

N I N T E N D O  
**NITRO**-System

fontcvtrc

Operation Manual

Version 0.2.1

**The contents of this document are strictly  
confidential and the document should be  
handled accordingly.**

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## Revision history

Version	Revision Date	Description
0.2.1	2007/04/25	Corrected typos.
0.2.0	2007/03/14	Support for the March 14, 2007 version.
0.1.0	2005/05/25	Initial version.

# 1 Introduction

## 1.1 About fontcvtrc

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fontcvtrc is the command line version of fontcvtr, the GUI version of the NITRO Font Converter. Although fontcvtrc uses the command line, the functions of the command line and GUI version are the same. fontcvtrc is designed specifically for use with makefiles and batch files.

## 1.2 About this Manual

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This manual only covers topics specific to fontcvtrc. Shared topics for both versions are discussed in the fontcvtr manual. Therefore, read the fontcvtr manual first.

## 1.3 Font Licenses

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fontcvtr can convert any font installed on a PC to a NITRO font for use on the DS. However, a user license is required to use these non-NITRO fonts in game software that will be sold. You need to obtain licenses for each game software title.

fontcvtr and NITRO-System do not come with licenses for any fonts.

## 2 How to Use fontcvtrc

A fontcvtrc command line is shown below.

```
fontcvtrc -i <input format> <input option> -o <output format> <output option>
[-f <character filter file path>]
```

As shown in Table 2-1, -i, -o, and -f are used to specify input, output, and filter options, respectively.

<input option> and <output option> change based on the specifications for <input format> and <output format>, respectively. These elements are discussed in subsequent sections.

Enclose elements that contain spaces between words with quotation marks ("). Quotation marks cannot be used inside of quotation marks.

**Table 2-1 fontcvtrc Options**

Option	Can Be Omitted?	Comments
-i <input format>	No	The input format can be bmp, nitro, win, or lc.
-o <output format>	No	The output format can be bmp or nitro.
-f <character filter file path>	Yes	—

### 2.1 Input Options

Use the following options with <input option> based on what is specified for <input format>.

#### 2.1.1 Input: BMP (-i bmp)

If you specify bmp for <input format>, the input options in Table 2-2 can be used.

**Table 2-2 BMP Options**

Option	Can Be Omitted?	Comments
-if <BMP file path>	No	Specifies the conversion source.
-io <letter order file path>	No	Selects the letter order of the BMP file.
-ib <number of colors>	Yes	Specify the number of colors by entering the power value with base 2. The default value is 1.

```
-i bmp -if font.bmp -io xlor/Latin1.xlor -ib 2
```

As shown above, the letter order file xlor/Latin1.xlor, the BMP file font.bmp will be read as input. The output will be data for the first four colors (2<sup>2</sup>) in the BMP color palette.

## 2.1.2 Input: NITRO Font ( -i nitro )

If you specify `nitro` for `<input format>`, the input options in Table 2-3 can be used.

**Table 2-3 NITRO Font Options**

Option	Can Be Omitted?	Comments
<code>-if &lt;NITRO font path&gt;</code>	No	Specifies a NITRO font as the conversion source.

```
-i nitro -if font.NFTR
```

In the above example, NITRO font `font.NFTR` will be read as input.

## 2.1.3 Input: Windows Font ( -i win )

If you specify `win` for `<input format>`, the options in Table 2-4 can be used.

**Table 2-4 Windows Font Options**

Option	Can Be Omitted?	Comments
<code>-in &lt;font name&gt;</code>	No	Specifies the conversion source.
<code>-is &lt;font size&gt;</code>	No	Specifies the font size in pixels. By specifying a negative value, it will be interpreted in the same way as general Windows software.
<code>-ib &lt;no. of gradations&gt;</code>	Yes	Specify the number of levels in the gray scale output with using the power value of base 2. The default value is 1. This options is not available for raster fonts because they are always set to 2.
<code>-ia</code>	Yes	Specify this option to use soft antialiasing.
<code>-it &lt;output width&gt;</code>	Yes	Specify one of the following for <code>&lt;output width&gt;</code> . <ul style="list-style-type: none"> <li><i>glyph</i>—Same as “glyph only” in fontcvtr.</li> <li><i>char</i>—Same as “include margin” in fontcvtr.</li> <li><i>fixed</i>—Same as “fixed width” in fontcvtr</li> </ul> The default value is <i>char</i> .
<code>-iw &lt;monospace width&gt;</code>	Required when <code>-it fixed</code> is specified. Invalid for all other cases.	

```
-i win -in "MS Gothic" -is 16 -ib 4 -it glyph
```

The above statement reads Windows MS Gothic font with a size of 16 pixels and 16 gradations ( $2^4$ ).

The glyph width is used for the character width.

## 2.1.4 Input: LC Font ( -i lc )

If you specify `lc` for `<input format>`, the input options in Table 2-5 can be used.

