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# **EZPL Programmer's Manual**

**GODEX**

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# Introduction

## About EZPL

The EZPL (EZ Programming Language) is a high-level label definition and printer control language.

Features of EZPL are as follows:

1. The data are stored to be processed and will not be printed out until the last printing instruction is received.
2. All the printing contents can be rotated.
3. Images can be downloaded and stored.

There are two ways to send printing commands to the printer. One is sending through the command window of QLabel IV, the other is sending through Windows™ HyperTerminal™ via RS-232 port.

The EZPL language consists of three types of commands:

- ◆ **Setup commands** – It includes printer control instructions, configuration instructions and image downloading instructions.
- ◆ **Control commands** – It includes commands that can control the printer to take action immediately, such as cleaning memory, feeding label.
- ◆ **Label Format commands** - Define the format of data that will be presented on the label, such as Line, Rectangle, Barcode, Text and image.

## Rules and syntax

EZPL commands include parameter strings associated with them:

1. The syntax of commands contains capital letters as the ID for each function.
2. The lower case letters in command represent parameters.
3. Control and Setup commands use the tilde (~) and caret (^) as prefix.
4. Label Format commands have no prefix.
5. The comma (,) is the delimiter to separate each parameter, and the CR (Carriage Return) signifies the end of every command.

Example: In “~En,name,size” command, “E” is an identity letter of this image downloading command; “n”, “name” and “size” are three parameters.

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# Setup Commands

## **^An - Printing mode**

Syntax	<b>^An</b>
Parameter	n = D, Direct thermal mode, the ribbon out sensor is disabled. n = T, Thermal transfer mode, the ribbon out sensor is enabled.
Description	Set the print mode * Note: this command will not be applied on Direct Thermal only models (EZ-DT-2 / EZ-DT-4).

## **^Bx - Set the backward length**

Syntax	<b>^Bx</b>
Parameter	x = 0~1000 (unit: mm)
Description	Set the backward length to move the position of paper.

## **^Cx - Number of copies per label**

Syntax	<b>^Cx</b>
Parameter	x = 1 ~ 32767
Description	Set the number of copies to print for a label.

## **^D+dddd.hh - Date calculation function**

Syntax	<b>^D+dddd.hh</b>	
Parameter	dddd = days in 4 digits. Set how many days to be added to the current date. hh = hours in 2 digits. Set how many hours to be added to the current time.	
Description	This command will set the specified days and hours forward based on the printer's current date then print it.	
Example	<p>In this sample, the printer will print current time and count the date that is 5 days and 12 hours after current time.</p> <pre> ^Q40,0,0 ^W100 ^AT ^L Dy2-me-dd Th:m:s ~D01,01,05,12,00,00 AD,72,96,1,1,0,0,Manufactured Date: ^D ^T AD,72,190,1,1,0,0,Expiration Date: ^D+0005.12 E </pre>	<p>(current time of the printer) Manufactured Date: 06-JAN-01 12:00</p> <p>(5 days and 12 hours after current time) Expire Date: 06-JAN-07</p>

## **^Dx - Number of labels per cut**

Syntax	<b>^Dx</b>
Parameter	x = 0, disable the cutting. x = 1 ~ 32767, number of label per cut.
Description	Number of labels per cut (refer to page41)

## **^Ex - Stop position setting**

Syntax	<b>^Ex</b>
Parameter	x = 0~40 (unit: mm)
Description	Feed the paper to specific stop position.

**^Fname - Download label format to printer**

Syntax	<b>^Fname</b> data
Parameter	name = the name of label format (up to 20 characters) data = the data containing the label formatting command for this stored format
Description	Download label format to the memory of printer. After the download is completed, the printer will beep once (refer to page44).  <div style="text-align: center;"> </div> <p>Duplicate name inspection: If you use the same file name, the printer will print "REPEAT FILE NAME", and the format will not be stored to the memory.</p>

**^Gn - Enable/disable See-Through sensor**

Syntax	<b>^Gn</b>
Parameter	n = 0, disable see-through sensor n = 1, enable see-through sensor n = 2, Auto-mode
Description	The reflective sensor may not be able to detect the label gap on special label materials. For example, when printing on labels with thick liner, colored liner, or back graphics, the see-through sensor would need to be enabled, since the reflective sensor may not work correctly. *When the see-through sensor is enabled, the moveable sensor must be placed in the center of the printer.

**^Hx - Print darkness setting**

Syntax	<b>^Hx</b>
Parameter	x = 00 ~ 19
Description	Set the darkness of printing.

**^Kname - Recall label format**

Syntax	<b>^Kname</b>
Parameter	name = the name of recalled label format (up to 20 characters)
Description	Recall a label format stored in printer's memory (refer to page44)  <div style="text-align: center;"> </div>

### **^L - The start sign of label format**

Syntax	<b>^L</b>	
Parameter	Use ^L to do normal printing; ^LI to do inverse printing; ^LM to do Mirror printing.	
Description	Define the start sign of Label format. Commands to set up the label format should be listed after this command.	
Sample		

### **^Mx - Set the forward length**

Syntax	<b>^Mx</b>
Parameter	x = 0~1000 (unit: mm)
Description	Set the forward length to move the position of paper.

### **^On - Stripper/Applicator**

Syntax	<b>^On</b>
Parameter	n = 0 , disable the stripper and applicator n = 1 , enable the stripper, disable the applicator n = 2 , enable the applicator, disable the stripper (applied on EZ-2000Plus / EZ-6000Plus only)
Description	Enable or disable the Stripper/Applicator. When you use this command, it should be matched with ^Ex for setting the stop position. (For the stripper setting, please refer to page41)

### **^PAx - Auto Print**

Syntax	<b>^PAx</b>	
Parameter	x = 1~30000	
Description	After the recall of label, printer will read variables and Serial Number and then print automatically for the number of copies that has been set.	
	^Flabel1 ^Q40,0,0 ^PA3 ^L C0,0000001,+1,Counter V00,15,Variable AF,108,140,1,1,0,0,^C0 AE,122,278,1,1,0,0,^V00 E ^Klabel1 00001 Variable E	Printer will auto print 3 pieces.



**^Px - Number of pages printed**

Syntax	<b>^Px</b>
Parameter	x = 1 ~ 32767
Description	Set the amount of copies for a printing. The Serial Number will be reset for each time the command is implemented.

**^PI - Continuous printing**

Syntax	<b>^PI</b>	
Parameter	None	
Description	Printer will print immediately, until the "Cancel" key is pressed or the printer is turned off.	
Example	<pre> ^Flabel2 ^Q40,0,0 ^PI ^L C0,000001,+1,Counter V00,15,Product AF,108,140,1,1,0,0,^C0 AE,122,278,1,1,0,0,^V00 E  ^Klabel2 00001 Apple E                     </pre>	

**^Qx,y,(z±) - Label length**

Syntax	<b>^Qx,y,(z±)</b>	
Parameter	Gap label: (See fig. 1) x = Label length (unit: mm) y = Gap length (unit: mm)	
EX.	<pre> ^Q25,3 (x=25,y=3) mm                     </pre>	<p>Figure 1</p>
Plain paper:	x = Label length (unit: mm) y = 0 (constant) z = Feed paper length (unit: mm)	
Black mark label:	x = Label length (unit: mm) y = Black mark width (unit: mm) z = Black line to top of form position. Z+: When the position is outside the black mark. Z-: When the position is within the black mark.	
EX.	<pre> ^Q25,4,3+ (x=25, y=4, z=3+) mm  ^Q25,4,3- (x=25, y=4, z=3-) mm                     </pre>	<p>Figure 2</p>
Description	Set label size (length, gap length, [plain paper feed length])	

### **^Rx - Row column adjustment**

Syntax	<b>^Rx</b>
Parameter	x = 0 ~ 399 dots
Description	Set left margin

### **^Sx - Speed setting**

Syntax	<b>^Sx</b>
Parameter	x = 2 to 7 inch/sec (EZ-2200Plus) ; 2 to 6 inch/sec (EZ-1200Plus, EZ-2100Plus, EZ-2300Plus, EZ-6200Plus, EZPi-1200) ; 2 to 4 inch/sec (EZ-1100Plus, EZ-1300Plus, EZ-6300Plus, EZ-DT-2, EZ-DT-4, EZ-1105, EZPi-1300) ; 2 to 3 inch/sec (EZ-1305)
Description	Set printing speed

### **^T+hhh.mm - Time calculation function**

Syntax	<b>^T+hhh.mm</b>	
Parameter	hhh = hours in 3 digits (from 0 to 23 hours). Set how many hours to be added to the current time. mm = minutes in 2 digits. Set how many minutes to be added to the current time.	
Description	This command will set the specified time forward based on the printer's current time then print it.	
Example	This sample printer will print current time and counting after 10 hours and 30 minutes time and print:  ^Q40,0,0 ^W100 ^H10 ^AT ^L ~D04,15,05,12,0,0 AF,600,102,1,1,0,0,^T AF,600,280,1,1,0,0,^T+010.30 AF,58,52,1,1,0,0,Manufactured Time : AF,54,228,1,1,0,0,Expire Time : E	(Printer's current time) Manufactured Time: 12:00:00  (10 hours and 30 minutes after current time) Expire Time: 22:30:00

### **^Wx - Label width setting**

Syntax	<b>^Wx</b>
Parameter	x = label width (unit: mm), the input range is defined by the specification of printer models.
Description	Label width setting

### **^XGET,CONFIG - Return the configure status**

Syntax	<b>^XGET,CONFIG</b>
Parameter	None
Description	The printer will return configure status (the content is same as Self Test page) from RS232 or USB and display it on Hyper Terminal.

### ^XGET,TPHRESISTANCE - Dot detect

Syntax	<b>^XGET,TPHRESISTANCE</b>
Parameter	None
Description	Detect the resistance of each heat dot to check if there is any bad dot on thermal print head.
Example	<pre> R0843 is good. R0844 is good. R0845 is good. R0846 is good. R0847 is good. R0848 is good. R0849 is good. R0850 is good. R0851 is good. R0852 is good. R0853 is good. R0854 is good. R0855 is good. R0856 is good. R0857 is good. R0858 is good. R0859 is good. R0860 is good. R0861 is good. R0862 is good. R0863 is good. Total Dot: 864 Bad Dot: 0                 </pre> <p>The resistance status of each dot</p> <p>Total number of heat dots</p> <p>Total number of bad dots</p>

### ^XSET,ACTIVERESPONSE,n - Active response

Syntax	<b>^XSET,ACTIVERESPONSE,n</b>
Parameter	n = 0, do not return the "ERRORxx" message to PC n = 1, return the error message (default). When door open, ribbon out... or other error occur, the printer will return the "ERRORxx" message to PC
Description	Set the Active Response function on/off. The error code includes: <ul style="list-style-type: none"> <li>01 – Paper out</li> <li>02 – Paper jam or missing gap</li> <li>03 – Ribbon out</li> <li>04 – Print head is up</li> <li>05 – Rewinder full</li> <li>06 – Memory is full</li> <li>07 – Filename can not be found</li> <li>08 – Filename duplicate</li> <li>09 – Syntax error</li> <li>10 – Cutter JAM</li> <li>11 – CF Card not found</li> </ul>

### ^XSET,BUZZER,n - Set remind beep on/off

Syntax	<b>^XSET,BUZZER,n</b>
Parameter	n = 0, remind beep function off n = 1, remind beep function on
Description	This command can set printer remind beep on/off. When download graphic or font, printer will beep once. And use this command can turn off the remind beep function. But it can't set error beep on/off.

