

# xmCHART 5 Important Notes

## IMAGE QUALITY

To get good looking drawings for the screen make sure that FileMaker does not rescale the image created in xmCHART. So, most important, the size of the FileMaker container field must be identical with the width and height in xmCHART's [OpenDrawing\(\)](#) function. Take the padding values (in Layout Mode: Inspector > Appearance > Advanced Graphic > Padding) properly into account when calculating the drawing size or set padding to 0. Set the container format (in Layout Mode: Inspector > Data > Data Formatting > Format) to "Reduce image to fit". See also [Frequently Asked Questions](#).

The image resolution can be controlled with the 3rd argument *resolution* in the [OpenDrawing\(\)](#) function. If there is no 3rd argument or *resolution=screen*, the drawing will be created as a PNG bitmap image with a resolution optimized for screen display. That means Apple's Retina or Windows HighDPI display resolutions, but also the current Zoom Level set in FileMaker will be properly taken into account.

Examples:

```
OpenDrawing(800;600)           /* PNG bitmap, optimized for screen display. */
OpenDrawing(800;600;screen)    /* Same as OpenDrawing(800;600) */
OpenDrawing(800;600;0)        /* Same as OpenDrawing(800;600) */
OpenDrawing(800;600;print)     /* Optimized for printing (300 dpi) */
OpenDrawing(800;600;-1)       /* Same as OpenDrawing(800;600;print) */
OpenDrawing(800;600;3.5)      /* High resolution PNG bitmap: 2800x2100 */
```

xmCHART supports image resolution factors from 0.25 (very coarse and pixelated) to 4 (high resolution). A high resolution bitmap, for example, `OpenDrawing(800;600;print)` is recommended for FileMaker script steps such as [Save Records As PDF] or [Export Field Contents] and all types of barcodes.

## IMPORTANT:

Please note, for a [transparent background](#) make sure to checkmark "Preserve PDF transparency" in FileMaker Inspector > Data > Data Formatting.

### *xmCHART on FileMaker Server:*

When using xmCHART on FileMaker Server avoid an unnecessary high image resolution. High resolution images require a lot of data transfer between server and clients. For example, don't use *resolution=print*, instead set *resolution=screen* (default) or, if only low resolution displays are involved set *resolution=1*. Examples:

```
OpenDrawing(400;300;print) /* Not recommended - except for printing. */
OpenDrawing(400;300;screen) /* Recommended for Retina & HighDPI displays. */
OpenDrawing(400;300) /* Same as resolution = screen. */
OpenDrawing(400;300;1.0) /* Recommended for low resolution displays. */
```

## **ENTERING TEXTS IN FILEMAKER'S "Specify Calculation" DIALOG BOX**

It is important to note that quotation marks should be prefixed (aka escaped) by a backslash (\). For example:

```
xmCH_DrawChart(
"OpenDrawing(180;50)
  AddText(20;30;\ "Company Universal Exports\ ")
  CloseDrawing()")
```

To place double quotes in a string of text, escape them twice, once for xmCHART (\) and again for FileMaker (\\). For example:

```
xmCH_DrawChart(
"OpenDrawing(180;50)
  AddText(20;30;\ "Company \\ \"Universal Exports\\ \"")
  CloseDrawing()")
```

## **COMMENTS IN FILEMAKER'S "Specify Calculation" DIALOG BOX**

In FileMaker's "Specify Calculation" dialog box `"/"` [comments](#) are not automatically limited by the end of the line, making the single-line comments extend to the end of the script! Instead, use multi-line comments `/* ... */` or add a paragraph sign "¶" at the end of `"/"` comments.

## IMPORT & EXPORT FILES

- **IMPORT:**  
The following image formats are supported:  
macOS: BMP, GIF, JPEG, PDF, PNG, TIFF  
Windows: BMP, EMF, GIF, JPEG, PNG, TIFF  
Linux: PNG
- **EXPORT:**  
The following image formats are supported:  
macOS: BMP, GIF, JPEG, PDF, PNG, SVG, TIFF, WebP  
Windows: BMP, EMF, GIF, JPEG, PDF, PNG, SVG, TIFF, WebP  
Linux: PDF, PNG, SVG, WebP

## INCOMPATIBILITIES

- [BackgroundPict\(\)](#), [ChartBackgroundPict\(\)](#), [AddPicture\(\)](#):  
The outdated arguments *location*, *adjustment* and *isProportional* available in the obsolete xmCHART versions 2 and 3 have been replaced by the attributes *borderStroke*, *borderColor* and *borderColorVariant*.
- The timestamp entry format option "date time", i.e timestamps are enclosed by quotes and separated by whitespace, have been deprecated in xmCHART 4 and removed entirely in xmCHART 5. Instead, the date and time are joined together by an ampersand (&) - and not enclosed by quotes. For example:  

```
ChartData("2024-01-01 11:22" "2024-03-22 18:33:12") // Error in xmCHART 5+  
ChartData(2024-01-01&11:22 2024-03-22&18:33:12) // Correct in xmCHART 5+
```
- All symbol names available in xmCHART 4 are compatible with xmCHART 5, however the symbol number IDs in xmCHART 4 [0..58] are only compatible up to number ID 34 [0..34].
- In xmCHART 5 the default path fill rule changed from even-odd to the non-zero winding rule.

## DEPRECATIONS

- Numbers as path commands are deprecated, instead use command letters, see [AddPath\(\)](#).
- The fileFlag constant *throwError* has been deprecated in xmCHART 4 and removed entirely in xmCHART 5.
- [xmCH\\_GetVersion\(\)](#): A number as function argument is deprecated.  
xmCH\_GetVersion( 1 ), use xmCH\_GetVersion("long") instead.  
xmCH\_GetVersion( 2 ), use xmCH\_GetVersion("short") instead.  
xmCH\_GetVersion( 3 ), use xmCH\_GetVersion("norm") instead.  
xmCH\_GetVersion( 4 ) or xmCH\_GetVersion("platform") has been deprecated, instead use FileMaker's built-in function [Get\(SystemPlatform\)](#).  
xmCH\_GetVersion("autoupdate") has been deprecated, instead use argument "norm".  
xmCH\_GetVersion("norm") returns the normalized version info as an 8-character string in the format: Major version (2 characters)  
Minor version (2 characters)  
Patch version (2 characters)  
Build number (2 characters)  
For example: For v5.0.11 xmCH\_GetVersion("norm") returns "05001100".
- [xmCH\\_SetLanguage\(\)](#) has been deprecated.
- The external function xmCH\_AutoUpdate() has been removed (obsolete).

## CODE SIGNING & NOTARIZING

*xmCHART 5* plug-ins and the *xmCHART 5 Quick Reference* applications for macOS and Windows have been code signed. In addition the *xmCHART 5 Quick Reference.app* for macOS has been notarized by Apple Inc.

## UNIVERSAL BINARIES

*xmCHART 5.0.8+* for macOS and the *xmCHART 5 Quick Reference* application for macOS are compiled as Universal Binaries. They can run on Mac with Intel or the Apple M1, M2 or M3 chip.

*Thank you for reading!*