

INSTRUCTIONS

[click through this document
using the arrow keys]

Dear participant,

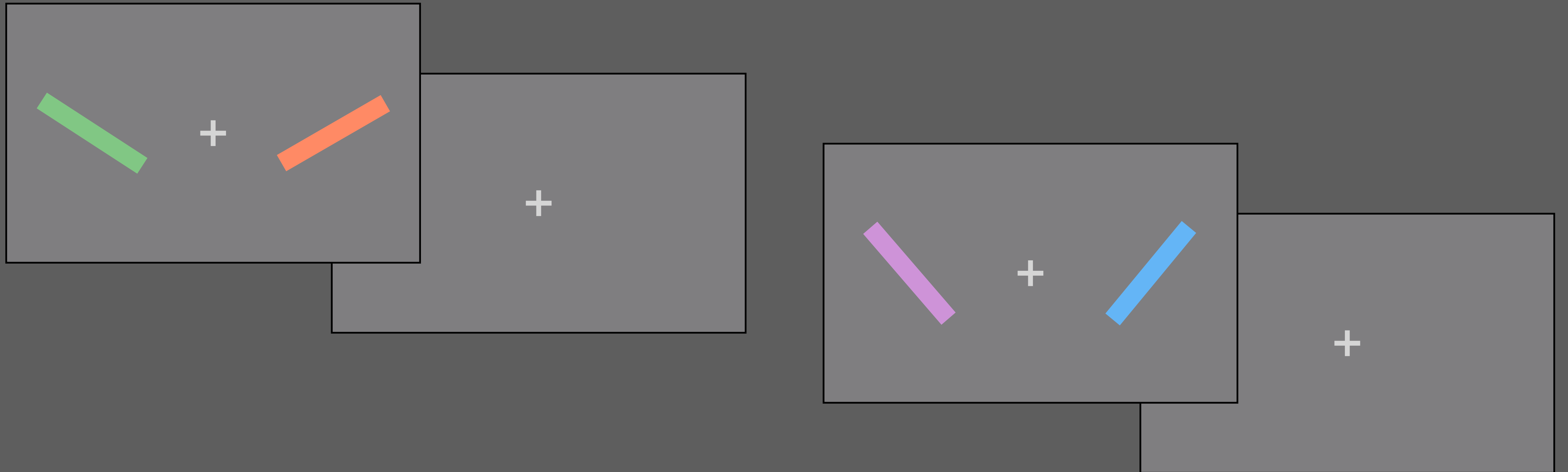
Thank you for agreeing to participate in this experiment.
This document will give you instructions about the task you will perform. If you like, we can go through them together.

In this experiment we will test your visual working memory: the ability to memorise visual information for a short amount of time. You will be asked to memorise the orientation of coloured bars presented on the screen for a short amount of time. After keeping them in mind, you will be asked to reproduce the orientations using a response dial.

These instructions will give you a rough idea of what to expect later. You will also practice the task afterwards.

Good luck!

During the task, coloured oriented bars will be presented on a computer screen. Four of these will appear sequentially (one after the other), in pairs of two, with blank screens in between



Although four different bars are always presented on the screen, only two are relevant for you to memorise & reproduce

Preceding a block you will receive a pre-cue, telling you:

- the relevant colours
- the order in which you need to report them

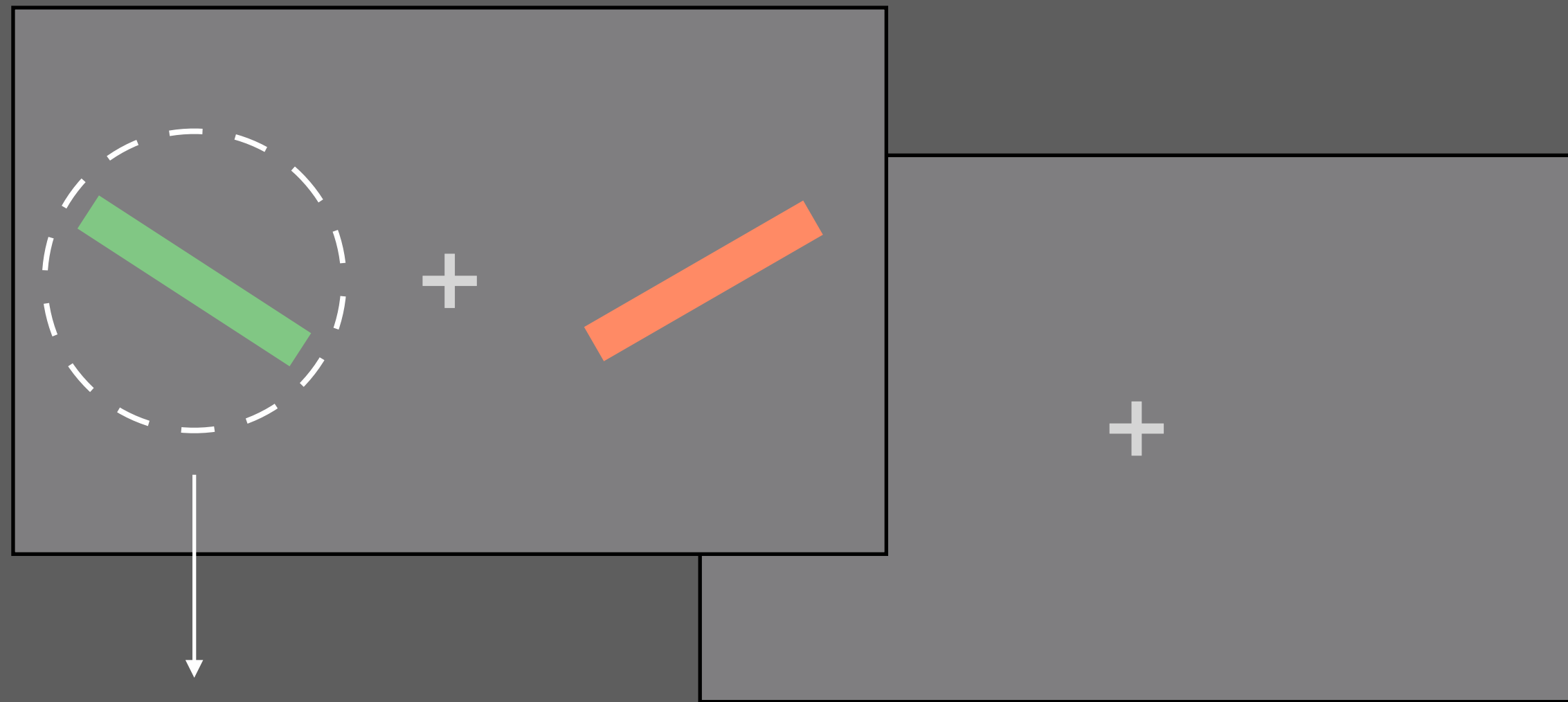


GREEN then BLUE

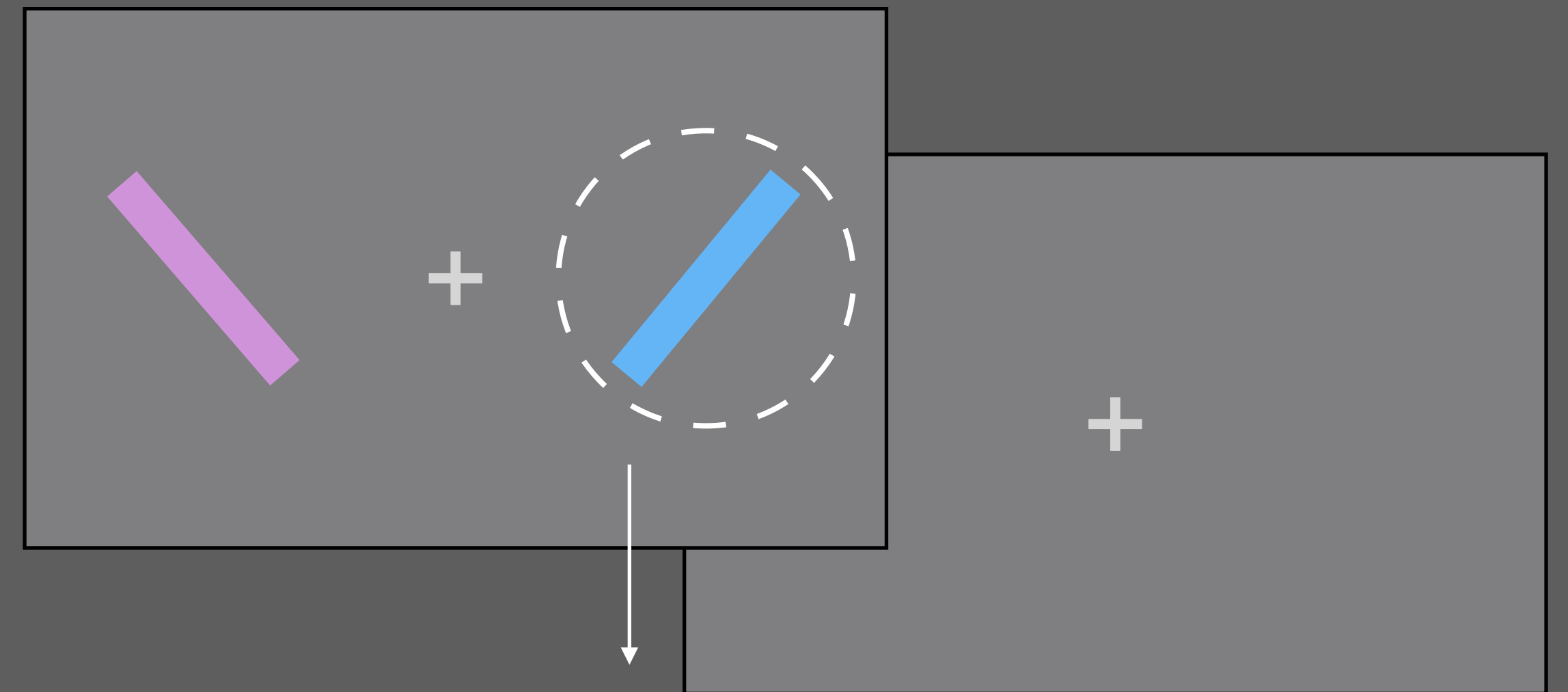
In this example, the relevant colours are GREEN and BLUE
The order in which you'll need them is: green *first*, blue *second*

So, in this example:

GREEN then BLUE



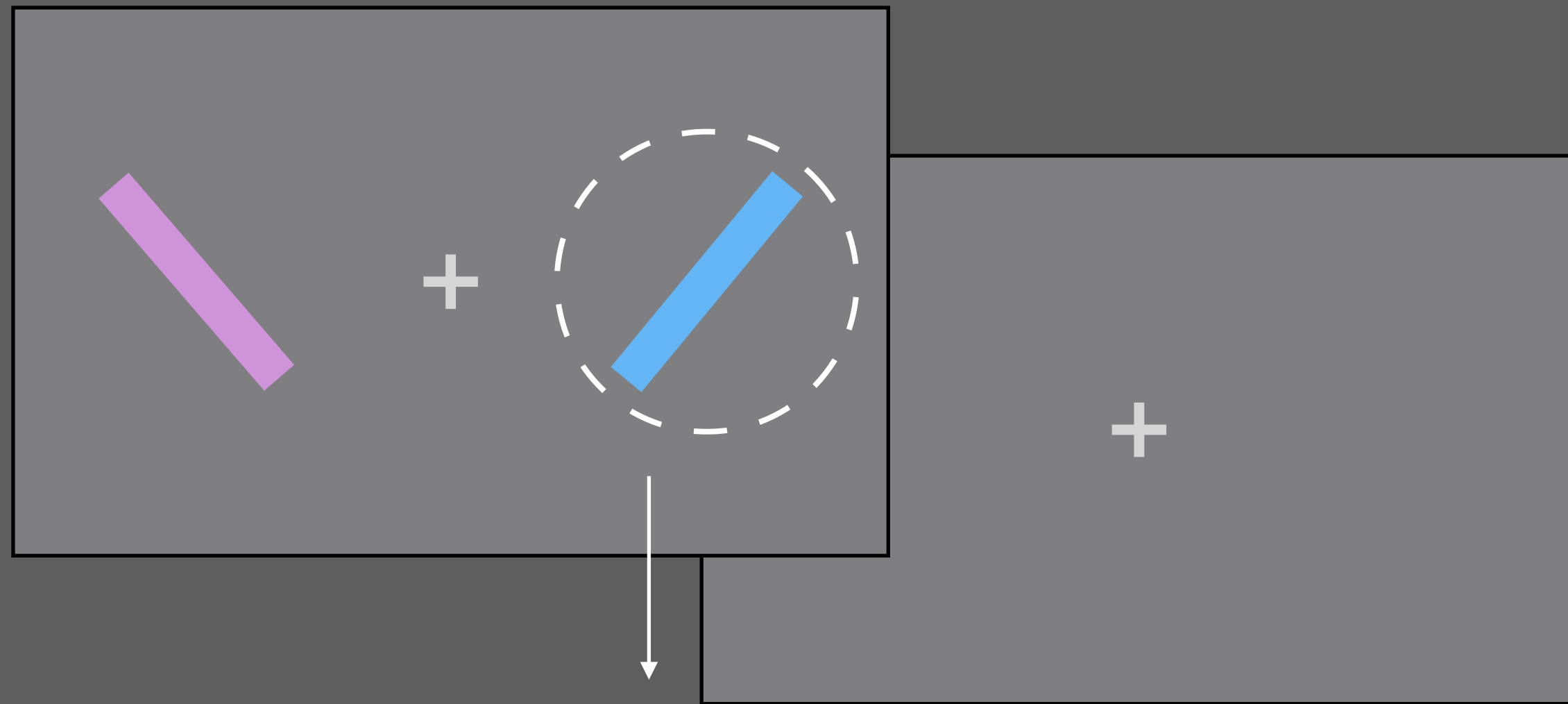
You will need the green bar first



and the blue bar second

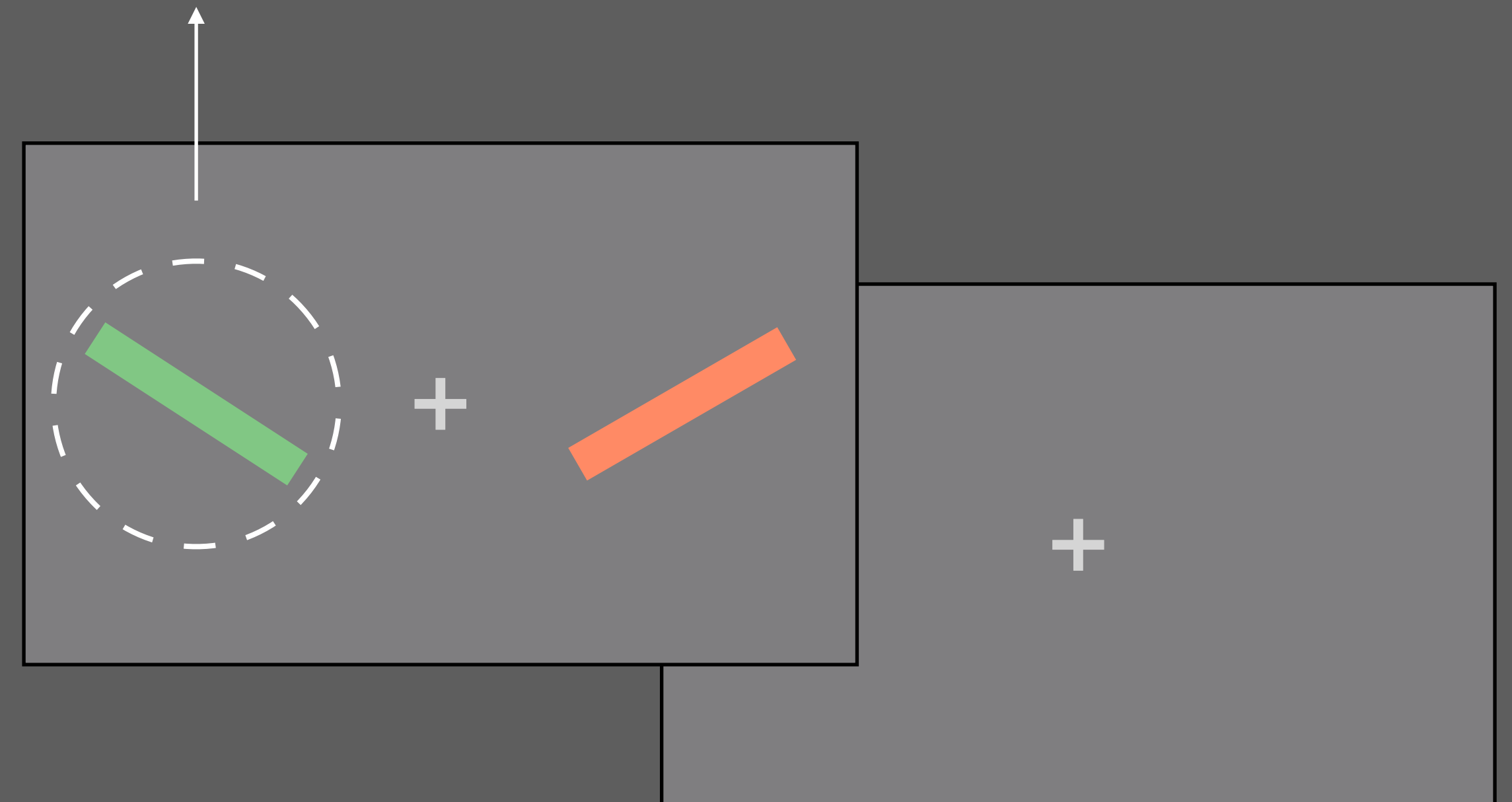
Even when you SEE the blue bar first:

GREEN then BLUE

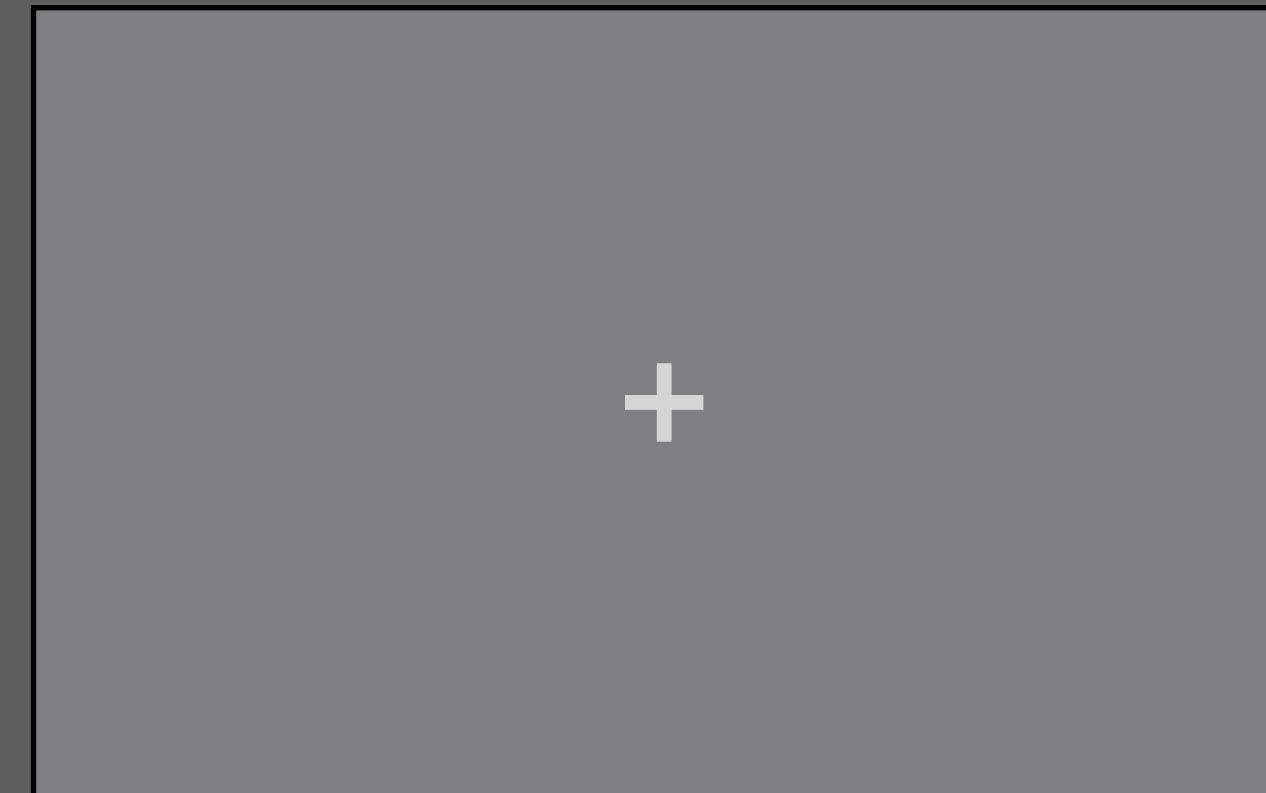
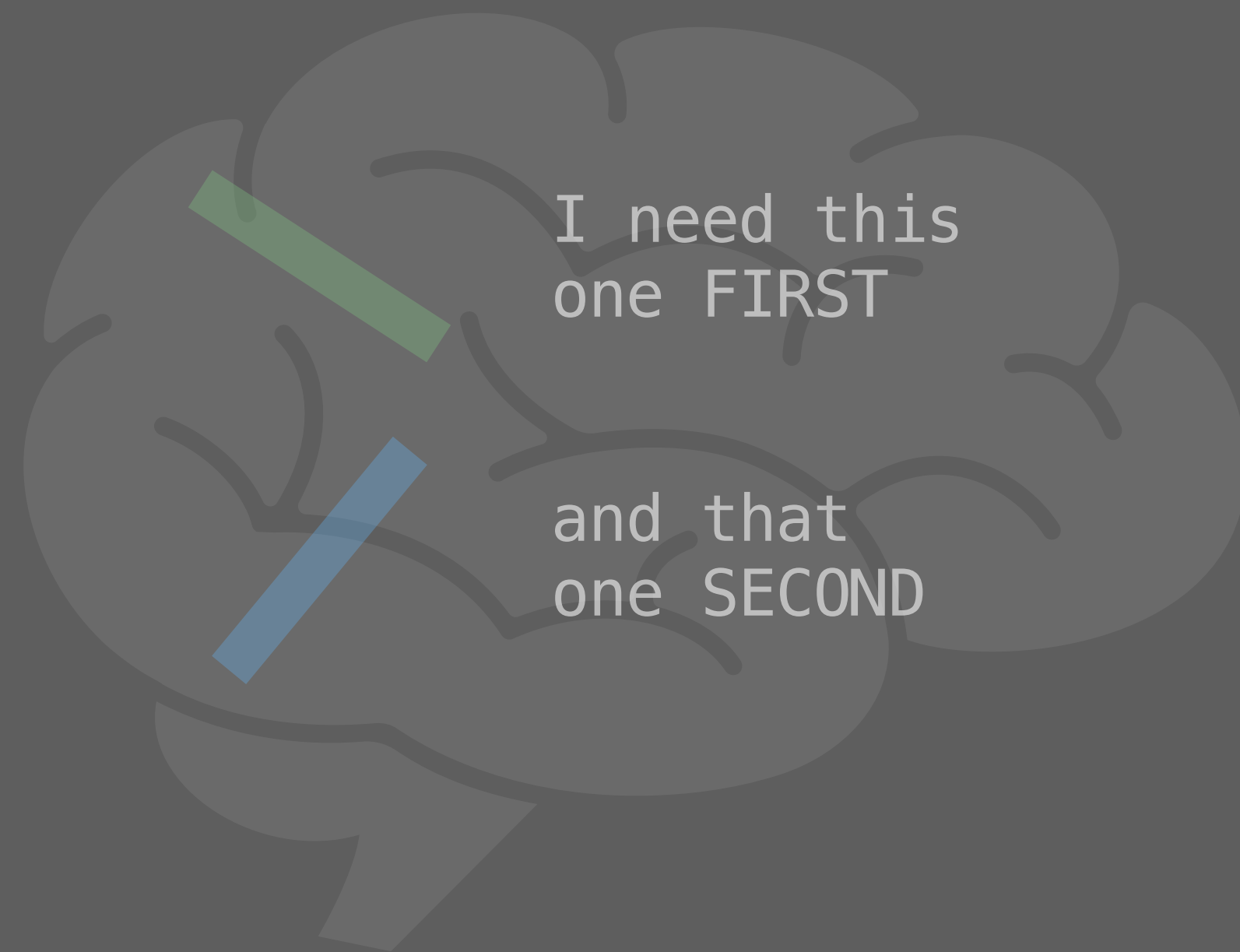