**^XSET,CODEPAGE,n - Select Code Page**

Syntax	<b>^XSET,CODEPAGE,n</b>		
Parameter	n=0, CODEPAGE 850 n=3, CODEPAGE 860 n=6, CODEPAGE 857 n=9, CODEPAGE 855 n=12, CODEPAGE 851 n=15, WINDOWS 1250 n=18, WINDOWS 1254	n=1, CODEPAGE 852 n=4, CODEPAGE 863 n=7, CODEPAGE 861 n=10, CODEPAGE 866 n=13, CODEPAGE 869 n=16, WINDOWS 1251 n=19, WINDOWS 1255	n=2, CODEPAGE 437 n=5, CODEPAGE 865 n=8, CODEPAGE 862 n=11, CODEPAGE 737 n=14, WINDOWS 1252 n=17, WINDOWS 1253
Description	Set the code page.		

**^XSET,CF\_FORMAT,1 - Format the CF memory card**

Syntax	<b>^XSET,CF_FORMAT,1</b>
Parameter	None
Description	The CF Card cannot be used for printer's external memory until it is formatted in FAT16. This command is used for formatting the CF card in proper file system. A new file folder would be created automatically after formatting is completed. This folder is for storing all the data from the printer, please don't do any change on it.

**^XSET,IMMEDIATE,n - Set immediate response on/off**

Syntax	<b>^XSET,IMMEDIATE,n</b>
Parameter	n = 0, set immediate response function off n = 1, set immediate response function on (default)
Description	This command can set printer's immediate response function on/off. To implement commands that related to immediate response, the function should be turned on.

**^XSET,KEYBOARD,n - Select different area PS2 Keyboard**

Syntax	<b>^XSET,KEYBOARD,n</b>
Parameter	n = 0-US 1-UK            5-Italian 2-French       6-Finnish 3-German      7-Dutch 4-Spanish     8-Belgian
Description	Change the area setting of keyboard mode. * Note: this command is only applied on printer models that support keyboard mode.

**^XSET,LANGUAGE,n - LCD language setting**

Syntax	<b>^XSET,LANGUAGE,n</b>
Parameter	n = 0-English    5-Simplified Chinese 1-German       6-Traditonal Chinese 2-French        7-Turkish 3-Spanish 4-Italian
Description	This command can set the language of LCD. * Note: this command is only applied on printer models that support LCD display.

**^XSET,MEMORY,n - CF Card/Flash switch**

Syntax	<b>^XSET,MEMORY,n</b>
Parameter	n = Memory being used n = 0, use flash n = 1, use CF card *Note: The CF card must be formatted in FAT16. FAT32 and NTFS are not acceptable.
Description	Set flash or CF card as default memory.

**^XSET,PASSWORD,n,x - Password for protecting the front panel setting**

Syntax	<b>^XSET,PASSWORD,n,x</b>	
Parameter	n = 0, disable n = 1, enable x = 4 digits password	
Description	LCD shows password message before entering Setting Mode when password protection is set. * Note: this command is only applied on printer models that support LCD display.	
Example	Enable: ^XSET,PASSWORD,1,1234  Disable ^XSET,PASSWORD,0	Set password as 1234

**^XSET,REWINDER,n- Rewinder**

Syntax	<b>^XSET,REWINDER,n</b>	
Parameter	n = 0, disable the rewriter n = 1, enable the rewriter	
Description	Set EZ-6000Plus Rewinder enable/disable. * Note: this command is only applied on EZ-6000Plus.	

**^XSET,SLASHZERO,n - Slashed zero**

Syntax	<b>^XSET,SLASHZERO,n</b>	
Parameter	n = 0, without slash, n = 1, with slash	
Description	Set all zero to be printed as slashed zero.	
Example	^XSET,SLASHZERO,1 ^Q60,0,0 ^L AA,81,15,1,1,0,0,A0123 AB,81,41,1,1,0,0,B0123 AC,81,71,1,1,0,0,C0123 AD,81,111,1,1,0,0,D0123 AE,81,160,1,1,0,0,E0123 AF,81,230,1,1,0,0,F0123 AG,81,298,1,1,0,0,G0123 AH,81,396,1,1,0,0,H0123 E	B0123 C0123 D0123 E0123  F0123 G0123 H0123

### **^XSET,SMARTBACK,n - Smart backfeed**

Syntax	<b>^XSET,SMARTBACK,n</b>	
Parameter	n = 0, OFF n = 1, ON	
Description	This function can reduce the process time when the stripper or the cutter been used. Use this command, when the prior label is waiting for cut or strip, the partial contents of the next label will be printed. After the label has been cut or stripped, the printer will continue print the rest contents of the next label.	
Example	(For stripper) ^XSET,SMARTBACK,1 ^Q100,3 ^E30 ^O1 ^P3 ^L R18,18,750,774,10,10 E	1. Printer will print out first label and part of second label 2. After taking label away, printer continues printing second label and part of third label. 3. After taking label away, printer print out third label.
	(For Cutter) ^XSET,SMARTBACK,1 ^Q100,3 ^E30 ^D1 ^P3 ^L R18,18,750,774,10,10 E	

### **^XSET,TOPOFFORM,n - Top of Form**

Syntax	<b>^XSET,TOPOFFORM,n</b>
Parameter	n = 0, disable Top of Form function n = 1, enable Top of Form function
Description	Enable/Disable Top of Form function.

### **^XSET,USBETHERNET,n - USB / Ethernet Port Switch**

Syntax	<b>^XSET,USBETHERNET,n</b>
Parameter	n = 0, set the USB port as active port n = 1, set the Ethernet port as active port
Description	The Ethernet module (includes WLAN module) share the same connection route with the USB port. Therefore, both connection ports are alternative. If USB port is set to active then the Ethernet port will be deactivated, and vice versa.

**^XSETCUT,DOUBLECUT,x - Double cut**

Syntax	<b>^XSETCUT,DOUBLECUT,x</b>	
Parameter	x = 0, disable the doublecut x = offset length (offset length < Label length, unit: mm)	
Description	Set the printer to cut twice per label.	
Example	<pre> ^XSETCUT,DOUBLECUT,45 ^Q90,3 ^E20 ^P3 ^D1 ^L C0,001,+1,A1 AC,350,144,1,1,1,0,a^C0 AC,350,544,1,1,1,0,a^C0 E                     </pre>	<p>The diagram illustrates the double-cut function with three examples. Each example shows a rectangular label with a dashed line indicating a cut. The first two examples show full-width cuts, resulting in two identical pieces of the label. The third example shows a partial cut with a 45mm offset from the right edge, resulting in two pieces: a larger one on the left and a smaller 90mm wide one on the right.</p>
Note	This function may decrease the service life of cutter since the adhesive of label will stain the cutter. Hence it is not recommended to use this function.	

**^XSETCUT,MODE,n - Set cutter mode**

Syntax	<b>^XSETCUT,MODE,n</b>	
Parameter	n = 0, Full-cut mode (default) n = 1, Partial-cut mode * Note: do not set the cutter mode to Partial-cut mode when cutting with cutter module that doesn't support Partial-cut function.	
Description	Set the cutter mode to Full-cut mode or Partial-cut mode	

**^XSETRTC,ISOWEEKNUM,n - ISO Week**

Syntax	<b>^XSETRTC,ISOWEEKNUM,n</b>																																																																																																																																																																																	
Parameter	n = 0, disable the ISO Week (default) n = 1, enable the ISO Week																																																																																																																																																																																	
Description	This command can set ISO week of the year to print.																																																																																																																																																																																	
Example	<p>The following figure shows the ISO Week for 1 January 2000 It is week 52 of year 1999, day 6 of the week, and day 1 of year 2000.</p> <table border="1"> <thead> <tr> <th>1999</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>2000</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> </tr> <tr> <th></th> <th><i>Mon</i></th> <th><i>Tue</i></th> <th><i>Wed</i></th> <th><i>Thu</i></th> <th><i>Fri</i></th> <th><i>Sat</i></th> <th><i>Sun</i></th> <th></th> <th><i>Mon</i></th> <th><i>Tue</i></th> <th><i>Wed</i></th> <th><i>Thu</i></th> <th><i>Fri</i></th> <th><i>Sat</i></th> <th><i>Sun</i></th> </tr> </thead> <tbody> <tr> <td>W44</td> <td>305</td> <td>306</td> <td>307</td> <td>308</td> <td>309</td> <td>310</td> <td>311</td> <td>W01</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> </tr> <tr> <td>W45</td> <td>312</td> <td>313</td> <td>314</td> <td>315</td> <td>316</td> <td>317</td> <td>318</td> <td>W02</td> <td>10</td> <td>11</td> <td>12</td> <td>13</td> <td>14</td> <td>15</td> <td>16</td> </tr> <tr> <td>W46</td> <td>319</td> <td>320</td> <td>321</td> <td>322</td> <td>323</td> <td>324</td> <td>325</td> <td>W03</td> <td>17</td> <td>18</td> <td>19</td> <td>20</td> <td>21</td> <td>22</td> <td>23</td> </tr> <tr> <td>W47</td> <td>326</td> <td>327</td> <td>328</td> <td>329</td> <td>330</td> <td>331</td> <td>332</td> <td>W04</td> <td>24</td> <td>25</td> <td>26</td> <td>27</td> <td>28</td> <td>29</td> <td>30</td> </tr> <tr> <td>W48</td> <td>333</td> <td>334</td> <td>335</td> <td>336</td> <td>337</td> <td>338</td> <td>339</td> <td>W05</td> <td>31</td> <td>32</td> <td>33</td> <td>34</td> <td>35</td> <td>36</td> <td>37</td> </tr> <tr> <td>W49</td> <td>340</td> <td>341</td> <td>342</td> <td>343</td> <td>344</td> <td>345</td> <td>346</td> <td>W06</td> <td>38</td> <td>39</td> <td>40</td> <td>41</td> <td>42</td> <td>43</td> <td>44</td> </tr> <tr> <td>W50</td> <td>347</td> <td>348</td> <td>349</td> <td>350</td> <td>351</td> <td>352</td> <td>353</td> <td>W07</td> <td>45</td> <td>46</td> <td>47</td> <td>48</td> <td>49</td> <td>50</td> <td>51</td> </tr> <tr> <td>W51</td> <td>354</td> <td>355</td> <td>356</td> <td>357</td> <td>358</td> <td>359</td> <td>360</td> <td>W08</td> <td>52</td> <td>53</td> <td>54</td> <td>55</td> <td>56</td> <td>57</td> <td>58</td> </tr> <tr> <td>W52</td> <td>361</td> <td>362</td> <td>363</td> <td>364</td> <td>365</td> <td>1</td> <td>2</td> <td>W09</td> <td>59</td> <td>60</td> <td>61</td> <td>62</td> <td>63</td> <td>64</td> <td>65</td> </tr> </tbody> </table>		1999	1	2	3	4	5	6	7	2000	1	2	3	4	5	6	7		<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thu</i>	<i>Fri</i>	<i>Sat</i>	<i>Sun</i>		<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thu</i>	<i>Fri</i>	<i>Sat</i>	<i>Sun</i>	W44	305	306	307	308	309	310	311	W01	3	4	5	6	7	8	9	W45	312	313	314	315	316	317	318	W02	10	11	12	13	14	15	16	W46	319	320	321	322	323	324	325	W03	17	18	19	20	21	22	23	W47	326	327	328	329	330	331	332	W04	24	25	26	27	28	29	30	W48	333	334	335	336	337	338	339	W05	31	32	33	34	35	36	37	W49	340	341	342	343	344	345	346	W06	38	39	40	41	42	43	44	W50	347	348	349	350	351	352	353	W07	45	46	47	48	49	50	51	W51	354	355	356	357	358	359	360	W08	52	53	54	55	56	57	58	W52	361	362	363	364	365	1	2	W09	59	60	61	62	63	64	65
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**^XSETRTC,LANGUAGE,n - Different language layout**

