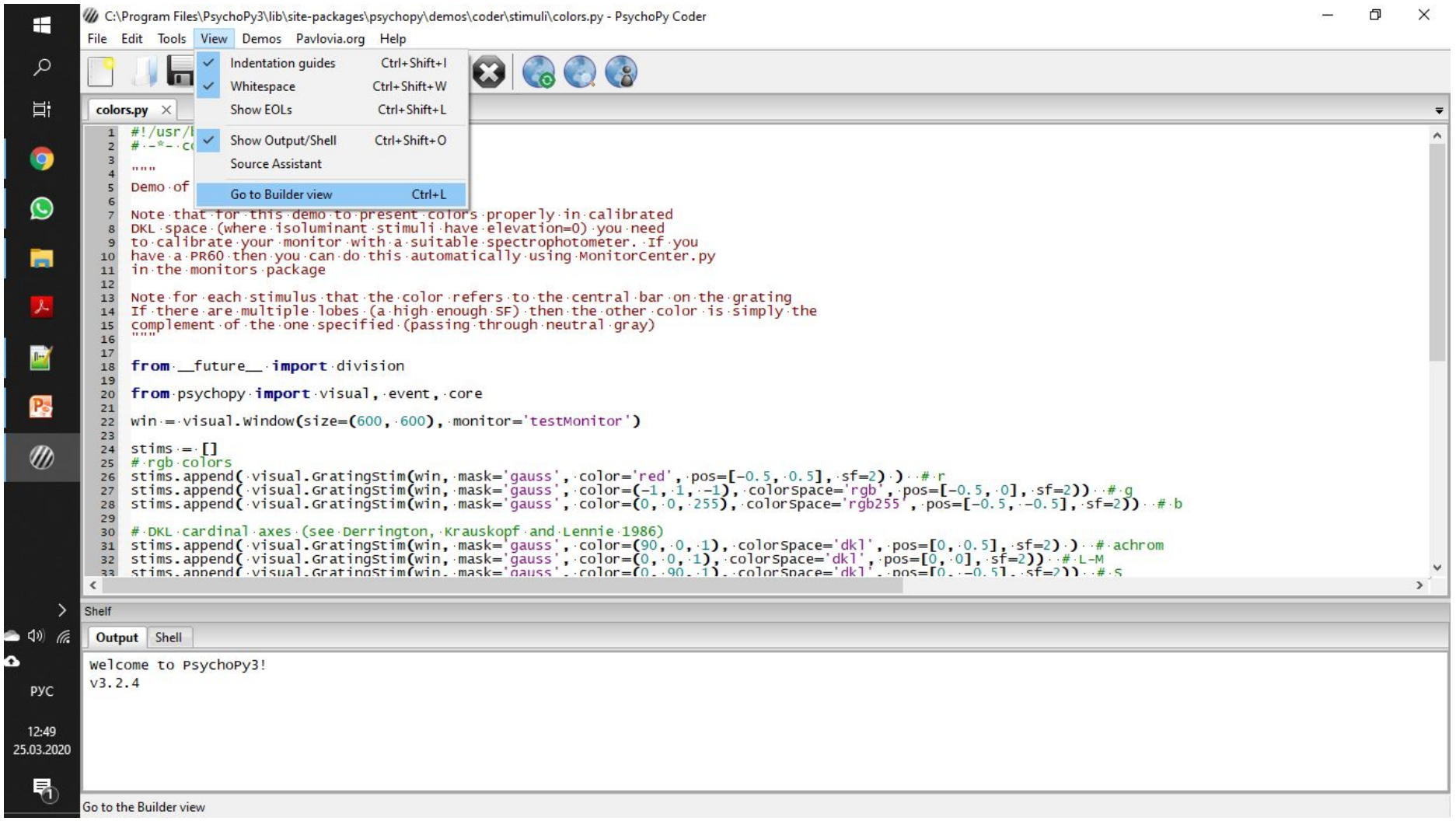
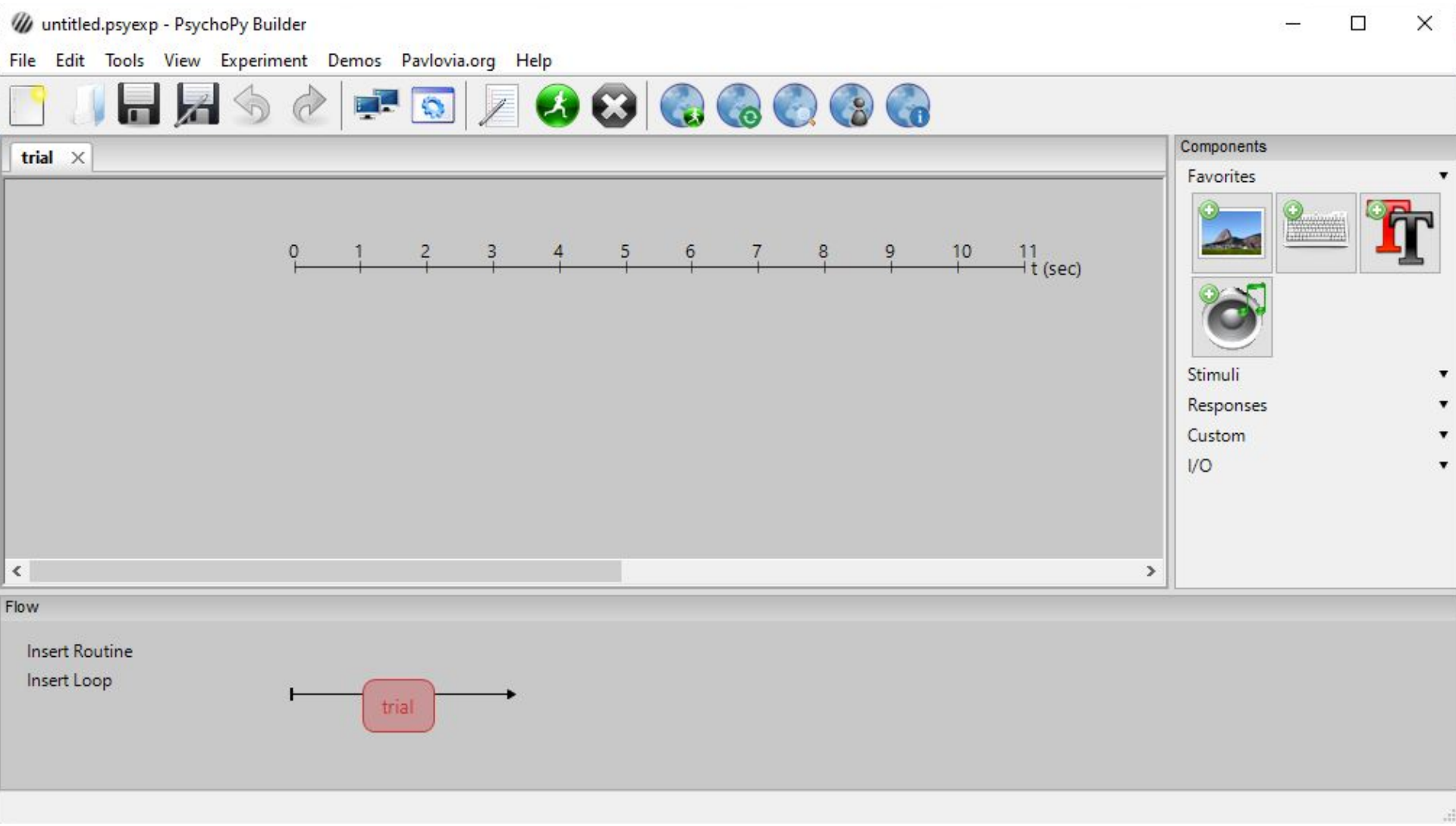
PsychoPy – инструмент для создания экспериментов


C:\Program Files\PsychoPy3\lib\site-packages\psychopy\demos\coder\stimuli\colors.py - PsychoPy Coder
File Edit Tools View Demos Pavlovia.org Help
Indentation guides Ctrl+Shift+I
Whitespace Ctrl+Shift+W
Show EOLs Ctrl+Shift+L
Show Output/Shell Ctrl+Shift+O
Source Assistant
Go to Builder view Ctrl+L
colors.py
#!/usr/b
-*- co
"""
Demo of
Note that for this demo to present colors properly in calibrated
DKL space (where isoluminant stimuli have elevation=0) you need
to calibrate your monitor with a suitable spectrophotometer. If you
have a PR60 then you can do this automatically using MonitorCenter.py
in the monitors package
Note for each stimulus that the color refers to the central bar on the grating
If there are multiple lobes (a high enough SF) then the other color is simply the
complement of the one specified (passing through neutral gray)
"""
from __future__ import division
from psychopy import visual, event, core
win = visual.Window(size=(600, 600), monitor='testMonitor')
stims = []
# rgb colors
stims.append(visual.GratingStim(win, mask='gauss', color='red', pos=[-0.5, 0.5], sf=2)) # r
stims.append(visual.GratingStim(win, mask='gauss', color=(-1, 1, -1), colorSpace='rgb', pos=[-0.5, 0], sf=2)) # g
stims.append(visual.GratingStim(win, mask='gauss', color=(0, 0, 255), colorSpace='rgb255', pos=[-0.5, -0.5], sf=2)) # b
DKL cardinal axes (see Derrington, Krauskopf and Lennie 1986)
stims.append(visual.GratingStim(win, mask='gauss', color=(90, 0, 1), colorSpace='dkl', pos=[0, 0.5], sf=2)) # achrom
stims.append(visual.GratingStim(win, mask='gauss', color=(0, 0, 1), colorSpace='dkl', pos=[0, 0], sf=2)) # L-M
Shelf
Output Shell
Welcome to PsychoPy3!
