
Jinga-Hi, Inc.

ANY-maze/NeuroPhys integration User Guide

July 2020

Installation

Install ANY-maze before you install NeuroPhys, because the installer depends on the ANY-maze directory already existing.

The InstallShield installer for NeuroPhysJingaHi is a Windows executable. You will need to have Administrator permissions to run it, as it installs the program to be visible to all users.

Run the installer, clicking “Next” and “Finish” as appropriate.

Run ANY-maze

Double click on the ANY-maze icon. As ANY-maze starts, it will look in its install directory (`C:\Program Files\ANY-maze`) for “plugin” files. NeuroPhys has already provided its plugin at install as the file `JagaPlugin.dll` (named after the “Jaga” devices produced by Jinga-Hi, Inc.), by placing it in the ANY-maze install directory.

The first thing the plugin does is to run NeuroPhys, so you will not need to do anything other than wait for NeuroPhys to start up.

Select your experiment file

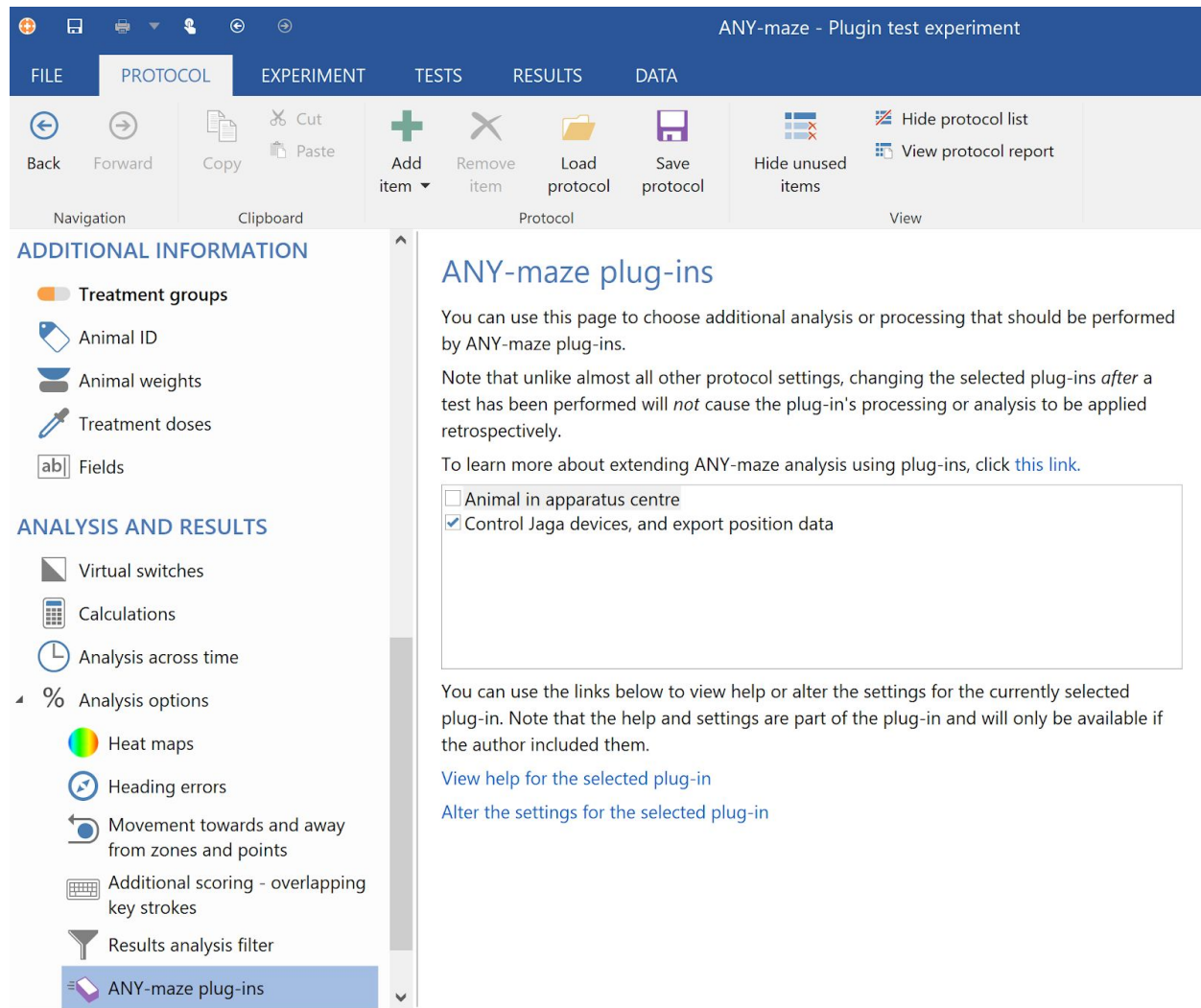
Open your ANY-maze experiment file (.szd extension).