Syntax	<b>^XSETRTC,LANGUAGE,n</b>	
Parameter	n = 0-English 1-German 3-Spanish 2-French 4-Italian	
Description	This command can set the language of RTC.	
Example	<p>^XSETRTC,LANGUAGE,0 ^Q50,0,0 ^L AC,58,06,1,1,0,0,English Dw1 AC,58,046,1,1,0,0,Day-of-week 3 letter: ^D Dw2 AC,58,098,1,1,0,0,Day-of-week complete: ^D Dwn AC,58,144,1,1,0,0,Day-of-week number: ^D Dm1 AC,58,188,1,1,0,0,Month of year 3 letter: ^D Dm2 AC,58,240,1,1,0,0,Month of year complete: ^D Dmn AC,58,286,1,1,0,0,Month of year number: ^D E</p> <p>^XSETRTC,LANGUAGE,1 ^Q50,0,0 ^L AC,58,06,1,1,0,0,German Dw1 AC,58,046,1,1,0,0,Day-of-week 3 letter: ^D Dw2 AC,58,098,1,1,0,0,Day-of-week complete: ^D Dwn AC,58,144,1,1,0,0,Day-of-week number: ^D Dm1 AC,58,188,1,1,0,0,Month of year 3 letter: ^D Dm2 AC,58,240,1,1,0,0,Month of year complete: ^D Dmn AC,58,286,1,1,0,0,Month of year number: ^D E</p>	<p>English Day-of-week 3 letter: Thu Day-of-week complete: Thursday Day-of-week number: 4 Month of year 3 letter: Mar Month of year complete: March Month of year number: 03</p> <p>German Day-of-week 3 letter: Sam Day-of-week complete: Samstag Day-of-week number: 6 Month of year 3 letter: Nov Month of year complete: November Month of year number: 11</p>

**^Yb,p,d,s - Serial Port communication setting**

Syntax	<b>^Yb,p,d,s</b>
Parameter	b = Baud Rate (48 or 96 or 19 or 38 or 57 or 11); 48=4800bps; 96=9600bps; 19=19200bps; 38=38400bps; 57=57600bps; 11=115200bps p = Parity (N, O, E); N=none parity; O=odd parity; E=even parity d = Number of data bits (7 or 8) s = Number of stop bits (1 or 2)
Description	Serial Port communication setting

# Control Commands

## ~B - Display the version message from RS-232

Syntax	<b>~B</b>
Parameters	None
Description	Show the version number of firmware on Hyper Terminal.

## ~Dm,d,y,h,i,s - Date/Time setting

Syntax	<b>~Dm,d,y,h,i,s</b>																																											
Parameter	m = Month (01 to 12) d = Date (01 to 31) y = Year (last two digits of year)	h = Hour (00 to 23) i = Minutes (00 to 59) s = Seconds (00 to 59)																																										
Description	Set real time clock of the printer. For format setting of the date, use the Daa bb cc command.																																											
Example	<pre>~D12,22,04,11,11,11 ^L Dwn AD,182,145,1,1,0,0,^D Dw2 AD,135,186,1,1,0,0,^D Dw1 AD,168,226,1,1,0,0,^D Dmn/dd/y2 AD,126,110,1,1,0,0,^D E</pre>	<p>The following form shows the date for December 2004.</p> <table border="1"> <thead> <tr> <th>Sun.</th> <th>Mon.</th> <th>Tue</th> <th>Wed.</th> <th>Thu.</th> <th>Fri.</th> <th>Sat.</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> <td>11</td> </tr> <tr> <td>12</td> <td>13</td> <td>14</td> <td>15</td> <td>16</td> <td>17</td> <td>18</td> </tr> <tr> <td>19</td> <td>20</td> <td>21</td> <td>22</td> <td>23</td> <td>24</td> <td>25</td> </tr> <tr> <td>26</td> <td>27</td> <td>28</td> <td>29</td> <td>30</td> <td>31</td> <td></td> </tr> </tbody> </table> <p>The print result as below.</p> <pre>12/22/04 3 Wednesday Wed</pre>	Sun.	Mon.	Tue	Wed.	Thu.	Fri.	Sat.				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
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## ~En,name,size - Download graphic to memory

Syntax	<b>~En,name,size</b>
Parameters	n = P or p: PCX file n = B or b: BMP file name = Name of image (up to 20 character) size = Size of image (bytes), maximum 512K byte.
Description	Download monochrome image onto memory. Printer will beep once after downloaded completed. If the file name of graph is duplicated, the printer will show "REPEAT FILE NAME", and the download will not be accepted (refer to page43).

## ~G - Graphic mode

Syntax	<b>~G</b>
Parameter	None
Description	Set the printer to image-receiving mode. The image data is sent directly from host to the printing buffer (refer to page42)

## ~H,TTF,Xname,size<CR>data - Download true type font

Syntax	<b>~H,TTF,Xname,size&lt;CR&gt;data</b>
Parameter	X = from A to Z name = font name, accepted values: English alphabet and numbers size = size of font file in bytes data = binary data of TTF font file
Description	Download True Type Font to printer via command set. *Note: This command is designed for advance programmer. For general user, it is recommended to download TTF through QLabel IV.

**~H,TTF\_TABLE,Xname,size<CR>data - Download Unicode Table**

Syntax	<b>~H,TTF_TABLE,Xname,size&lt;CR&gt;data</b>
Parameter	X = from A to Z name = table name, accepted values: English alphabet and numbers size = size of font in bytes data = binary data of Unicode Table file
Description	Download the Unicode Table for printing True Type Font. *Note: This command is designed for advance programmer. For general user, it is not recommended to use this command.

**~Jx - Bit-Mapped font download**

Syntax	<b>~Jx</b>
Parameters	x = character; From a ~ z or A ~ Z; the amount is up to 26 characters.
Description	The command used for font loading is usually generated by QLabel label creation software. The printer will beep once after downloaded. If you use the same file name, the printer will show "REPEAT FILE NAME", and the download will not be accepted. The downloaded font is compatible with the HP Laser Jet II Plus (PCL-4).
Example	Download the "HVR0OE1A.SFP" text file to external memory card. Use "A" to do the character code name.
	~JA ; Define A as HVR0OE1A.SFP
	COPY HVR0OE1A.SFP PRN/B ; Send the order with the DOS mode

**~Kn - Response from RS-232**

Syntax	<b>~Kn</b>
Parameter	n = 0, disable. n = 1, enable.
Description	Respond a "Y" signal from RS-232 back to host after each printing is done.

**~L,DBASE,x,y - Download dBase III to Printer**

Syntax	<b>~L,DBASE,x,y</b> data...
Parameter	x = database name y = database size (unit: byte)
Description	This command can download dBase III file to printer.
Example	~L,DBASE,customer,364 ...(Data of customer.dbf)

**~L,SERIAL,name,data - Download serial file to printer**

Syntax	<b>~L,SERIAL,name,data...</b>
Parameter	name = serial file name data = serial file data
Description	Download serial file to printer.

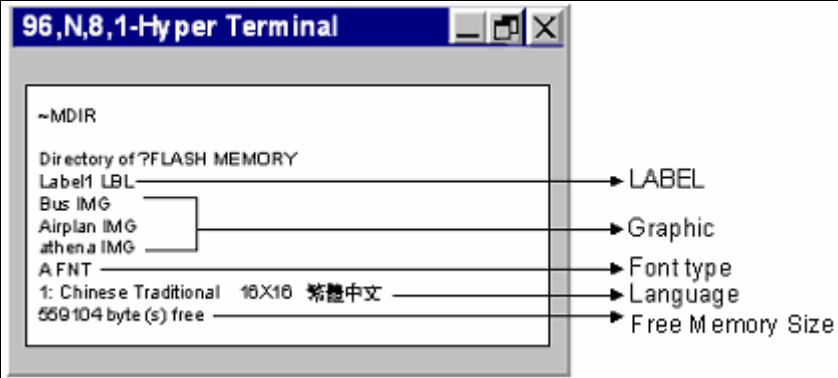
**~MDEL - Clear all memory of printer**

Syntax	<b>~MDEL</b>
Parameter	None
Description	Clear all memory of printer (Asia font is not included)

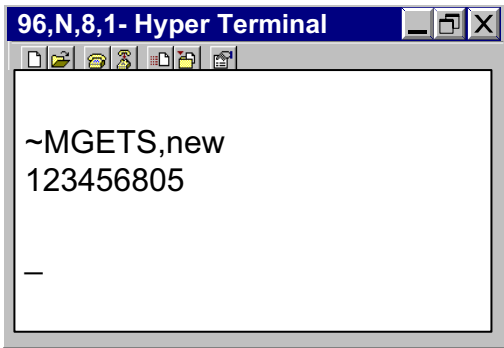
**~MDELn,name - Delete specific file from memory**

Syntax	<b>~MDELn,name</b>	
Parameter	n = D, database A, Asia font C, TTF font E, Bit-Mapped font F, label form G, graphic S, serial file T, text B, Unicode Table name = The name of the graphic, form, Bit-Mapped font or others. *Note: The 'name' of Asia font, TTF font and Unicode Table is ID tag.	
Description	Delete specific file from printer's memory	
Example	~MDELD,customer	Delete "customer" database.
	~MDELG,Bus	The graphic "Bus" will be deleted

**~MDIR - Get memory state from printer**

Syntax	<b>~MDIR</b>	
Parameter	None	
Description	Show the information of memory from printer	
Example		

**~MGETS,name - Get Serial File information**

Syntax	<b>~MGETS,name</b>	
Parameter	name = serial file name	
Description	Show the serial file information on Hyper Terminal	
Example	(Get the information of serial file "new" from printer)  ~MGETS,new	

**~MSETT,name<CR>nnnnnnnn<data> - Save the .TXT file to printer**

Syntax	<b>~MSETT,name&lt;CR&gt;nnnnnnnn&lt;data&gt;</b>	
Parameter	name = the name of saved nnnnnnnn = data size (8 digits) data = data to be saved	
Description	Save the .TXT file to printer.	

