AN-01
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OVERVIEW OF THERMAL PRINTING MODES

O'Neil thermal printers support several different printing protocols. The two native protocols are Line Printer and Easy Print. Each of these protocols has their own unique advantages depending upon what is to be printed. It is also possible to mix Line Printer and Easy Print in a single printed image. In addition to these there are several emulation modes. These emulation protocols are covered in separate documents.

Line Printer Mode
The Line Printer mode is the simplest method of printing. Each line to be printed is sent to the printer as a sequence of single bytes (some Asian character sets require two bytes for each character). The printer accepts characters and begins to print when a Carriage Return (0x0D) or Line Feed (0x0A) is received. Then all characters received to that point are printed on a single line. A series of ESCape code sequences can be sent to the printer to alter the look of the characters (e.g. to make them double wide, or to change the font, or to change other aspects of the appearance of the printout). These are documented in AN-2, the overview of Line Printer mode. You can also have the printer re-align if you are using stocks with a "Q" or alignment mark.

Easy Print Mode
The Easy Print mode is a much more powerful method of printing. Easy print is actually a printing protocol that lets you give commands to the printer (such as PRINT). Within that protocol, you can tell the printer how to print that data (e.g. using a variety of fonts, or as a bar code), *exactly* where to put the data (anywhere on the printed image down to .005"), and how to modify the data (e.g. tall, wide, rotated). And you can store graphics images such as logos or icons to be used anywhere on the printed image. If you are printing on pre-cut labels, you can use a pre-printed "Q" mark or the gap between labels to re-align after each image is printed. Easy Print commands are detailed in AN-3

TO PRINT	LINE PRINTER	EASY PRINT	EMULATION
Bar Codes		X	
Complex image (exact text/barcode/graphic positioning important)		X	
Line after line of text (receipts or invoice)	X		
Graphics (one time – not stored) including captured signatures	X		
Graphics (stored)		X	
Labels (Butt cut or Die Cut) with alignment "Q" mark or gap between labels	X (Text Only)	X (Complex)	
Pre-Printed "fill in the blank" form		X	
Rotated image		X	
Rotated areas on image		X	
Use O'Neil printer in system meant for another make of printer			X