and the blue bar second

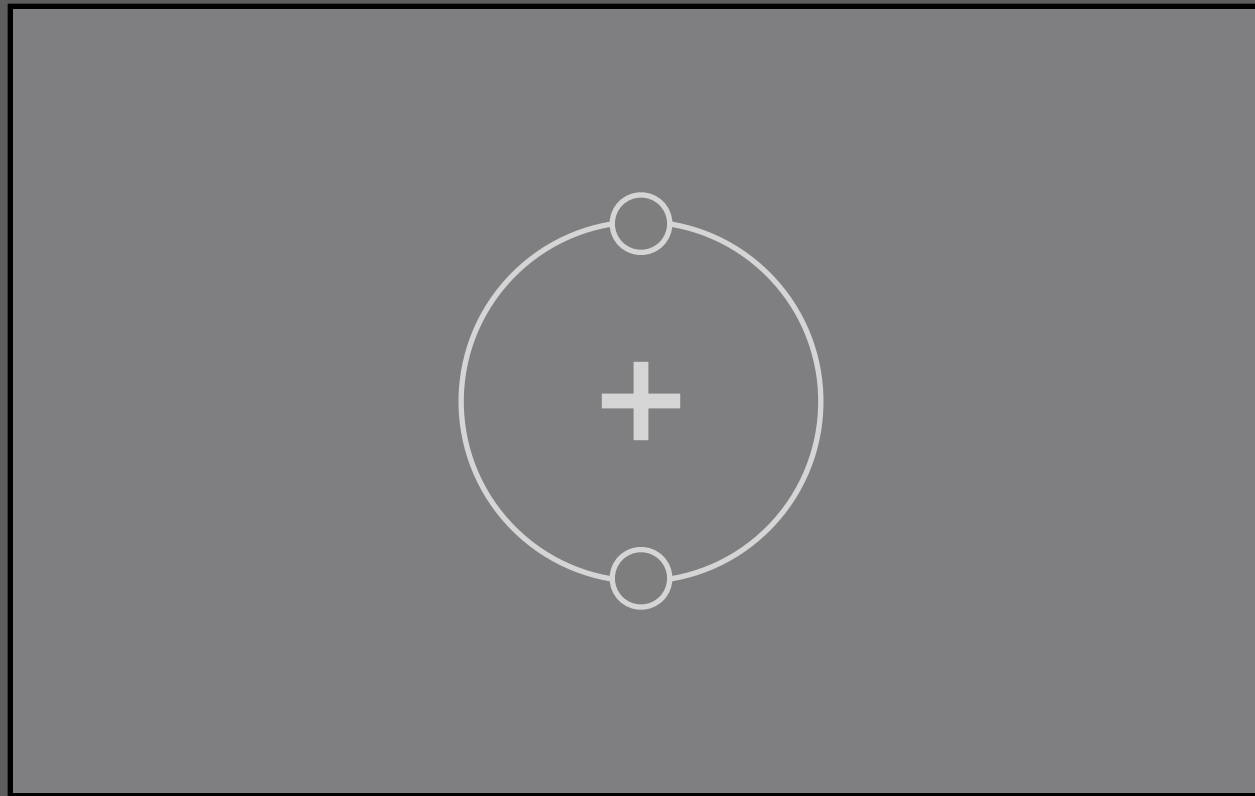
You will NEED the green bar first



After you've seen the bars, you'll keep them in your memory for a short period of time, while looking at the fixation cross