v3.2.4
Go to the Builder view
РУС
12:49
25.03.2020


untitled.psyexp - PsychoPy Builder
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Pavlovia.org
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Stimuli
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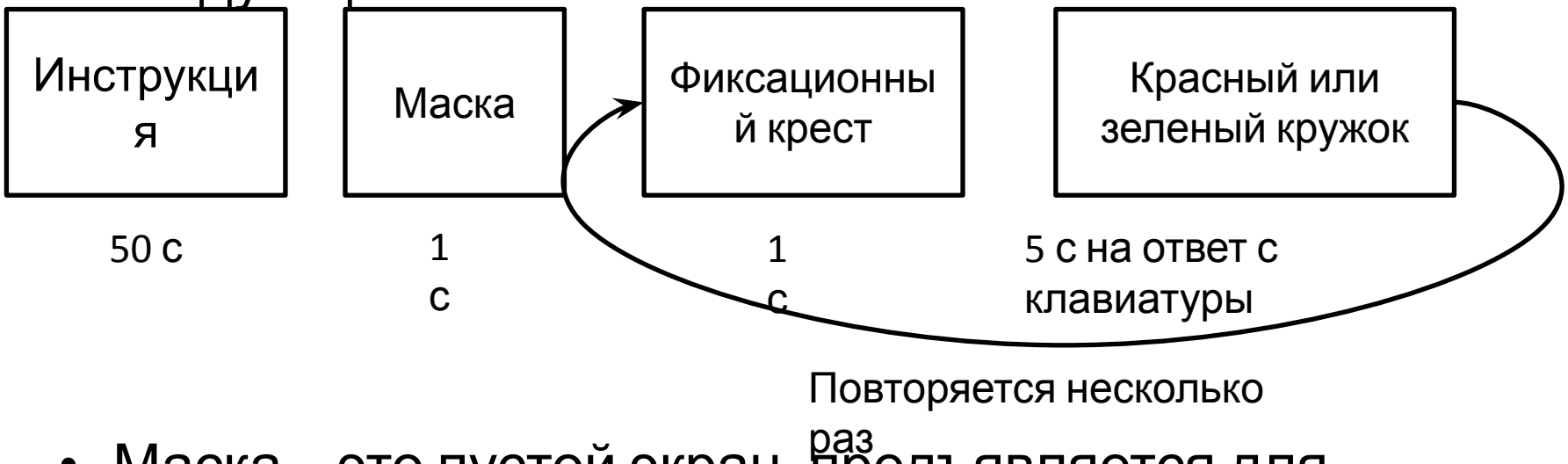
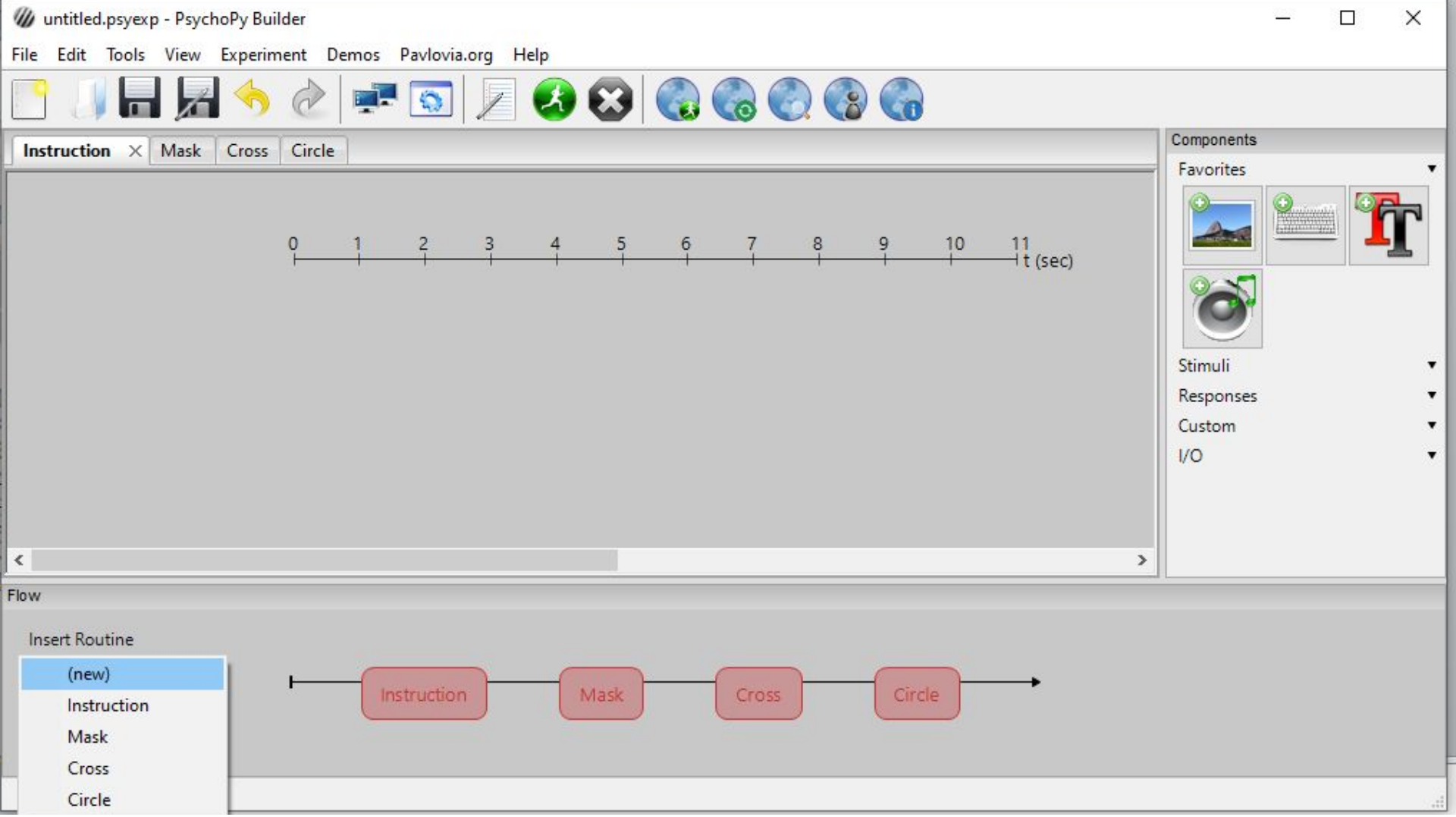
I/O
Flow
Insert Routine
Insert Loop
trial

- Мы попробуем собрать простой эксперимент, направленный на то, чтоб измерить время и точность реакции испытуемого
- Суть эксперимента будет в том, что испытуемый должен будет нажимать на стрелку «вниз» на клавиатуре, если видит красный кружок и не делать ничего, если видит зеленый
- Соответственно схема эксперимента будет следующей



- Маска – это пустой экран, предъявляется для обновления сенсорной памяти.
- Теперь, как реализовать этот эксперимент на PsychoPy?


untitled.psyexp - PsychoPy Builder
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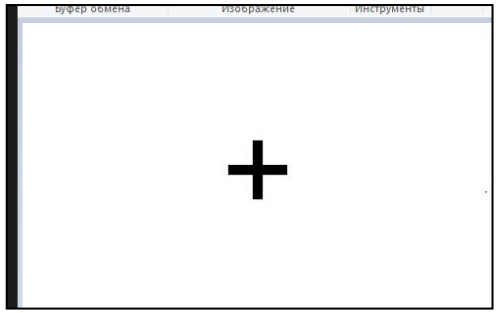
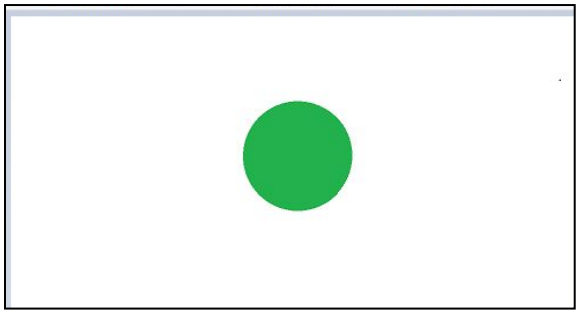
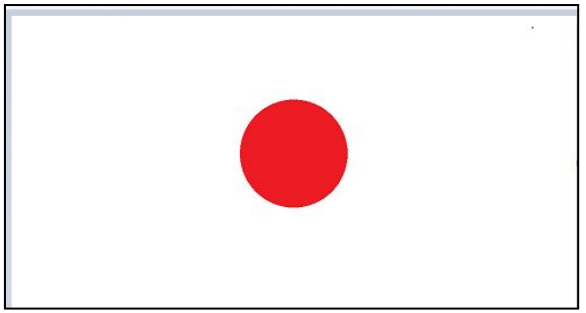
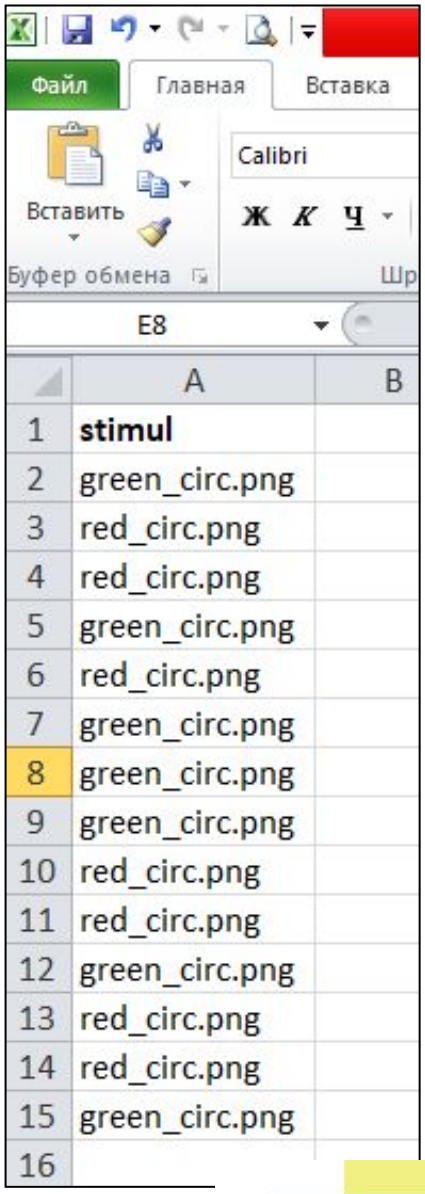
Instruction
Mask
Cross
Circle

- Для проведения эксперимента надо создать стимулы и файл, в котором прописаны условия предъявления
