

# FtXDY

for Photoshop by RONC©2018  
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PHOTOSHOP SCRIPTS by RONC

FtXDY - this string of letters is a short way to refer to the various Photoshop filters (8bf). Ft stands for Fourier transform; XD value stands for the number of dimensions in the transform (1D, 2D, or 3D); and Y value stands for Half spectrum, Full spectrum, or Single method where Half and Full refer to the computation method of the transform. Half computes the minimum number of frequencies in the row direction whereas Full computes twice the number but is possibly easier to interpret due to the redundancy. Single takes another route in that the RGB input is Desaturated and then a single 2D Full transform is used. This is included to show how the previous Fourier transform filters (FFT\_RGB and IFFT\_RGB) worked.

## INPUT IMAGE

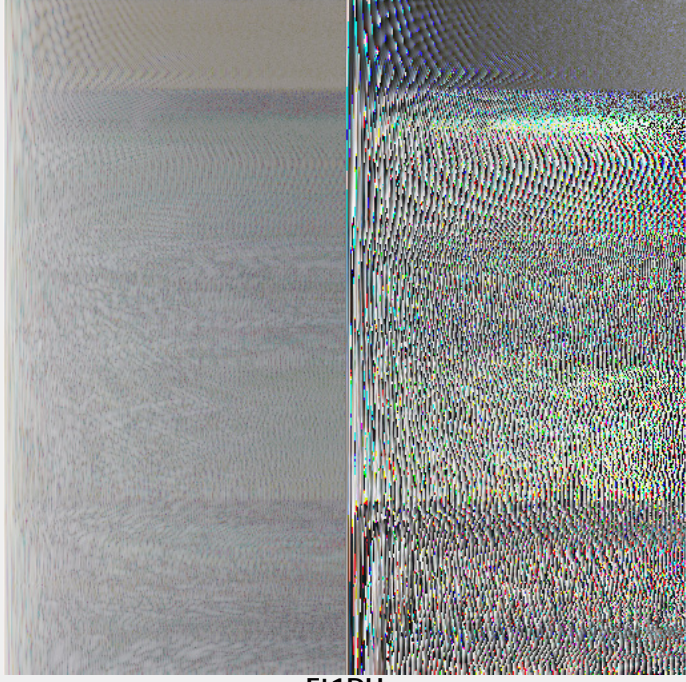
Input must be one layer from an RGB file with 8, 16, or 32 bits per color channel and the output will be one layer of an RGB file with the same number of bits per color channel. Processing of the data is completely 32 bits per color channel or floating point. Input is best to be 32 bits per color channel followed by 16 and the 8 bits. The larger the image is should direct the user toward more bits per color channel.