### ~MGETT,name<CR> - Read saved file

Syntax	~MGETT,name<CR>
Parameter	name = the name of saved
Description	Read the saved file from printer.
Example	Use “~MSETT, text1<CR>00000015Text file test2” to save data to printer.  Then use “~MGETT,name<CR>” command to read saved data  Example: ~MGETT,text1  Hyper Terminal will show: Text file test2

### ~Px - Print last label

Syntax	~Px
Parameter	x = 1 ~ 32767
Description	This command will repeatedly print the specific copies of the last label format.

### ~Qt±x - Row Offset Adjustment

Syntax	~Qt±x
Parameter	X = -100 ~ +100
Description	If the printing does not appear in the same place on every label, this command instructs the printer to print label formats. The “+n” move the position that the format specifies upward, and the “-n” move the position downward.

### ~Rx - Rotate printing

Syntax	~Rx
Parameter	x = label width (unit: mm), the input range is defined by the specification of printer models.
Description	Rotate the label format 180-degrees when printing (refer to page43). To return to the original print direction, set the x value greater than the max width of model's specification.

### ~S,CHECK - Status immediate response command

Syntax	~S,CHECK
Parameter	None
Description	The HyperTerminal will show the status of printer in “aa,nnnn<CR><LF>” format. aa = printer status information: 00 – Ready 01 – Paper out 02 – Paper jam or missing gap 03 – Ribbon out 04 – Print head is up 05 – Rewinder full 06 – Memory is full 07 – Filename can not be found 08 – Filename duplicate 09 – Syntax error 10 – Cutter JAM 11 – CF Card not found 20 – Pause 21 – In Setting Mode 22 – In Keyboard Mode 50 – Printer is printing 60 – Data in process nnnn = number of remaining labels, the value is from 00000 to 99999 *Note: Before using this command, the “^XSET,IMMEDIATE” (Set immediate response on/off) command should be turned on.

### ~S,DUMP - Enter into DUMP Mode

Syntax	<b>~S,DUMP</b>
Parameter	None
Description	When the printout result doesn't match to the label format setting, it is recommended to go into the Dump Mode to check whether any mistake in data transmission between the printer and the PC. For example, when printer receives 8 commands, yet without processing these commands, only printing out the contents of commands, this will confirm whether the commands were received correctly. To get out from the Dump Mode, please press the FEED key, and then the printer will automatically print out "OUT OF DUMP MODE". This indicates that the printer is back to standby mode. You can also power off the printer to exit from the Dump Mode.

### ~S,n - Analogue press control keys

Syntax	<b>~S,n</b>
Parameter	n = FEED n = PAUSE n = UNPAUSE
Description	This command can analogously press function keys on the printer. Key in "~S,FEED" via COM port can generate the same action as pressing the "FEED" key. Key in "~S,PAUSE" via COM port and the printing will be paused. Key in "~S,UNPAUSE" via COM port and the printing will continue.

### ~T - Print head testing

Syntax	<b>~T</b>
Parameter	None
Description	Print a pattern for the user to determine if the print head is damaged (refer to page45).

### ~V - Print Self-Test page

Syntax	<b>~V</b>
Parameter	None
Description	Print out the Self-Test page.

### ~Xn - Print the available space and file information in the memory

Syntax	<b>~Xn</b>
Parameter	n = 1, print label format names and available space in memory. n = 2, print graphic names and available space in memory. n = 3, print Bit-Mapped font names and available space in memory. n = 4, print the name of the label formats, graphics, fonts, and available space in memory. n = 5, print Asia font names and available space in memory
Description	Print the available space in the memory (unit: bytes)

### ~X7 - Print database information in memory

Syntax	<b>~X7</b>
Parameter	None
Description	Print database information in memory

### ~X8 - Print serial file name

Syntax	<b>~X8</b>
Parameter	None
Description	Print serial file name from printer.

### ~Z - Reset printer

Syntax	<b>~Z</b>
Parameter	None
Description	Reset the printer and the LED will flash once.

# Label formatting commands

## AUTOFR - Automatic form printing

Syntax	<b>AUTOFR</b>
Parameters	None
Description	When use "^Fname" command to store a label form, set the form name as "AUTOFR" and save into printer's memory. The printer then can print the label in standalone mode when power on next time.

## At,x,y,x\_mul,y\_mul,gap,rotationInverse,data - Text

Syntax	<b>At,x,y,x_mul,y_mul,gap,rotationInverse,data</b>																																							
Parameter	<p>t = Font type, see table below.</p> <table border="1"> <thead> <tr> <th>Font</th> <th>Points</th> <th>Font style</th> </tr> </thead> <tbody> <tr><td>A</td><td>6</td><td>CG Triumvirate, Code page 850</td></tr> <tr><td>B</td><td>8</td><td>CG Triumvirate, Code page 850</td></tr> <tr><td>C</td><td>10</td><td>CG Triumvirate, Code page 850</td></tr> <tr><td>D</td><td>12</td><td>CG Triumvirate, Code page 850</td></tr> <tr><td>E</td><td>14</td><td>CG Triumvirate, Code page 850</td></tr> <tr><td>F</td><td>18</td><td>CG Triumvirate, Code page 850</td></tr> <tr><td>G</td><td>24</td><td>CG Triumvirate, Code page 850</td></tr> <tr><td>H</td><td>30</td><td>CG Triumvirate, Code page 850</td></tr> <tr><td>I</td><td colspan="2">16x26 dots for US ASCII 8 bit</td></tr> <tr><td>K</td><td colspan="2">OCR-B font</td></tr> <tr><td>L</td><td colspan="2">OCR-A font</td></tr> <tr><td>Zn, n = 1 ~ 9</td><td colspan="2">Asia font from 1 to 4</td></tr> </tbody> </table> <p>x = Hori of top-left position of text (unit: dot, 1mm = 8 dots in 203dpi printer; 1mm=12 dots in 300dpi printer)  y = Vert of top-left position of text (unit: dot, 1mm = 8 dots in 203dpi printer; 1mm=12 dots in 300dpi printer)  x_mu = Horizontally magnified up to 8 times as large  y_mul = Vertically magnified up to 8 times as large  gap = Distance of the character (unit: dot, 1mm = 8 dots in 203dpi printer; 1mm=12 dots in 300dpi printer)  rotationInverse = The rotation of ASCII text from 0 to 3, the Asian text rotation form 0 to 7  0→ 0° 1→ 90° 2→ 180° 3→ 270°  4→ 0° 5→ 90° 6→ 180° 7→ 270°  (0~3→rotated for all characters; 4~7→rotated individually for each character)  In addition, if the rotation parameter is followed with "I", the text will be printed in inverse font.  data = data string, it includes Constant, Date information (^D), Time information (^T), Serial variable (^Cx) and Variable data (^Vxx).</p>	Font	Points	Font style	A	6	CG Triumvirate, Code page 850	B	8	CG Triumvirate, Code page 850	C	10	CG Triumvirate, Code page 850	D	12	CG Triumvirate, Code page 850	E	14	CG Triumvirate, Code page 850	F	18	CG Triumvirate, Code page 850	G	24	CG Triumvirate, Code page 850	H	30	CG Triumvirate, Code page 850	I	16x26 dots for US ASCII 8 bit		K	OCR-B font		L	OCR-A font		Zn, n = 1 ~ 9	Asia font from 1 to 4	
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L	OCR-A font																																							
Zn, n = 1 ~ 9	Asia font from 1 to 4																																							
Description	Prints an ASCII or ASIA text string (refer to page39). The ASCII text oriented form left to right, the Asian text from left to right or top to bottom.																																							

Sample

Rotation Para 0

Rotation Para 1

Rotation Para 2

Rotation Para 3

ROTATION PARA 0  
ROTATION PARA 1  
ROTATION PARA 2  
ROTATION PARA 3

ROTATION PARA 4  
ROTATION PARA 5

ROTATION PARA 6  
ROTATION PARA 7

**Text Rotation**

Rotation Para 0

Rotation Para 1

Rotation Para 2

Rotation Para 3

ROTATION PARA 0  
ROTATION PARA 1  
ROTATION PARA 2  
ROTATION PARA 3



ROTATION PARA 4  
ROTATION PARA 5

ROTATION PARA 6  
ROTATION PARA 7

**Rotation with Inverse**



## AT,x,y,w,h,g,s,d,m,data - Print built-in true type font

Syntax	<b>AT,x,y,w,h,g,s,d,m,data</b>
Parameter	<p>x = Hori of left-top position of text (unit: dot, 1 mm = 8 dots or 12 dots)  y = Vert of left-top position of text (unit: dot, 1 mm = 8 dots or 12 dots)  w = The width of font (8~2000 dot)  h = The height of font (8~2000 dot)  g = Space between characters (0~200 dot)  s = Font setting. It consists of 2 parts, one is rotation setting and the other is font style setting.  The rotation setting is from 0 to 3:  0 → 0°    1 → 90°    2 → 180°    3 → 270°  The font style setting is optional setting. It includes 3 types, can be set with none, one, two or three together:  B → Bold    T → Italic    U → Underline  d = DType, 0 → ASCII  m = m = 0 → width/height AspectRatio mode  m = 1 → Average width mode (refer to Further Information)  data = Data to be printed  *Portions of this software are copyright 2000-Feb-08 The FreeType Project  (www.freetype.org).</p>
Description	Print built-in True Type Font (TTF).
Further Information	<p>In width/height AspectRatio mode (m = 0):  When the width (w) and the height (h) of TTF are equal, the printing result of TTF will be exactly the same with Windows font. There is a formula to calculate the Windows font size from TTF size:  <math display="block">\text{TTFheightsize} = \text{WindowsFontsize} * \text{dpi} / 72</math> For example, if user want to print Windows font 72pt on 203dpi printer, then the <math>\text{TTFheightsize} = 72 * 203 / 72 = 203</math>. And the <math>\text{TTFwidthsize}</math> should be equal to <math>\text{TTFheightsize}</math>, which is 203. As a result, when the width and height of TTF both are 203, the printout will be the same with Windows font 72pt.</p> <p>In Average width mode (m = 1):  The height in dot is calculated the same as width/height AspectRatio mode, but the width is the average width in dots. If width=0, a 1:1 aspect ratio font is rendered.</p>
Sample	<p>AT,48,92,90,90,0,0,0,0,0,1234ABCDE  →  </p> <p>AT,50,324,90,90,0,0,0,0,0,1234ABCDE  →  </p>

### **【Note】**

For conversion: 1mm = 8 dots when printing with 203dpi printer; 1mm = 12 dots when printing with 300dpi printer.