- Нам нужны следующие стимулы – инструкция (это будет изображение с текстом инструкции), фиксационный крест, зеленый и красный круг
- Создать стимулы можно, например, в Paint



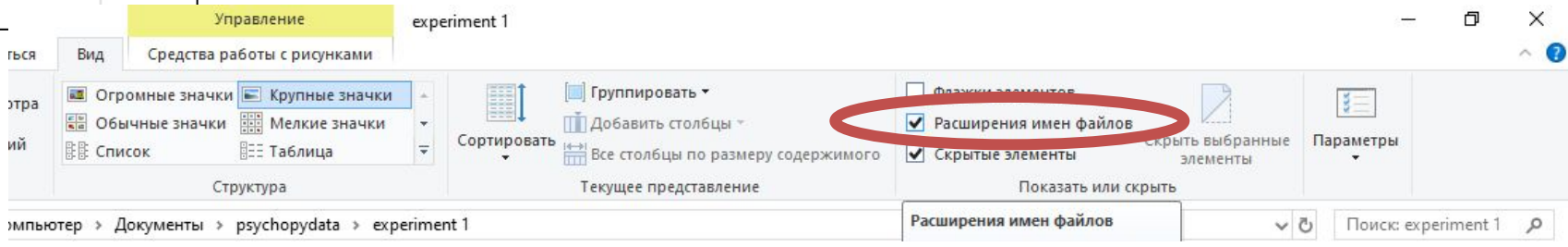
- Задачей испытуемого будет нажимать, когда появится красный круг и не нажимать, если появится зеленый
- В инструкции, соответственно, надо прописать это задачу так, чтоб испытуемому было понятно

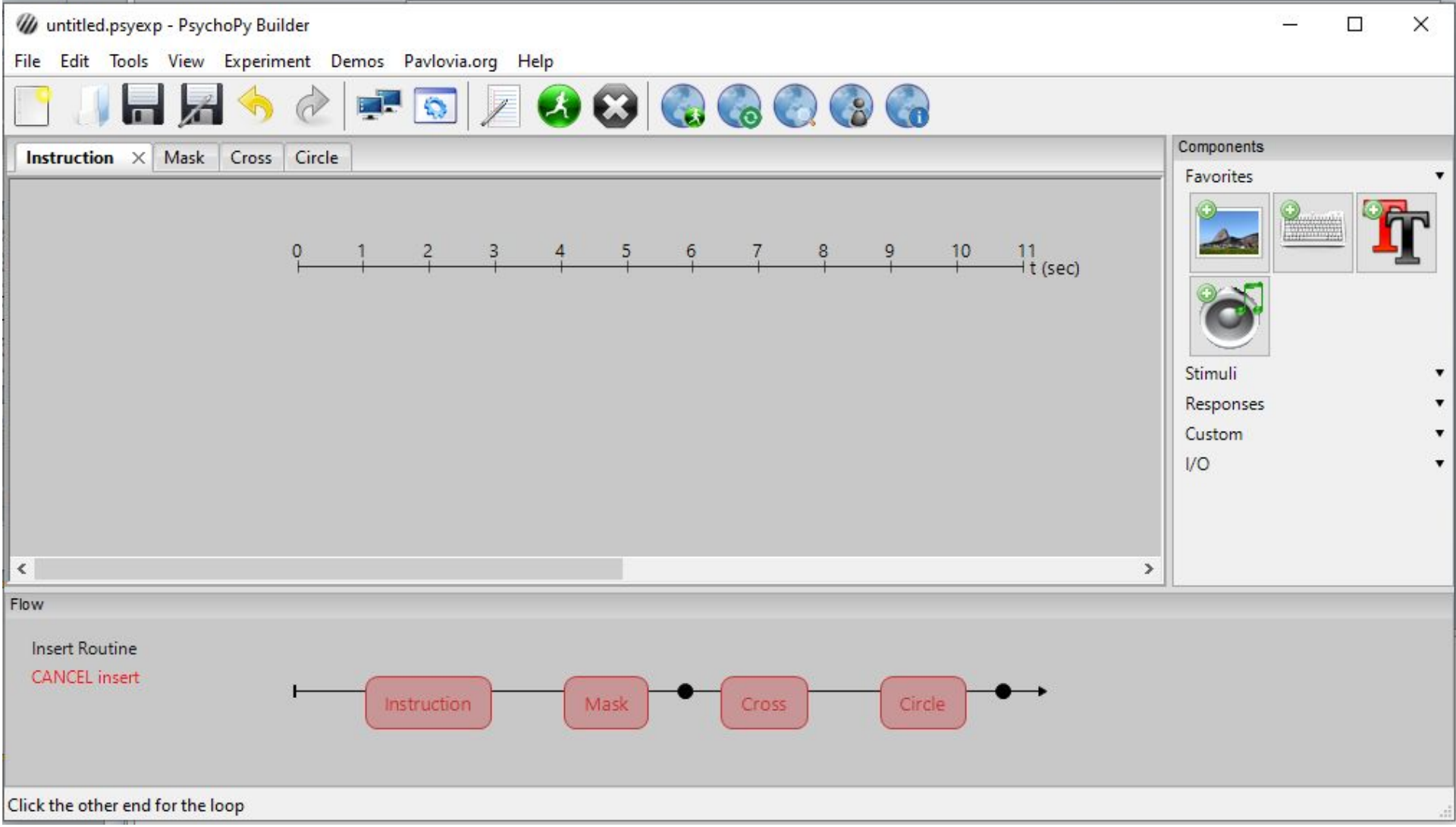


Создаем файл Excel, в котором прописываем какие стимулы будут предъявляться

Первая строка – название столбца. Это будет имя переменной

Следующие строки – порядок предъявления стимулов. Наши стимулы – это файлы с изображением. Делаем 14 строк в пвсевдослучайном порядке (то есть случайном, но расставляете сами). Красных и зеленых кругов должно быть одинаковое количество. Прежде чем копировать имена файлов, включите в свойствах папки свойство «Расширение имён файлов». Имя файла надо вставлять вместе с расширением




untitled.psyexp - PsychoPy Builder
File Edit Tools View Experiment Demos Pavlovia.org Help
Instruction
Mask
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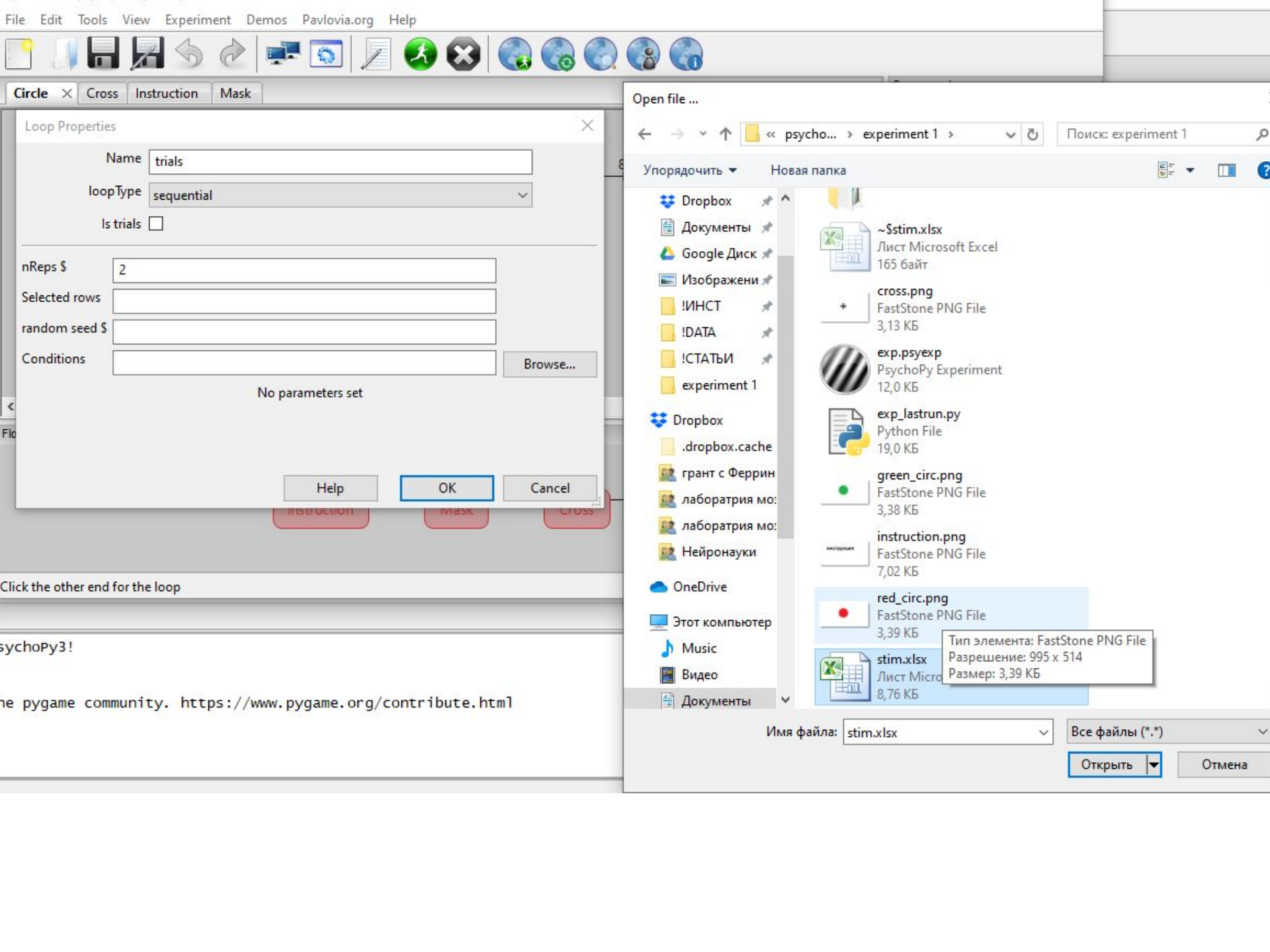
File Edit Tools View Experiment Demos Pavlovia.org Help
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Conditions
Browse...