Enabling the plugin

Go to Protocol > Analysis and Results and click on “Analysis options”

Click on “ANY-maze plug-ins”

Make sure the checkbox that says “Control jaga devices, and export position data” is enabled:



Identify all actions you would like to report to NeuroPhys

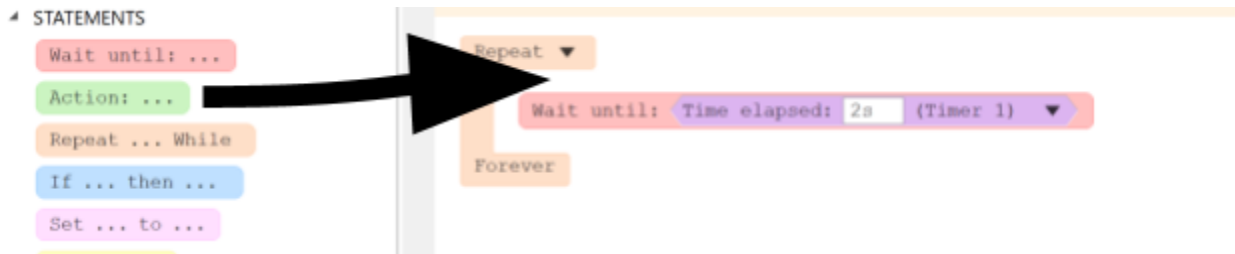
In your Procedures (Protocol > Testing > Procedures), you can insert an Action at any point. You may want to create many actions in different scripts.

First, enumerate all the Actions that you would like to create, and assign a unique number from 0 to 250 to each to act as the “Event ID”. Also, give each action a name. Keeping track of these desired actions in a spreadsheet would be a good idea, to ensure you don’t *accidentally* create duplicate IDs.

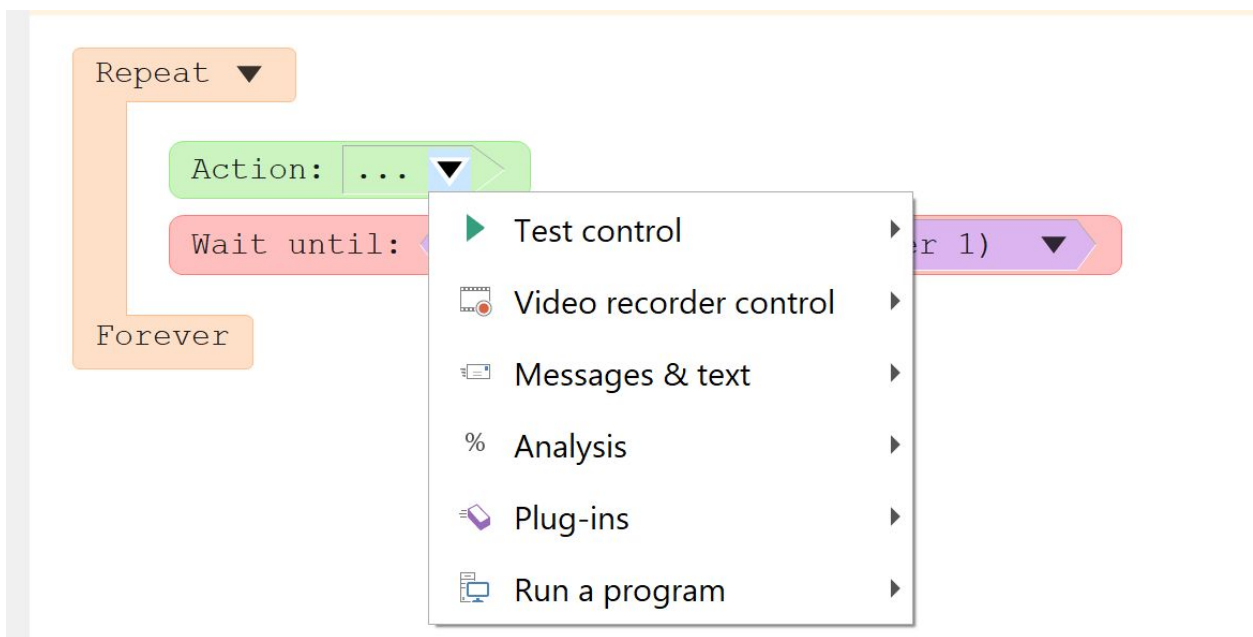
It is permissible to have multiple actions, even in different Procedures, that use the same event ID *and* name, as long as you want to treat them identically in your data analysis. Note that in this case it’s important to ensure the event ID and name match in each case, as the JagaPluginn is

