Printout showing the five LQ fonts of Canon BJC-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)

LQ FONT 0 CANON BJC 8133 abcdefghijklmnopqrstuvwxyz1234567890(*&^%$#@!
LQ FONT 1 ABCDEFGhijklmnopqrstuvwxyz1234567890(*&^%$#@!
LQ FONT 2 ABCDEFGHIJKLMNOPqrstuvwxyz0987654321!@#$%^&*()-=[{}]/.,
LQ FONT 3 ABCDEFGHIJKLMNOPqrstuvwxyz1234567890-=+._(*&^%$#@!][',./,<>?
LQ FONT 4 APPLE II FOREVER abcdefghijklmnopqrstuvwxyz1234567890+_.(*&^%$#@!

LIST

10 PR# 7
15 PRINT CHR$ (27);"x"; CHR$ (1) ← Epson command enabling LQ printing
20 PRINT CHR$ (27);"k"; CHR$ (0) ← Epson command to select LQ font - ESC 'k' n
30 PRINT "LQ FONT 0 CANON BJC 8133 abcdefghijklmnopqrstuvwxyz1234567890(*&^%$#@!
40 PRINT CHR$ (27);"k"; CHR$ (1)
50 PRINT "LQ FONT 1 ABCDEFGhijklmnopqrstuvwxyz1234567890(*&^%$#@!
60 PRINT CHR$ (27);"k"; CHR$ (2)
70 PRINT "LQ FONT 2 ABCDEFGHIJKLMNOPqrstuvwxyz0987654321!@#$%^&*()-=[{}]/.,"
80 PRINT CHR$ (27);"k"; CHR$ (3)
90 PRINT "LQ FONT 3 ABCDEFGHIJKLMNOPqrstuvwxyz1234567890-=+._(*&^%$#@!][',./,<>
95 PRINT CHR$ (27);"k"; CHR$ (4)
100 PRINT "LQ FONT 4 APPLE II FOREVER abcdefghijklmnopqrstuvwxyz1234567890+_.(*&^%$#@!
110 PR# 0

]PR#0
**Canon BJC-240 condensed print sample**

18 CHARACTERS PER INCH (condensed Pica)

LQ FONT 0 CANON BJC 8133 abcdefghijklmnopqrstuvwxyz1234567890(*&%^@!*
LQ FONT 1 ABCDEFGHIJKLMNOPQRSTUVWXYZ0987654321@%$^&()-=+/.,
LQ FONT 2 ABCDEFGHIJKLMNOPQRSTUVWXYZ0987654321@%$^&()-=+/.,
LQ FONT 3 ABCDEFGHIJKLMNOPQRSTUVWXYZ0987654321@%$^&()-=+/.,
LQ FONT 4 APPLE II FOREVER abcdefghijklmnqrstuvwxyz1234567890+__(*&%^@!

**Canon BJC-240 double-wide print sample**

9 CHARACTERS PER INCH (double-width condensed Pica)

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

LQ FONT 0 CANON BJC-240 EPSON LQ EMULATION MODE abcdefghijklmnopqrstuvwxyz1234567890(*&%^@!
LQ FONT 1 ABCDEFGHIJKLMNOPQRSTUVWXYZ0987654321@%$^&()-=+/.,
LQ FONT 2 abcdefghijklmnopqrstuvwxyz1234567890+-_.(*&%^@!
LQ FONT 3 ABCDEFGHIJKLMNOPQRSTUVWXYZ0987654321@%$^&()-=+/.,
LQ FONT 4 The quick brown fox 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$(0)
30 PRINT "LQ FONT 0 CANON BJC-240 EPSON LQ EMULATION MODE abcdefghijklmnopqrstuvwxyz1234567890(*&%^@!"
40 PRINT CHR$(27);"k"; CHR$(1)
50 PRINT "LQ FONT 1 ABCDEFGHIJKLMNOPQRSTUVWXYZ0987654321@%$^&()-=+/.,
60 PRINT CHR$(27);"k"; CHR$(2)
70 PRINT "LQ FONT 2 abcdefghijklmnopqrstuvwxyz1234567890+-_.(*&%^$^@!
80 PRINT CHR$(27);"k"; CHR$(3)
90 PRINT "LQ FONT 3 ABCDEFGHIJKLMNOPQRSTUVWXYZ0987654321"
95 PRINT CHR$(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
LQ FONT 0 CANON BJC-240 EPSON LQ EMULATION MODE abcdefgh1234567890(!*^-%$#@!)