No parameters set
Help
OK
Cancel
Click the other end for the loop
sychoPy3!
he pygame community. https://www.pygame.org/contribute.html
Open file ...
psycho... › experiment 1 ›
Поиск: experiment 1
Упорядочить
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~$stim.xlsx
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cross.png
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exp.psyexp
PsychoPy Experiment
12,0 КБ
exp_lastrun.py
Python File
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green_circ.png
FastStone PNG File
3,38 КБ
instruction.png
FastStone PNG File
7,02 КБ
red_circ.png
FastStone PNG File
3,39 КБ
stim.xlsx
8,76 КБ
Тип элемента: FastStone PNG File
Разрешение: 995 x 514
Размер: 3,39 КБ
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stim.xlsx
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Открыть
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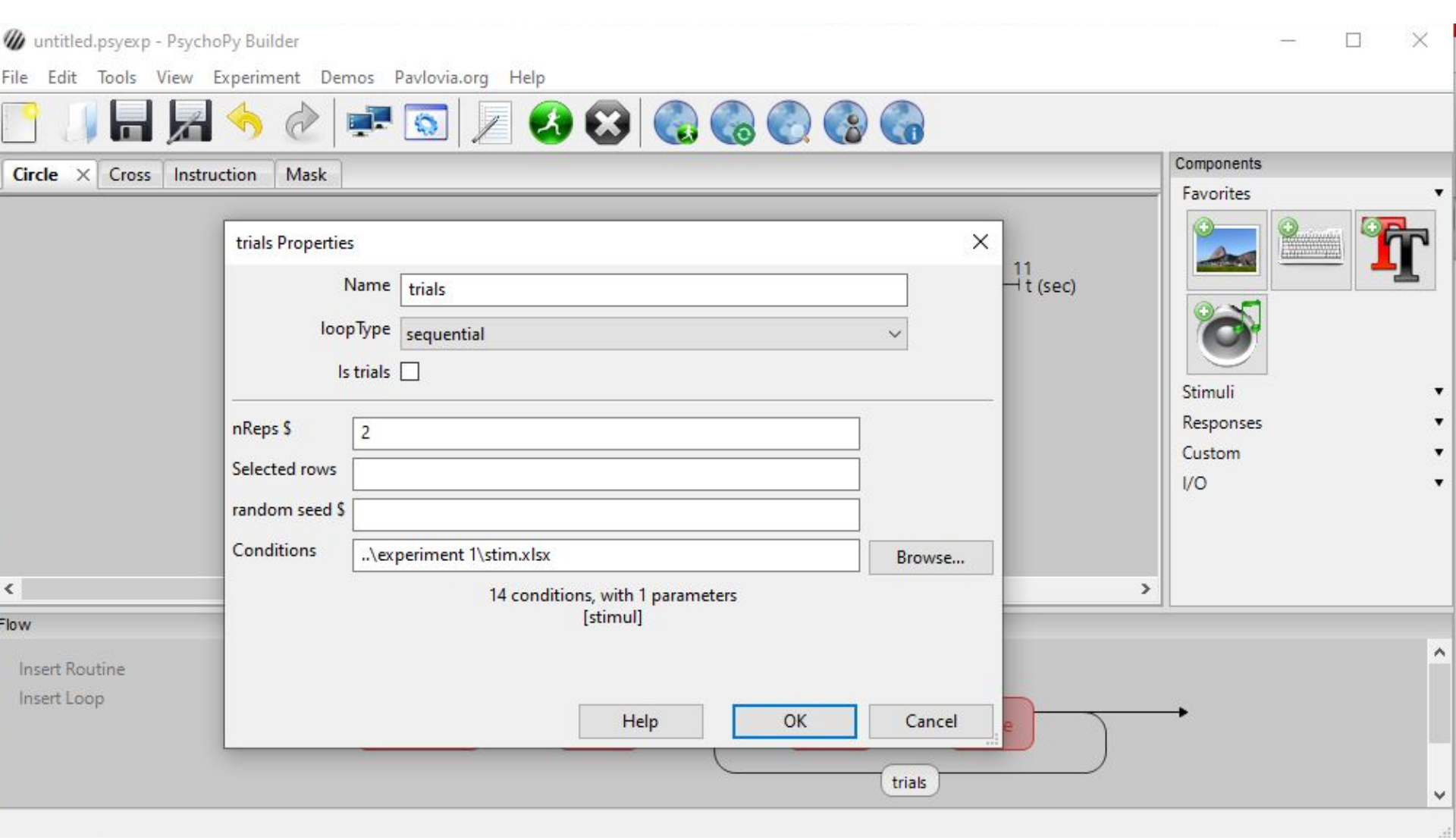
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[stimul]
