```
Printout showing the five LQ fonts of Canon BIC-240 (configured for Epson LQ-510/550 emulation)

Direct hookup to Epson APL parallel interface card (8133 ROM) in slot 7 of Apple IIGS

10 CHARACTERS PER INCH (default Pica pitch)
```

110 PR# 0

1PR#0

```
LQ FONT 0 CANON BJC 8133 abcdefghijklmnopgrstuvwxyz1234567890) (*&^%$#@!
LQ FONT 1 ABCDEFGhijklmnopgrestuvwxyz1234567890()*&^%$#@
LQ FONT 2 ABCDEFGHIJKLMNOPgrstuvwxyz0987654321!@#$\%*()-=[]{}/.,
LQ FONT 3 ABCDEGHIJKLMNOPgrstuvwxyz1234567890-=+ )(*&^%$#@!][':/.,<>?
LQ FONT 4 APPLE II FOREVER abcdefghijklmnQRSTUVWXYZ1234567890+ )(*&^\$#@!
ILIST
 10
    PR# 7
 15
    PRINT CHR$ (27); "x"; CHR$ (1) <= Epson command enabling LQ printing
            CHR$ (27); "k"; CHR$ (0) \= Epson command to select LQ font - ESC 'k' n n = 0,1....
 20 PRINT
     PRINT "LO FONT 0 CANON BJC 8133 abcdefighijklmnopgrstuvwxyz1234567890)(*&^%$
 30
#@!"
     PRINT CHR$ (27);"k"; CHR$ (1)
 40
     PRINT "LQ FONT 1 ABCDEFGhijklmnopgrestuvwxyz1234567890()*&~8$#@"
 50
     PRINT CHR$ (27); "k"; CHR$ (2)
 60
     PRINT "LQ FONT 2 ABCDEFGHIJKLMNOPqrstuvwxyz0987654321!@#$%^&*()-=[]{}/.,"
 70
 80
     PRINT CHR$ (27); "k"; CHR$ (3)
     PRINT "LQ FONT 3 ABCDEGHIJKLMNOPqrstuvwxyz1234567890-=+_)(*&^%$#@!][';/.,<>
 90
911
 95
     PRINT
            CHR$ (27);"k"; CHR$ (4)
100 PRINT "LQ FONT 4 APPLE II FOREVER abcdefightifklmnQRSTUVWXYZ1234567890+ ) (*&
~8$#@!"
```

Canon BJC-240 condensed print sample 18 CHARACTERS PER INCH (condensed Pica)

PRWT CHR\$(27); CHR\$(15)
ESC ST

LQ FONT 0 CANON BJC 8133 abcdefghijklmnopgrstuvwxyz1234567890)(*&~%\$#@!

LQ FONT 1 ABCDEFGhijklmnopqrestuvwxyz1234567890()*&^%\$#@

LQ FONT 2 ABCDEFGHIJKLMNOPgrstuvwxyz0987654321!@#\$\&*()-=[]{}/.,

LQ FONT 3 ABCDEGHIJKLMNOPqrstuvwxyz1234567890-=+_)(*&^%\$#@!][';/.,<>?

LQ FONT 4 APPLE II FOREVER abcdefightifklmnQRSTUVWXYZ1234567890+)[*&^\\$#@!

NB: Condensed mode is still active (after printing the sample immediately above) so double-wide is being applied to 18 cpi giving a final result of 9 cpi

Canon BIC-240 double-wide print sample
9 CHARACTERS PER INCH (double-width condensed Pica)

LQ FONT 0 CANON BJC-240 EPSON LQ EMULATION MODE abcdefgh1234567890)(*&^%\$#@!

LQ FONT 1 ABCDEFGHIJK1mnopqrstuvwxyz0987654321[];/.,<>?:{})(*&^%\$#@!

LQ FONT 2 abcdefghijkLMNOPQRSTUVWXYZ1234567890-=+_)(*&^\\$#@!

LQ FONT 3 ABCDEFGHIJKLMNOPqrstuvwxyz,./;'[]=0-09866554433221

LQ FONT 4 The quick brown for jumped OVER THE LAZY DOG 1234567859!@# $$%^{*}()-=[]{}';:/.,<>?\$

```
10 PR# 7
```