unable to enforce uniqueness, and having different names with the same ID will create confusion as the name could switch back and forth between the two cases.

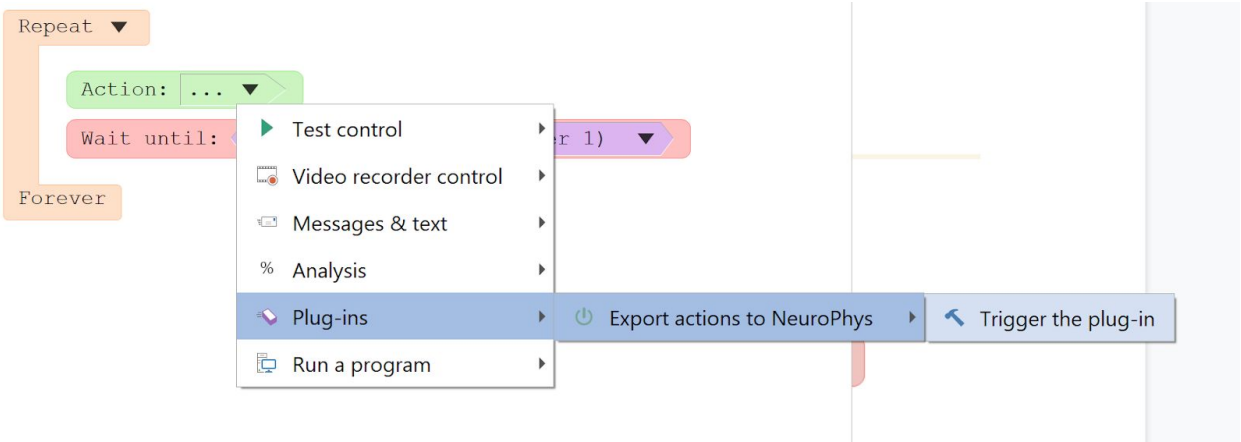
Now, given your list of desired event IDs and names, create the actions by dragging and dropping an “Action” component into the proper location in your procedure.