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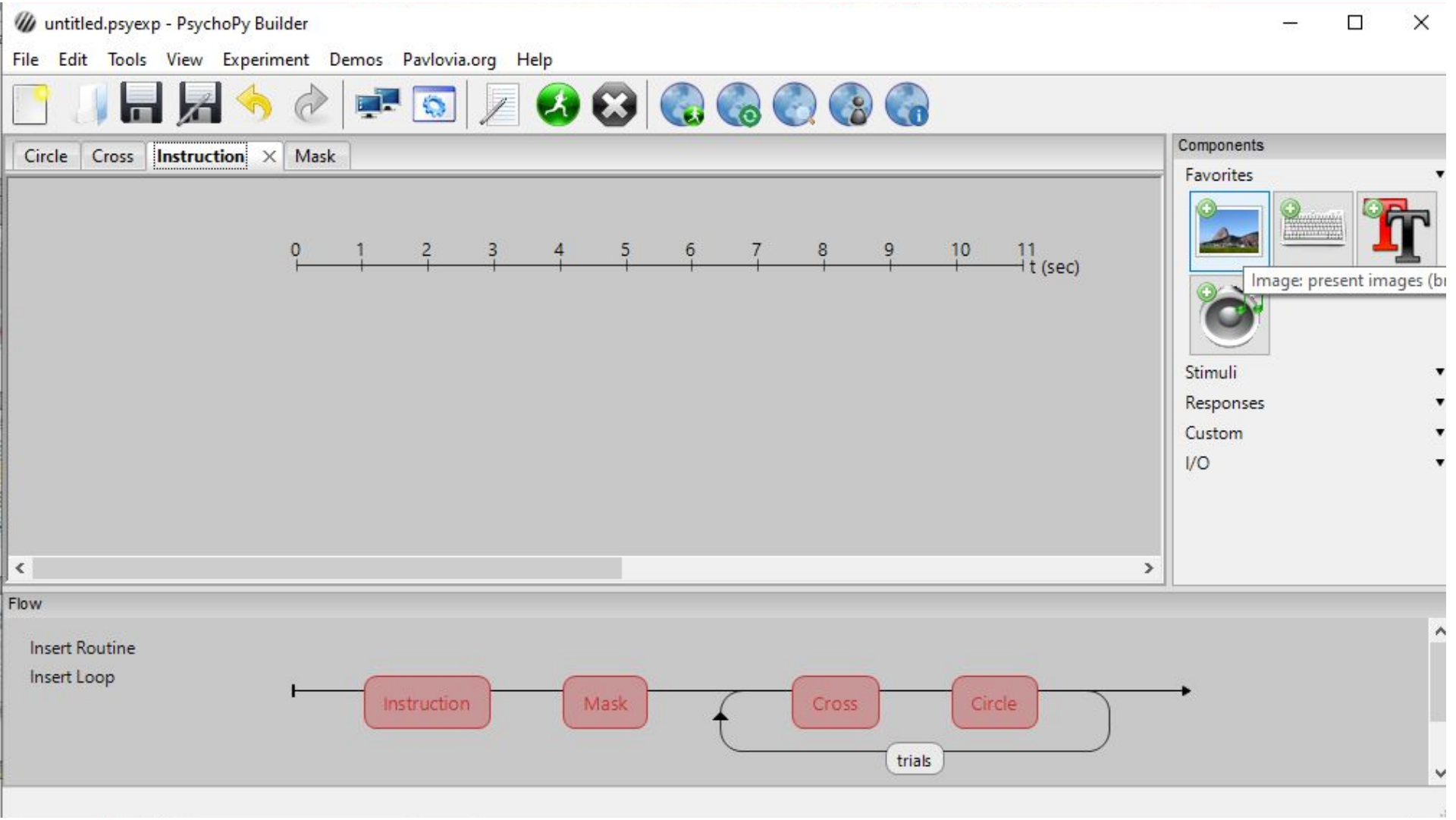
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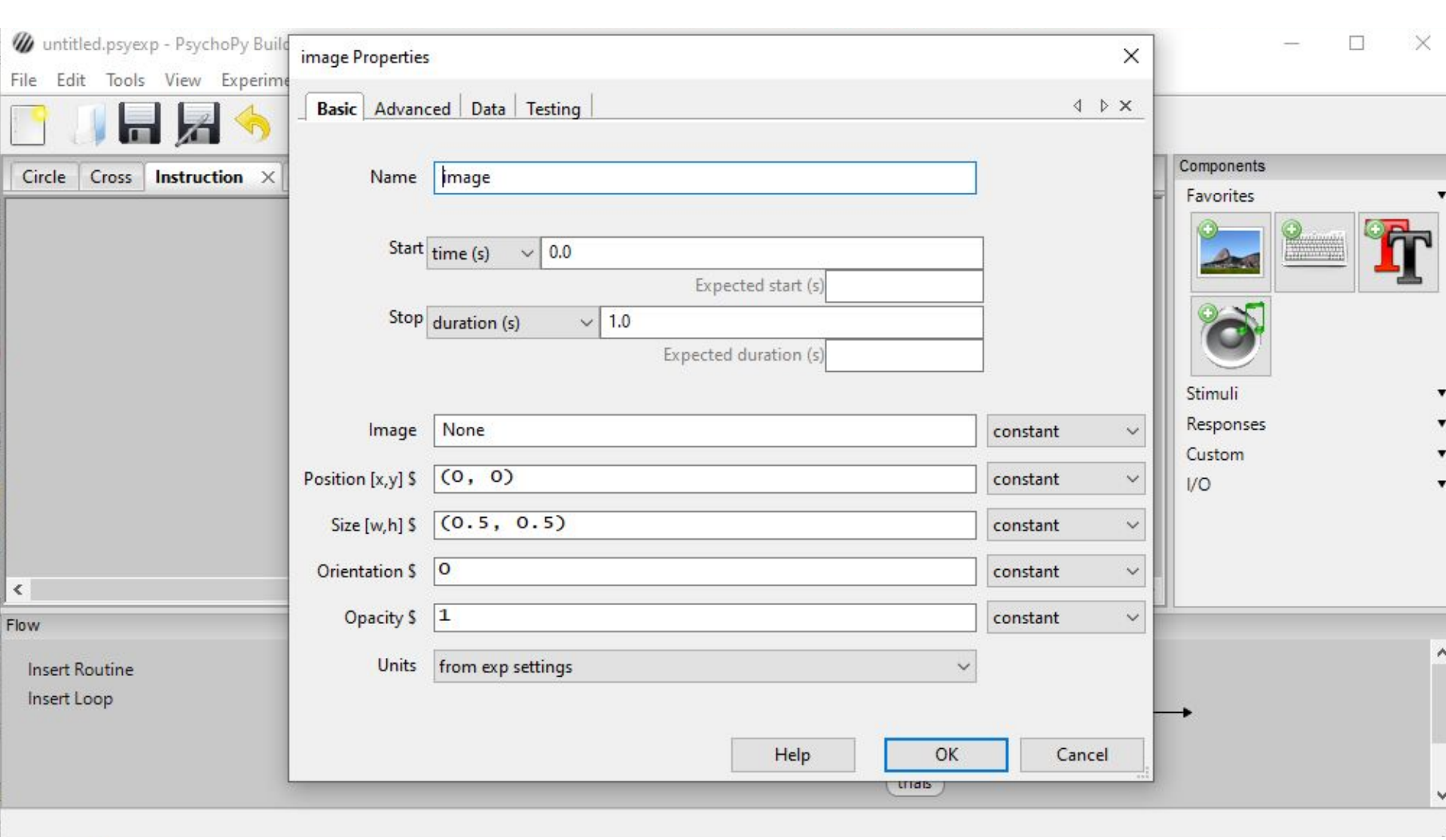
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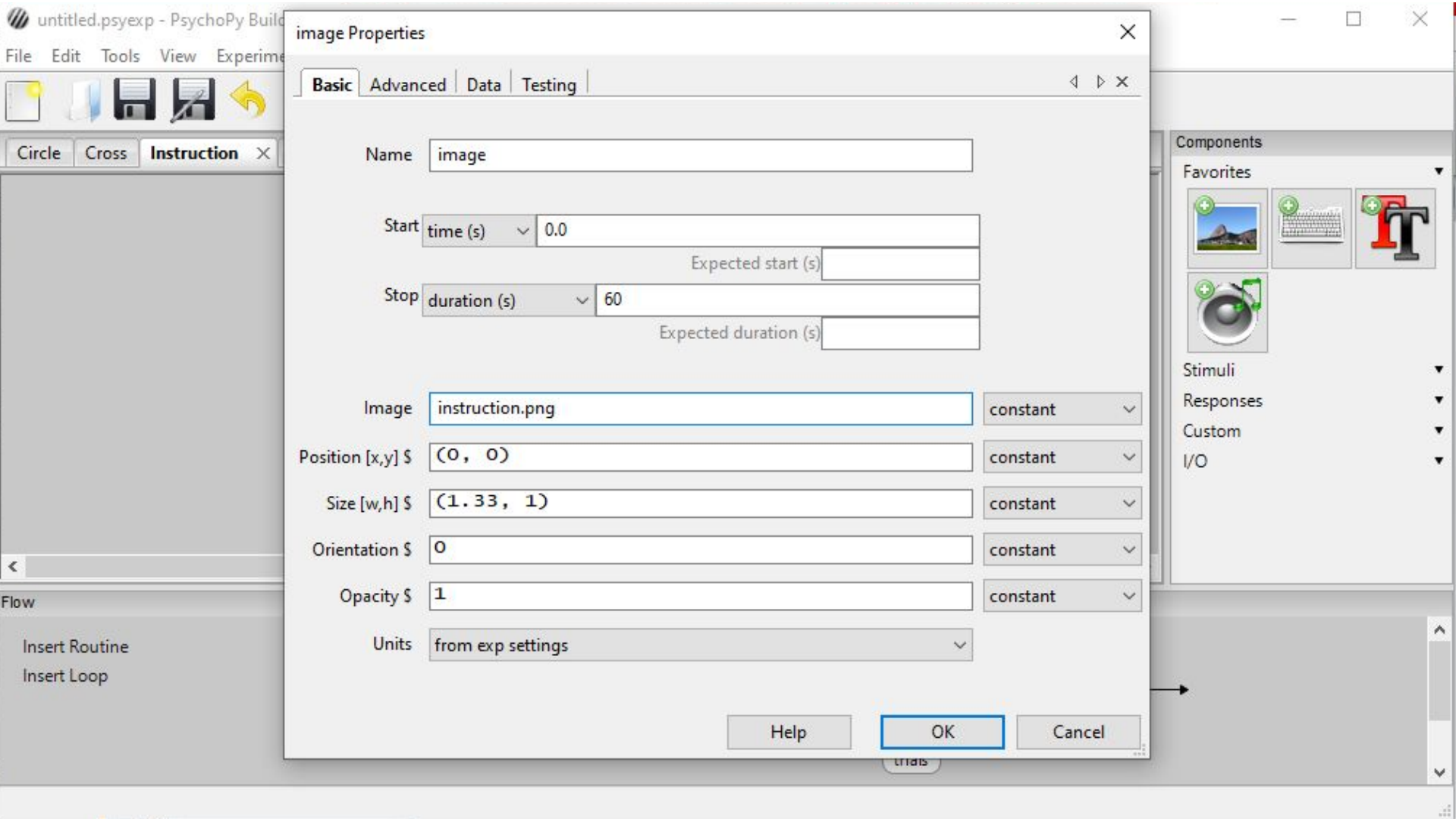
Insert Loop
image Properties
Basic Advanced Data Testing
Name image
Start time (s) 0.0
Expected start (s)
Stop duration (s) 1.0
Expected duration (s)
Image None constant
Position [x,y] $ (0, 0) constant
Size [w,h] $ (0.5, 0.5) constant
Orientation $ 0 constant
Opacity $ 1 constant
Units from exp settings
Help OK Cancel
trials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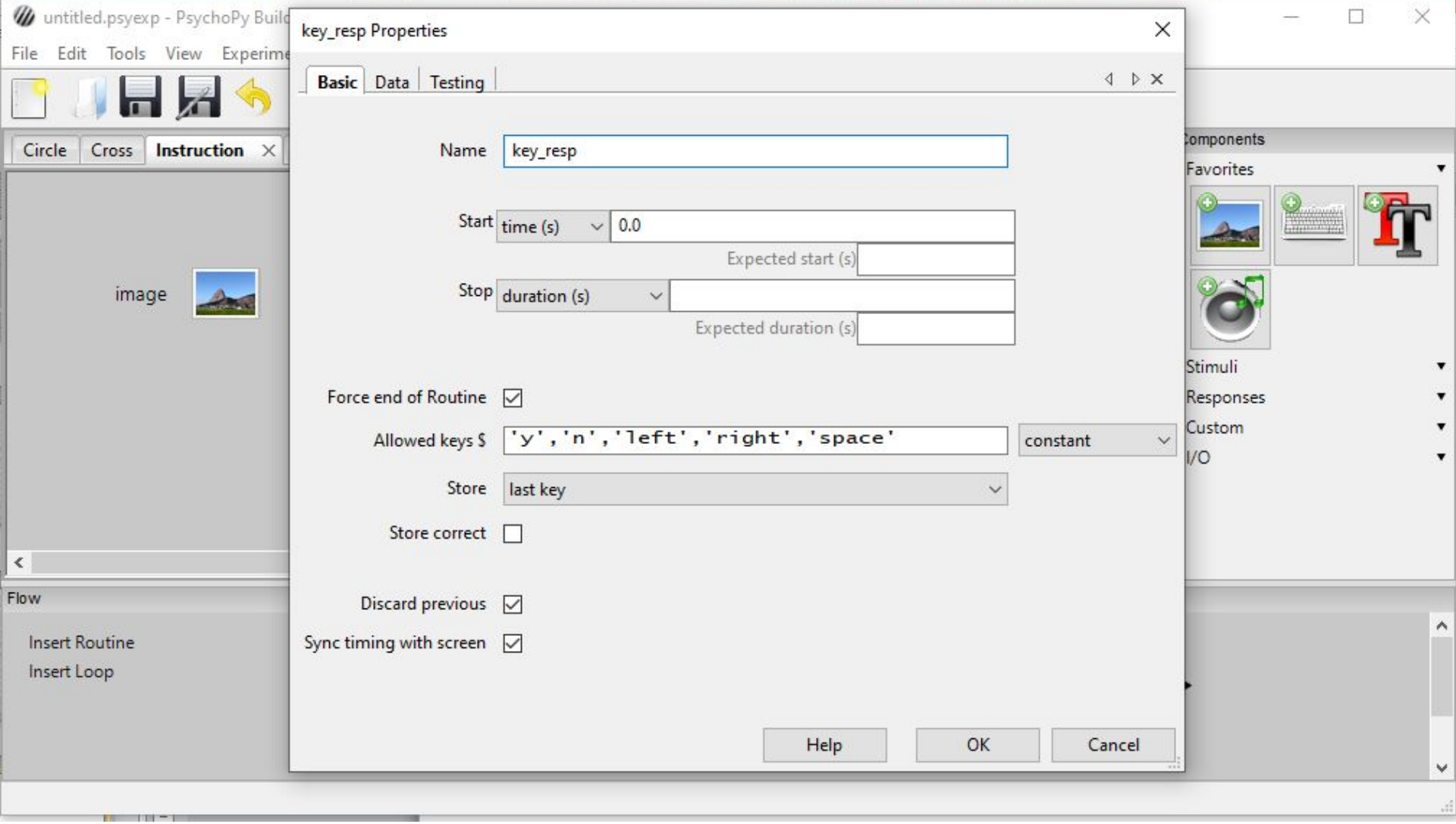
Insert Routine
Insert Loop
image Properties
Basic Advanced Data Testing
Name image
Start time (s) 0.0
Expected start (s)
Stop duration (s) 60
Expected duration (s)
Image instruction.png constant
Position [x,y] $ (0, 0) constant
Size [w,h] $ (1.33, 1) constant
Orientation $ 0 constant
Opacity $ 1 constant
Units from exp settings
Help OK Cancel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Flow
