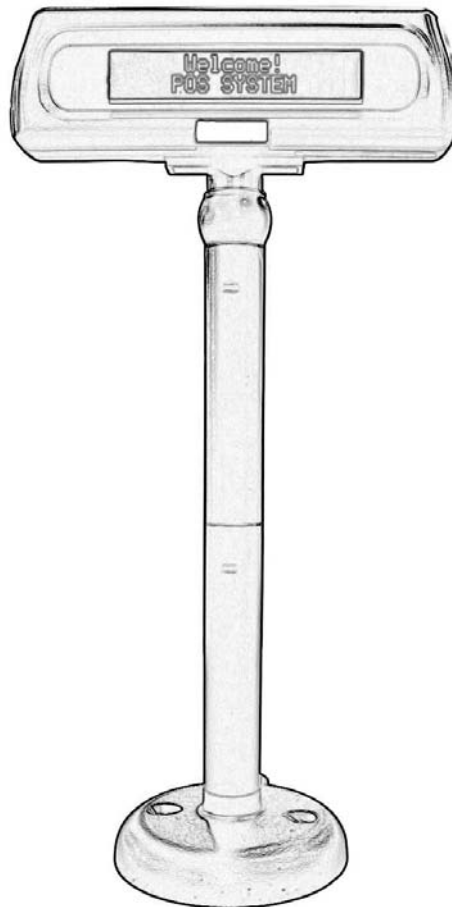


Customer Pole Display

SERIES 8034

Operation Manual

Version 1.0



This equipment has been tested and found to comply with the limits for Class A digital device. Pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and if not installed and used in accordance with the instructions may cause harmful interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on. The user is encouraged to try correct interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help. This booklet is available from the U.S. government Printing Office, Washington, DC 20402, Stock NO.004-000-00345-4.

CAUTION: Any changes of modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

Operation is subject to the following two conditions:
(1) This device may not cause harmful interference.
(2) This device must accept any interference received including interference that may cause undesired operation.

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1

Before You Install

This manual describes functions and usage of the Model 8034 customer pole display.

The 8034 is a 2x20 alphanumeric customer pole display designed with multi-languages for retail and industrial environments. Its outstanding features include high quality vacuum fluorescent display in blue-green color, RS232 interface, easy to use and powerful programming features. The 8034 can also attach to any brand of serial receipt printer.

Step 1: Turn Off Your Computer

By shutting off your computer, you will prevent any accidental damage to the pole display and computer.

Step 2: Review Packing List

Please ensure that your pole display shipment is complete.

Model 8034 includes:

- 1 pce 8034 pole display
- 1 pce operation manual
- 1 pce +12V DC power plate with internal power cable (GC-POS-POWER)
- 1 pce DC cable (GC-RCA-DC)
- 1 pce Y cable (GC-8034YW)
- 1 pce pole

NOTE: The last character of "GC-8034YW" indicates cable's color.

Ex: W=White; B=Black..

2

Installing Model 8034



This chapter describes the procedures for installing the 8034 pole display by using RS232C interface.

Step 1: Turn off your computer

If you have not already done so, turn off your computer to avoid any accidental damage to the pole display and computer.

Step 2: Decide on baud rate, character set and command type

There are some functions such as baud rate, character set and command type are selected by Dip switch. Please refer to Appendix I: Specification to set the 8034 to meet your requirement.

Step 3: Bulid up your 8034



Plug into 8Pin
Phone Jack Socket

Step 4: Decide on power access

The RS232 connection requires power +12V DC. This may be provided through an internal connection in your computer or through an external connection to a 110/220V adapter.

The components for an internal connection are provided. If you are using an external connection, be sure that your adaptor confirms with the specifications listed in Appendix I, then go to step 6.

Step 5: Using internal power source

Refer to the installation diagram as below. Remove the access cover to your computer. Mount the +12V DC power plate on an available expansion slot in the back of your computer. Attach the 4-pin male connector to the open female connector of the same type in your computer. Alternatively, an internal power source may be available already if the 9-pin RS232 port on your computer or terminal matches the 8034 pin assignment (see Specifications in Appendix I).



