

The Evolution I is a large character, high resolution ink jet printer with a print resolution of 300 DPI. This compact system delivers bold, highly legible, fully formed characters at production line speeds of up to 200 feet per minute. Hewlett Packard Inkjet technology, coupled with an efficient, affordable, maintenance free design makes this system very competitive with contact coders.



This system comes equipped with a hand held controller with tactile keypad for message entry, print head module, breakaway mounting bracketry and two character heights, 1/2" and 7/32" in Arial style font. (Ink cartridge is sold separately)

Selecting the character height is accomplished through the font key on the hand held controller. Print one line using 1/2" high characters or two lines using 7/32" high characters, 24 characters per line with either size font.

The hand held controller is capable of controlling up to 32 individual printhead modules.

Other features include, Programmable line speed, Programmable print direction, Programmable print delay, Inter-character spacing, Inverted printing and Multiple language prompts in English & Spanish. You can customize your printer to fit each individual user requirement.



Alternate Font heights are available in Arial style, in character heights of 1/8" & 3/32". Font styles, logos, graphic bitmap images and software packages can be supplied on Data Flash Card media and easily loaded into the print head module, however, there can only be two different size fonts resident in the Evolution I printer at one time.

It is also important to know that which ever size font you use, a two line code still takes up 1/2" of vertical space, there is just more space between lines. If your application requires the lines of text to have more or less spacing between them, the print heads can be staggered to achieve this.

7/32" high fonts, 2 lines of text, 1/16" space between lines.

1/8" high fonts, 2 lines of text, 1/4" space between lines.

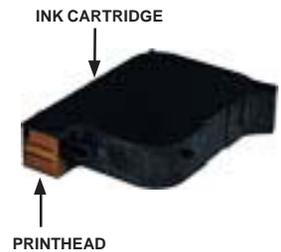
3/32" high fonts, 2 lines of text, 5/16" space between lines.

Power Required: 110-240 VAC, & 50-60 Hz 0.5A

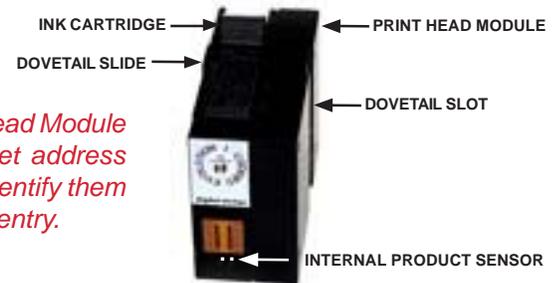
Environmental Specifications: 50F - 104F (10C - 40)
Up to 80% RH non-condensing.

Physical Dimensions: Controller: 4.125" W x 8.750" L x 1.500" D.
Print Head Module: 1.750" W x 4.500" L x 3.00" T.

The print head is an integral part of the ink cartridges, when you replace the ink cartridge you are also replacing the print head. No maintenance down time or costly field service to keep your system running like new.



The Print Head Module, houses the ink cartridge and is designed with a dovetail slot on one side and a dovetail slide on the other so you can easily slide multiple print head modules together. Built into the print head module is a product sensor to detect the presence of a carton or product.



Each Print Head Module has a discreet address so you can identify them for message entry.

The Mounting Bracket will hold up to 4 separate print head modules at once; a small RS 485 data cable is used to connect



each module together which allows the hand held controller to network all of the print heads. A longer cable is used to connect the modules to the printers on the next production line in the manufacturing area.

Breakaway Mounting Bracketry was designed to protect the print head from harm should a carton moving down a conveyor or case taper come through skewed or off center. The adjusting rod holding the print head will turn away or "breakaway" from the line moving the print head out of harms way as soon as the carton comes in contact with it. Once the misaligned carton passes, a detent in the assembly allows you to pivot the rod back into position without any further adjustment.



Authorized EVOLUTION Distributor

Universal Stenciling & Marking Systems, Inc.

