20210508

Notes on multipoint Z series.

To set up multiple positions (XY) with different Z positions, use the Include Z checkbox in the ND Acquisition window. Use PFS is optional.

(For objects close to the coverslip, such as cultured cells, where asymmetric Z is used to go in the up direction only, PFS may be used instead of Z.)

Z Device in XY tab always set for Ti2 Drive. This sets the Z position absolutely using the motor inside the microscope stand.

In the Z window, you must use either the symmetric or asymmetric mode defined by range. The Relative button **should be grayed out** and **DO NOT click the Home button**.  
The reference Z position is defined in the XY tab.  
Regardless whether you use the Ti2 Drive, NIDAQ Piezo Z, or Triggered NIDAQ Piezo Z, these operate relative to the absolute Z position set in the XY tab.

When you are setting the Z position, Piezo Z in lower right should always stay at 110 um.  
Devices > Move Piezo Z to Home Position  
will set to 110 um and   
Devices > Keeps Z position and centers Piezo Z   
should lock it at 110 um except during Piezo Z specific addressing.



Always click Split Multipoints at bottom of the Advanced menu in XY tab so that each position will be saved separately. At the end of the experiment, click No to the question about splitting multipoints as they are already saved separately on disk. Doing this 1.) allows you to access in ImageJ the data during image collection, 2.) makes smaller files, and 3.) saves time at the end of the experiment because you do not need to split the multipoints.