LQ FONT 1 ABCDEFGHIJKLMNOPQRSTUVWXYZ0987654321[]\.,<>?:{})(!*^-%$#@!

LQ FONT 2 abcdefghijklMNOPQRSTUVWXYZ1234567890-=+_-)(!*^-%$#@!

LQ FONT 3 ABCDEFGHIJKLMNOPqrstuvwxyz,.;'[]]=0-0986655443221

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

10   PR# 7
15   PRINT CHR$(27);"x"; CHR$(1)
16   PRINT CHR$(27);"W1": REM TURN DOUBLE-WIDE MODE ON
17   PRINT CHR$(27);"E": REM TURN EMPHASIZED MODE ON
20   PRINT CHR$(27);"k"; CHR$(0)
30   PRINT "LQ FONT 0 CANON BJC-240 EPSON LQ EMULATION MODE abcdefgh1234567890!*^-%$#@!"
40   PRINT CHR$(27);"k"; CHR$(1)
50   PRINT "LQ FONT 1 ABCDEFGHIJKLMNOPQRSTUVWXYZ0987654321[]\.,<>?:{})(!*^-%$#@!"
60   PRINT CHR$(27);"k"; CHR$(2)
70   PRINT "LQ FONT 2 abcdefghijklMNOPQRSTUVWXYZ1234567890-=+_-)(!*^-%$#@!"
80   PRINT CHR$(27);"k"; CHR$(3)
90   PRINT "LQ FONT 3 ABCDEFGHIJKLMNOPqrstuvwxyz,.;'[]]=0-0986655443221"
95   PRINT CHR$(27);"k"; CHR$(4)
100  PRINT "LQ FONT 4 The quick brown fox jumped OVER THE LAZY DOG 1234567859!@#$%&*()-=[]{}';':\.,<>?\!"
101  PRINT CHR$(27);"k"; CHR$(3)
105  LIST
110  PR# 0
5 CHARACTERS PER INCH (double-width Pica)

LQ FONT 0 Test of ITALICS

LQ FONT 1 Double-width 5cpi EXAMPLE 1234567890!@#$%^&*()_

LQ FONT 1 UNDERLINING example

LQ FONT 2 DOUBLE-WIDTH 5CPI ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefgijklmnopqrstuvwxyz
[[':/.,<>?>>{:}={}=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 ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefgijklmnopqrstuvwxyz1234567890-=!@#$%^&*()_+;][/.,<;?:{]}

LQ FONT 4 5cpi italic TEST PRINT sample 1234567890

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);"W": REM TURN DOUBLE-WIDE MODE ON
20 PRINT CHR$ (27);"k"; CHR$ (0)
30 PRINT "LQ FONT 0 ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefgijklmnopqrstuvwxyz1234567890-=!@#$%^&*()_+
35 PRINT CHR$ (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)
55 PRINT "LQ FONT 1 Double-width 5cpi EXAMPLE 1234567890!@#$%^&*()"
60 PRINT CHR$ (27);"-1": REM TURN UNDERLINE ON
65 PRINT "LQ FONT 1 UNDERLINING example"; CHR$ (27);"-0": REM UNDERLINE OFF
80 PRINT CHR$ (27);"k";

": CHR$ (2)
90 PRINT "LQ FONT 2 DOUBLE-WIDTH 5CPI ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefgijklmnopqrstuvwxyz";
95 PRINT
110 PRINT "LQ FONT 2 "; CHR$ (27);"$: Superscript MODE 1234567890"
115 PRINT CHR$ (27);"T": REM CANCEL SUPERSCRIPT
120 PRINT CHR$ (27);"k": CHR$ (3)
130 PRINT "LQ FONT 3 The QUICK BROWN FOX jumped over the lazy dog 1234567890!@#$%&*(_+"
135 PRINT
140 PRINT "LQ FONT 3"; CHR$ (27);"S1"; " subscript EXAMPLE"
150 PRINT CHR$ (27);"T": REM CANCEL SUBSCRIPT
160 PRINT CHR$ (27);"k": CHR$ (4)
170 PRINT "LQ FONT 4 ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefgjklmnopqrstuvwxyz1234567890-=!@#$%&*(_+"
175 PRINT CHR$ (27);"4"
180 PRINT "LQ 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 "APPLESOFT program listing LQ FONT 4 at ELITE PITCH (12cpi)": PRINT
200 LIST
210 PR# 0
Watch video "Apple II GS with ImageWriter LQ driver prints great to Canon BJC-240" https://youtu.be/vhiBT7gkU-o
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 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.