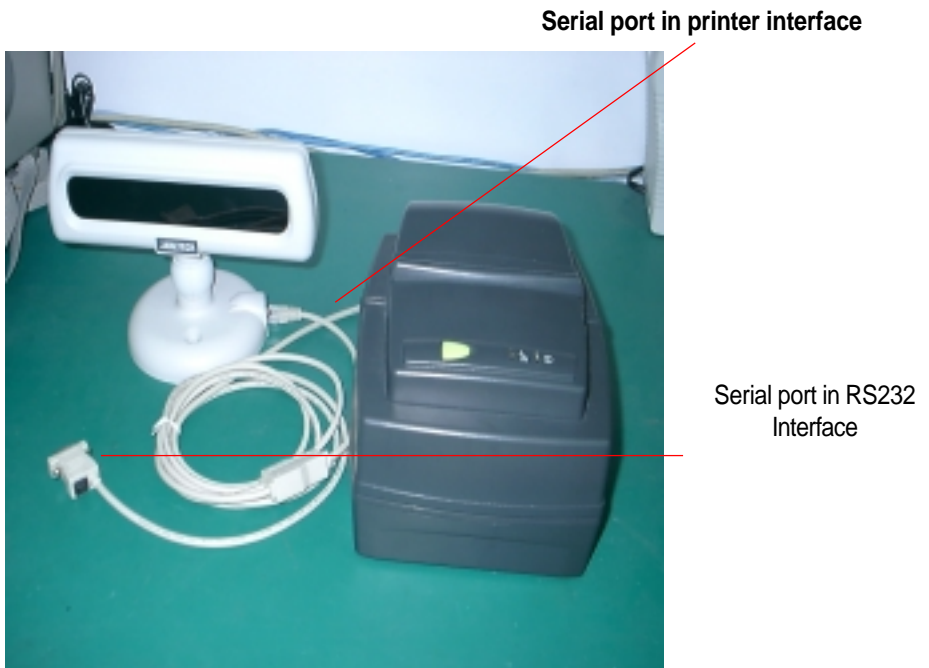
Connect to COM Port

Connect to 12V DC power

Step 6: Connect to printer

If you are not going to use 8034 pass through function, please go to step 7. If you are using a serial printer to work with 8034, please connect the Y cable (GC-8034YW) to serial RS232 port, receipt printer and 8034 display. (please refer to figure as below)

NOTE: Please make sure the pinout of interface are matched between receipt printer and DB-25M connector.



Step 7: Connect to your computer

Connect the 9-pin female RS232 connector (DB9F with DC jack) to the male equivalent (DB9M) RS232 port on your computer or terminal. Provide power to the DC jack on the DB9F connector using either a cable connection to the +12V DC power plate or an external adapter.

Step 8: Turn on your computer

Turn on your computer. It should boot up normally. The pole display will show a self-diagnostic status and then the display will be blank.

Step 9: Turn to Chapter 3

You are now ready for operation, please refer to Chapter 3 for programming to meet the specific requirement of your application environment.

3

Programming Commands

Introduction

There are four programming modes available for model 8034 which are mode, ESC/POS mode, UTC standard mode and UTC w/pass through mode. In this Chapter, we will always use mode as an example and the command codes for other modes, please refer to Appendix II. For multi-languages, please refer to Appendix III and IV for details.

The basic function of the 8034 display is comparable to the display programming by your software should be as easy. You just have to open the COM-port on which the display has been connected by you. Then, you just send the character you want the 8034 to display directly to the COM interface. Please use the following RS232 parameters:

9600 Baud, No Parity, 8 Data Bits, 1 Stop bit

In Qbasic, you would initialize the interface as follows:

OPEN "COMx: 9600, N, 8, DS0" FOR OUTPUT AS #1
(x=number of the COM port you are using for the display)

And you would print something to the display using the PRINT command:

PRINT#1, "Hello World!"

In the end, you can close the interface:

CLOSE #1

In other programming languages, the commands for serial output shall be different, but they will work in a similar way. For some compilers, you will need an extra toolbox, that offers you RS232 routines. Please refer to your compilers/interpreters manual for more details.