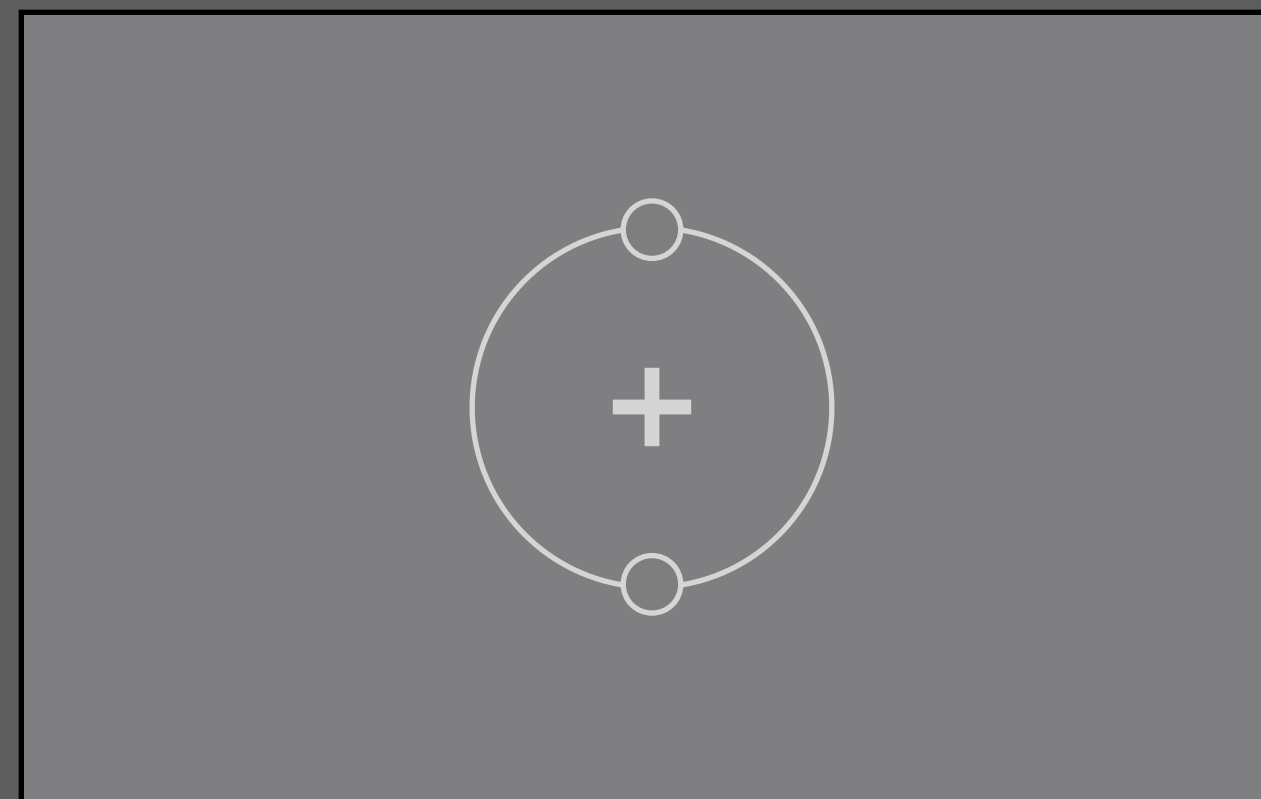
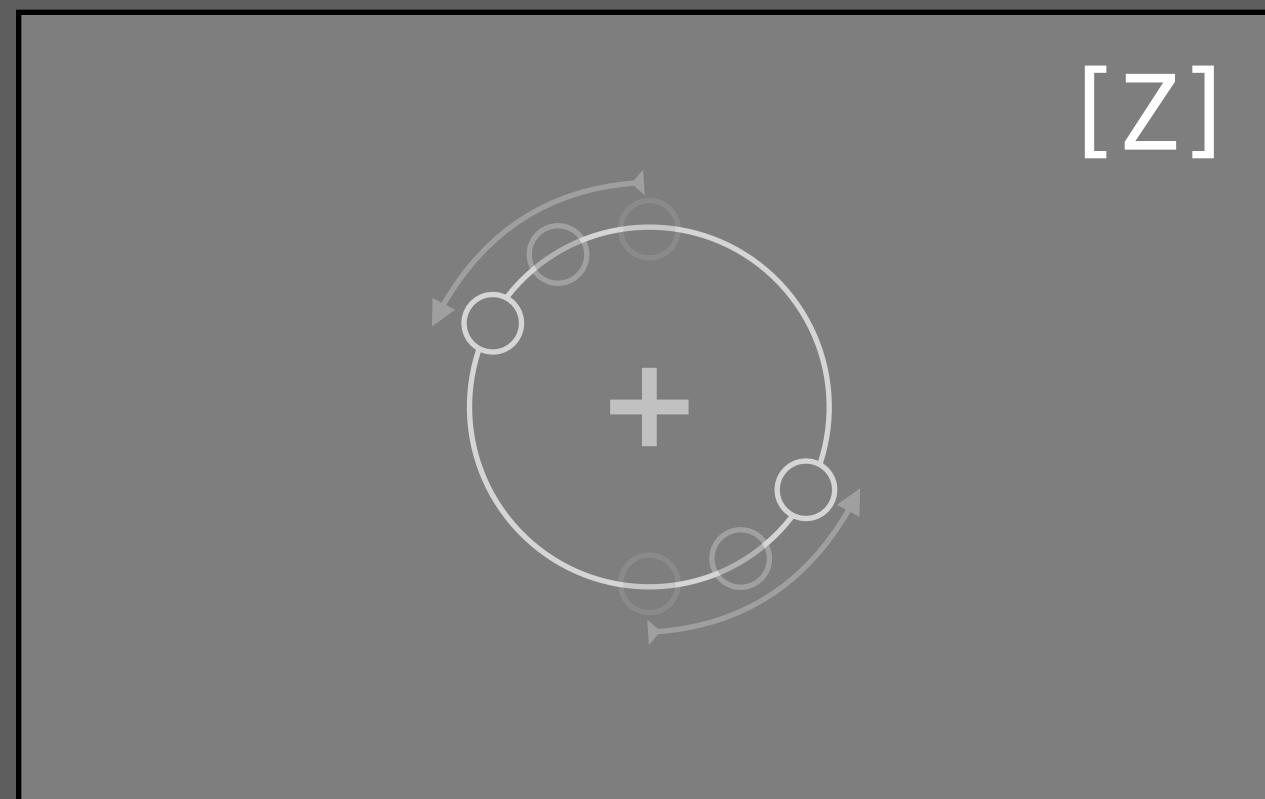


You can reproduce the orientation by turning the handles of the RESPONSE DIAL (kind of like a steering wheel)



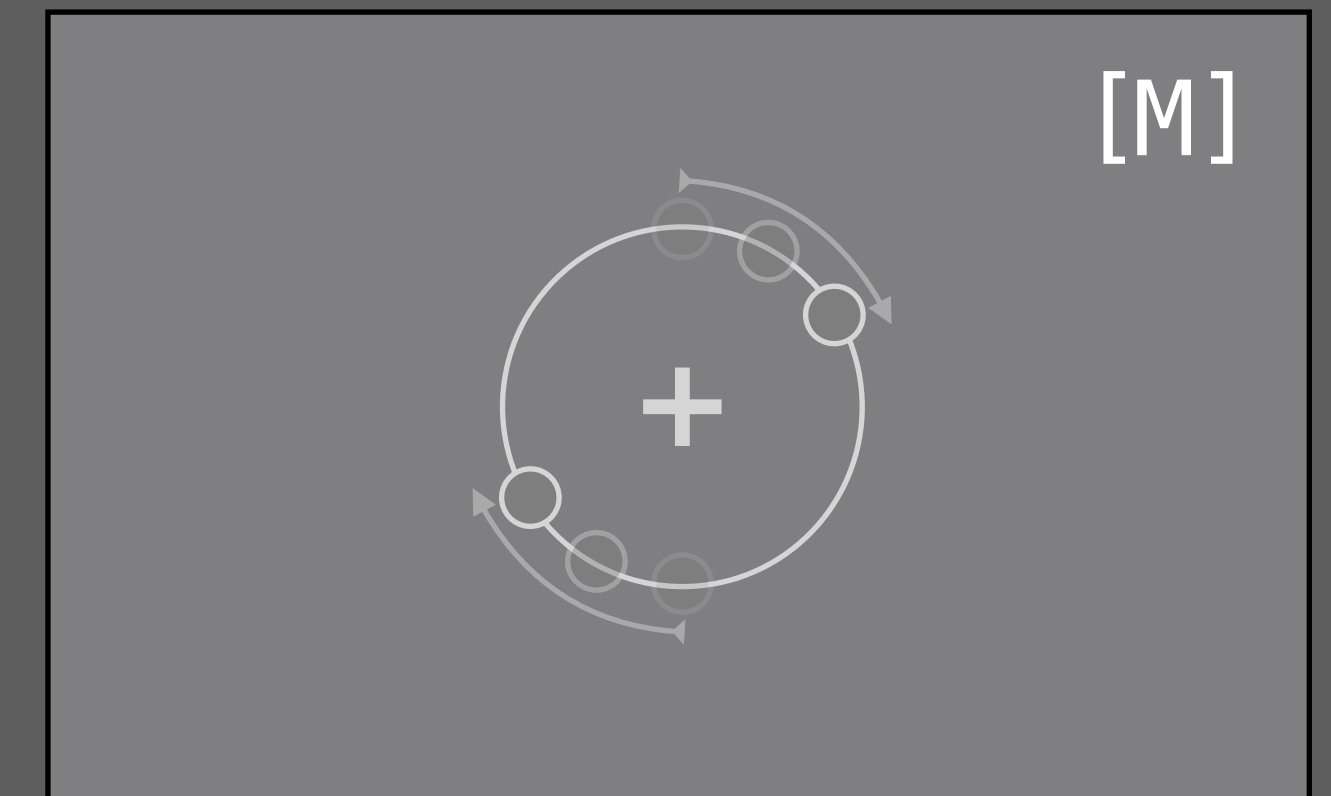
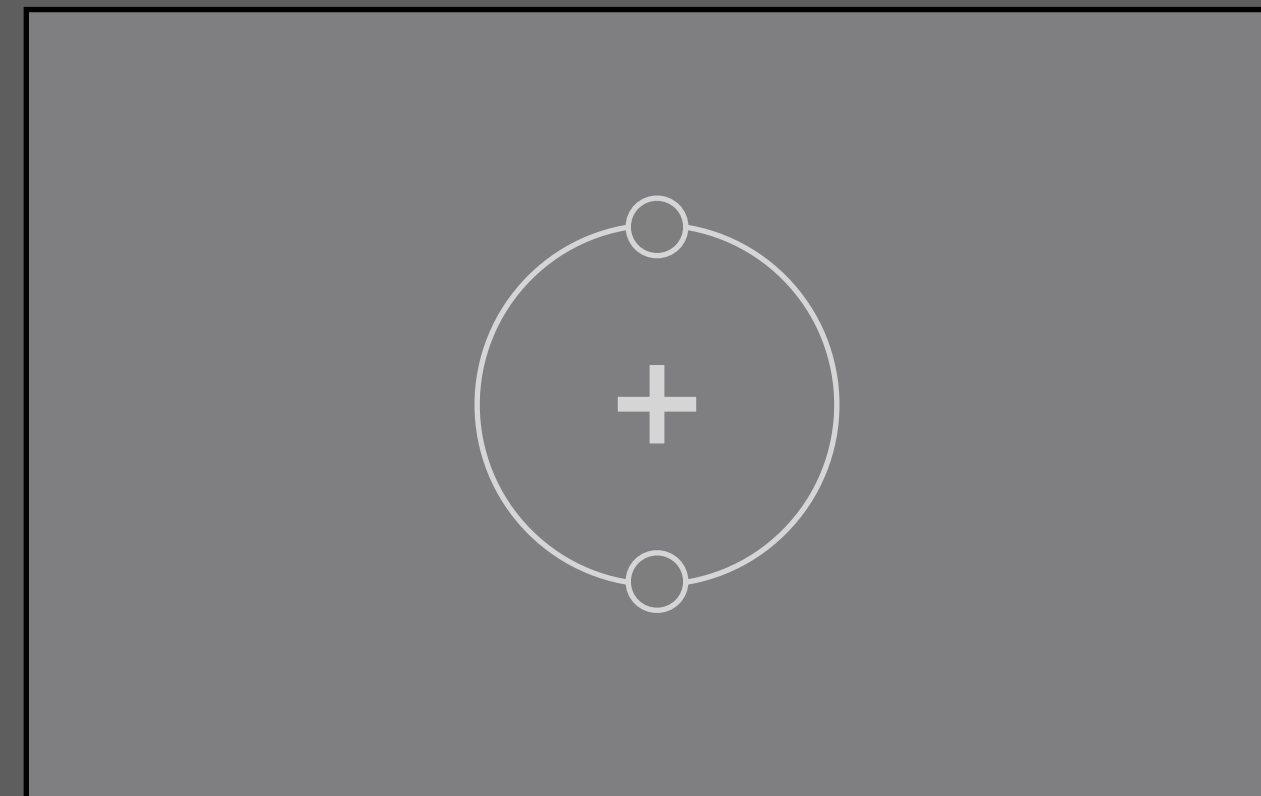
The handles represent an orientation, in this case: it is fully vertical.