P.O. Box 871 - St. Petersburg, FL 33731 - U.S.A.

Ph: (727) 894-3027 Fax: (727) 821-7944

E-Mail: sales@universal-marking.com

Website: www.universal-marking.com

The **4500 porous ink cartridges** are genuine Hewlett Packard cartridges but the ink was specially formulated exclusively for the Evolution systems. The print head driver design uses a smaller droplet of ink to achieve the same dark black print at 300 DPI resolution as a standard HP ink cartridge would at 600 DPI. The reservoir in the ink cartridge holds 42 cc's of ink.

The **4700 black non-porous ink cartridge** is a genuine Hewlett Packard cartridge also with specially formulated non-porous ink exclusively for the Evolution systems. The dry time for the non-porous ink cartridge on most surfaces is 2 seconds. Adhesion of the ink is very good on a wide variety of non-porous surfaces: HDPE, PE, coated chipboards, packaging films, frosted glass, metal cans, hard plastic, mylar & stainless steel as long as there is no oil present. To preserve the life of the ink, place the ink cartridge in the cartridge clip provided when the system is not running. For the best performance, a maximum print distance of 1/8" is recommended. The reservoir in the ink cartridge holds 42 cc's of ink.



Approximate Yield per Cartridge:

- 1/2" high fonts - yield - 450,000 characters
- 7/32" high fonts - yield - 2.1 million characters.
- 1/8" high fonts - yield - 5.6 million characters
- 3/32" high fonts - yield - 8.6 million characters.

4500 porous ink colors: Black, Dark Blue, Cyan, Green, Red, Yellow and UV Readable ink.

Important Note: The 4700 Ink requires different energy settings than the 4500 inks in order to fire the ink. These changes are made using the hand held controller. Please follow the instructions provided with every 4700 ink cartridge.



Approximate Yield per Cartridge:

- 1/8" high fonts - yield - 3.75 million characters

4700 non-porous ink color: Black

4500 POROUS SERIES PRINT SAMPLES

4 LINES OF 3/32" PRINTED ON AN EGG CARTON



Zoomed in view of text

2 LINES OF 1/2" PRINTED ON CARDBOARD BOX



2 LINES OF 7/32" & 1 LINE OF 1/2" PRINTED ON TREATED WOOD



4700 NON-POROUS SERIES PRINT SAMPLES

PRINT ON PLASTIC BOTTLE



PRINT ON ALUMINUM BAR



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Software Packages

A series of five **Software Packages** have been developed for Evolution Ink Jet Printers. These packages give the end user the flexibility to add only what they need for a particular application. Each system is capable of having a variety of optional font styles and character heights downloaded into the the print head. The Software Packages can operate independently or as a group making Evolution Printers a full featured system.

If your application requires a size or font style other than the standards, please contact your distributor. We do have the ability to match virtually any font style in 1/2" character heights or smaller.

Software Package No. 1

This software package contains **Message Storage, Automatic Message Repeat** and **Password Protection**.

Message Storage allows the user to store up to 50 messages in the hand held controller. The stored messages include the text and the operating parameters such as line speed and print registration.

Automatic Message Repeat is designed for those applications where a continuously repeating message is required. The distance between message repeats can be programmed through the controller to give varying distances of up to 20 inches.

Password Protection gives a supervisor the ability to store a password into the controller to prevent unauthorized changes of the message and the operating parameters of the system.

Software Package No. 1.5

This software package contains **Extended Message Length** and **Expanded Memory**.

Extended Message Length expands the message lengths. 1/2" characters expand from one line of 24 characters to one line of 48 characters. 7/32" characters expand from two lines of 24 characters per line to 48 characters per line.

Expanded Memory allows the user to store up to 99 messages, as opposed to 50, which includes both the text and operating parameters stored in the Hand Held Controller.

Software Package No. 2

This software package contains **Sequential Numbering, Variable Date Formats** and **Variable Time Formats**, including all of the features contained in software package 1 and 1.5.