Example:

OPEN "COM1: 9600, N, 8, 1, DS0" FOR OUTPUT AS #1
PRINT #1, "Hello World!"
CLOSE #1

Programming using DOS routines

You can also generate a display output using the simple DOS routines.

Example:

MODE COM1: 9600, N, 8, 1
ECHO Hello! >COM1:

Control characters and special functions

For special display functions, there are some commands which will be explained in this chapter. Some of the commands consist of one ASCII-CTRL-code, others are command strings, introduced by ESC.

If a command needs additional parameters, please do not forget to use ASCII format for the parameter. That means, if the parameter is 0 (zero), then you have to transmit the ASCII code "0" (=CHR\$(48) in Basic; 48 is the decimal position of the "0" character in the ASCII code table). But please consider that only ONE byte is allowed for each parameter. That is why you cannot transmit two-digit numbers. In this case, just add the number you want to transmit as parameter 48 and transmit the corresponding character. For example, if you want to transmit the parameter 11, you have to send CHR\$(11+48)=CHR\$(59)=";". Attention: For some other commands, only BYTE values are allowed as parameter. For those, you directly send the corresponding character code without adding 48 (e.g. CHR\$(11) for 11). For details, please refer to the individual command code descriptions.

Example: Set the cursor to the last position in the display area

WRONG:

```
PRINT #1, CHR$(27)+"="; :REM command ESC =
PRINT #1, 19;1 :REM parameter column 19, line 1
```

CORRECT:

```
PRINT #1, CHR$(27)+"=";
PRINT #1, CHR$(48+19)+"1" :REM or CHR$(48+19)+CHR$
(48+1)
```

Below is a list of command sequences for user to design an interface to the 8034 customer pole display.

Please note that pole display is default with **9600 bps baud rate, no parity, 8 data bits, 1 stop bit.**

Command codes explanation(control sequences)

Note: They are with switch 7' 8 OFF(Refer Appendix I:Dip switch setting)

COMMANDS	FUNCTION	DESCRIPTION
Wrap mode		
CTRL A	Turn on wrap mode Code: 001	This allows the text displayed to the screen to wrap to the next line when the cursor position exceeds the right handside boundary. If autoscroll is also on and the cursor is on the bottom line, the screen will scroll up one row.
CTRL B	Turn off wrap mode Code: 002	When the cursor position meets the right hand side boundary, the cursor will not continue. If any further characters are received then they will over write the last character at the right handside.

COMMANDS	FUNCTION	DESCRIPTION
Cursor Move		
CTRL H	Move cursor left one column Code: 008	This is simply the BACK SPACE function, though characters are not deleted as you back space over them. When you reach the beginning of a line, the cursor will wrap to end of the previous line until cursor = 0,0 is met.
CTRL J	Scroll (line feed) Code: 010	This is the LINE FEED function. It will move the cursor down one line. It will always scroll the screen if at the bottom.
CTRL V	Move cursor down one row Code: 022	This is an alternative LINE FEED function that will not scroll the screen up one row when at the bottom line.
CTRL K	Move cursor up one row Code: 011	This control sequence will move the cursor up one row. if it is at the top of the screen, it will wrap to the bottom line, the cursor's horizontal location stays the same.
CTRL L	Move cursor right one column Code: 012	This is RIGHT ARROW function. It will move the cursor right by one character cell. If it is at the end of a line, the cursor will wrap to the next line until the bottom right hand side is met.

COMMANDS	FUNCTION	DESCRIPTION
CTRL M	Move cursor to column 0 Code: 013	This is CARRIAGE RETURN function which returns the cursor's horizontal location to the first position, on the same line.