15 PRINT CHR\$ (27);"x"; CHR\$ (1)

16 PRINT CHR\$ (27); "W1": REM TURN DOUBLE-WIDE MODE ON

20 PRINT CHR\$ (27); "k"; CHR\$ (0)

30 PRINT "LQ FONT 0 CANON BJC-240 EPSON LQ EMULATION MODE abcdefgh 1234567890)(*&^%\$#@!"

40 PRINT CHR\$ (27); "k"; CHR\$ (1)

50 PRINT "LQ FONT 1 ABCDEFGHIJK1mnopqrstuvwxyz0987654321[];/.,<>?: {})(*&^%\$#@!"

60 PRINT CHR\$ (27); "k"; CHR\$ (2)

70 PRINT "LQ FONT 2 abcdefghijkLMNOPQRSTUVWXYZ1234567890-=+_)(*&^% \$#@!"

80 PRINT CHR\$ (27); "k"; CHR\$ (3)

90 PRINT "LQ FONT 3 ABCDEFGHIJKLMNOPqrstuvwxyz,./;'[]=0-0986655443 3221"

95 PRINT CHR\$ (27); "k"; CHR\$ (4)

100 PRINT "LQ FONT 4 The quick brown fox jumped OVER THE LAZY DOG 1234567859!@#\$%^&*()-=[]{}';:/.,<>?\!"

101 PRINT CHR\$ (27); "k"; CHR\$ (1)

105 LIST

110 PR# 0

- (emphasized, double-width condensed Pica) LQ FONT 0 CANON BJC-240 EPSON LQ EMULATION MODE abcdefgh1234567890)(*& ~ %\$#@! LQ FONT 1 ABCDEFGHIJK1mnopgrstuvwxyz0987654321[];/.,<>?:{})(*&^%\$#@! LO FONT 2 abcdefghijkLMNOPORSTUVWXYZ1234567890-=+)(*&^%\$#@! LO FONT 3 ABCDEFGHIJKLMNOPgrstuvwxyz../;'[]=0-09866554433221 LO FONT 4 The quick brown fox jumped OVER THE LAZY DOG 1234567859!@# \$%^&*()-=[]{}'::/..<>?\! 10 PR# 7 15 PRINT CHR\$ (27); "x"; CHR\$ (1) CHR\$ (27); "W1": REM TURN DOUBLE-WIDE MODE ON 16 PRINT CHR\$ (27); "E": REM TURN EMPHASIZED MODE ON 17 PRINT CHR\$ (27); "k"; CHR\$ (0) 20 PRINT PRINT "LO FONT O CANON BJC-240 EPSON LO EMULATION MODE abcdefgh 30 1234567890) (*& % \$#@!" PRINT CHR\$ (27); "k"; CHR\$ (1) 40 50 PRINT "LO FONT 1 ABCDEFGHIJK1mnopgrstuvwxyz0987654321[]:/.,<>?:
- {})(*&^%\$#@!"
 - 60 PRINT CHR\$ (27); "k"; CHR\$ (2)
- PRINT "LQ FONT 2 abcdefghijkLMNOPQRSTUVWXYZ1234567890-=+)(*&^% 70 \$#@!"
 - 80 PRINT CHR\$ (27); "k"; CHR\$ (3)
- PRINT "LQ FONT 3 ABCDEFGHIJKLMNOPqrstuvwxyz,./;'[]=0-0986655443 90 3221"
 - 95 PRINT CHR\$ (27); "k"; CHR\$ (4)
- 100 PRINT "LQ FONT 4 The quick brown fox jumped OVER THE LAZY DOG
- 1234567859!@#\$%^&*()-=[]{}';:/.,<>?\!"
 - CHR\$ (27):"k": CHR\$ (3) 101 PRINT
 - 105 LIST
 - 110 PR# 0

LQ FONT 0 ABCDEFGHIJKLMNOPQRSTUVWXYZ abc defghijklmnopqrstuvwxyz 1234567890-= !@# \$%^&*()_+

LQ FONT 0 Test of ITALICS

LQ FONT 1 Double-width 5cpi EXAMPLE 1234 567890!@#\$%^&*()

LQ FONT 1 UNDERLINING example

LQ FONT 2 DOUBLE-WIDTH 5CPI ABCDEFGHIJKL MNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz][';/.,<>?:}{=-0987654321!@#\$%^&*() +

LQ FONT 2 Superscript MODE 1234567890

LQ FONT 3 The QUICK BROWN FOX jumped over the lazy dog 1234567890!@#\$%^&*()_+

LQ FONT 3 subscript EXAMPLE

LQ FONT 4 ABCDEFGHIJKLMNOPQRSTUVWXYZabcd efghijklmnopqrstuvwxyz1234567890-=!@#\$% &*()_+';][/.,<>?:{}\¦

LQ FONT 4 5cpi italic TEST PRINT sample 1234567890

12 CHARACTERS PER INCH (Elite pitch)

APPLESOFT program listing LQ FONT 4 at ELITE PITCH (12cpi)