## USAGE PARAMETERS

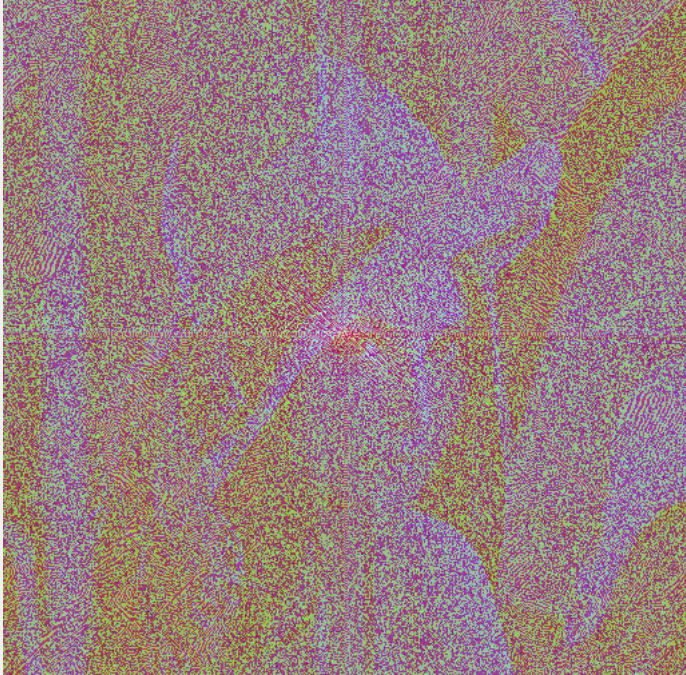
ITEM	FUNCTION		User INPUT	INPUT Size (px)	OUTPUT Size(px)	EXT.
Ft FORWARD						
1D	Half	1D Fourier half width forward transform of each channel	FtXDY-HELP.pdf	Width by height.	Width + 2 by height.	8bf
2D	Single	2D Fourier full width forward transform of desaturated input.	FtXDY-HELP.pdf	Width by height.	Width + 2 by height.	8bf
	Half	2D Fourier half width forward transform of each channel	FtXDY-HELP.pdf	Width by height.	Width + 2 by height.	8bf
	Full	2D Fourier full width forward transform of each channel	FtXDY-HELP.pdf	Width by height.	Width * 2 by height.	8bf
3D	Half	3D Fourier half width forward transform of all channels	FtXDY-HELP.pdf	Width by height.	Width + 2 by height.	8bf
	Full	3D Fourier full width forward transform of all channels	FtXDY-HELP.pdf	Width by height.	Width * 2 by height.	8bf
iFt INVERSE						
1D	Half	1D Fourier half width inverse transform of each channel	FtXDY-HELP.pdf	Width + 2 by height.	Width by height.	8bf
2D	Single	2D Fourier full width inverse transform of desaturated input.	FtXDY-HELP.pdf	Width + 2 by height.	Width by height.	8bf
	Half	2D Fourier half width inverse transform of each channel	FtXDY-HELP.pdf	Width + 2 by height.	Width by height.	8bf
	Full	2D Fourier full width inverse transform of each channel	FtXDY-HELP.pdf	Width + 2 by height.	Width by height.	8bf
3D	Half	3D Fourier half width inverse transform of all channels	FtXDY-HELP.pdf	Width + 2 by height.	Width by height.	8bf
	Full	3D Fourier full width inverse transform of all channels	FtXDY-HELP.pdf	Width + 2 by height.	Width by height.	8bf