NOTE: *In BASIC, after a PRINT#-command, a CR is always sent to the display if you do not add an “;” to the end of the command. The CR command is normally used for the line switching.*

EXAMPLE:

```
PRINT #1, "First line!"
PRINT #1, CHR$(10);
PRINT #1, "Second line!"
```

CTRL ^	Cursor home Code: 030	This function will return the cursor position to 0,0.
--------	--------------------------	---

Reset

CTRL \	Reset display Code: 028	This function will execute a software reset which will initialize the entire pole display. The power up test will begin as if power was just switched on.
--------	----------------------------	---

COMMANDS	FUNCTION	DESCRIPTION
Automatic Scrolling lines		
<p>With the following commands, you can define up to 8 scrolling strings. Using another command, you can then start and stop them in a certain display line. Your PC does not have to care about this. The display does the scrolling on its own until it receives the stop command.</p>		
ESC	<p>Program a message for the scrolling lines Code: 027, 040</p>	<p>This function allows the programmer to download 1 of 8 messages for lines that you are going to scroll. These messages are 255 bytes long or can be terminated by carriage return, ENTER [010, 013].</p>
<p>PARAMETER FORMAT : ESC (<BLOCK><MESSAGE> RANGES : BLOCK : "1" - "8" (049 - 056) MESSAGE : Any text string terminated by 010,013 EXAMPLE : PRINT #1, CHR\$(27)+"(1 This is scrolled" ATTENTION : Please do not forget to use ASCII format for the parameters, so that for the text number, only the codes 049-056 are allowed. Do not send 001-008!</p>		
ESC)	<p>Start a line scrolling Code: 027, 041</p>	<p>This function starts one of the total number of lines, being (1 or 2), scrolling horizontally. You may specify the direction, speed and message.</p>

COMMANDS	FUNCTION	DESCRIPTION
----------	----------	-------------

PARAMETER FORMAT :

ESC) <LINE> <DIRECTION> <SPEED>
<BLOCK_NO>

RANGES :

LINE : "0" (048) = first line

"1" (049) = second line

DIRECTION : "0" = right

"1" = left

SPEED : 0 to 16 (048-064).

BLOCK_NO : "1" to "8" (049-056)

EXAMPLE :

PRINT #1, CHR\$(27) + ")0041" or PRINT #1,
CHR\$(27)+CHR\$(41)+CHR\$(48)+CHR\$(48)+CHR
(52)+CHR\$(49)

This commands start the scrolling in the first line from the left to the right with the speed 4 using the scrolling text no.1 (as defined in the example above)

ESC %

Stop a line from scrolling
Code: 027, 037

This function will stop one of the display rows from scrolling its message.

For further information on scrolling message, please refer to the explanation on :

ESC (: Program a message for the scrolling lines.

ESC) : Start a line scrolling.

PARAMETER FORMAT :

ESC % <LINE>

RANGES :

LINE : "0"(048)=first line

"1"(049)=second line

COMMANDS	FUNCTION	DESCRIPTION
Clear character		
CTRL Z or ESC :	Home cursor, clear characters to nulls Code: 026 Code: 027, 058	This function will clear all the characters to blank character and returns the cursor to 0, 0.
ESC !	Clear characters to spaces Code: 027, 033	This function is the same as CTRL Z & ESC :, except that the cursor position is not changed
ESC y	Clear display to spaces Code: 027, 121	This function will clear the entire screen to spaces, but will not change the character attributes that are associated to each character.
ESC Y	Clear from cursor to end of the display Code: 027, 089	This function is the same as ESC T, except that the screen will be cleared to the bottom right most boundary, end of screen
ESC t	Clear current line to spaces Code: 027, 116	This function follows the same rules as the ESC y, except that instead of clearing the entire screen. This function only clears the current character line.
ESC T	Clear from cursor to the end of the line Code: 027, 084	This function will clear all characters to spaces, on the current line, from the current cursor "X" to the end.

COMMANDS	FUNCTION	DESCRIPTION
ESC R	Delete an entire line Code: 027, 082	This function will delete the current line at cursor "Y" All data below this line will move up and the last line will be blank.

Line Scroll

ESC E	Insert line of space characters Code: 027, 069	This function will insert a line of space characters at the current vertical position. Data on this line and underneath will scroll downward.
ESC j	Move cursor up one line (scroll if at top) Code: 027, 106	This function will move the cursor up 1 line, if it is at the top of the screen will scroll down all the lines down, the bottom line will be lost and the top line will become black.
ESC O	Turn autoscroll on Code: 027, 079	This function enables autoscrolling, which simply means that when the bottom right most boundary is met, the screen will scroll up when the next printable character is recieved.
ESC N	Turn autoscroll off Code: 027, 078	This function will turn off the autoscroll mode.