- 10 PR# 7
- 11 PRINT CHR\$ (27);"@": REM INITIALIZE PRINTER CLEARS ALL PRIOR FORMATTING
- 15 PRINT CHR\$ (27); "x"; CHR\$ (1): REM ENABLE LQ MODE (DEFAULT PITCH IS 10CPI)
- 16 PRINT CHR\$ (27);"W1": REM TURN DOUBLE-WIDE MODE ON 20 PRINT CHR\$ (27);"k"; CHR\$ (0)
- 30 PRINT "LQ FONT 0 ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefighijklmnopqrstuvwxyz 1234567890-= !@#\$%^& *()_+"
- 35 PRINT CHR\$ (27);"4": REM ENABLE ITALIC
- 40 PRINT "LQ FONT 0 Test of ITALICS"
- 45 PRINT CHR\$ (27); "5": REM DISABLE ITALIC
- 50 PRINT CHR\$ (27); "k"; CHR\$ (1)
- 60 PRINT "LQ FONT 1 Double-width 5cpi EXAMPLE 1234567890!@#\$%^&*()"
- 65 PRINT CHR\$ (27);"-1": REM TURN UNDERLINE ON
- 70 PRINT "LQ FONT 1 UNDERLINING example"; CHR\$ (27); "-0": REM UNDERLINE OFF
- 80 PRINT CHR\$ (27):"k

```
95 PRINT
    PRINT "LO FONT 2 ": CHR$ (27):"SO":" Superscript MODE 1234567890"
115
     PRINT
            CHR$ (27):"T": REM CANCEL SUPERSCRIPT
120
     PRINT
           CHR$ (27):"k": CHR$ (3)
     PRINT "LO FONT 3 The QUICK BROWN FOX jumped over the lazy dog 1234567890!@#$\%^&*()_+"
130
135
     PRINT
140
     PRINT "LQ FONT 3"; CHR$ (27); "S1"; " subscript EXAMPLE"
150
     PRINT
           CHR$ (27):"T": REM CANCEL SUBSCRIPT
160
     PRINT CHR$ (27):"k": CHR$ (4)
     PRINT "LO FONT 4 ABCDEFGHIJKLMNOPORSTUVWXYZabcdefghijklmnopgrstuvwxyz1234567890-=!@#$%^&*1
170
) +':][/..<>?:{}\!"
     PRINT CHR$ (27):"4"
180
     PRINT "LO FONT 4 5cpi italic TEST PRINT sample 1234567890"
195
     PRINT
           CHR$ (27):"5": REM CANCEL ITALIC
196
     PRINT
            CHR$ (27):"WO": REM DISABLE DOUBLE-WIDE - PITCH REVERTS TO 10CPI
197
     PRINT
            CHR$ (27):"M": REM SELECT ELITE PITCH 12 CPI
198
     PRINT: PRINT "APPLESOFT program listing LQ FONT 4 at ELITE PITCH (12cpi)": PRINT
200
     LIST
210
     PR# 0
```

/..<>?:}{=-0987654321!@#\$%^&*() +"

Watch video "Apple IIGS with ImageWriter LQ driver prints great to

Canon BJC-240" https://youtu.be/vhiBT7gkU-o



Canon

BJC-240

COLOR BURBLE JET PHINTER



Customizing the Printer

Changing the printer emulation mode

The BJC-240 can operate in two different emulations:

- · Canon BJ mode
- · Epson LQ mode

This mode can only be changed with the BJ Set Up Utility disk or by following the instructions below:

Each emulation has a number of different options that affect printer operation. The table below shows the different options for each emulation and some customized emulations. Choose the emulation that best fits the way you work, then follow the procedure below to change the emulation.

| | USA- LQ | USA- BJ* | Europe/ Asia-LQ | Europe/ Asia-BJ | UK/ Asia-BJ* |
|---------------------|--------------|--------------|--------------------|--------------------|-----------------|
| Print Control Mode | LQ | BJ | LQ | BJ | BJ |
| Paper Selection | LTR | LTR | A4 | A4 | A4 |
| Print Mode | High Quality | High Quality | High Quality | High Quality | High Quality |
| Smoothing | Disabled | Disabled | Disabled | Disabled | Disabled |
| Reduction | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 |
| Auto Power Off | Disabled | Disabled | Disabled | Disabled | Disabled |
| Auto Power on | Disabled | Disabled | Disabled | Disabled | Disabled |
| Font | Roman | Courier | Roman | Courier | Courier |
| Code Page | 437 | 437 | 437 | 850 | 437 |
| Page Length | 22 inch | 11 inch | 22 inch | 12 inch | 12 inch |
| Character Set | Graphics | Set1 | Graphics | Set2 | Set2 |
| Text Scale | Disabled | Disabled | Disabled | Disabled | Disabled |
| Receive Buffer Size | 40 KB | 40 KB | 40 KB | 40 KB | 40 KB |
| Auto Line Feed | CR=CR | CR=CR | CR=CR | CR=CR | CR=CR |
| luto Carriage Ret. | - | LF=LF | THE REAL PROPERTY. | LF=LF | LF=LF |
| Alte. Graphics Mode | _ | Disabled | miligal nos | Disabled | Disabled |
| ntern.Charac. Set | USA | _ | USA | _ | |