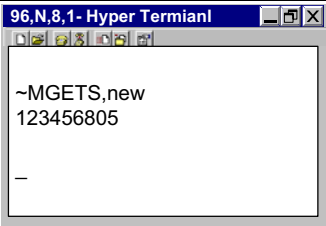
## ATt,x,y,w,h,g,s,d,m,data - Print downloaded true type font

Syntax	<b>ATt,x,y,w,h,g,s,d,m,data</b>
Parameter	<p>t = TTF type, accepted values: from A to Z  x = Hori of left-top position of text (unit: dot, 1 mm = 8 dots or 12 dots)  y = Vert of left-top position of text (unit: dot, 1 mm = 8 dots or 12 dots)  w = The width of font (8~2000 dot)  h = The height of font (8~2000 dot)  g = Space between characters (0~200 dot)  s = Font setting. It consists of 2 parts, one is rotation setting and the other is font style setting.  The rotation setting is from 0 to 3:  0 → 0°    1 → 90°    2 → 180°    3 → 270°  The font style setting is optional setting. It includes 3 types, can be set with none, one, two or three together:  B → Bold    T → Italic    U → Underline  d = DType → 0: ASCII    A~Z: Unicode table  m = m = 0 → width/height AspectRatio mode  m = 1 → Average width mode (refer to Further Information)  data = Data to be printed</p>
Description	Print downloaded True Type Font.
Further Information	<p>In width/height AspectRatio mode (m = 0):  When the width (w) and the height (h) of TTF are equal, the printing result of TTF will be exactly the same with Windows font. There is a formula to calculate the Windows font size from TTF size:  <math display="block">\text{TTFheightsize} = \text{WindowsFontsize} * \text{dpi} / 72</math> For example, if user want to print Windows font 72pt on 203dpi printer, then the <math>\text{TTFheightsize} = 72 * 203 / 72 = 203</math>. And the <math>\text{TTFwidthsize}</math> should be equal to <math>\text{TTFheightsize}</math>, which is 203. As a result, when the width and height of TTF both are 203, the printout will be the same with Windows font 72pt.</p> <p>In Average width mode (m = 1):  The height in dot is calculated the same as width/height AspectRatio mode, but the width is the average width in dots. If width=0, a 1:1 aspect ratio font is rendered.</p>

**Bt,x,y,narrow,wide,height,rotation,readable,data - Barcode**

Syntax	<b>Bt,x,y,narrow,wide,height,rotation,readable,data</b>			
Parameter	t = Barcode type, see table below.			
	type	Barcode	type	Barcode
	A	Code 39	P	Code 93
	A2	Code 39 with check digit	Q	Code 128 (auto subset A/B/C)
	B	EAN 8	Q2	Code 128 (subset A/B/C)
	C	EAN 8 - Add ON 2	R	UCC 128
	D	EAN 8 - Add ON 5	S	Post NET
	E	EAN 13	T	DUN 14 ONLY 90
	F	EAN 13 – Add ON 2	U	EAN 128
	G	EAN 13 – Add ON 5	V	RPS 128
	H	UPC A	W	China Postal Code
	I	UPC A - Add ON 2	X	HIBC
	J	UPC A - Add ON 5	Y	Plessey
	K	UPC E	Z	I 2 of 5 with Shipping Bearer Bars
	L	UPC E - Add ON 2	1	UCC/EAN-128 K-MART
	M	UPC E - Add ON 5	2	UCC/EAN-128 RANDAN
	N	I 2 of 5	3	Telepen
	N2	I 2 of 5 with check digit	4	FIM
	O	Codabar		
	<p>x = Hori. of top-left position of barcode (unit: dot, 1 mm = 8 dots or 12 dots)  y = Vert. of top-left position of barcode (unit: dot, 1 mm = 8 dots or 12 dots)  narrow (x dimension) = narrow bar from 1 ~ 10 dots(0.125 ~ 1.25 mm)  **DUN 14 narrow setting from 5 ~ 8 dots; UPC/EAN narrow setting from 2 ~ 4 dots **  wide = wide bar from 2 ~ 30 dots(0.25 ~ 0.5 mm); **CODE 39, 93, CODABAR &amp; I 2 of 5**  height = Barcode height in dots (24 ~ 1200 dots)  rotation = rotation of barcode (0 ~ 3)  0) 0° 1) 90° 2) 180° 3) 270°  readable =  0 – human readable off 3 – below barcode, centered 6 – above right  1 – below barcode, left 4 – above barcode, centered  2 – above barcode, left 5 – below right  data = barcode data, it includes Constant, Date information (^D), Time information (^T),  Serial variable (^Cx) and Variable data (^Vxx).</p>			

### C#x,y,±value,z - Print count with serial file

Syntax	<b>C#x,y,±value,z</b>	
Parameter	x = counter index y = serial file name ±value = ±value of serial variable (up to 12-digit) z = '0'~'9' or 'B' for decimal, 'A' for hexadecimal, 'C' for 0~9,A~Z	
Description	Set print count with serial file by this command.	
Example	~L,SERIAL,new,123456795	Download the new file to printer first
	Turn printer off Turn printer on. Print again.  ^Q60,0,0 ^P5 ^L C#0,new,+1,0 AG,50,137,1,1,0,0,^C0 E	Print Result: 123456800 123456801 123456802 123456803 123456804
	Key in ~MGETS,new in HyperTerminal	

### Cx,ys,±value,prompt - Serial number setting

Syntax	<b>Cx,ys,±value,prompt</b>	
Parameter	x = 0 to 9(up to 10 group), maximum combination up to 3 groups. y = select the decimal y → 0~9, set serial number as Decimal numbers, the value of "y" is included in "s" (start value of serial variable) as first digit. y → A, set serial number as Hexadecimal numbers, the value of "y" (e.g, A) is not included in "s" (start value of serial variable). y → C, set serial number as Base 36 numbers, the value of "y" (e.g, C) is not included in "s" (start value of serial variable). s = start value of serial variable (up to 13-digit). You can use the leading spaces to replace the leading zeros. ±value = ±value of serial variable (up to 12-digit) prompt = prompt of serial variable (up to 20 characters), only applied on models with LCD or EZ-Viewer.	
Description	Set the serial number (refer to page42)	
Example	^Q50,0,0 ^W100 ^H10 ^P3 ^L Dy2-me-dd Th:m:s C0,000,+1,Prompt C1, 1,+1,Prompt C2,AEE,+1,Prompt1 C3,CZYY,+1,Prompt2 AC,80,10,1,1,0,0,decimal with leading zeros: ^C0 AC,80, 80,1,1,0,0,decimal with leading spaces: ^C1 AC,80,160,1,1,0,0,hexadecimal: ^C2 AC,80,240,1,1,0,0, 0~9 A~Z: ^C3 E	decimal with leading zeros: 002 decimal with leading spaces: 3 hexadecimal: F0 0~9 A~Z: ZZ0
		decimal with leading zeros: 001 decimal with leading spaces: 2 hexadecimal: EF 0~9 A~Z: ZYZ
		decimal with leading zeros: 000 decimal with leading spaces: 1 hexadecimal: EE 0~9 A~Z: ZYY



### E - Terminate label formatting mode and print label

Syntax	<b>E</b>
Parameter	None
Description	End of formatting command; printer will print label after receiving this command.

### FILEDB,OPEN,name - Open database

Syntax	<b>FILEDB,OPEN,name</b>
Parameter	name = the name of the database
Description	Open a database for printing.
Example	FILEDB,OPEN,customer

### FILEDB,MOVE,n - Move data record

Syntax	<b>FILEDB,MOVE,n</b>
Parameter	n: Move the point of record in demand. n = number n = FIRST, the first record n = LAST, the last record n = NEXT, the next record n = PRIOR, the prior record
Description	Use variable or counter to select a specific record from the database.
Example	FILEDB,MOVE,3                      Move to third record FILEDB,MOVE,FIRST                Move to first record FILEDB,MOVE,NEXT                 Move to next record

### FILEDB,FIND,x,y - Searching from database

Syntax	<b>FILEDB,FIND,x,y</b>
Parameter	x =Column name in database file y =Keyword for searching
Description	Select a specific record form database and print it.
Example	Download database "customer" : ^Q60,0,0 ^P1 ^L FILEDB,OPEN,customer V00,10,Prompt0 V#LINKDB,PHONE,V00 FILEDB,FIND,NAME,Mary AC,79,120,1,1,0,0, Marry's phone: ^V00 E Find Mary's data and print it.

### Gwxxx - Graphic command

Syntax	<b>Gwxxx</b>
Parameter	wxxx... w = byte number of image data xxx...: image data
Description	This command is a sub-command of ~G It is sent by binary data. W is the digits number byte of image data (refer to page42). For example, if the image file is 50 bytes, the command is G2xxx . (2: ASCII is 50 decimal)

### Hx,y,col\_count,row\_count,col\_width,row\_width,line\_width - Table

Syntax	<b>Hx,y,col_count,row_count,col_width,row_width,line_width</b>
Parameter	x = left-upper Hori .pos. (unit: dots) y = left-upper Vert. Pos. (unit: dots) col_count = numbe of columns row_count = number of rows col_width = column width row_width = row width line_width = line width
Description	Draw a table in the label.
Example	H20,20,2,3,20,30,10



### La,x,y,x1,y1 - Line command

Syntax	<b>La,x,y,x1,y1</b>	
Parameter	<p>a = o, overwrite the line on the bottom  a = e, exclusive the line on the bottom  x = left-up; per horizontal(Hori.) pos. (unit: dots; 1mm= 8 dots or 12 dots)  y = left-upper vertical (Vert.) pos. (unit: dots; 1mm= 8 dots or 12 dots)  x1 = right-bottom Hori. Pos. (unit: dots)  y1 = right-bottom Vert. Pos. (unit: dots)</p>	
Description	Define a line to render in the label (refer to page40) *Note: The diagonal line draw is not available.	