COMMANDS	FUNCTION	DESCRIPTION
----------	----------	-------------

Set cursor position

ESC =	Move cursor to X,Y Code: 027, 061	It will address the cursor to an X, Y location on display.
-------	--------------------------------------	--

PARAMETER FORMAT :
 ESC = <COLUMN X> <ROW Y>

RANGES :
 COLUMN X : "0"- "19" (048-067).
 ROW Y : "0"- "1" (048-049).

EXAMPLE :
 PRINT #1, CHR\$(27)+"=11";
 Sets the cursor to the second line, second cell.

ATTENTION :
 For all cursor move commands, please make sure that your PRINT-command does not send a CR as terminator, which will also change the cursor position.

Printer functions

ESC_P	Enable printer, disable display Code: 027, 095, 080	If you have connected both a serial printer and 8034 display on the same COM port, you can use this command to start the access to the printer. After power on, only the display is active. If you send ESC_P, the printer mode will be activated, all data sent to this COM-port will be printed and not displayed.
-------	--	--

COMMANDS	FUNCTION	DESCRIPTION
ESC_D	Disable printer, enable display Code: 027, 095, 068	This command quits the printer mode and return to display mode. The following data will be displayed, not printed.

EXAMPLE:

```
PRINT #1, CHR$(27)+"*";
PRINT #1, "Display";
PRINT #1, CHR$(27)+"_P"
PRINT #1, "Printer is active."+CHR$(13)
      +CHR$(13)+CHR$(13)+CHR$(13)
PRINT #1, CHR$(27)+"_D"
PRINT #1, "again."
```

Misc. cursor and VFD functions

ESC `	Turn cursor off	This function is same as ESC W, self explanatory
CTRL A	Code: 027,096,001	
ESC ` C	Turn cursor on	Self explanatory
TRL B	Code: 027,096,002	
ESC `	Turn VFD screen	Self explanatory
CTRL G	off Code: 027,096,007	
ESC `	Turn VFD screen	Self explanatory
CTRL H	on Code: 027,096,008	

COMMANDS	FUNCTION	DESCRIPTION
ESC H CTRL B	Turn on special character mode Code: 027,072,002	The special character mode allows you to use the 8 user definable characters, you also must add DEC 32 or Hex 20 to the character.
ESC H CTRL C	Turn off special character mode Code: 027,072,003	Return the display to normal display mode.

Macro programming

You can define up to 16 function blocks (macros) with a length of up to 127 byte. You can exceed the length of 127 bytes if you take care that you do not use the following function block which would overwrite the data of the last one.

ESC "	Program an executable function block Code: 027,034	<p>This function allows the programmer to program a sequence of function calls, control or escape sequences and even text.</p> <p>The ability to execute series of functions with a single call is useful for repetitive function formats such as those in the retail industry.</p> <p>There are 16 usable blocks all of which, if you desire, may be linked.</p> <p>If you exceed the 127 byte size of the blocks, the display will directly link your block to the next consecutive block.</p>
-------	---	--

COMMANDS	FUNCTION	DESCRIPTION
		<p>This is only useful upon power up, because if you have data in the next block, its data will be overwritten. Therefore it is suggested these blocks are unutilized as one of the first steps to use the display.</p> <p>To link blocks, simply add a function call, from within a block, to the block that you wish to use.</p>

PARAMETER FORMAT :

ESC “ <BLOCK-NO> <DATA and/or CTRL/ ESC SEQUENCES><ESC EOT>

RANGES :

BLOCK-NO : 0 - 15 (048 - 063)

ESC EOT: 027, 004.

EXAMPLE :

PRINT #1, CHR\$(27)+CHR\$(34)+“0”;

PRINT #1, CHR\$(27)+“*”

PRINT #1, CHR\$(27)+“Macro#0.”;

PRINT #1, CHR\$(27)+CHR\$(4)

ESC \$	<p>Pause (for a multiple of 8.88ms) Code: 027,036</p>	<p>This function allows the programmer to stop the pole display for a period of time, The delay is in multiple of 8.88ms.</p>
--------	---	---

PARAMETER FORMAT :

ESC \$ <DELAY>

RANGES :

DELAY : 0 - 255 (000-255)(0 sec - 2.26 secs).