^{*} The default setting for North America is USA-BJ. For other areas, the default setting is UK/Asia-BJ.

The Setup Utility allows you to change each option within an emulation. For details on using the Setup Utility, see page 72.

1 Select the emulation you want to use from the table above.

Check the following list for the setting you want to make and note the number of beeps:

| LQ emulation for USA | 61 |
|------------------------------|----------|
| BJ emulation for USA | 6 beeps |
| LQ emulation for Europe/Asia | 7 beeps |
| BJ emulation for Europe/Asia | 8 beeps |
| | 9 beeps |
| BJ emulation for UK/Asia | 10 beens |

- 3 If the printer is on, turn it off and wait for about 15 seconds.
- Press and hold the POWER button until you hear the required number of beeps. Then release the button.

The printer will now use the emulation you selected until you change it again.



See Chapter 4, "Advanced Printer Operations" for details on changing printer functions and emulation modes with the POWER and RESUME buttons.

Main features of the BJ and LQ modes

The main features between the BJ and LQ emulations are type size, type styles, and character sets. The tables below show the differences between the emulations.

Fonts and pitch

This table shows the five different fonts and the different sizes (as expressed in character pitch) available for each emulation.

| Font | BJ | LQ |
|----------|----------------------------|---|
| Prestige | 10 cpi*,12 cpi, 17 cpi, PS | 10 cpi*, 12 cpi, 15 cpi, 17 cpi, 20 cpi, PS |
| Courier | 10 cpi, 12 cpi,17 cpi, PS | 10 cpi, 12 cpi, 15 cpi,17 cpi, 20 cpi, PS |
| Gothic | 10 cpi, 12 cpi, 17 cpi, PS | 10 cpi, 12 cpi, 15 cpi,17 cpi, 20 cpi, PS |
| Roman | 10 cpi,12 cpi,17 cpi, PS | 10 cpi, 12 cpi, 15 cpi, 17 cpi, 20 cpi, PS |
| Script | 10 cpi, 12 cpi, 17 cpi, PS | 10 cpi, 12 cpi, 15 cpi, 17 cpi, 20 cpi, PS |

^{*} Characters per inch

HOW TO CONFIGURE CANON BJC-240 TO EMULATE AN EPSON LQ-510 (24-pin dot matrix printer)

These instructions also apply to Canon BJC-250 & BJC-255SP



USER'S MANUAL

NEW APPLE II INTELLIGENT PARALLEL INTERFACE

8133

Y4909912300

As well as the #8133 interface commands themselves, you can also use printer control codes known as ESC/P codes. These form a standard laid down by Epson for the control of printers. It is rapidly becoming the universal standard and is often used by applications programs and programs not originally written for the Apple.

In fact, the interface commands use the ESC/P code sequences to control the printer. In most cases you will find it easier to use the <CTRL>-I commands because one <CTRL>-I command sometimes uses several ESC/P codes, but some effects can only be achieved by using the ESC/P codes directly. If you want to find out exactly which ESC/P commands are used by the interface, you should put your printer into HEX DUMP mode, as described in the printer manual, then send the command from the interface. By comparing the codes which are printed with the table of ASCII characters in your printer manual, you should then be able to identify each command.

ESC/P commands usually begin with the <ESC> (ESCAPE) character, which has a decimal ASCII code of 27. The <ESC> character is then followed by one or more ASCII characters which make up the command. For example, <ESC> G sets the printer to

double-strike mode.

From APPLESOFT, the <ESC> G code can be sent using the command:

PRINT CHR\$(27);"G"

Remember to turn on the printer first, with the PR #1 command.

CP/M and DOS both allow the use of <ESC> codes. The form that the commands take depends on the program being used. For example, with MBASIC and GBASIC, use LPRINT CHR\$(27); "G" to send the <ESC> G code to the printer.

Specific examples on the use of the #8133 interface with BASIC, DOS, Pascal and CP/M are covered elsewhere in this manual.



