
Message Width:	150mm	
Forward Margin	30mm	Delays before and after printing. Forward margin is the distance from print start signal and begin of print area. End margin linked to the backward printing sense and essential when printing in both directions with a traversing device.
End Margin	0 mm	
Print start mode:	External	External \cong print start with photocell signal Internal \cong Continuous print
Print speed mode:	External	External = follows Encoder frequency as speed. Internal = print at the fixed indicated at the next parameter: production speed
Production speed:	30m / minute	The printing speed will follow this adjustment when printing with "print speed mode" = internal. Note: there are limits for this speed related to the resolution.
Speed modification: (Shrink or Stretch printing)	0 %	Shrink or Stretch the printing. Only possible when Speed mode = External. Note this parameter affect proportionally the horizontal resolution.
Space Between Elements link to (# prints repetition):	0 mm	Distance between repeated prints generated by a single start print signal. Note this parameter is active in the next parameter "# prints per object" is greater than 1 and less than 99. The value 99 is reserved to turn printing in infinite repetition.
Distance Between Prints	0 mm	Distance or interval from one print to the next print. Note: this parameter is active only when continuous print is active.
# of prints per object:	1 time	Number of print repetitions from a one start print signal.



Parameters	Factory Default	Description
Print direction:	Normal	Start to print left to right or Right to left. This parameter is related to the encoder rotation sense. <i>Note: For protection and simplicity reasons this parameter is left unchanged at "Normal" in this menu but activated if needed in the group orientation menu</i>
Horizontal print orientation:	Normal	Turn the print area content by 180°. <i>Note: For protection and simplicity reasons this parameter is left unchanged at "Normal" in this menu but activated if needed in the group orientation menu</i>
Vertical print orientation:	Normal	Affect the printing senses like it is readable by transparency of the substrate. <i>Note: For protection and simplicity reasons this parameter is left unchanged at "Normal" in this menu but activated if needed in the group orientation menu.</i>
Horizontal resolution	600 dpi	Correspond to the number of dots printed per inch in the printing sense. There are 9 steps of horizontal resolution, from 60 to 600 dpi. Note: there are limits for this resolution related to the product speed
Vertical resolution:	600 dpi Two Row	Vertical resolution has 2 settings: 300 or 600 dpi. Correspond to the use of one or two row of the cartridge nozzles. Note: This parameter don't affect the product speed and is use to reinforce the marking contrast. <i>Note: to use 600 dpi as vertical resolution the product speed should perfectly match with programmed printing speed. When using external encoder, the encoder resolution should be fine adjusted.</i>

Quick Start



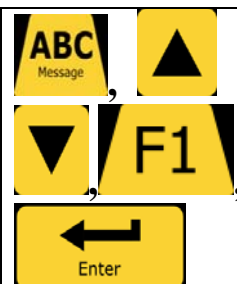
Objective: Quick Understanding of ULTIJET START/STOP THE PRINTER

1. To power the printer use ON / Off green lighted switch located on the right bottom side of controller. There is no prior operation to switching On/Off the controller.

Note: When switching power ON, the controller will restore the last printing jobs and configuration set before powering off.

LOAD AND PRINT A MESSAGE FROM THE LIBRARY

1. To load a message already saved in the message library press ABC, then scroll the library up or down to select a message. After the message has been selected press F1 (load message) then verify using enter. Prompt will tell that the message has been loaded.



2. **Start the new print job:** After the message is loaded start printing by pressing print, then use the function keys to select what print head group to activate verify using enter.