COMMANDS	FUNCTION	DESCRIPTION
ESC #	Execute a programmed function block Code: 027,035	This function allows the programmer to call one of the function blocks for execution.

PARAMETER FORMAT :
 ESC # <BLOCK-NO>
RANGES :
 BLOCK-NO : 0 - 31 (048 - 079)
EXAMPLE : Starts the Block-NO, that has been defined in the example above.
 PRINT #1, CHR\$(27)+"#0"

ESC_D	To select to print out the data from display.	If you send <ESC> <_> <D> <Hello> then the pole display will display "Hello".
ESC_P	To select to print out the data from printer.	If you send <ESC> <_> <P> <Hello> then the printer will print out "Hello".

NOTE: *D&P must be capital initial.*

Before you send commands, please make sure that you have already connected printer to 8034. Otherwise you send <ESC> <_> <P> <Hello> that will make your 8034 data buffer full, but after you connect printer to 8034 it will work normally.

4

Sample Program

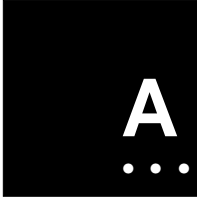
```
10 'Sample program for 8034 series
20 '
30 '
40 RESET:CLEAR:SCREEN 0:COLOR 7,0:CLS
50 '
60 OPEN "COM1:9600, N, 8, 1, CS0" AS #1
70 '           ': Set RS232 Options
80 E$=CHR$(27)
90 '           ': Set E$= "[ESC]"
100 'Clear Screen & Set cursor off
110 PRINT #1,E$+"":E$+"`"+CHR$(1)
120 '
130 'Demp program
140 '
150 LOCATE 7,20:PRINT "Testing 8004 Series..."
160 LOCATE 8,35:PRINT "[ESC] to Stop ..."
170 '
180 'Main      *****
190 'Program an Executable Function Block
200 'Syntax: ESC "<BLOCK><DATA and/or CTRL/ESC SEQUENCES> ESC <EOT>
210 'Ranges:
220 '   <BLOCK> : 00-31 (48 DEC - 79 DEC) ® ASCII: 0 ... 0
230 '   <EOT>   : 04 DEC
240 '
250 ED$=E$+CHR$(34) ' Set ED$= ESC "
260 EN$=E$+CHR$(4)  ' Set EN$= ESC <EOT>
270 '
280 PRINT #1,ED$+"0"+CHR$(10)+CHR$(10)+CHR$(30)+CHR$(22)
290 PRINT #1,ED$+"1"+CHR$(10)+CHR$(13)+"Testing Control ..." +EN$
300 PRINT #1,ED$+"2"+CHR$(10)+CHR$(13)+"Command OK !" +EN$
310 PRINT #1,ED$+"3"+CHR$(10)+CHR$(30)+"Testing [ESC] ..." +EN$
320 PRINT #1,ED$+"4"+CHR$(22)+CHR$(13)"Cursor Off/On: " +EN$
330 PRINT #1,ED$+"5"+E$+"`"+CHR$(2)+EN$
340 PRINT #1,ED$+"6"+E$+"`"+CHR$(1)+CHR$(13)+"Turn LCD screen off"+EN$
```



```

350 PRINT #1,ED$+"7"+E$+"`"+CHR$(7)+EN$
360 PRINT #1,ED$+"8"+E$+"`"+CHR$(8)+CHR$(13)+"Turn LCD screen ON"+EN$
370 PRINT #1,ED$+"9"+E$+"`"+": "+"Move cursor ":"CHR$(2)+EN$
380 PRINT #1,ED$+": "+E$+"B0"+EN$
390 PRINT #1,ED$+"; "+E$+";1"+EN$
400 PRINT #1,ED$+"< "+E$+"=31"+EN$
410 `
420 `Excute Program Block
430 `
440 FOR I=48 TO 61:PRINT #1,E$+"#"+CHR$(I):GOSUB 540:NEXT
450 PRINT #1,E$+"`"+CHR$(1)
460 `
470 `Program a Message For the Scrolling Lines & Start a Line Scrolling
480 `
490 PRINT #1,E$+"; "+E$+"(1* Nice to see you! *"CHR$(13)+E$+" )0091"
500 PRINT #1,E$+"(2* This is 8004 series DEMO *"+CHR$(13)+E$+" )1192"
510 `
520 END      *****
530 `
540 `timer delay
550 T=INT(TIMER)
560 Y$=INKEY$:IF Y$=CHR$(27) THEN END
570 IF T+2 > TIMER THEN 560 ELSE RETURN