**Table 2-5 LC Font Options**

Option	Can Be Omitted?	Comments
<code>-if &lt;LC font with default mapping&gt;</code>	Only one of these options can be omitted	Specify the conversion source LC Font file. Stores full width characters.
<code>-if &lt;LC font with half-width mapping&gt;</code>		Specify the conversion source LC Font file. Stores half width character codes.
<code>-it</code>	Yes	If not specified, the left and right space around the glyphs with normal mapping will be removed and a one pixel space will remain on the left during conversion.
<code>-iu</code>	Yes	If not specified, the left and right space around the glyphs with half-width mapping will be removed and a one pixel space will remain on the left during conversion.
<code>-uv</code>	Yes	If specified, it will be treated as a vertical font.

Example:

```
-i lc -if LD937721.DAT -ig LD937749.DAT -iu
```

LC font `LD937721.DAT` is read as full width characters, and LC font `LD937749.DAT` is read as half-width characters. With the full-width characters, the left and right spaces in glyphs will be removed.

## 2.2 Output Options

The following options can be used with `<output option>`, depending on `<output format>`.

### 2.2.1 Output: BMP ( `-o bmp` )

If you specify `bmp` for `<output format>`, the options in Table 2-6 can be used.

**Table 2-6 BMP Output Options**

Option	Can Be Omitted?	Comments
<code>-of &lt;BMP font path&gt;</code>	No	Specify the conversion destination BMP file.
<code>-oo &lt;letter order file path&gt;</code>	No	Selects the order to output the text characters in the BMP files.
<code>-oc &lt;rotation direction&gt;</code>	Yes	Specify one of the following for <code>&lt;rotation direction&gt;</code> . The default value is no rotation. <ul style="list-style-type: none"> <li><i>Clk</i>—Clockwise</li> <li><i>Cnt</i>—Counterclockwise</li> </ul>
<code>-og</code>	Yes	When specified, the grid lines will not be drawn.
<code>-ow &lt;cell width&gt;</code>	Yes	The default specifies a width sufficient for output. Cannot be specified concurrently with <code>-or</code> or <code>-ob</code> .
<code>-oh &lt;cell height&gt;</code>	Yes	The default specifies a height sufficient for output. Cannot be specified concurrently with <code>-or</code> or <code>-ob</code> .
<code>-ol &lt;cell left margin width&gt;</code>	Yes	The default is 0.
<code>-or &lt;cell right margin width&gt;</code>	Yes	The default specifies the same value as <code>-ol</code> . Cannot be specified concurrently with <code>-ow</code> or <code>-oh</code> .
<code>-ot &lt;cell top margin width&gt;</code>	Yes	The default is 0.
<code>-ob &lt;cell bottom margin width&gt;</code>	Yes	The default specifies the same value as <code>-ot</code> . Cannot be specified concurrently with <code>-ow</code> or <code>-oh</code> .

```
-o bmp -of font.bmp -oo xlor/Latin1.xlor -oc cnt -og -ol 1 -ot 3
```

In the above statement, glyphs are rotated counterclockwise, each cell is given a 3 pixel top and bottom margin and a 1 pixel left and right margin. The conversion is output without a grid into the file `font.bmp` and has the letter order specified in `xlor/Latin1.xlor`.



## 2.2.2 Output: NITRO Font ( -o nitro )

If `nitro` is specified for `<output format>`, the options in Table 2-7 can be used.

Table 2-7 Output Options for NITRO Font

Option	Can Be Omitted?	Comments
<code>-of &lt;NITRO font path&gt;</code>	No	Specify the output target NITRO font file.
<code>-oe &lt;encoding&gt;</code>	Yes	Specify one of the following for <code>&lt;encoding&gt;</code> . as the default value is <b>utf16</b> . <ul style="list-style-type: none"><li>• <i>utf16</i>—Specifies UTF-16</li><li>• <i>utf8</i>—Specifies UTF-8</li><li>• <i>sjis</i>—Specifies Shift_JIS</li><li>• <i>cp1252</i>—Specifies CP 1252</li></ul>
<code>-oa &lt;alternate character&gt;</code>	Yes	The default is based on the input.
<code>-oh &lt;line feed width&gt;</code>	Yes	The default is based on the input.
<code>-ol &lt;default left space&gt;</code>	Yes	The default is based on the input.
<code>-ow &lt;default glyph width&gt;</code>	Yes	The default is based on the input.
<code>-or &lt;default right space&gt;</code>	Yes	The default is based on the input.
<code>-oc &lt;rotation amount&gt;</code>	Yes	Specify either 0, 90, 180, or 270 for the rotation amount. Rotation will not be performed if this option is omitted.

Example:

```
-o nitro -of font.NFTR -oe sjis -oa ?
```

Outputs to `font.NFTR` using Shift\_JIS encoding and alternate character “?”.

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