

Scanning Options

As you may know we do offer three ways to scan for our MBS Plugins:

- TWAIN, the old cross platform interface. See [TWAIN functions](#) for FileMaker and our [TWAIN plugin part](#) in the [MBS Xojo Images Plugin](#).
- ImageCapture, the interface provided by Apple and used by Image Capture.app. See [ImageCapture functions](#) for FileMaker and our [ImageCapture plugin part](#) in the [MBS Xojo MacOSX Plugin](#).
- WIA, the Windows Image Acquisition API from Microsoft. See [WIA functions](#) for FileMaker and our [WIA plugin part](#) in the [MBS Xojo Win Plugin](#).



All three interfaces are still in use with customers. For some scanners, you only get one driver, so your decision is made by the manufacturer of the device. 64-bit can be a problem as TWAIN is very old and you may not find a 64-bit driver, although you can have a [compatibility DLL](#) for Windows to help translate 64-bit app to 32-bit driver.

To select the feeder, you would use [ImageCapture.requestSelectFunctionalUnit](#) early to request the DocumentFeeder as functional unit, before setting up other parameters. For WIA, you would later when requesting the scan pass Feeder as the item to use for [WIA.Scan](#) function. For TWAIN you need to enable feeder with [Twain.SetFeederEnabled](#) and enable auto feeding with [Twain.SetAutofeed](#) function. If used correctly, you should be able to scan a stack of papers on your scanner.

But before scanning, you may want to set a few options. For the feeder, you may want to enable duplex. To do this for TWAIN, you call [Twain.SetDuplexEnabled](#) passing 1 to enable duplex mode. For ImageCapture, you need to use [ImageCapture.SetParameter](#) with the duplexScanningEnabled property and the value 1. And for WIA, it is the [WIA.SetItemPropertyValue](#) function with the property named "Document Handling Select". Usually you pass a combination of values including 4 for duplex. You may also include 256 for preferred automatic selection or +512 for auto advance. The specs also allow to specify 8 for front page first, but may scanner here doesn't recognize that and returns an error. It's always good to double check and query the value you set to verify what was saved.

Next you may want to define resolution for the scan. Usually most scanners can interpolate in hardware if needed, but asking for a common resolution of 150 or 300 dpi may simply be okay for most scanners. For ImageCapture you call [ImageCapture.SetParameter](#) with parameter resolution and value 300. For WIA, you may need to call [WIA.SetItemPropertyValue](#) several times. First for item Feeder as well as item Flatbed, then for properties "Horizontal Resolution" and "Vertical Resolution" to set both. For TWAIN you call [Twain.SetResolutionX](#) and [Twain.SetResolutionY](#) to set the resolution. As said, 300 dpi usually works. But we have seen scanners which can do 200 and 100 dpi, but not 150 dpi. For ImageCapture, you can use [ImageCapture.GetParameter](#) with parameter nativeXResolution and nativeYResolution to query native resolution, preferredResolutions to query preferred resolution and supportedResolutions for a list of supported resolutions. With WIA, the [WIA.DevicePropertyValue](#) function can query the "Vertical Optical Resolution" to let you know the native resolution.

If you scan only for OCR, you may just limit it to be black and white or grayscale. For ImageCapture, you can use [ImageCapture.SetParameter](#) to set pixelDataType to gray and bitDepth to 8 to get a 8bit grayscale image file. With WIA, you can use [WIA.SetItemPropertyValue](#) to set the item's current intent property to 2 for grayscale. For TWAIN, you would use [Twain.SetPixelType](#) to pass 1 for grayscale images.

For all three variants, you can scan with dialog and see options as well as define defaults for your scanner. That may be more convenient for some users to simply use the dialogs.

The options above are listed as MBS FileMaker Plugin calls, but for Xojo the properties are named similar and values are the same. So if you have problems translating this, let me know. And if you miss an option, please let us know. We may be able to add more options to documentation in examples.