

# WHAT'S NEW IN MANTRA SNAP?

Mantra Snap is the software used to acquire quantitative imagery with the Mantra system.

Want a quick tour? Below, we've highlighted the most frequently used features in Mantra Snap.

- References
- Brightfield Acquisition
- Snap Rules (Fluorescence only)
- Exposures (Fluorescence only)
- Fluorescence Acquisition
- Post Processing

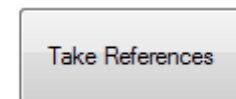
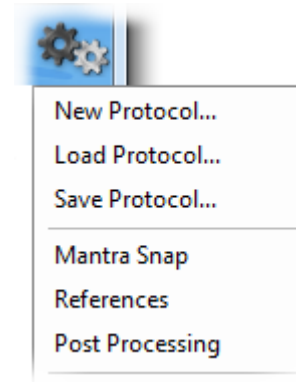


Select 'Help' in the settings menu for complete system documentation

# WHAT'S NEW IN MANTRA SNAP?

## References

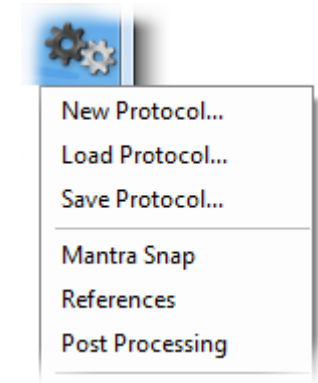
- When you first get your Mantra system, it's necessary to take references. Brightfield references enable the software to acquire imagery in Optical Density units, which is required for quantitation. Fluorescence references flat-field fluorescence imagery.
- You can access the reference editor by selecting 'References' from the settings menu.
- Before taking brightfield references, make sure you have a clean slide available. Fluorescent references require the blue slide shipped with your system.
- The system will prompt you to move the slide and trinocular during the reference acquisition. When complete, you'll have valid references for all system objectives and epi-filters.



# WHAT'S NEW IN MANTRA SNAP?

## Brightfield Acquisition

- When the system has brightfield references, it's ready to acquire! Select Mantra Snap from the settings menu to get to the acquisition editor.
- Select your output directory and base filename. Every picture will be automatically saved using that filename plus an incrementing number.
- Once you're ready, click Snap to acquire quantitative imagery. Alternatively, you can use the snap button directly on the hardware.
- If you only need a color picture, press and hold Alt before clicking the button; it will become a Snap Color button.



Save Snap To:

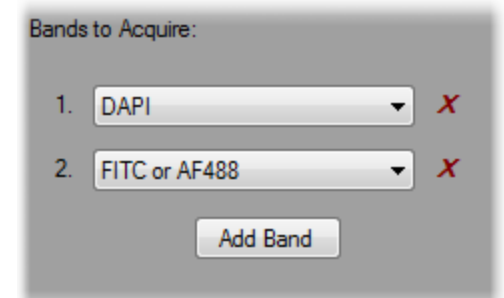
Base Filename:

Starting Number:

# WHAT'S NEW IN MANTRA SNAP?

## Snap Rules

- Fluorescence imaging requires a little more information before Mantra Snap can take pictures. To set up the rules for acquiring, start with the Snap Rules editor from the settings menu.
- Choose imaging bands based on the fluorophores in your sample. Add more if you need them. The bands can be in any order; the system will acquire them in the order listed.
- Mantra Snap can protect against over-exposure by autoexposing only when necessary. To take advantage of that, which is recommended, select Use Saturation Protection.
- In order to take quantitative data, your trinocular should always be set in the same position for acquisition.

A screenshot of the "Bands to Acquire" configuration panel. It features a list of two bands: "1. DAPI" and "2. FITC or AF488". Each band has a dropdown arrow and a red "X" icon to its right. Below the list is a button labeled "Add Band".

Use Saturation Protection

Prior to acquisition, the trinoc must be at:

- Camera Only (📷)
- Shared (📷)
- Either Camera Only or Shared

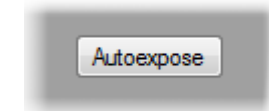
# WHAT'S NEW IN MANTRA SNAP?

## Exposures

- Once you've selected imaging bands in Snap Rules, you can set exposures. Start by selecting Exposures from the settings menu. The system will display exposure times for the current objective.
- Select the imaging band you'd like to expose; the hardware will switch to the appropriate epi-filter automatically.
- Once you've found a bright location on your sample, click autoexpose to automatically determine the best exposure. The system will ignore the brightest 0.01% of pixels, and choose an exposure 20% below saturation for the remaining pixels. You can also manually type in the exposure time.
- If you'd like to expose for epi-filters that you aren't using for imaging, change the epi-filter on the system first, then set the exposure.

Current Objective: 4x

Imaging Band	Exposure
DAPI	250
FITC or AF488	250



Non-imaging band	Exposure
Texas Red or AF594	250

# WHAT'S NEW IN MANTRA SNAP?

## Fluorescence Acquisition

- With Snap Rules and Exposures in place, you can begin fluorescence acquisition. Select Mantra Snap from the settings menu to begin. An overview of your imaging bands and exposures will be shown.
- Select your output directory and base filename. Every picture will be automatically saved using that filename plus an incrementing number.
- Once you're ready, click Snap to acquire quantitative imagery. Alternatively, you can use the snap button directly on the hardware. The system will automatically cycle through each epi-filter using the exposures you've selected.
- If you only need a color picture, press and hold Alt before clicking the button; it will become a Snap Color button.

Current Objective: 4x

Imaging Band	Exposure
DAPI	42.489
FITC or AF488	250

Save Snap To:

Base Filename:

Starting Number:

Snap

Snap Color

# WHAT'S NEW IN MANTRA SNAP?



- **Post Processing**

By default, Mantra Snap automatically saves each image you acquire. There are additional processing steps you can take if desired; these are all selectable in the Post Processing editor.

Select Launch inForm to send this image directly to inForm Analysis; the system will start inForm if it not presently running, and will process and display the image using the current inForm algorithm.

If you would like the image to be processed by inForm in the background, select Batch Process Using inForm. Select an appropriate algorithm or project, and the system will automatically process all acquired images.

If you need more flexibility, you can also write your own Windows .bat file.

Launch inForm Analysis

Batch Process Using inForm

Launch a Custom .bat file