### Mx,y,sno,nos,mode,ccode,zip,class,rotation,message - Print Maxicode

Syntax	<b>Mx,y,sno,nos,mode,ccode,zip,class,rotation,message</b>	
Parameter	<p>x = Hori. of left-bottom pos. of barcode (unit: dots).  y = Vert. of left-bottom pos. of barcode (unit: dots).  sno = symbol number, in set of symbols: 1 ~ 8.  nos = number of symbols in set of symbols: 1 ~ 8 sets.  mode = mode of maxicode 2, 3, 4 or 6.  ccode = 3 digits country code.  zip = postal code  9 digits for US style postal code. If there is a 5 digits zip code, 4 zeros must be padded  6 digits alphanumeric zip code for non-US style postal code.  class = service class, 3 digits numeric.  rotation = rotation of barcode (0 ~ 3)  0) 0° 1) 90° 2) 180° 3) 270°  message = 1 ~ 84 characters.</p>	
Description	Print a 2 dimensional Maxicode (refer to page40)	

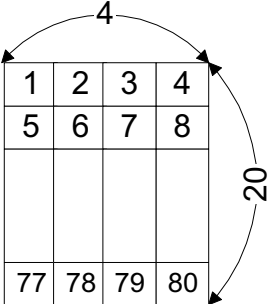
### Px,y,w,h,r,c,ec,len,rotation - Print PDF 417

Syntax	<b>Px,y,w,h,r,c,ec,len,rotation</b>	
Parameters	<p>Data</p> <p>x = Hori. of left-bottom pos. of barcode ( unit: dots)  y = Vert. of left-bottom pos. of barcode (unit: dots)  w = Width (x dimension) of the narrowest element (bar or space) in the barcode.  h = Height (y dimension) of each barcode row in the symbol.  r = number of barcode rows, from 3 to 90. If you key in 0, printer will count all the rows.  c = number of barcode columns, from 1 ~ 30. If you key in 0, printer will count the all columns.  ec = error correction level: 0 ~ 8.  len = number of encoded data bytes, including carriage returns ↵ and line feed.  rotation = rotation of barcode (0 ~ 3)  0) 0° 1) 90° 2) 180° 3) 270°  Data = data to be encoded (the length of the data must be equal to the set value of "len"; up to 1024 characters)</p>	
Description	Print a 2 dimensional PDF417 code (refer to page40)	

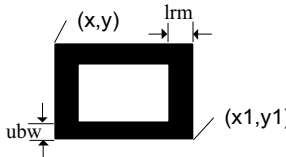
**PCx,y,w,h,r,c,ec,max\_len,rotation - PDF 417 with variable length data**

Syntax	<b>PCx,y,w,h,r,c,ec,max_len,rotation</b> Data	
Parameter	x = Hori. of left-bottom pos. of barcode ( unit: dots) y = Vert. of left-bottom pos. of barcode (unit: dots) w = Width (x dimension) of the narrowest element (bar or space) in the barcode. h = Height (y dimension) of each barcode row in the symbol. r = number of barcode rows, from 3 to 90. If you key in 0, printer will count all the rows. c = number of barcode columns, from 1 ~ 30. If you key in 0, printer will count the all columns. ec = error correction level: 0 ~ 8. max_len = max of number encoded data bytes, including carriage returns ↵ and line feed. rotation = rotation of barcode (0 ~ 3) 0) 0°   1) 90°   2) 180°   3) 270° Data = data to be encoded. The content of data must be enclosed with "&*" sign on the beginning and the end.	
Description	To adjust the PDF 417 data length by this command	
Example	^Q50,0,0 ^L PC141,104,3,5,3,3,3,50 &*0123456789 Line2 Line3 9876543210&* E	(Data read from CCD: 0123456789[ CR][ LF]Line2[ CR][ LF]Line3[ CR][ LF]9876543210) 

**Qx,y,width,height - Pattern command**

Syntax	<b>Qx,y,width,height</b> Data...	
Parameters	x = Hori. of left-bottom pos. (unit: dots). y = Vert. of left-bottom pos. (unit: dots). width = width of graphic (unit: byte) height = height of graphic (unit: dots) (data length = width x height)	
Description		Data send out 1 2 3 4 .....77 78 79 80  width = 4 ; height = 20 (data length: 4x20 = 80)  (refer to page43)

**Rx,y,x1,y1,lrw,ubw - Rectangle**

Syntax	<b>Rx,y,x1,y1,lrw,ubw</b>	
Parameter	x = left-upper Hori .pos. (unit: dots) y = left-upper Vert. Pos. (unit: dots) x1 = right-bottom Hori. Pos. (unit: dots) y1 = right-bottom Vert. Pos. (unit: dots) lrw = thickness of left, right border (unit: dots) ubw = thickness of upper bottom border (unit: dots)	
Description	Draw a rectangle in the label (refer to page40)	



### Th|m|s - Define time layout formatting

Syntax	<b>Th m s</b>
Parameter	h = Hour format ( 2 digits, 00 ~ 23) m = Minute format ( 2 digits, 00 ~ 59) s = Second format (2 digits, 00 ~ 59)   = Partition (It can be any separator between dec. 32 to 63 of ASCII).
Description	Define the time layout for internal real-time clock (refer to page39)

### V#ADD,name,size,prompt - Store variable with a name

Syntax	<b>V#ADD,name,size,prompt</b>	
Parameters	name = descriptive name size = number of character prompt = prompt of variable	
Description	The name of the variable can be defined by user.	
Example	<pre> ~MDELf,aaa ^Faaa ^Q50,0,3 ^AD ^L V#ADD,weight,10,Weight V#ADD,date,15,Date AE,7,46,1,1,0,0,Weight is ^(weight) AE,7,86,1,1,0,0,Date is ^(date) E  ^Kaaa 16 kg 11/26/2004 E ~P1                     </pre>	<pre> Weight is 16 kg Date is 11/26/2004                     </pre>

### V#ADDCHKSUM,x - Add modulus 10 check code

Syntax	<b>V#ADDCHKSUM,x</b>	
Parameters	x = variable	
Description	Add the modulus 10 check code to x	
Example	<pre> Add modulus 10 check code to V00  ~MDELf,test ^Ftest ^Q60,0,0 ^L V00,16,Prompt V#ADDCHKSUM,V00 AE,47,57,1,1,0,0,Date: ^V00 E  ^Ktest 111222333 E ~P1                     </pre>	<pre> Print result  Enter Variable value 111222333  Print result 1112223332                     </pre>

### V#LINKDB,x,y - Set a Variable name for dBase data

Syntax	<b>V#LINKDB,x,y</b>
Parameter	x = Column name of database y = Variable
Description	Before using this command, a dBase data should opened first, and then can link dBase data to print designate data out.
Example	Please refer to page47

### V#OPx,p1,p2,p3 - Variable calculation

Syntax	<b>V#OPx,p1,p2,p3</b>	
Parameters	x = +, -, *, /, % ; p1,p2,p3= variable x = +, p1=p2+p3 x = -, p1=p2-p3 x = *, p1=p2*p3 x = /, p1=p2/p3 x = %, p1=p2%p3	
Description	This command can calculate variables. (refer to page46) *Note: the calculation result will be rounded off to integer value.	
Example	V#OP+,V00,V01,V02 V#OP-,V00,V01,V02 V#OP*,V00,V01,V02 V#OP/,V00,V01,V02 V#OP%,V00,V01,V02	V00=V01+V02 V00=V01-V02 V00=V01*V02 V00=V01/V02 V00=V01%V02

### V#RENAME,name,x - Variable rename

Syntax	<b>V#RENAME,name,x</b>	
Parameters	name = new name of the variable (max 8 characters) x = variable	
Description	Rename the variable.	
Example	~MDELf,aaa ^Faaa ^Q50,0,3 ^AD ^L V00,10,Prompt V01,10,Prompt V#RENAME,weight,V00 V#RENAME,date,V01 AE,7,46,1,1,0,0,Weight is ^(weight) AE,7,86,1,1,0,0,Date is ^(date) E  ^Kaaa 16 kg 11/20/2004 E ~P1	Weight is 16 kg Date is 11/20/2004

### V#SET,UNPROMPT,x - Disable variable prompt

Syntax	<b>V#SET,UNPROMPT,x</b>	
Parameters	x = variable	
Description	This command can set the variable without prompt.	
Example	V#OP+,V00,V01,V02 V#SET,UNPROMPT,V00	Use doesn't need to input the value of V00

### V#STRCPY,x,y - Copy all of variable data

Syntax	<b>V#STRCPY,x,y</b>	
Parameters	x = target variable y = source variable	
Description	Copy all data of y to x	
Example	V#STRCPY,V00,V01	Copy all of V01 data to V00

### V#STRSUB,x,y,first,length - Copy part of Variable value

Syntax	<b>V#STRSUB,x,y,first,length</b>	
Parameters	x = target variable y = source variable first = the position of first character length = the number of characters	
Description	Copy part of y value to x	
Example	Copy year, month and day values respectively from a whole date variable.  ~MDELf,test ^Ftest ^Q60,0,0 ^L V00,16,PromptV0 V01,16,PromptV1 V02,16,PromptV2 V03,16,PromptV2 V#STRSUB,V01,V00,5,2 V#STRSUB,V02,V00,8,2 V#STRSUB,V03,V00,0,4 V#SET,UNPROMPT,V01 V#SET,UNPROMPT,V02 V#SET,UNPROMPT,V03 AE,47,57,1,1,0,0,Date:^V00 AE,38,115,1,1,0,0,Month:^V01 AE,38,155,1,1,0,0,Day:^V02 AE,38,205,1,1,0,0,Year:^V03 E  ^Ktest 2005/01/31 E ~P1	Print result:  Date:2005/01/31 Month:01 Day:31 Year:2005

### Vt,x,y,x\_mul,y\_mul,gap,rotationInverse,data - Print with downloaded character sets

Syntax	<b>Vt,x,y,x_mul,y_mul,gap,rotationInverse,data</b>	
Parameter	t = the font name; from A ~ Z x = Hori of top-left position of text (unit: dot, 1mm = 8 dots in 203dpi printer; 1mm=12 dots in 300dpi printer) y = Vert of top-left position of text (unit: dot, 1mm = 8 dots in 203dpi printer; 1mm=12 dots in 300dpi printer) x_mul = Horizontally magnified up to 8 times as large y_mul = Vertically magnified up to 8 times as large gap = Dintance of the character (unit: dot, 1mm = 8 dots in 203dpi printer; 1mm=12 dots in 300dpi printer) rotationInverse = The rotation of ASCII text from 0 to 3, the Asian text rotation form 0 to 7 0→ 0° 1→ 90° 2→ 180° 3→ 270° 4→ 0° 5→ 90° 6→ 180° 7→ 270° (0~3→rotated for all characters; 4~7→rotated individually for each character) In addition, if the rotation parameter is followed with "I", the text will be printed in inverse font. data = Data string (up to 239 characters).	
Description	Download Bit-Mapped font to memory. All parameters are all the same with text command	
Example	VA,5,10,1,1,1,0,data	The name of font "A"


### Vxx,length,prompt - Store variable

Syntax	<b>Vxx,length,prompt</b>	
Parameters	xx = a code name of the variable, from 00 ~ 99 length = number of characters (up to 98characters). prompt = prompt of variable (maximum up to 60 characters)	
Description	Define variables for further use. (refer to page44)	

**Vxx,length,prompt,jnl - Variable alignment**

Syntax	<b>Vxx,length,prompt,jnl</b>
Parameter	xx = a code of the variable length = length of variable value prompt = prompt of variable j = Justification option n = l(for left), c(for center), r(for right) l = the length of entire string in millimeters
Description	Variable arrangement by appoint setting

**Wx,y,mode,type,ec,mask,mul,len,roatae - Print QR-code**

Syntax	<b>Wx,y,mode,type,ec,mask,mul,len,roatae</b>	
Parameters	x = Hori. of left-bottom pos. of barcode (unit: dots) y = Vert. of left-bottom pos. of barcode (unit: dots) mode = input mode (1 ~ 5) 1 → Numerical data mode 2 → Alpha numerical data mode 3 → 8-bit data mode 4 → Kanji data mode 5 → Mixing mode type = barcode type (1 ~ 2) 1 → Model1 (original) 2 → Model2 (enhanced) ec = error correction level (L · M · Q · H) L → Low M → Medium Q → Medium high H → High mask = masking factor (0 ~ 7 or 8 for auto) mul = multiple (1 ~ 8) len = number of encoded data bytes, including carriage returns ↵ and line feed. roatae =rotation of barcode (0 ~ 3) 0) 0° 1) 90° 2) 180° 3) 270°	
Description	Print QR-code by setting.	
Example	Q50,0,0 ^L W10,10,2,1,L,8,10,36,0 0123456789ABCDEFGHIJKLMNQRSTU WXYZ E	Data mode: 2 Model type: 1 Error level: L Masking factor: 8 Multiple:10 Data length: 36 