```



Appendix I

Specifications

- Display**
- Type: alphanumeric dot matrix vacuum fluorescent display
 - Text mode: 20 characters x 2 lines
 - Character size: 6.4(W) x 9.2mm(H), 5x7 dots
 - Display color: blue green
 - Brightness: 700 cd/m²
- Case**
- Dimension: 311mm(L) x 217mm(W) x 50mm(H)
 - Adjustable angle: 270° swivel, 9° forward and 45° backward
 - Pole height: 140mm
 - Material: ABS
- Bottom Plate**
- ABS with metal plate. Screw holes available for pole fixed
- Interface**
- RS232C
- Power Requirement**
- ⊕ +
- RS232 interface: +12V DC directly from host or through adaptor from external 110/220V AC source with polarity as follows:
 - Consumption: 4.5W
- Programming**
- More than 30 control sequences and escape sequences for powerful programming such as move cursor, cursor home, cursor blink, clear, delete, reset, scrolling, program function block, pause, insert line and special character mode.

8034 Specifications

8034 Y cable pinout

DB-9F		DB-25M	RJ-45 8P	
Pin No.	Signal		Pin No.	Signal
--	--	--	1	VCC
2	RX	2	--	--
5	GND	7	3	GND
9	--	--	--	--
--	--	3	5	TX
6	DSR	--	6	RTS
8	CTS	--	6	RTS
3	TX	--	7	RX
--	--	20	8	CTS

Dip Switch Setting

Baud Rate

SWITCH		FUNCTION
SW1	SW2	Baud Rate (bps)
OFF	OFF	9600
ON	OFF	1200
OFF	ON	38400
ON	ON	19200

Operation mode select

SWITCH		FUNCTION
SW7	SW8	Operation Mode
OFF	OFF	Command
ON	OFF	ESC/POS
OFF	ON	UTC standard
ON	ON	UTC W/pass through function

Dip Switch Setting

International character set

SWITCH				CHARACTER SET	
SW3	SW4	SW5	SW6	International character ASCII code 20H-7FH	Code table ASCII code 80H-FFH
OFF	OFF	OFF	OFF	U.S.A	PC-437 (USA standard Europe)
ON	OFF	OFF	OFF	FRANCE	PC-850 (multilingual)
OFF	ON	OFF	OFF	GERMANY	PC-850
ON	ON	OFF	OFF	U.K.	PC-850
OFF	OFF	ON	OFF	DENMARK I	PC-850
ON	OFF	ON	OFF	SWEDEN	PC-850
OFF	ON	ON	OFF	ITALY	PC-850
ON	ON	ON	OFF	SPAIN	PC-850
OFF	OFF	OFF	ON	JAPAN	Katakana
ON	OFF	OFF	ON	NORWAY	PC-850
OFF	ON	OFF	ON	DENMARK II	PC-850
ON	ON	OFF	ON	SLAWIEN	SLAWIEN
OFF	OFF	ON	ON	RUSSIA	RUSSIA
ON	OFF	ON	ON	Reversed	Reversed
OFF	ON	ON	ON	Reversed	Reversed
ON	ON	ON	ON	USER DEFINE	USER DEFINE

See Table IV-2 and IV-3 for the international character set.
See Table IV-4 to IV-8 for the country code table.