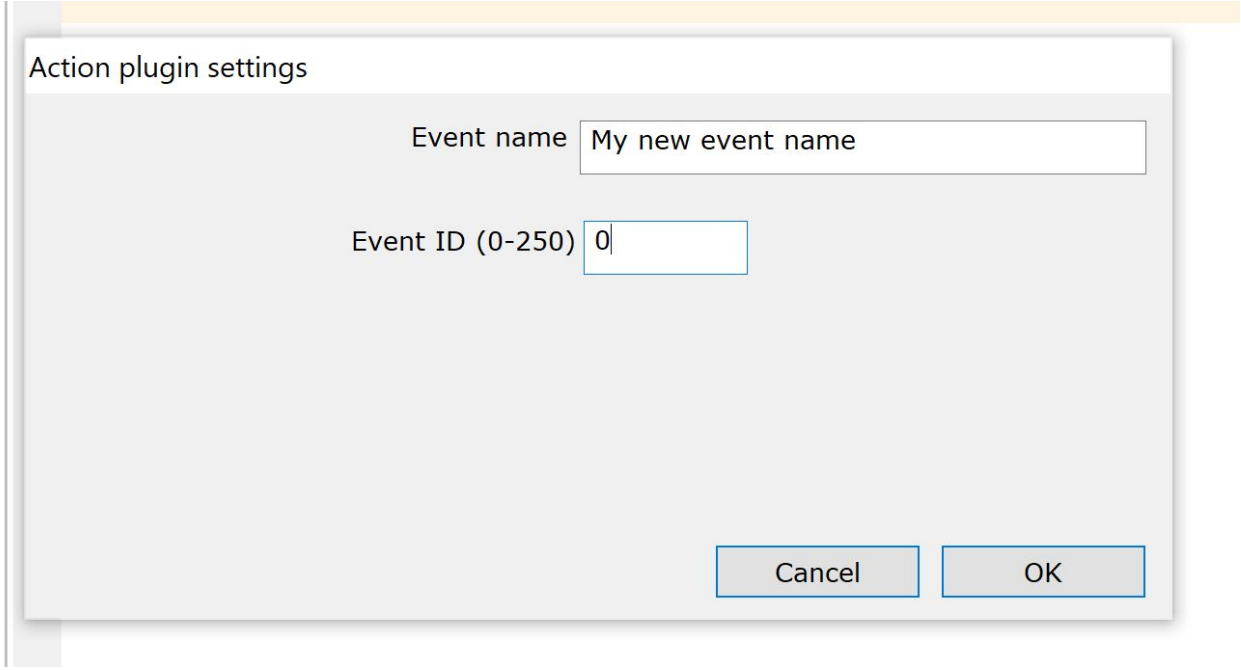
Select the Action’s drop down menu:



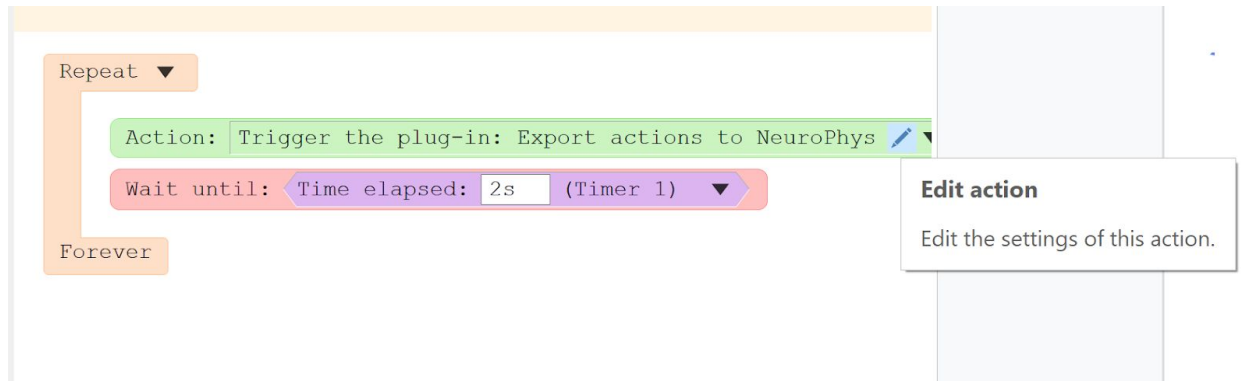
And select Plug-ins > Export actions to NeuroPhys > Trigger the plug-in



The following dialog will appear, in which you should enter your chosen event name and event ID (in the range 0-250 only). Click OK.



You can come back to this dialog to edit the name or ID at any time (not during a test) by clicking on the pencil-shaped “Edit action” icon:



Ensure NeuroPhys is set up

Follow the NeuroPhys manual to set up your Jaga device and software to properly capture data.

Run your tests

Now you should be able to run your tests. At the start of any test, NeuroPhys will be notified to start recording data to a file.

Any actions as defined in your Procedures (as described above), will be reported to NeuroPhys and recorded along with your neural data in the Plexon PLX file. This file can be opened in the SpikeSorter software that comes with NeuroPhys, as well as other software like NeuroExplorer, and the actions will appear there as events.

Any position data (if you have position tracking enabled for your test), will be sent to NeuroPhys to be recorded in a CSV file stored next to the main PLX data file.

Where can I find the data?

By default, all the data recorded by NeuroPhys is stored in Documents\NeuroPhysData.