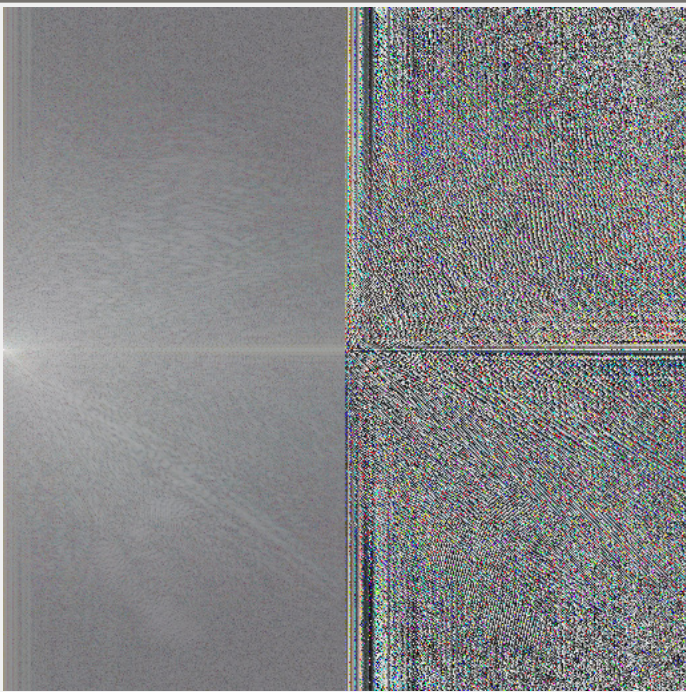
FtXDY input



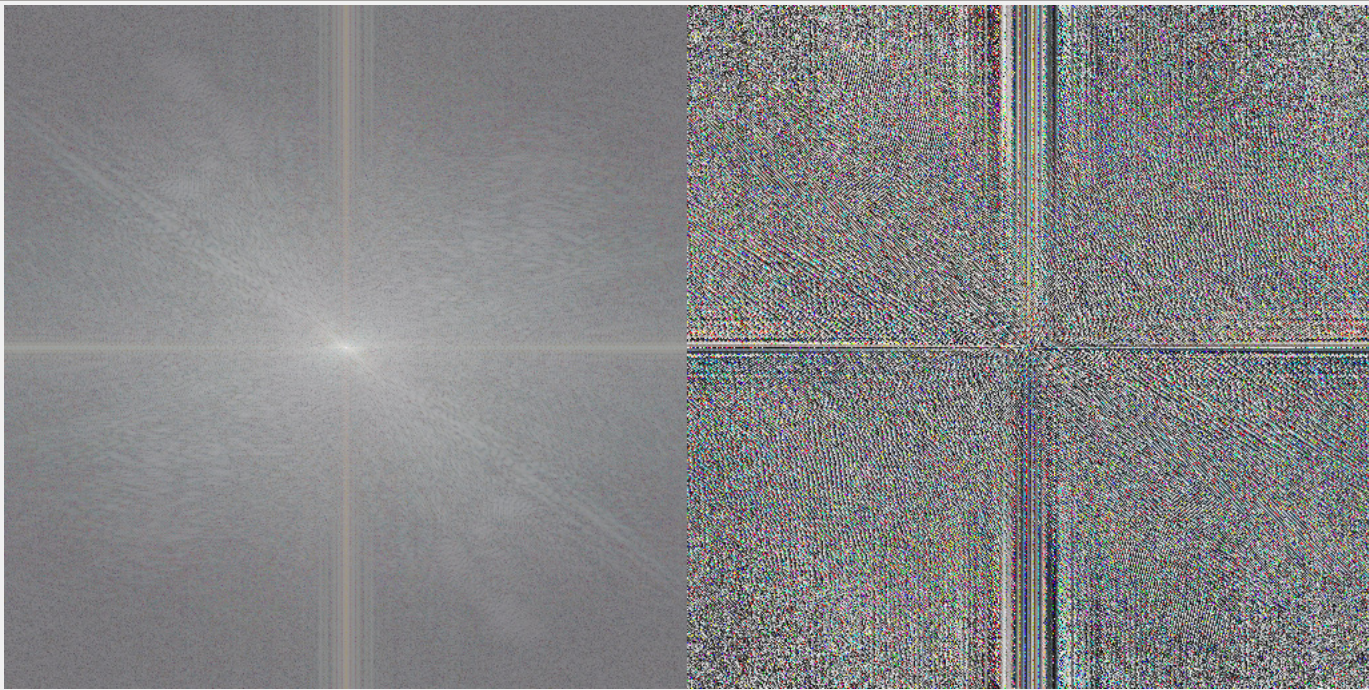
Ft1DH



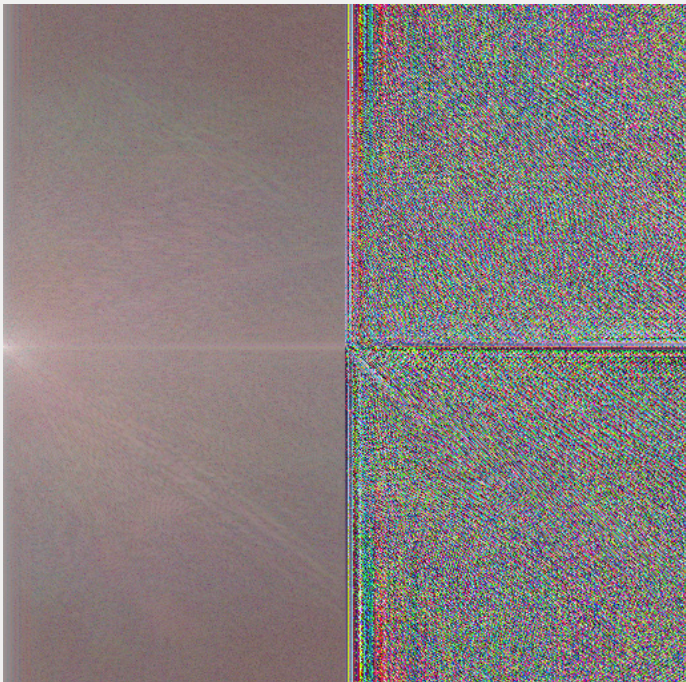
Ft2DS/iFt2DS



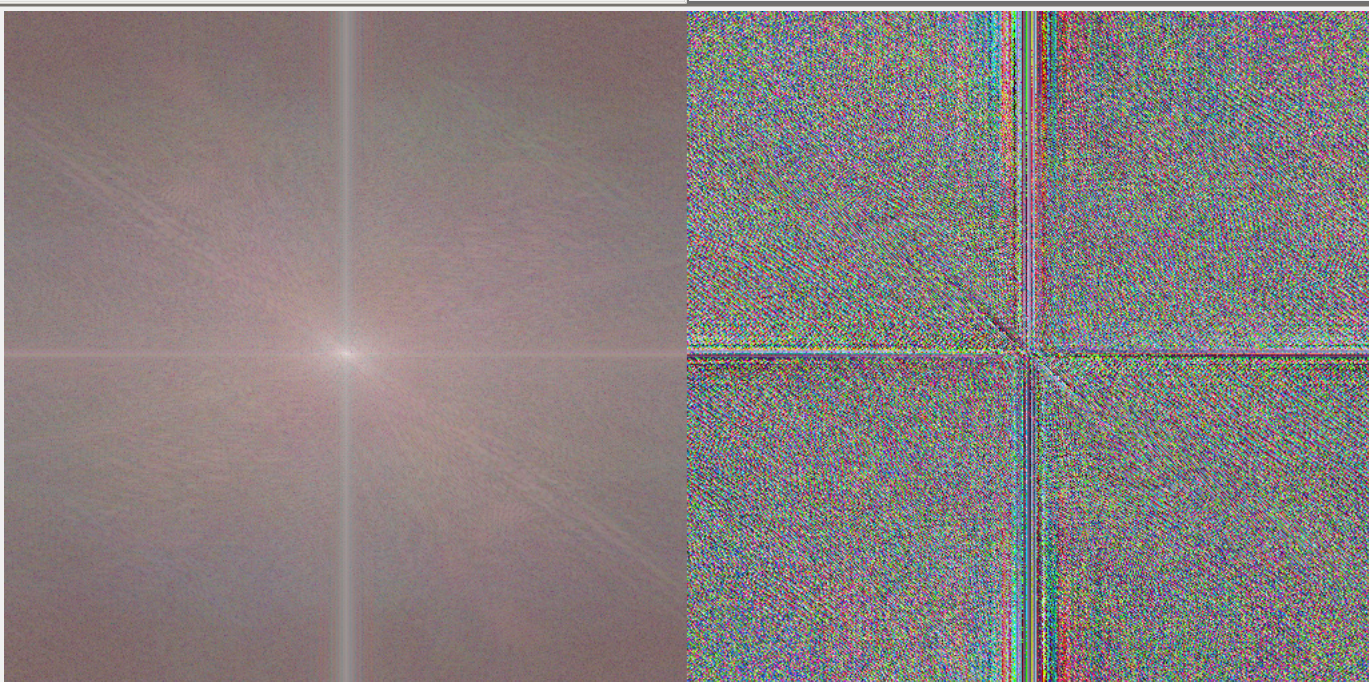
Ft2DH/iFt2DH



Ft2DF/iFt2DF



Ft3DH/iFt3DH



Ft3DF/iFt3DF



FtXDY output layer

## PROCESS

## RECOMMENDED SCRIPT USAGE

There are no user supplied parameters for these routines.

## INSTALLATION/REMOVAL

This script should work on Photoshop versions CS6 and CC onwards and for both Windows and MAC.  
Might also work with Photoshop Elements. Someone should try it. Please.

The Script filename is FtXDY.jsxbin and will be loaded to a folder with mostly \*.jsx files.  
The Help filename is FtXDY-HELP.pdf and should be placed in the same folder as the Script file.

MAC OS X foldername: PSCC 2018: Users/[username]/Library/Preferences/Adobe Photoshop CC 2018 Settings	WINDOWS 10 foldername: PSCC 2018: C:\Program Files\Adobe\Adobe Photoshop CC 2018\Presets\Script
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## COPYRIGHT

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