A

Appendix II

The table indicates EPSON ESC/POS command list

Command	Code description(Hex)	Function
ESC t n	1B 74 n 0<=n<=7	Select code table (Refer Item I as below)
ESC R n	1B 52 n 0<=n<=12	Select international character set(Refer Item II)

I. Select code table for ESC/POS

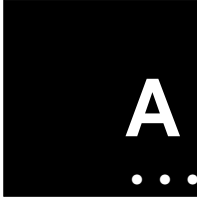
<i>n</i>	<i>Code Table ASCII (80H~FFH)</i>
0	PC437:U.S.A., standard Europe
1	Katakana for Japan
2	PC850: multilingual
3	PC860: Portuguese
4	PC863: Canadian-French
5	PC865: Nordic

(See table list in Appendix IV for more details.)

II. Set international character set for ESC/POS

International character set

<i>n</i>	<i>ASCII (20H~FFH)</i>
0	U.S.A
1	FRANCE
2	GERMANY
3	U.K.
4	DENMARK I
5	SWEDEN
6	ITALY
7	SPAIN
8	JAPAN
9	NORWAY
10	DENMARK II



Appendix III



Code Table Selection

This chapter introduce you how to define/setup the font table on the 8034 either through switch 3, 4, 5, 6 setting or EEPROM programming.

The Switch Setting

Step 1: Turn off your computer

If you have not already done so, turn off your computer to avoid any accidental damage to the pole display and computer.

Step 2: Decide on the desired fonts

Please refer to the tables listed on Appendix IV to decide which table is the one you are going to work on the 8034. Adjust the switch 3, 4, 5, 6 (see Appendix I: Specifications) for the correlative table.

Step 3: Connect 8034 to your computer

Connect the 9-pin female RS232 connector (DB9F with DC jack) to the male equivalent (DB9M) RS232 port on your computer or terminal. Provide power to the DC jack on the DB9F connector using either a cable connection to the +12V DC power plate or an external adapter.

Step 4: Turn on your computer

Turn on your computer. It should boot up normally. The pole display will show a self-diagnostic status and then the display will be blank.

A

Appendix IV

The Code Table

HEX	CODE	HEX	CODE
00H	NULL	10H	DLE
01H	MD1	11H	DC1
02H	MD2	12H	DC2
03H	MD3	13H	DC3
04H	MD4	14H	DC4
05H	MD5	15H	
06H	MD6	16H	
07H	MD7	17H	
08H	BS,MD8	18H	CAN
09H	HT	19H	
0AH	LF	1AH	
0BH	HOM	1BH	ESC
0CH	CLR	1CH	
0DH	CR	1DH	
0EH	SLE1	1EH	SF1
0FH	RS,SLE2	1FH	US,SF2

Table IV-1: Control code set

This is reserved by the 8034

International Characters Set

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
20h	.....	..0..	.0.0.	.0.0.	.0.0.	00..	.00..	.00..	..0.	.0..	....	....	....	....	....	....
30h	.000.	..0..	.000.	00000	..0.	00000	..00.	00000	.000.	.000.	....	....	..0.	....	.0..	.000.
40h	.000.	..0..	0000.	.000.	000.	00000	00000	.000.	0..00	.000.	.0000	0..00	0....	0..00	0..00	.000.
50h	0000.	.000.	0000.	.000.	00000	0..00	0..00	0..00	0..00	0..00	00000	0..00	0....	0..00	0..00	.000.
60h	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
70h	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Table IV-2: U.S.A font set

Above U.S.A font set is acted as a basic font set. Only ASCII 23H, 24H, 40H, 5BH, 5CH, 5DH, 5EH, 60H, 7BH, 7CH, 7DH and 7EH in Table IV-2 will be changed. When you adjust the switch 3, 4, 5, 6 to select the international character.(refer to Table IV-3)

The Code Table

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
80h	+000	00000	00000	00000	+000	00000	0+0+0	+000	0+0+0	+0+0	+0+0	+000	0+0+0	0+0+0	+000	00000
90h	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000
A0h	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000
B0h	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000
C0h	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000
D0h	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000
E0h	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000
F0h	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000

Table IV-8: RUSSIA code table

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
80h	+0000	+0+0	+0+0	+0+0	+0+0	+0+0	+0000	+0000	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0
90h	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0
A0h	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0
B0h	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0
C0h	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0
D0h	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0
E0h	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0
F0h	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0	+0+0

Table IV-9: PC-860 Portuguese code table

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