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Insert Loop
key_resp Properties
Basic Data Testing
Name key_resp
Start time (s) 0.0
Expected start (s)
Stop duration (s)
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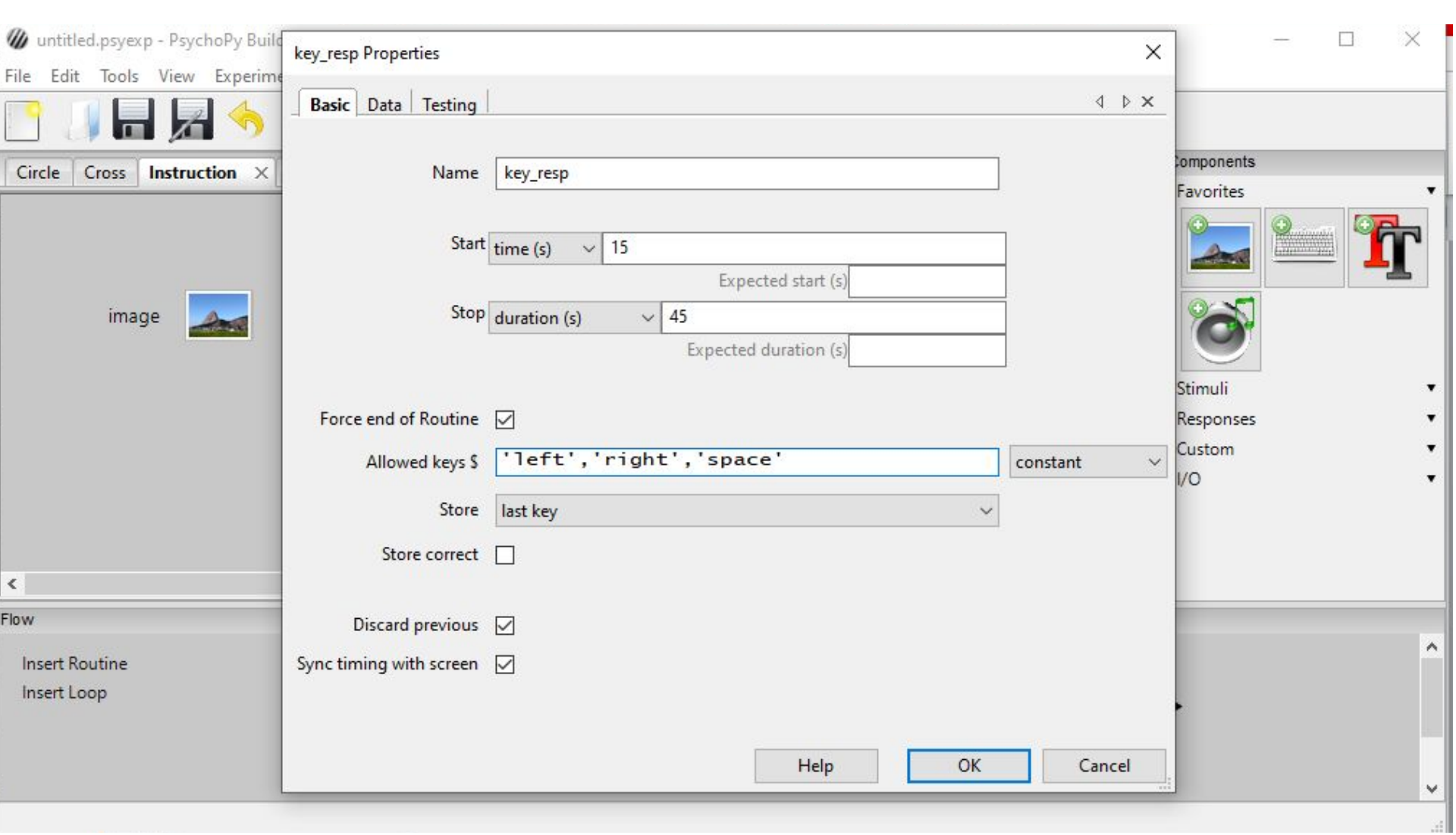
Force end of Routine
Allowed keys $ 'y','n','left','right','space' constant
Store last key
Store correct
Discard previous
Sync timing with screen
Help OK Cancel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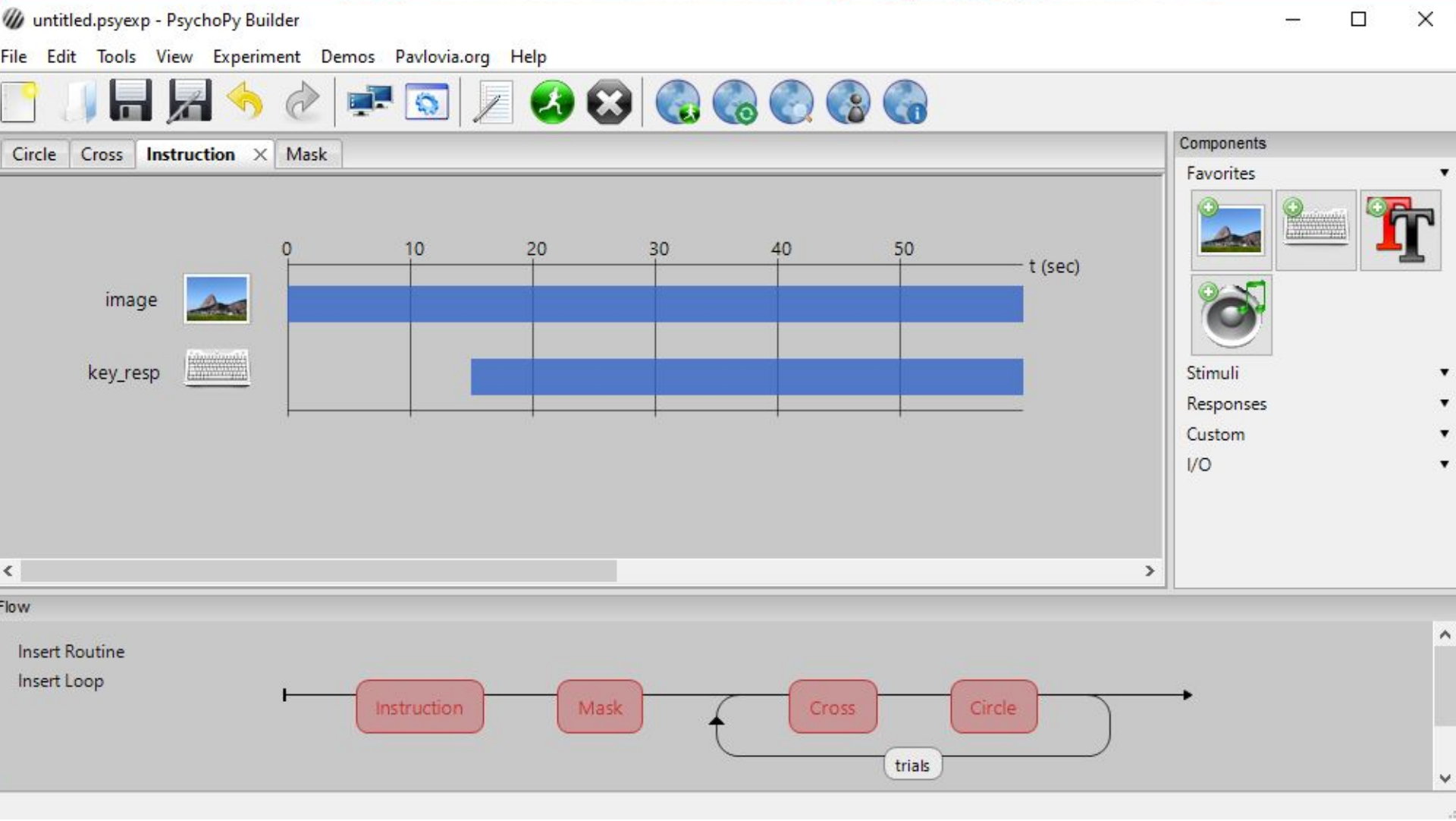
key_resp Properties
Basic Data Testing
Name key_resp
Start time (s) 15
Expected start (s)
Stop duration (s) 45
Expected duration (s)
Force end of Routine
Allowed keys $ 'left','right','space' constant
Store last key
Store correct
Discard previous
Sync timing with screen
Help OK Cancel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File Edit Tools View Experiment Demos Pavlovia.org Help
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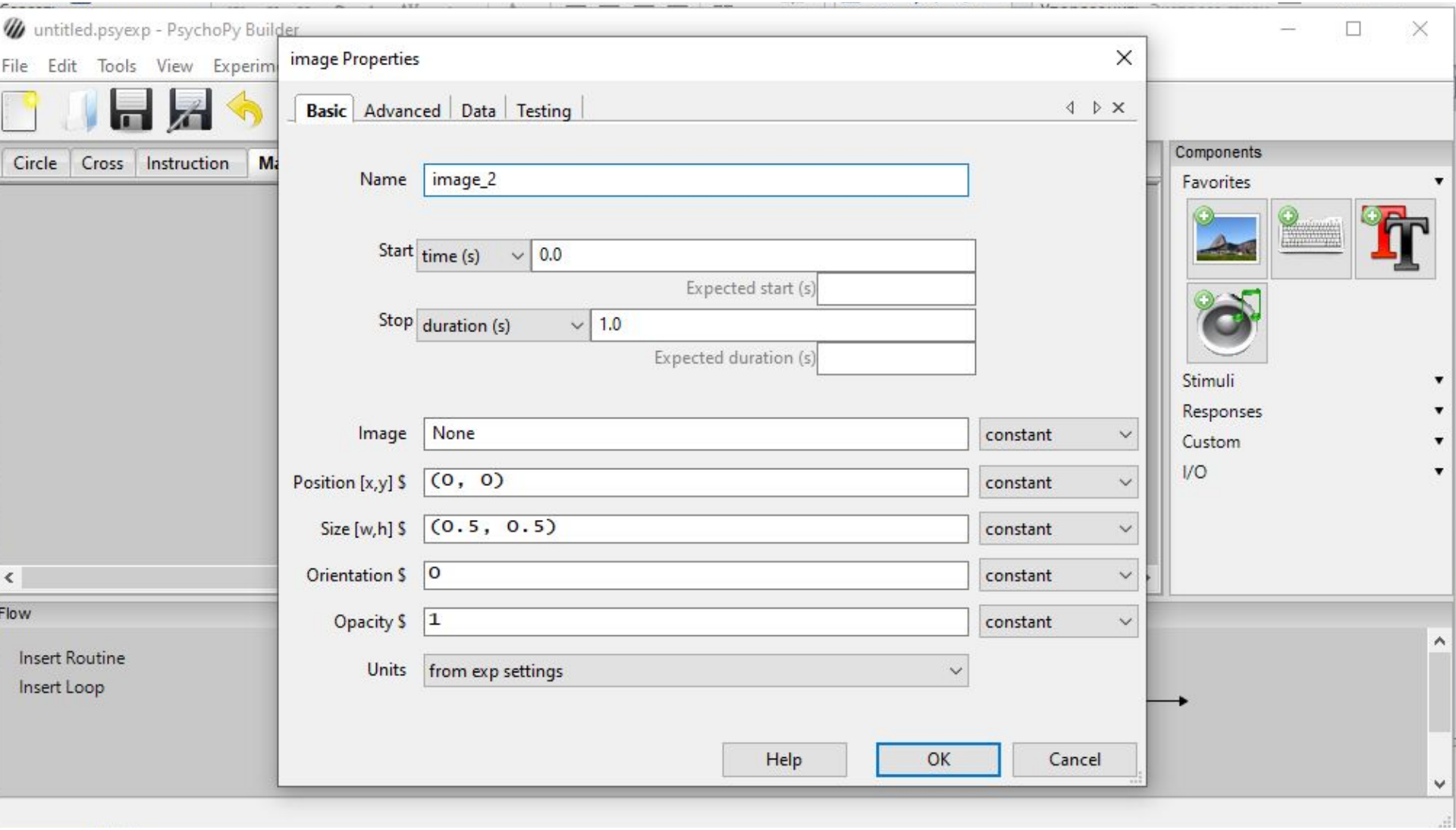