You can reproduce the orientation by turning the handles of the RESPONSE DIAL (kind of like a steering wheel)



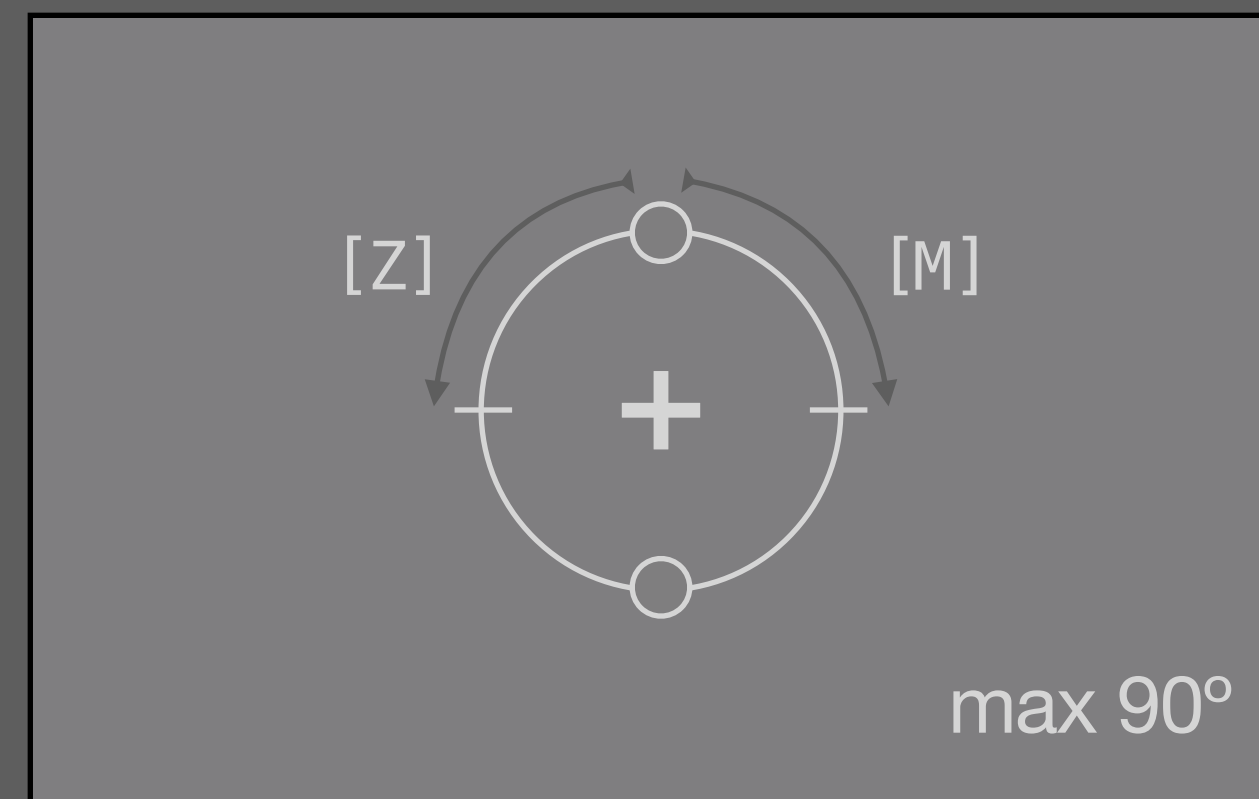
press and hold [Z] with you left index finger
to turn the dial *clockwise*

You can reproduce the orientation by turning the handles of the RESPONSE DIAL (kind of like a steering wheel)



press and hold [M] with you right index finger
to turn the dial *counterclockwise*

