MANTECH Nudge Tool Documentation

MANTECH MANTECH Nudge Tool Documentation Document Version: 1.0 Software Version: 1.0.0.0 2018/01/03



Glossary of Terms

.GTY: File extension for tray file type used with Gilson robots (AM73, AM122, AM197).

.CSV: File extension for tray file type used with MANTECH robots (AM354, AM372, AM390, AM108).

X Axis: Left/tight direction.

Y Axis: Backwards/forwards direction.

Z Axis: Upwards/downwards direction.

Bed: Visual representation of the available X/Y travel of a robot.

Rack: A grouping of zones, typically representing a physical rack. Used for MANTECH robots only.

Zone: A group of vessels, typically of the same type, numbered 1,2,3,...

Vessel: An individual target location for the robot probe. Given a diameter to visually represent the physical vessel, *e.g.* tube, beaker, cup *etc.*



Program Description

The *MANTECH Nudge Tool* is a stand-alone program intended for adjusting tray files for Gilson or MANTECH robots. Gilson robots use .GTY tray files and MANTECH robots use .csv tray files. These files are <u>not</u> interchangeable between robots.

Installation

Requirements

- Compatible with Windows: XP, Vista, 7, 8, 10 and both 32/64-Bit Systems.
- Requires: .NET Framework 3.5 or later.
 - Typically already installed as part of base Windows installation.
- The utility is a stand-alone program that can be launched directly, and requires no additional installation steps.



Adjusting a Gilson or MANTEH Tray File

- 1. Launch the *Nudge Tool.exe*.
- Click the *Load Tray File...* button.
 Find and select the file to adjust.
- 3. In the *ltem(s) to Nudge* drop down select either:
 - a. "All": Will adjust all vessels.
 - b. The name of the specific zone to adjust.
- 4. Next to the appropriate axis, enter the magnitude of the desired adjustment.
- 5. Click on the button next to the value in the desired direction.
- Take note of the "SUCCESS" or "FAILURE" of the adjustment, as indicated in the log. Typically, a failure occurs if the movement would put a vessel out of range (*e.g.* a value less than zero).
- 7. Repeat 3-6, to make any other adjustments.
- 8. Click the Save File As... button.
 - a. If you do not want to create a new file, simply overwrite the originally selected file.
- Test the file in PC-Titrate or PC-BOD manual control (you do not need to close the nudge tool).
 - a. If further adjustments are required, follow steps 3-7, and save the file again, as in step 8.

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Item(s) to Nudge: X Adjustment (mm): 0 • Left Y Adjustment (mm): 0 • Forward	Right Backward	

.oad Tray File Save File As		
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Y Range (mm): 0 - 240 Item(s) to Nudge: All	Z Range (mm): 0 - 183	
X Adjustment (mm): 0 A Left	Right	
Y Adjustment (mm): 0 Forward	Backward	

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If the desired nudges result in failures, re-examine the tray file in the MANTECH *Tray Editor*, which includes a visual representation, and may aid in diagnosing the adjustment issue.