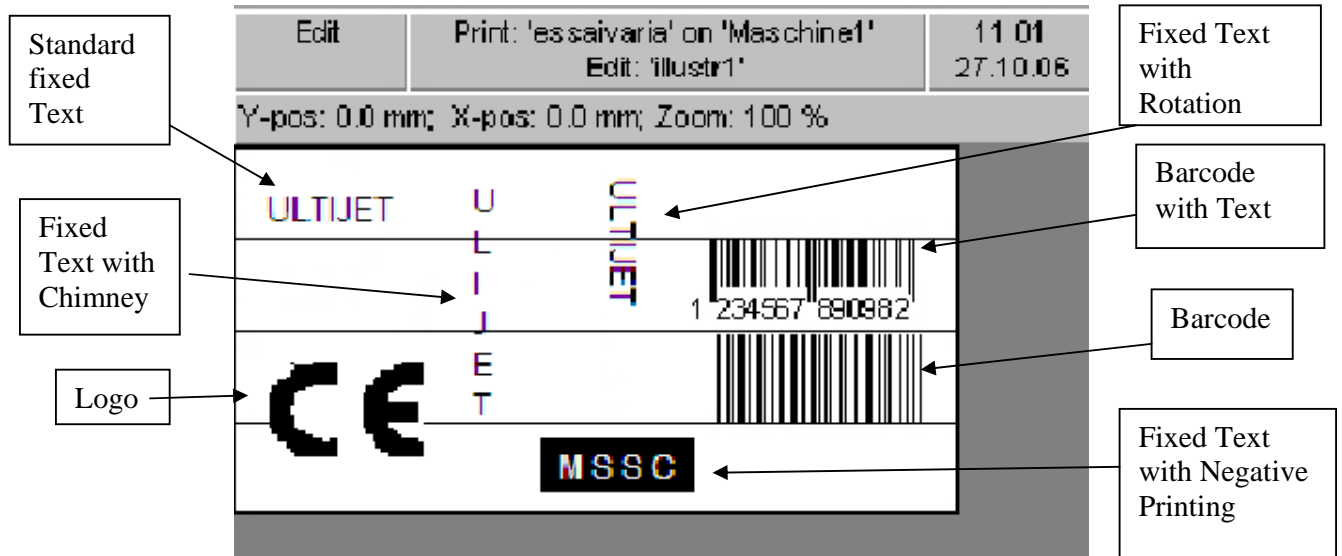
Changing Current User Type

1. ULTIJET has three user level types. They are Setting, Manufacture and Service. To create a message or change parameters service level must be active. Changing from Setting to Service level a password is required. Start by pressing the User Level key then use the up down arrows to highlight User Type. Press edit to allow the change to type and enter the password, servicepro. Finish by using F5 (user change) and a prompt will tell if it was successful.



Creating and Printing a new message

- A message is made of various fields and can be multiple fields in a message. Each field can contain different content to be displayed in the message.
- Fields can be made up of: fixed text, variable text, date and time, shift code, counters logos or bar codes.

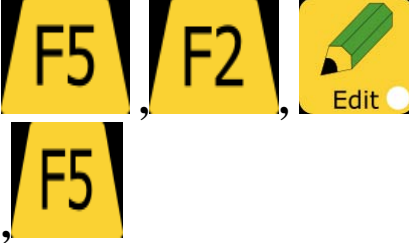


1. First step to creating a message is to choose what type of field to use. To access the field screen press ABC(message) then F3(new) to open as new message. After the message has been opened press F4(edit message) and F1(NEW) access the field screen.





2. After accessing the field screen select the correct field by pressing the corresponding function key below it. On the following screen fill in all values as desired. Finish by pressing F5(accept new values).



<p>3. Saving the message: from this message screen it is best to save the message, before bring loaded. Start by pressing F5(more) then select F2(save as) <i>Note: after a message has been created, it needs to be saved. It is best to save it under a unique name so it can be found easily in the library.</i></p>	
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Cartridge Change

<p>1. Press the <ink symbol> key. Verify the indicated levels of ink and renaming</p>	
<p>3. Physically change the cartridge with a new one. Verify that the ink type is the same as the existing cartridge. <i>Note, the type of ink is indicated by the part number on the top of the cartridge.</i></p>	
<p>4. Select the cartridge to be changed using the corresponding <F> key.</p>	
<p>5. Press <F1> to change the cartridge and confirm using <F5>. Do not modify other values or you may damage the ink cartridge.</p>	