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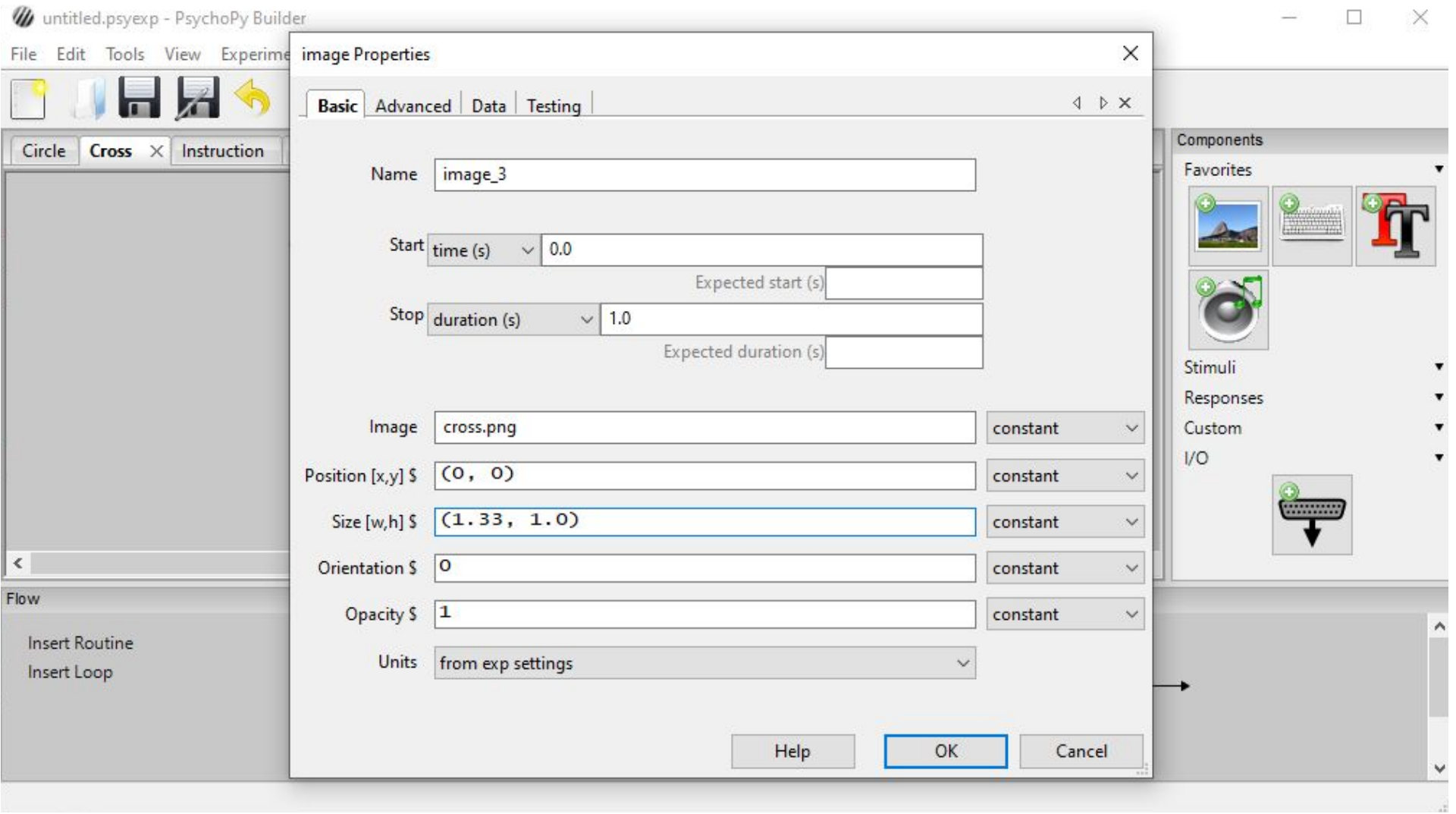
image Properties
Basic Advanced Data Testing
Name image_2
Start time (s) 0.0
Expected start (s)
Stop duration (s) 1.0
Expected duration (s)
Image None constant
Position [x,y] $ (0, 0) constant
Size [w,h] $ (0.5, 0.5) constant
Orientation $ 0 constant
Opacity $ 1 constant
Units from exp settings
Help OK Cancel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Basic Advanced Data Testing
Name image_3
Start time (s) 0.0
Expected start (s)
Stop duration (s) 1.0
Expected duration (s)
Image cross.png constant
Position [x,y] $ (0, 0) constant
Size [w,h] $ (1.33, 1.0) constant
Orientation $ 0 constant
Opacity $ 1 constant
Units from exp settings
Help OK Cancel
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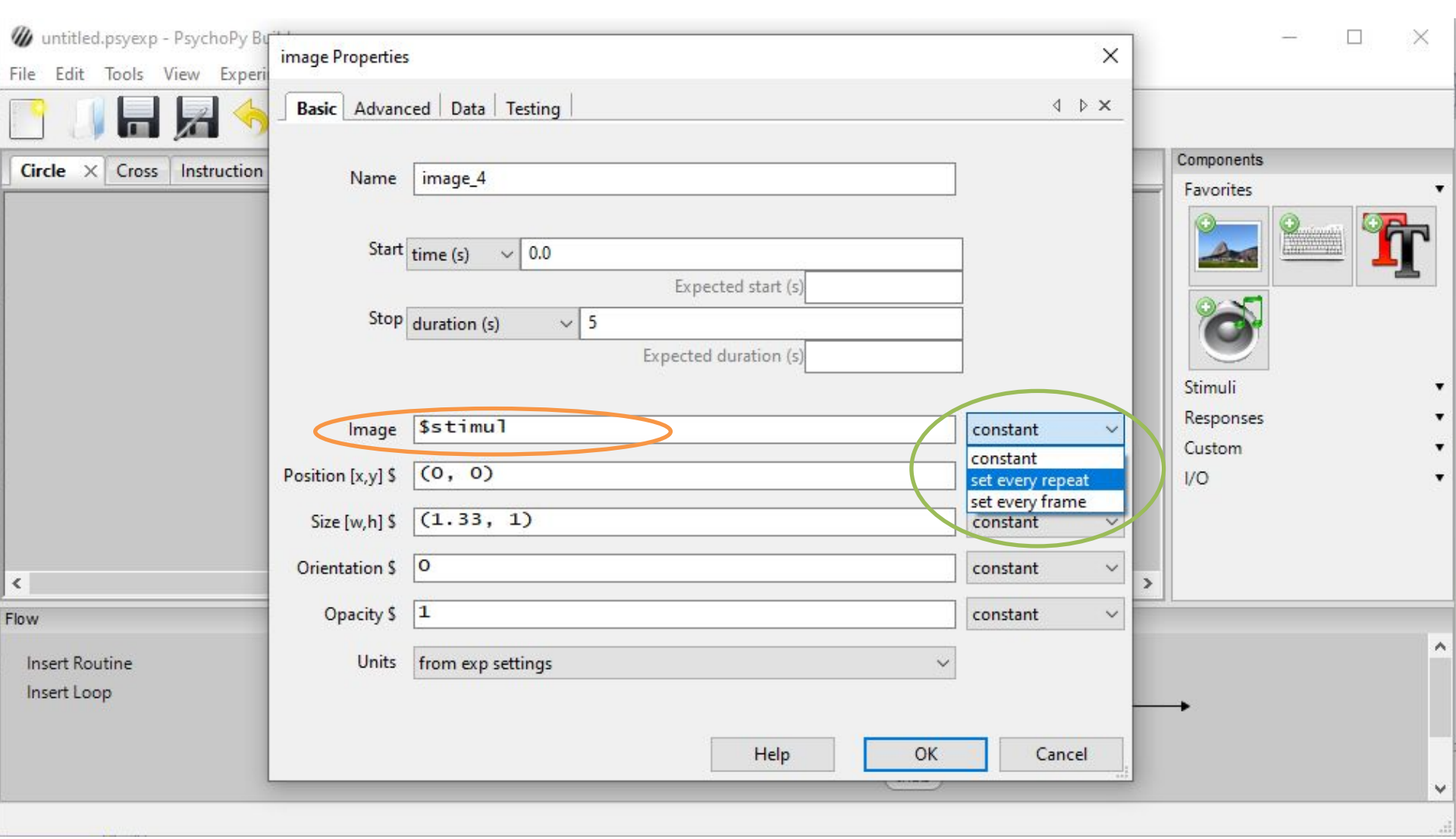
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image Properties
Basic Advanced Data Testing
Name image_4
Start time (s) 0.0
Expected start (s)
Stop duration (s) 5
