Working with Hex Graphic Images

ZPL II can be used to save graphic images in HEX format in DRAM, FLASH, or PCMCIA, depending on the type of memory installed in your printer. ZPL II can be used to save graphic images in HEX format in DRAM, FLASH, PCMCIA, or battery backed up SRAM, depending on the type of memory installed in your printer. The image might be created using a CAD program, a draw or paint program, or a scanner. These images can then be printed on the label. Graphic images may be created using a program that creates files in the .PCX format. These files must then be converted to ZPL II graphic format .GRF (pure hexadecimal data without headers or other extraneous information) for use as part of a label format.

You can use ZebraDesigner or ZebraNet Bridge Enterprise to convert the .PCX graphic format into the pure hexadecimal .GRF graphic format. Hexadecimal data may also be directly input as part of a ZPL II program. Manually preparing a string of HEX code is possible but usually impractical.

Alternative Data Compression Scheme for ~DG and ~DB Commands

There is an alternative data compression scheme recognized by the Zebra printer. This scheme further reduces the actual number of data bytes and the amount of time required to download graphic images and bitmapped fonts with the **~DG** and **~DB** commands.

The following represent the repeat counts 1, 2, 3, 4, 5, ..., 19 on a subsequent Hexadecimal value. Values start with G since 0 through 9 and A through F are already used for HEX values.)

G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

These numbers represent the repeat counts 20, 40, 60, 80,....400 on a subsequent hexadecimal value.

g	h	I	j	k	l	m	n	o	p	q
20	40	60	80	100	120	140	160	180	200	220

r	s	t	u	v	w	x	y	z
240	260	280	300	320	340	360	380	400

Sending **M6** to the printer is identical to sending the following hexadecimal data:

```
6666666
```

The M has the value of 7. Therefore **M6** sends seven (7) hexadecimal 6's.

Sending **hB** to the printer is identical to sending the following hexadecimal data:

```
BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB
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The h has a value of 40. Therefore, **hB** sends 40 Hexadecimal B's.

Repeat Values Several repeat values can be used together to achieve any desired value.

Several repeat values can be used together to achieve any value desired. vMB or MvB will send 327 hexadecimal B's to the printer.

- a comma (,) fills the line, to the right, with zeros (0) until the specified line byte is filled.
- an exclamation mark (!) fills the line, to the right, with ones (1) until the specified line byte is filled.
- a colon (:) denotes repetition of the previous line.