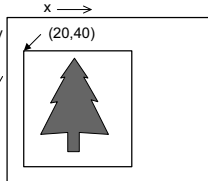
**XRbx,y,enlarge,rotation,length<CR>data - Print DataMatrix Code**

Syntax	<b>XRbx,y,enlarge,rotation,length&lt;CR&gt;data</b>
Parameters	x = Horizontal start position of barcode (unit: dots). y = Vertical start position of barcode (unit: dots). enlarge = Enlarge the DataMatrix Code 1~8 times (horizontally and vertically). rotationR = rotation of barcode (0 ~ 3) 0) 0° 1) 90° 2) 180° 3) 270° length = data length (unit: bytes). data = bar code data.
Description	Print DataMatrix code. (refer to page41)

### XRbx,y,enlarge,rotationR,length<CR>data - Print Rectangular DataMatrix Code
















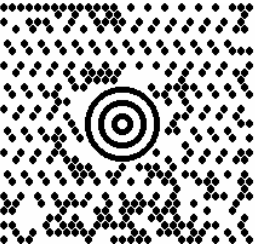








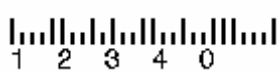

Syntax	<b>XRbx,y,enlarge,rotationR,length&lt;CR&gt;data</b>
Parameters	x = Horizontal start position of barcode (unit: dots). y = Vertical start position of barcode (unit: dots). enlarge = Enlarge the DataMatrix Code 1~8 times (horizontally and vertically). rotationR = rotation of barcode (0R ~ 3R) 0R) 0°   1R) 90°   2R) 180°   3R) 270° length = data length (unit: bytes). data = bar code data.
Description	Print rectangular DataMatrix code. (refer to page41)

### Yx,y,name - Graphics

Syntax	<b>Yx,y,name</b>
Parameter	x = Hori. Pos. of left-upper of graphics (unit: dots) y = Vert. Pos. of left-upper of graphics (unit: dots) name = Name of graphics download
Description	This command is for printing a graphic that has been previously stored in printer memory (refer to page43)
	<p>Example: A graphic in printer named "Graphic1", command Y20, 40; Graphic1 ↵ will put this graphic into label at position (20, 40).</p> 

# Examples

## Barcode samples

CODE	SAMPLE	CODE	SAMPLE
Code 39	 CODE39	UPC E Add on 2	 0 234567 3
EAN 8	 1234 5670	UPC E Add on 5	 0 234567 3 12345
EAN 8 Add on 2	 1234 5670 12	1 2 of 5	 4321
EAN 8 Add on 5	 1234 5670 12345	CODABAR	 ABCD
EAN 13	 1 234567 890128	Code 93	 CODE 93
EAN 13 Add on 2	 1 234567 890128 12	Code 128	 CODE 128
EAN 13 Add on 5	 1 234567 890128 12345	EAN 128	 EAN 128
UPC A	 1 23456 78901	MAXICODE	
UPC A Add on 2	 1 23456 78901 2 12	PDF 417	
UPC A Add on 5	 1 23456 78901 2 12345	UPC E	 0 234567 3
DataMatrix Code		QR Code	
UCC128	 (12) 3 4567890 123456789	DUN 14	 1 29 45678 90129 1
POST NET	 1 2 3 4 0	RPS128	 1234567890123456789017

## Examples

How to construct a label using EZ-Series command:

To create a label, it must be an order command combination.

Control command And Setup up command	
^L	^L is precedent for the beginning of label format
Label format command	} Label format command must be included between the ^L and E command
E	

\*\* Control or setup commands to be used in the label command area will be ineffective.

Example:

The following example is printing a label with EAN8. The program is a text file. No matter what language you use in programming, simply send out the text file of the contents and you can control the printing with EZ-Series printers.

Save the following contents (command file named: EX1.TXT).

Program command	Description
^Q25,3	Setting up the height 25mm, gap 3mm
^W32	Setting up the width 32mm
^H10	Setting up the darkness 10
^S6	Setting up the speed 6 inches per second
^P1	Setting up the number of printing 1
^E10	Setting up the paper advance length to 10 mm from the print head after printing. The label will move back 10 mm when the next label is printed.
^C1	Setting up the number of copies (start value is 1)
^O0	Setting up the auto stripper function to be turned OFF
^R0	Setting up the left margin 0 dot
^D0	Turning the cutting function off
^L	The label content of start symbol
BB,42,39,2,5,100,0,1,1234567	Select EAN8 label, data content is 1234567
E	Label content of stop symbol

The label can be created by the following MS-DOS command:

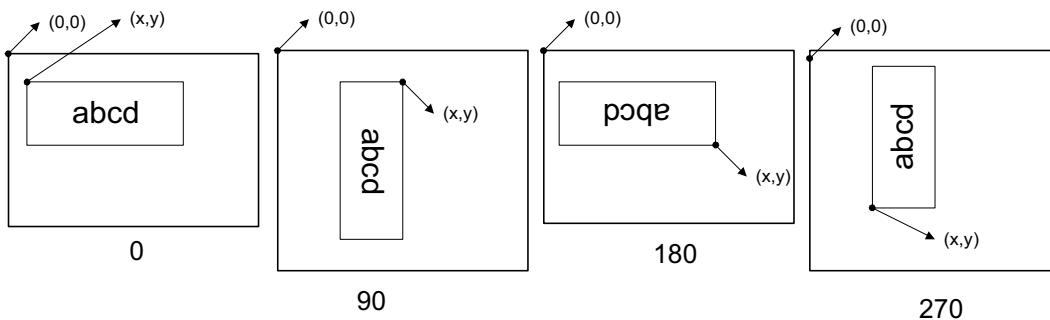
```
C:\>COPY EX1.TXT PRN.
```

To send the label to serial port by the following MS-DOS command:

```
C:\>MODE COM1 96,N,8,1
```

```
C:\>TYPE EX1.TXT >> COM1
```

## Setting the x and y values:





### 1. Text

Example	Result	Rotate printing	Result
^Q50,0,2 ^W50 ^S6 ^H10 ^R10 ~D8,27,00,8,39,36 ^L AC,10,10,1,1,1,0,PRINTER AC,10,50,1,1,1,0,^D AC,10,100,1,1,1,0,^T E	PRINTER AUG/27/00 08:39:36	^Q50,0,0 ^W50 ^S6 ^H10 ^L AC,100,30,1,1,1,0,ROTATION 0 AC,38,0,1,1,1,1,ROTATION 90 AC,260,150,1,1,1,2,ROTATION 180 AC,290,200,1,1,1,3,ROTATION 270 E	ROTATION 0 ROTATION 90 ROTATION 180 ROTATION 270
Adjusting the character spacing	Result	Asia Font	Result
^Q30,0,0 ^W50 ^S6 ^H10 ^L AC,10,10,1,1,10,0,PRINTER AC,10,100,1,1,1,0,PRINTER E	P R I N T E R     P R I N T E R	^L AZ,100,12,1,1,0,4,中文 AZ,223,65,1,1,0,5,中文 AZ,60,100,1,1,0,6,中文 AZ,90,144,1,1,0,7,中文 E	中文 中文 中文 中文

The data output is a default setting and user can change it with ~D command (refer to page28).  
 The time output format is a default setting and user can change it with T command.

### 2. Barcode

Example	Result	Rotation of barcode	Result
^H10 ^S6 ^Q30,0,2 ^W60 ^L BB,20,100,3,3,100,0,1,1234567 E		^H10 ^S6 ^W25 ^Q30,0,2 ^L BE,100,20,2,4,80,1,1,123456789 012 E	

### 3. RTC Setting

Change the date formatting	Result
Dy4-me-dd	2000-MAY-29
Dy4/mn/dd	2000/05/29
Dmn dd y4	05 29 2000
Dy4	2000
Dme	MAY
Ddd	09
Dy4-me	2000-MAY
Dme-dd	MAY-29



#### 4. Line printing

Example	Description	Result
^Q50,3 ^W100 ^E32 ^H7 ^P1 ^S6 ^L Lo,212,45,311,53 Lo,244,11,252,128 Le,34,43,149,51 Le,72,8,80,121 E	; Darkness= 7 ; Speed = 6 inch/second ; Label height = 50mm, gap = 3 mm ; Label width = 100mm	

#### 5. Rectangle printing

Example	Description	Result
^H10 ^S6 ^Q50,2 ^W70 ^L R20,20,120,120,8,8 E	; Darkness = 10 ; Speed = 6 inch/second ; Label height = 50mm, gap = 2 mm ; Label width= 70mm ; (x,y) = (20,20), (x1,y1) = (120,120) lrw = 8 dots, ubw = 8 dots	


#### 6. PDF417

Example	Result
^Q50,0,3 ^W70 ^S6 ^H10 ^L P30,20,3,3,3,3,1,100 12345678 12345678 12345678 12345678 12345678 12345678 12345678 12345678 12345678 12345678 E	

#### 7. Maxicode

Example	Result
^Q50,0,0 ^W70 ^S6 ^H10 ^L M30,20,1,1,2,840,068107317,8,0,123456 E	

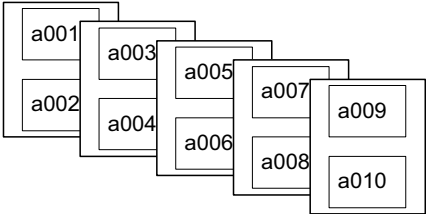
### 8. DataMatrix Code

Example	Result
<pre> ^Q60,3 ^W80 ^H19 ^P1 ^S2 ^L XRB314,134,8,0,10 0123456789 XRB312,438,8,0R,10 0123456789 E                     </pre>	

### 9. Stripper setting

Example	Result
<pre> ^Q50,2 ^W50 ^S6 ^O1 ^E10 ^P1 ^H10 ^L AD,20,20,1,1,3,0,Stripper Function E                     </pre>	<pre> ; Label height= 50mm, gap= 2mm ; Label width= 50mm ; Speed =6 inch/second ; Stripper enable ; Set stop position to 10 mm ; Printing one label ; Darkness = 10 ; Label format begin sign  ; Label format end and begin print                     </pre>

### 10. Cutter setting

Example	Description	Result
<pre> ^Q20,0,0 ^H5 ^S2 ^P10 ^D2 ^C1 ^L R10,10,120,90,2,2 C0,001,+1,A1 AC,20,30,1,1,1,0,a^C0 E                     </pre>	<pre> ;plain paper length:20mm ;feed label length :0mm  ;print 10 labels ;2 labels per cut                     </pre>	