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Position [x,y] $ (0, 0)
Size [w,h] $ (1.33, 1)
Orientation $ 0
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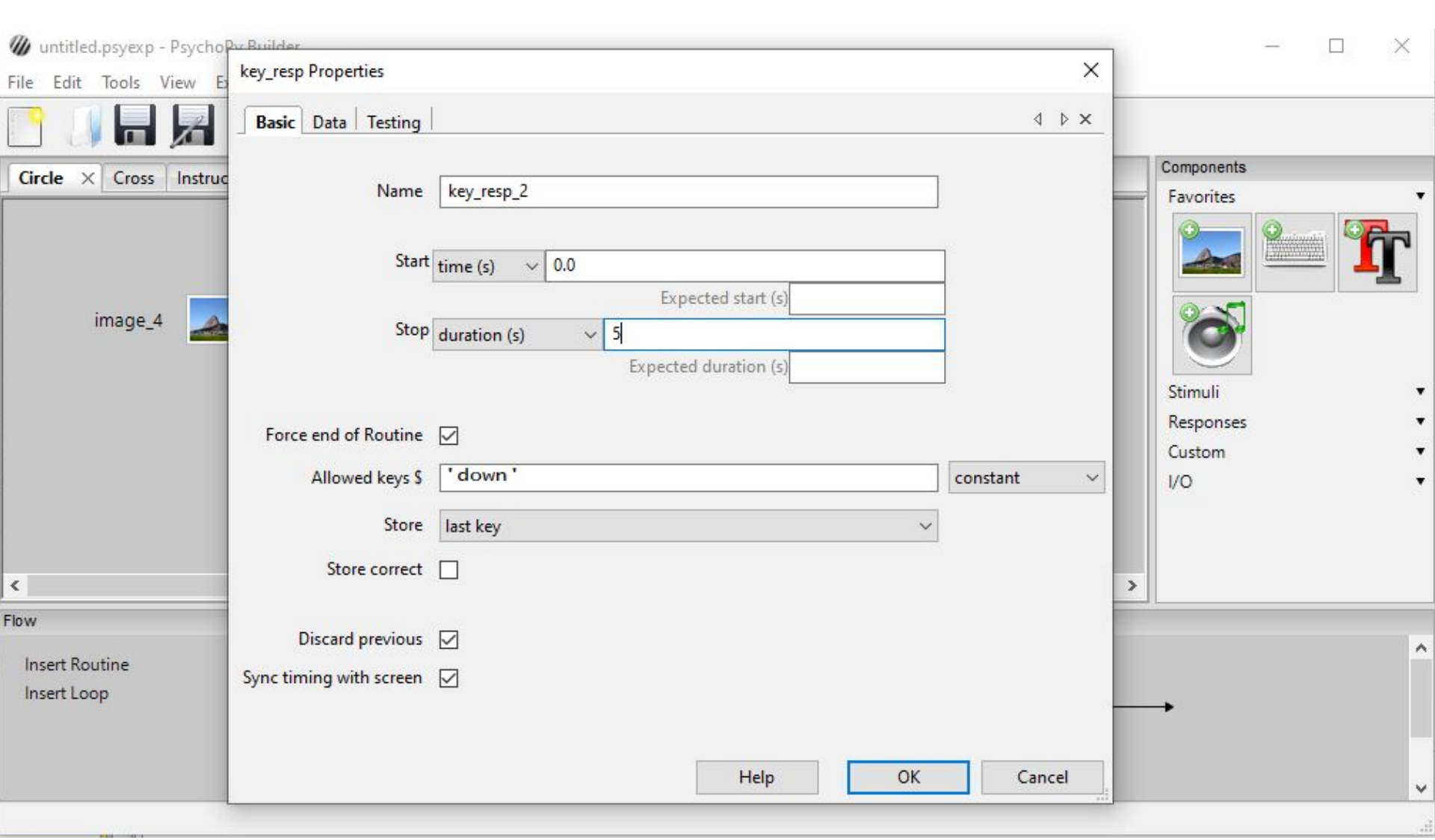
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key_resp Properties
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Testing
Name
key_resp_2
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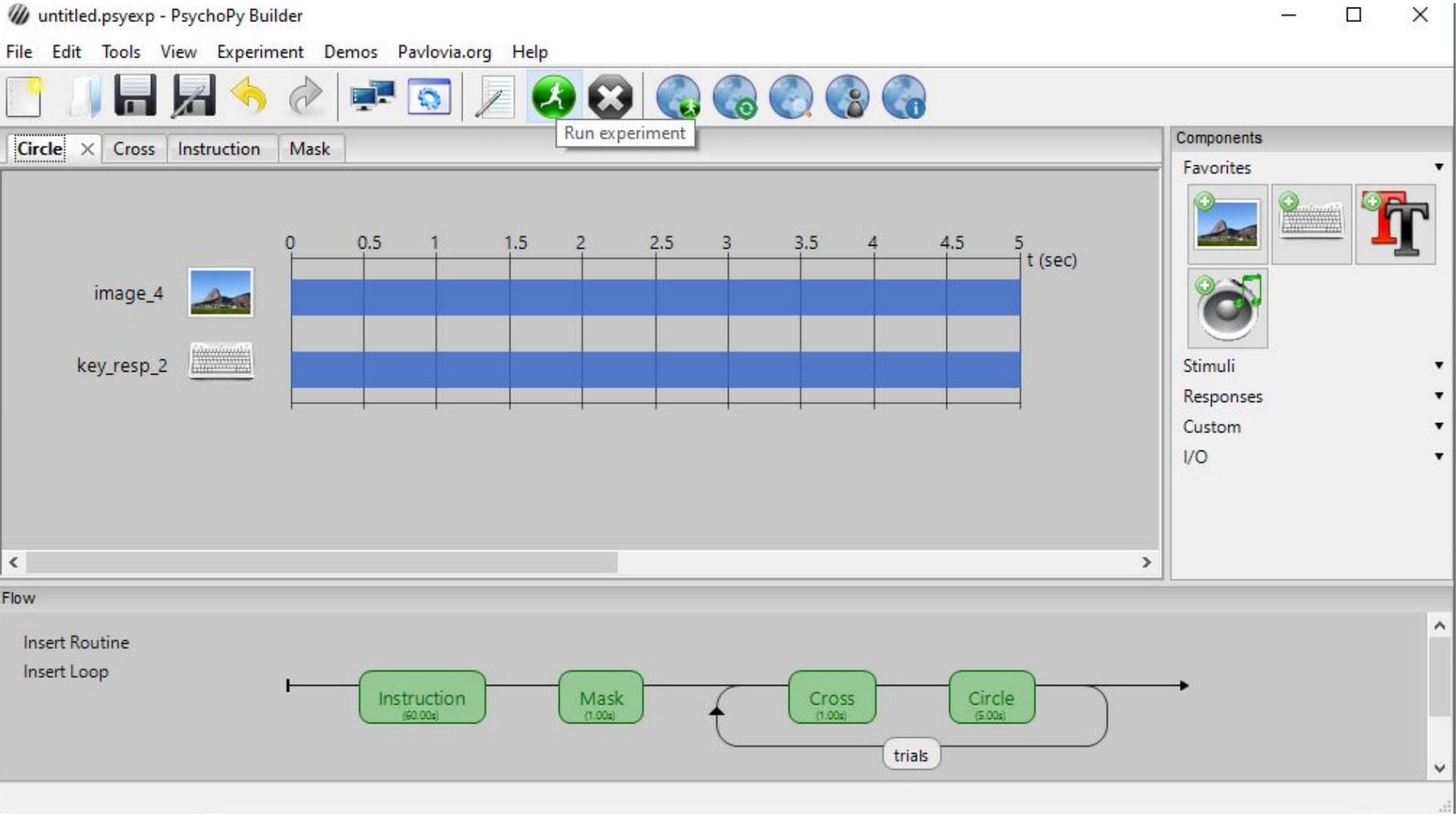
time (s)
0.0
Expected start (s)
Stop
duration (s)
5
Expected duration (s)
Force end of Routine
Allowed keys $
' down '
constant
Store
last key
Store correct
Discard previous
Sync timing with screen
Help
OK
Cancel
Components
Favorites
Stimuli
Responses
Custom
I/O


untitled.psyexp - PsychoPy Builder
File Edit Tools View Experiment Demos Pavlovia.org Help
Run experiment
Circle
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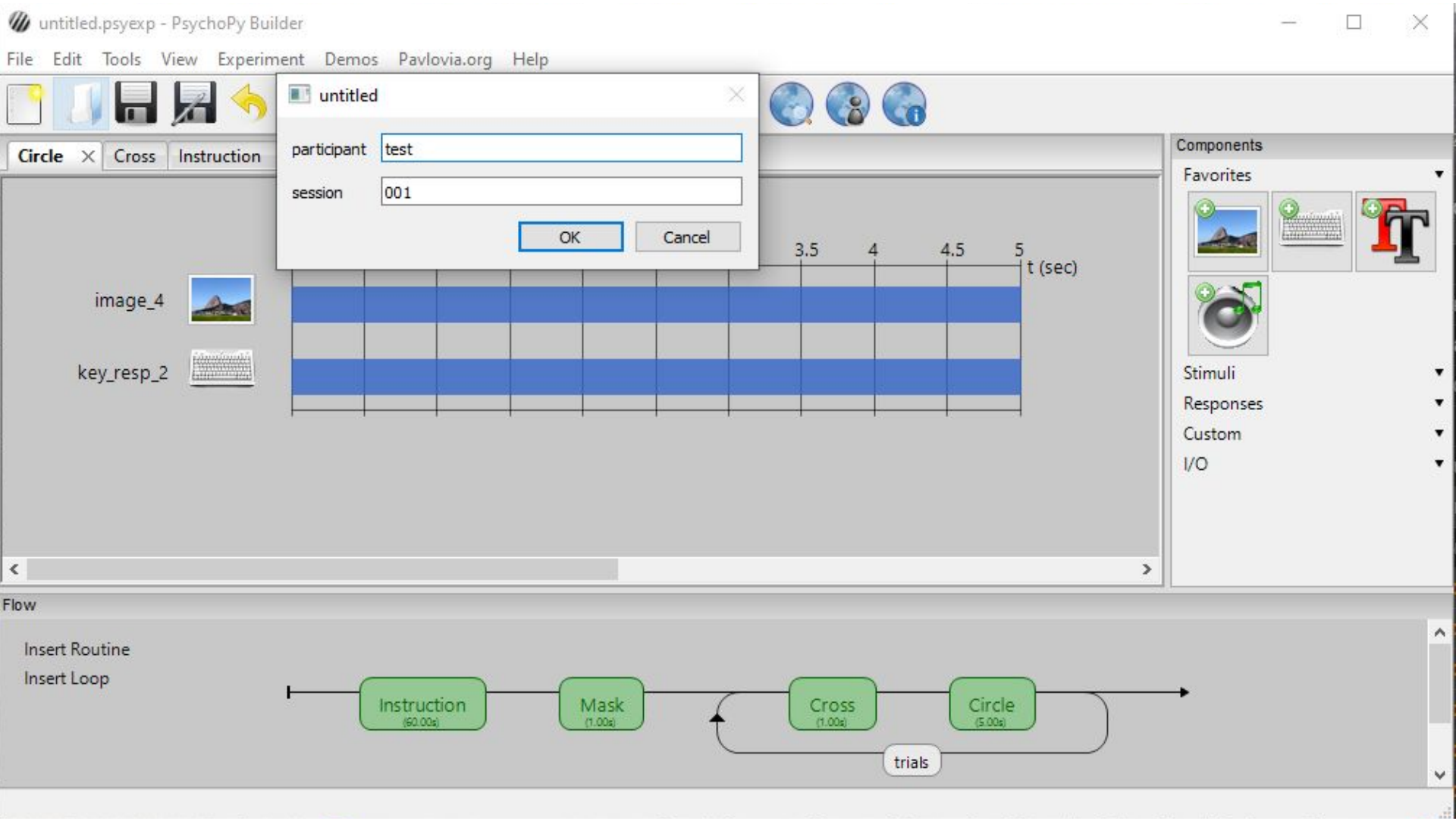
trials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trials

Вот как в итоге должен выглядеть эксперимент и как работать