The **Sequential Numbering** option is a user defined counter which can start at zero or any number you enter up to a maximum of 9 digits. Example: 0000 (start) 9999 (end and resets to 0000)

Variable Date Formats can be represented in a numerical (01/01/05), alphabetical (Jan 01, 2005) and Julian date format (05001). The formats can be arranged to print Month/Day/Year, or Day/Month/Year. The ability to print only the month and year, and other combinations, are totally programmable. Delimiters (: / .) are selectable.

With the **Variable Time Formats** package, Military style time numbering in hours and minutes (14:45) can be entered into the message for more precise production tracking. Time can be printed as hour and minutes, hours only or minutes only. Delimiters (: / .) are selectable.

Software Package No.3

This software package contains **Shift Coding, Date Offset** and **Product Counter**, including all of the features contained in software package 1, 1.5 and 2.

Shift Coding allows the user to break the work day into 6 or less individual shifts. To identify each shift you can print either a single number or alpha character to identify each shift.

The **Date Offset** feature was designed so you could automatically rollover the expiration date. The user can program in up to 999 days and the printer will automatically advance the date by that value.

The **Product Counter** gives you the ability to count the number of products you have printed within a specific programmed time period.

The **EVOLUTION Ink Jet Printers** can be easily customized to fit each individual users requirements. Font styles, character heights (different than the standard sizes), and logos can be supplied and easily added with optional data flash cards.

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Logo & Barcode Download Packages

The **Logo Download Software Package** gives the user the ability to download a BMP file directly to the print head module from the Data Flash Card. A bitmap file is simply an image file containing anything from multiple lines of text, company logos, intricate graphics or barcodes. Logos can be created by the user in any graphics program that is capable of producing a 2-bit black and white image in Bitmap (BMP) format. A standard feature on the Evolution I and Evolution II printers is the ability to print up to three images in either the one line mode or the two line mode. Bitmap files can also be custom ordered and supplied on a Data Flash Card ready to be downloaded into the print head module.

Example of single line, logos and text image:



Example of dual line symbols and text:



Example of single line, barcode image:



NOTE: When using a bitmap barcode, the barcode must be static. The Evolution I controller is not designed for barcode variable input. If the barcode needs to change, a new bitmap image with the changes must be downloaded for use.

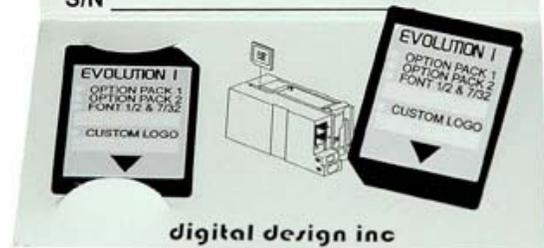
Data Flash Card

The Software packages are supplied on a Data Flash Card and can be easily installed in the field. Simply insert the Flash Card into the slot on top of the print head module and follow the instructions on the box, it's that easy. Each Flash Card is intended to be used in only one print head module so if the same software package is required in more than one print head, you must purchase a separate package for each head required for your application.

To load Data Flash Card into Print Head Module:

1. Insert Data Flash Card into slot on top of Print Head Module
2. Press F4 key on Hand Held Controller
3. Press option 4 (LOAD CARD)
4. Press appropriate number key to load Fonts, Logos, or Options
5. LED's on Print Head Module will flash indicating card is loading
6. Display will indicate that the Data Flash Card was loaded
7. Remove Data Flash Card from module and replace in this folder
8. Write S/N of Print Head Module below

S/N _____



DATA FLASH CARD PACKAGE

EVOLUTION-Net Software

The Evolution-Net software is a PC resident package that gives the user complete control of all the Evolution printers within the manufacturing area. Create messages, monitor printers and more all from a central location. Due to the varying lengths, all interconnect cables are optional. Please ask your distributor for complete details.

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