# Mikrotron high-speed tracking checklist

In the multiple region-of-interest mode, the mikrotron mc1362 has a few details to be aware of.

Workflow:

* Go to camera settings and select “Use hardware multiple-ROI?”
* Select beads, close bead selector
* Open bead selector again to see if ROI alignment is ok. [[1]](#footnote-1)
* [Or optionally] Run an experiment at <100 Hz. This will display the real images as the tracker will receive them and allows you to verify the ROI alignment.
* Run an experiment.
* Lost frames will show up as measurements with zero position.

To speed up and reduce lost frames you can:

* Increase the number of buffers in camera settings.
* Open “Edit QTrk Settings” and run Speed test, so you can see if your settings allow you to get enough tracking speed.
* Paths & Settings tab in Experiment Program dialog:
  + Saving in binary is faster, see the settings tab “Paths & Settings” in the experiment program dialog. The “matlab” directory contains scripts to read the binary data.
  + Deleting tracking results from memory is currently not well optimized, so you can increase “Max frames in memory” to a very large number to never delete any.
* Close other programs running.
* Get a better CPU. The grabbing loop runs in a single thread, so it’s better to get a really fast CPU with fewer cores than a slower one processor with many cores.

1. ROI positions are aligned at 48-pixel positions in X direction. The bead selector will do this but only if “Use hardware multiple ROI” is enabled in camera settings. [↑](#footnote-ref-1)