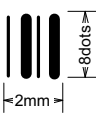
## 11. Serial number

TEXT			
Example 1	Result	Example 2	Result
^Q10,0,0 ^W30 ^S6 ^H10 ^P10 ^L C0,0000,+2,A1 AB,10,10,1,1,2,0,^C0 E	0018 0016 0014 0012 0010 0008 0006 0004 0002 0000	~P10          If you want to continue printing 10 more serial numbers that is starting from 0018, enter the command "~P10". With this command you do not have to re-enter all the command in example.	0038 0036 0034 0032 0030 0028 0026 0024 0022 0020
Example 3	Result	Example 4	Result
^Q10,0,0 ^W30 ^S6 ^H10 ^P4 ^C2 ^L C0,0000,+2,A1 AB,10,10,1,1,2,0,^C0 E	0006 0006 0004 0004 0002 0002 0000 0000	^Q10,0,0 ^W30 ^S6 ^H10 ^P8 ^L C0,0000,+2,A1 AB,10,10,1,1,2,0,abc^C0def E	abc0014def abc0012def abc0010def abc0008def abc0006def abc0004def abc0002def abc0000def
Barcode			
Barcode with serial number	Result		
^H10 ^S6 ^Q20,0,2 ^W50 ^P10 ^L C0,000,-1,A3 BE,20,100,3,3,100,0,1,111111^C0111 E			



## 12. Graphic driver format

Example	Description
^Q20,2 ^W50 ^R20 ~G G(AA G(AA G(AA G(AA G(AA G(AA G(AA G(AA G(AA G(AA G(AA G(AA G(AA G(AA G(AA G(AA E	<p>; Left margin = 20 dots</p> <p>For this example, ASCII “ character is 40 decimal (=40 bytes). Total 14 lines, so the graphics height is 1.75mm (14 dots)</p> <hr/> <p>Result</p> <p>                     =====                 </p>

### 13. Pattern command setting

Example	Result
<pre> ^Q,20,0,0 ^W40 ^S6 ^D5 ^L Q40,10,2,8 GGGGGGGGGGGGGGGGGG E </pre>	 <p>Length: 2x8=16</p>
Description	
<pre> 0100011101000111 0100011101000111 0100011101000111 0100011101000111 0100011101000111 0100011101000111 0100011101000111 0100011101000111 </pre> <p>HEIGHT = 8 DOTS</p> <p>← 1 BYTE → ← 1 BYTE →</p> <p>← WIDTH = 2 BYTES →</p> <p>G : 01000111 (binary)</p>	


### 14. Rotate label format for printing

Example	Description	Result
<pre> ^Q40,2 ^W50 ^S6 ^H10 ~R50 ^L AC,153,42,1,1,1,2,ROTATE BB,156,112,2,5,50,2,1,1234567 E </pre>	<p>; Label size is 40 mm(h) x 50 mm(w); 2 mm gap</p> <p>; Rotate the label format 180° for printing</p>	
<pre> ^Q50,0,0 ~R200 ^L AC,20,10,1,1,1,0,ROTATE BB,20,45,2,5,50,0,1,1234567 E </pre>	<p>; Disable the rotate function</p>	

### 15. Download graphic to printer's memory

Following the below steps to download graphic to printer.

1. Prepare a graphic file (file name: TREE.PCX, file size: 922 bytes).
2. Prepare two text files (TEST1.TXT and TEST2.TXT, see the following contents).

TEST1.TXT	TEST2.TXT	Print Result
<pre> ~EP,TREE,922 </pre>	<pre> ^Q30,0,0 ^W50 ^S2 ^H5 ^L Y30,50,TREE E </pre>	

3. In DOS mode, running the following commands.

```




COPY TEST1.TXT PRN.␣
COPY TREE.PCX PRN/B.␣
COPY TEST2.TXT PRN.␣

```

### 16. Download label and variable settings

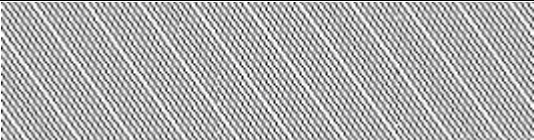
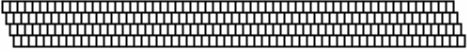
Example	Description
^Ftest ^Q50,0,15 ^W70 ^H10 ^S6 ^E12 ^L C0,0000,+1,serial no. V00,10,name V01,8,barcode V02,6,price AE,108,306,1,1,1,0,\$^V02 AC,39,27,1,1,1,0,S/N.^C0 AD,126,78,1,1,1,0,^V00 BA,108,135,2,5,100,0,1,^V01 E	; Download label to memory card and the label name is "test".  ; Setting serial number is C0 ; Setting three variables V00, V01, V02

### 17. Recall label format from memory

Example 1	Description	Result
^Ktest 0000 Book 12345678 200.00 E ~P1	Recall label format without changing the label format C0 = 0000 V00 = book V01 = 12345678 V02 = 200.00	S/N.0000 book  * 12345678 * \$200.00
Example 2	Description	Result
^Ktest 1111 Pencil 12345678 100.00 E ^Q35,0,0 ^S6 ^H10 ~P2	Recall label format and change label format C0 = 1111 V00 = pencil V01 = 12345678 V02 = 100.00 Changing the size Changing speed to 6"/sec Changing darkness to 10 Printing the last label twice	S/N.1111 Pencil  * 12345678 * \$100.00  S/N.1112 Pencil  * 12345678 * \$100.00

Each time you change variable data or label format, repeat to send command from ^Kname to ~Px.

18. Print head test & Version list

Example	Result
~T	
~V	<div style="border: 1px solid black; border-radius: 15px; padding: 10px; width: fit-content; margin: auto;"> <p>EZXXX : VX.XXX            Serial port :96,N,8,1</p>  <p>1 DRAM installed            Image buffer size : 1475K            000 FORM(S) IN MEMORY            000 GRAPHIC (S) IN MEMORY            000 FONT(S) IN MEMORY            000 ASIAN FONT(S) IN MEMORY            150K BYTES FREE MEMORY            ^S6 ^H8 ^R000 ~R200            ^W100 ^Q100,3            Option : ^D0 ^O0 ^AD            Gap Sensor AD : 129 162 195            (3)</p> </div>

**19. Use variable settings**

	Example	Result
<p>1. User input unit price and amount. Printer calculates total price.</p>	<pre>~MDELF,test1 ^Ftest1 ^Q60,0,0 ^P1 ^L V00,10,Price V01,10,Amount V02,10,Total Price V#OP*,V02,V00,V01 V#SET,UNPROMPT,V02 AC,30,110,1,1,0,0,Price: ^V00 AC,30,189,1,1,0,0,Amount: ^V01 AE,30,273,1,1,0,0,Total Price: ^V02 E  ^Ktest1 100 3 E ~P1</pre>	<pre>Price: 100 Amount: 3 Total Price: 300</pre>
<p>2. Calculation sample</p>	<pre>~MDELF,test2 ^Ftest2 ^Q60,0,0 ^L V00,10,Input V00 V01,10,Input V01 V02,10,Input V02 V03,20,Input V03 V04,20,Input V05,20,Input V06,20,Input V#OP+,V02,V01,V00 V#OP-,V03,V01,V00 V#OP*,V04,V01,V00 V#OP/,V05,V01,V00 V#OP%,V06,V01,V00 V#SET,UNPROMPT,V02 V#SET,UNPROMPT,V03 V#SET,UNPROMPT,V04 V#SET,UNPROMPT,V05 V#SET,UNPROMPT,V06 AA,38,37,1,1,0,0,V00=^V00 AA,38,77,1,1,0,0,V01=^V01 AE,38,115,1,1,0,0,V1+V0=^V02 AE,38,165,1,1,0,0,V1-V0=^V03 AE,38,215,1,1,0,0,V1*V0=^V04 AE,38,265,1,1,0,0,V1/V0=^V05 AE,38,315,1,1,0,0,V1 MOD V0=^V06 E  ^Ktest2 10 20 E ~P1</pre>	<pre>V00=10 V01=20  V1+V0=30 V1-V0=10 V1*V0=200 V1/V0=2 V1 MOD V0 = 0</pre>

## 20. dBase III data setting

Example:

customer.dbf has following data

NAME	ADDRESS	PHONE
Tom	Address of Tom	11111111
Mary	Address of Mary	22222222
John	Address of John	33333333
Joe	Address of Joe	44444444
Bob	Address of Bob	55555555
Gilbert	Address of Gilbert	66666666

Example	Description	Result
^Q60,0,0 ^P1 ^L FILEDB,OPEN,customer V00,10,Prompt0 V#LINKDB,PHONE,V00 FILEDB,FIND,NAME,Mary AC,79,120,1,1,0,0, Mary's phone: ^V00 E	Print out Mary's phone number	Mary's phone: 22222222
^Q60,0,0 ^P1 ^L FILEDB,OPEN,customer V00,10,Prompt0 V#LINKDB,ADDRESS,V00 FILEDB,FIND,NAME,John AC,79,120,1,1,0,0, ^V00 E	Print out John Address	Address of John
^Q60,0,0 ^P1 ^L FILEDB,OPEN,customer V00,10,Prompt V#LINKDB,NAME,V00 FILEDB,MOVE,LAST AC,79,120,1,1,0,0,Last Name is ^V00 E	Print out last person name	Last Name is Gilbert
^Q60,0,0 ^P1 ^L FILEDB,OPEN,customer V00,10,Prompt V#LINKDB,NAME,V00 FILEDB,MOVE,2 AC,79,120,1,1,0,0,Second Name is ^V00 E	Print second person name	Second Name is Mary



^Q60,0,0 ^P3 ^L FILEDB,OPEN,customer C0,1,+1,DB Move C V00,10,name V01,10,phone V#LINKDB,NAME,V00 V#LINKDB,PHONE,V01 FILEDB,MOVE,C0 AC,79,120,1,1,0,0,^V00 Phone is ^V01 E	Print first, second and third person phone number	Tom Phone is 11111111 Mary Phone is 22222222 John Phone is 33333333
---	--	---

# Appendix.

## Barcode Details

### 1. Code 128

#### BQ2, X, Y, NARROW, WIDE, HEIGHT, RTATION, READABLE, DATA

Code 128 Subset A: Included the standard uppercase alphanumeric keyboard characters, control and special characters.

Code 128 Subset B: Includes the standard uppercase, lowercase alphanumeric keyboard characters and special characters.

Code 128 Subset C: Used for double density encoding of numeric data (the set of 100 digit pairs from 00 through 99).

Example	
Subset A: BQ2,8,8,2,5,40,0,0,AAPPLE	To select Code 128 Subset A, place a ASCII A before the data to be encoded.
Subset B: BQ2,8,8,2,5,40,0,0,BAPPLE	To select Code 128 Subset B, place a ASCII B before the data to be encoded.
Subset C: BQ2,8,8,2,5,40,0,0,C1234	To select Code 128 Subset C, place a ASCII C before the data to be encoded.
Special character handling: BQ2,8,8,2,5,40,0,0, ATEST&G	To encode FNC1 into a Code 128 Subset A, send the ASCII &G.

ASCII	2 Character	Code A	Code B	Code C
96	&A	FNC3	FNC3	-NA-
97	&B	FNC3	FNC2	-NA-
98	&C	SHIFT	SHIFT	-NA-
99	&D	Code C	Code C	-NA-
100	&E	Code B	FNC	Code B
101	&F	FNC4	Code A	Code A
102	&G	FNC1	FNC1	FNC1