<table>
<thead>
<tr>
<th>USA-LQ</th>
<th>USA-BJ*</th>
<th>Europe/Asia-LQ</th>
<th>Europe/Asia-BJ*</th>
<th>UK/Asia-BJ*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print Control Mode</td>
<td>LQ</td>
<td>BJ</td>
<td>LQ</td>
<td>BJ</td>
</tr>
<tr>
<td>Paper Selection</td>
<td>LTR</td>
<td>LTR</td>
<td>A4</td>
<td>A4</td>
</tr>
<tr>
<td>Print Mode</td>
<td>High Quality</td>
<td>High Quality</td>
<td>High Quality</td>
<td>High Quality</td>
</tr>
<tr>
<td>Smoothing</td>
<td>Disabled</td>
<td>Disabled</td>
<td>Disabled</td>
<td>Disabled</td>
</tr>
<tr>
<td>Reduction</td>
<td>1/1</td>
<td>1/1</td>
<td>1/1</td>
<td>1/1</td>
</tr>
<tr>
<td>Auto Power Off</td>
<td>Disabled</td>
<td>Disabled</td>
<td>Disabled</td>
<td>Disabled</td>
</tr>
<tr>
<td>Auto Power On</td>
<td>Disabled</td>
<td>Disabled</td>
<td>Disabled</td>
<td>Disabled</td>
</tr>
<tr>
<td>Font</td>
<td>Roman</td>
<td>Courier</td>
<td>Roman</td>
<td>Courier</td>
</tr>
<tr>
<td>Code Page</td>
<td>437</td>
<td>437</td>
<td>437</td>
<td>850</td>
</tr>
<tr>
<td>Page Length</td>
<td>22 inch</td>
<td>11 inch</td>
<td>22 inch</td>
<td>12 inch</td>
</tr>
<tr>
<td>Character Set</td>
<td>Graphics</td>
<td>Graphics</td>
<td>Graphics</td>
<td>Set 2</td>
</tr>
<tr>
<td>Text Scale</td>
<td>Disabled</td>
<td>Disabled</td>
<td>Disabled</td>
<td>Disabled</td>
</tr>
<tr>
<td>Receive Buffer Size</td>
<td>40 KB</td>
<td>40 KB</td>
<td>40 KB</td>
<td>40 KB</td>
</tr>
<tr>
<td>Auto Carriage Reset</td>
<td>LF=LF</td>
<td>LF=LF</td>
<td>LF=LF</td>
<td>LF=LF</td>
</tr>
<tr>
<td>Alt. Graphics Mode</td>
<td>Disabled</td>
<td>Disabled</td>
<td>Disabled</td>
<td>Disabled</td>
</tr>
<tr>
<td>Intern. Charac. Set</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
<td>USA</td>
</tr>
</tbody>
</table>

* 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.

2. Check the following list for the setting you want to make and note the number of beeps:
   - LQ emulation for USA: 6 beeps
   - BJ emulation for USA: 7 beeps
   - LQ emulation for Europe/Asia: 8 beeps
   - BJ emulation for Europe/Asia: 9 beeps
   - BJ emulation for UK/Asia: 10 beeps

3. If the printer is on, turn it off and wait for about 15 seconds.

4. 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.

<table>
<thead>
<tr>
<th>Font</th>
<th>BJ</th>
<th>LQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prestige</td>
<td>10 cpi, 12 cpi, 17 cpi, PS</td>
<td>10 cpi, 12 cpi, 15 cpi, 17 cpi, 20 cpi, PS</td>
</tr>
<tr>
<td>Courier</td>
<td>10 cpi, 12 cpi, 17 cpi, PS</td>
<td>10 cpi, 12 cpi, 15 cpi, 17 cpi, 20 cpi, PS</td>
</tr>
<tr>
<td>Gothic</td>
<td>10 cpi, 12 cpi, 17 cpi, PS</td>
<td>10 cpi, 12 cpi, 15 cpi, 17 cpi, 20 cpi, PS</td>
</tr>
<tr>
<td>Roman</td>
<td>10 cpi, 12 cpi, 17 cpi, PS</td>
<td>10 cpi, 12 cpi, 15 cpi, 17 cpi, 20 cpi, PS</td>
</tr>
<tr>
<td>Script</td>
<td>10 cpi, 12 cpi, 17 cpi, PS</td>
<td>10 cpi, 12 cpi, 15 cpi, 17 cpi, 20 cpi, PS</td>
</tr>
</tbody>
</table>

* 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
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.