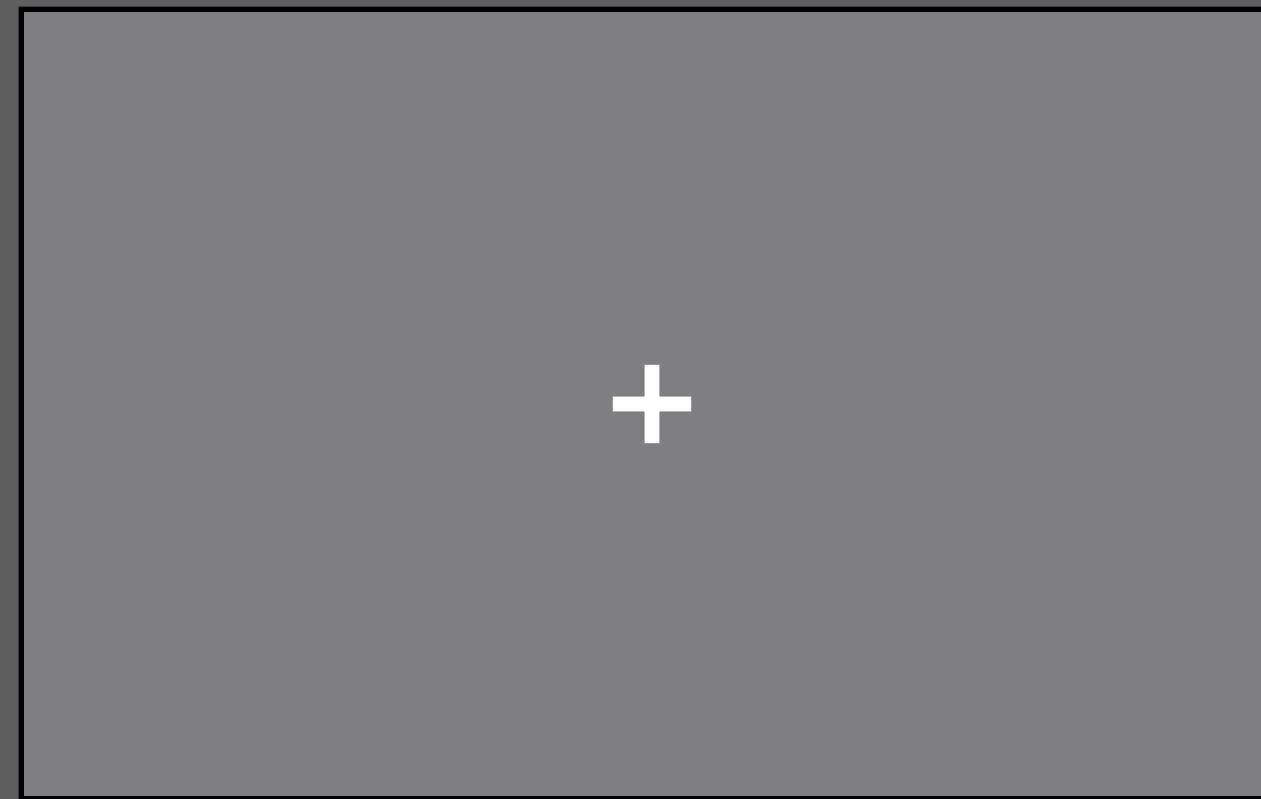
Note: you can only turn the dial 90 degrees in each direction



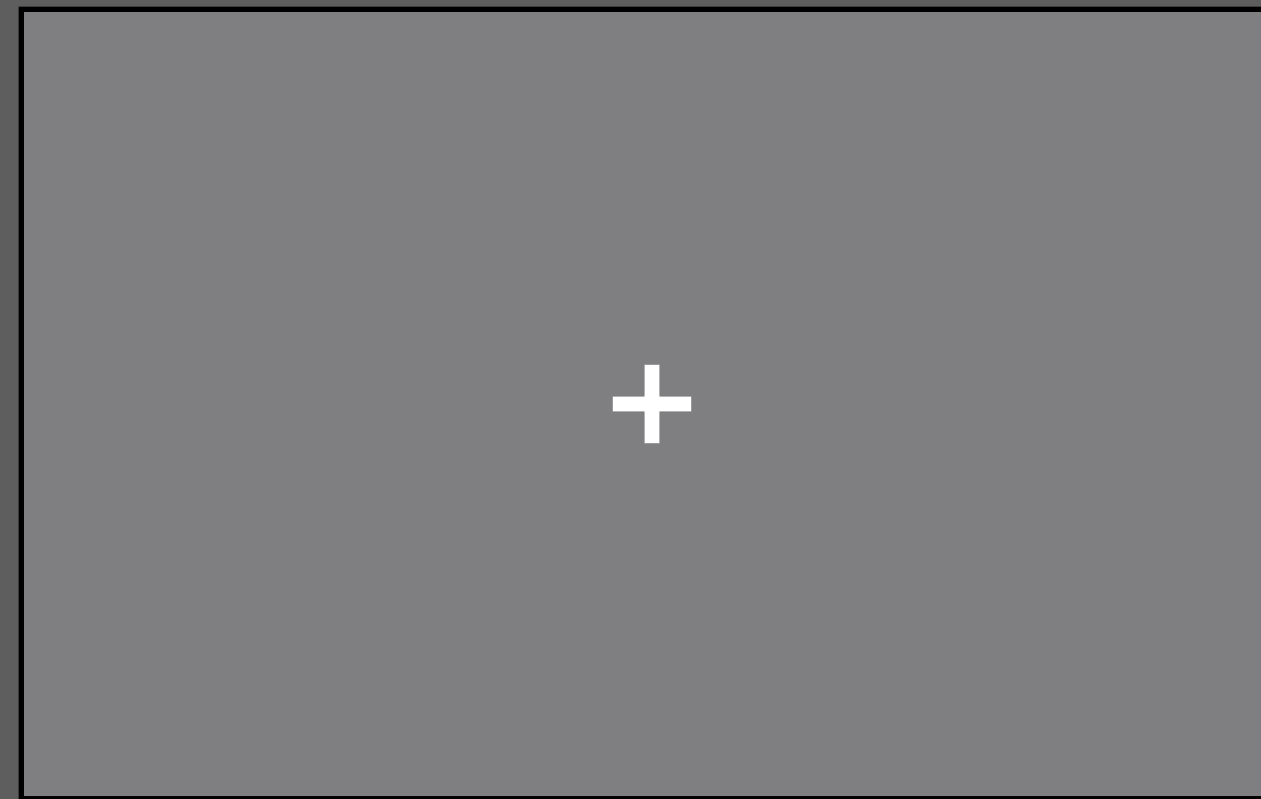
Back to our bars: we remembered the orientations of the GREEN and BLUE bar, and know we need to reproduce the GREEN bar first:



Back to our bars: we remembered the orientations of the GREEN and BLUE bar, and know we need to reproduce the GREEN bar first:

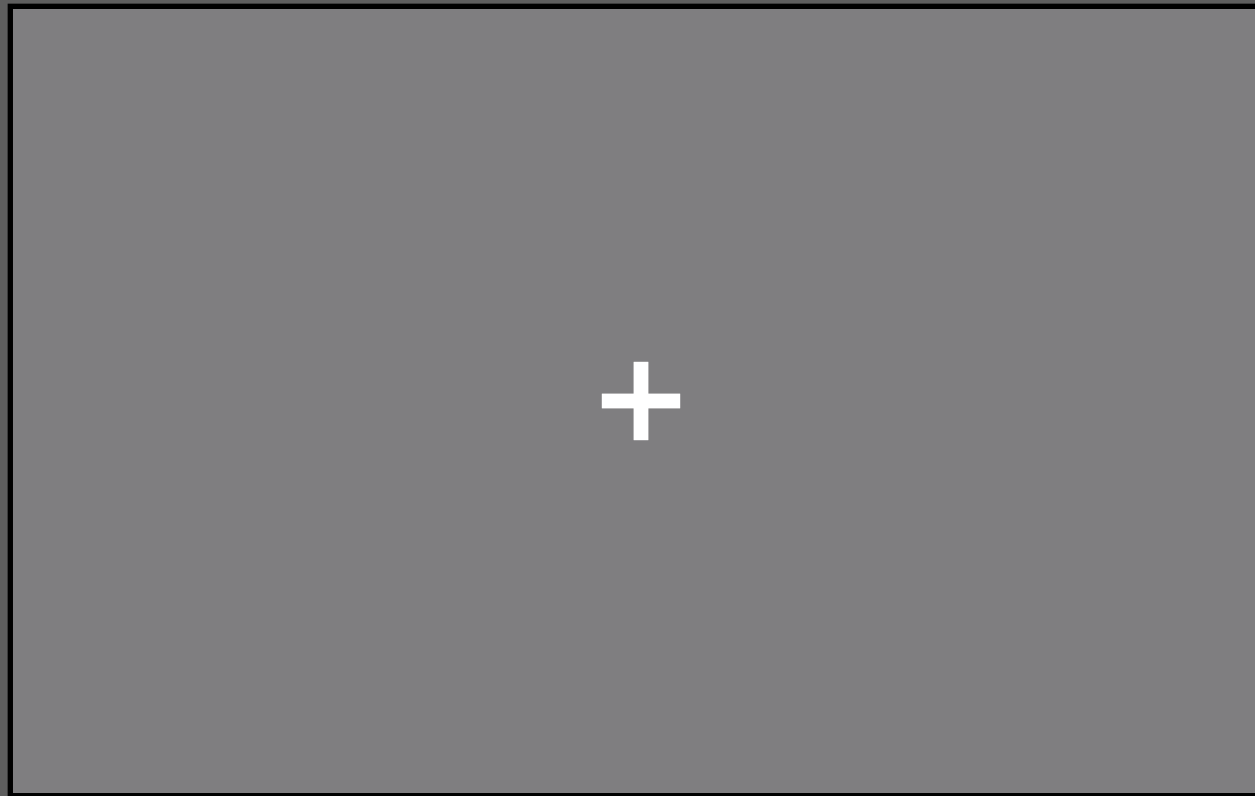


Back to our bars: we remembered the orientations of the GREEN and BLUE bar, and know we need to reproduce the GREEN bar first:



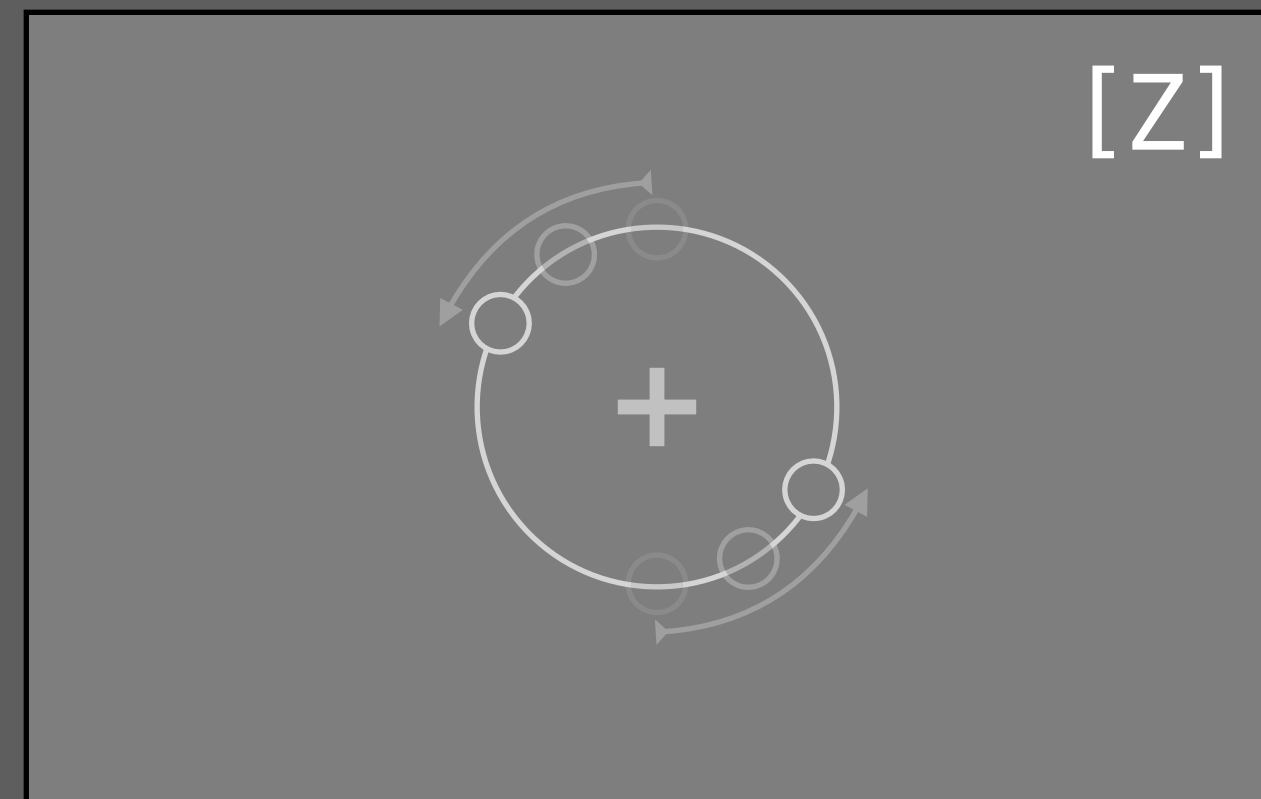
Did you see that? The color of the fixation cross increased in brightness, meaning that you can start reproducing the orientation of the first bar

Back to our bars: we remembered the orientations of the GREEN and BLUE bar, and know we need to reproduce the GREEN bar first:



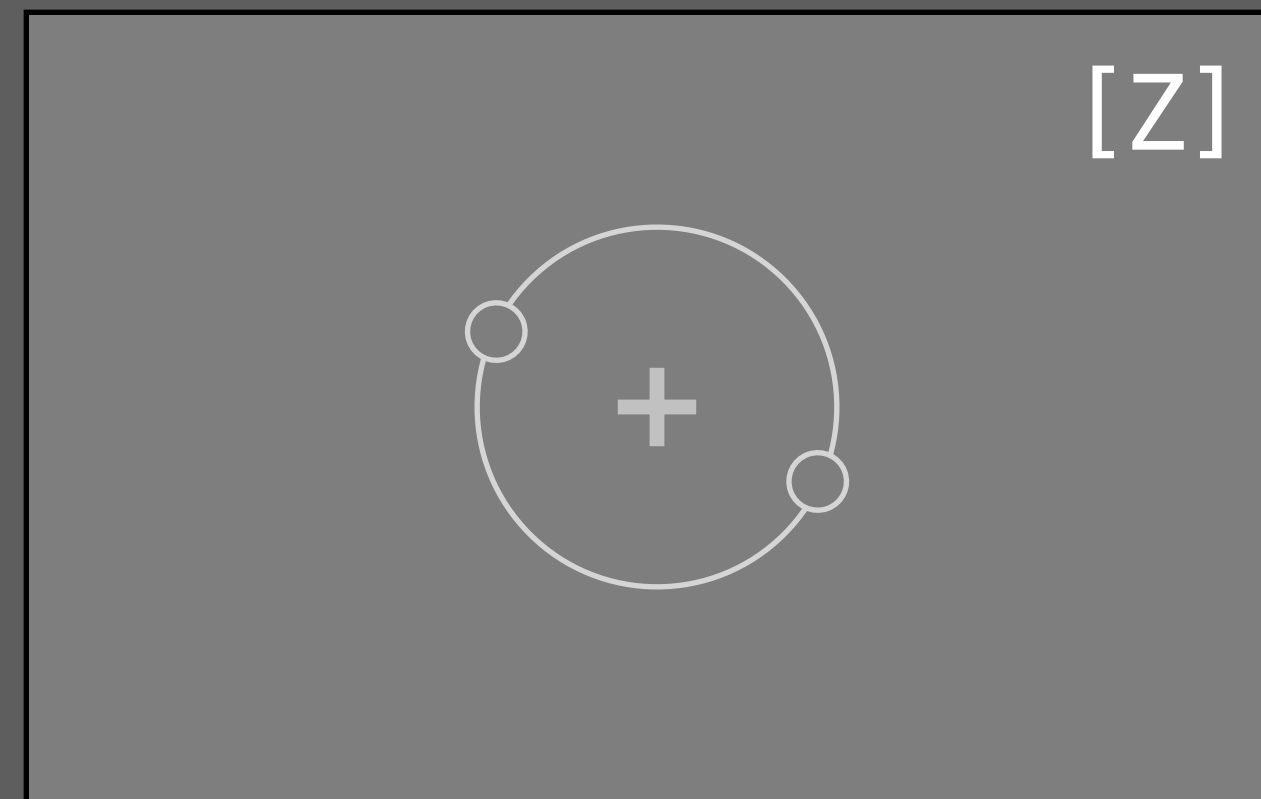
You needed the green bar first. Because it is tilted to the left, you need to press [Z] with your left hand to reproduce it.

Back to our bars: we remembered the orientations of the GREEN and BLUE bar, and know we need to reproduce the GREEN bar first:



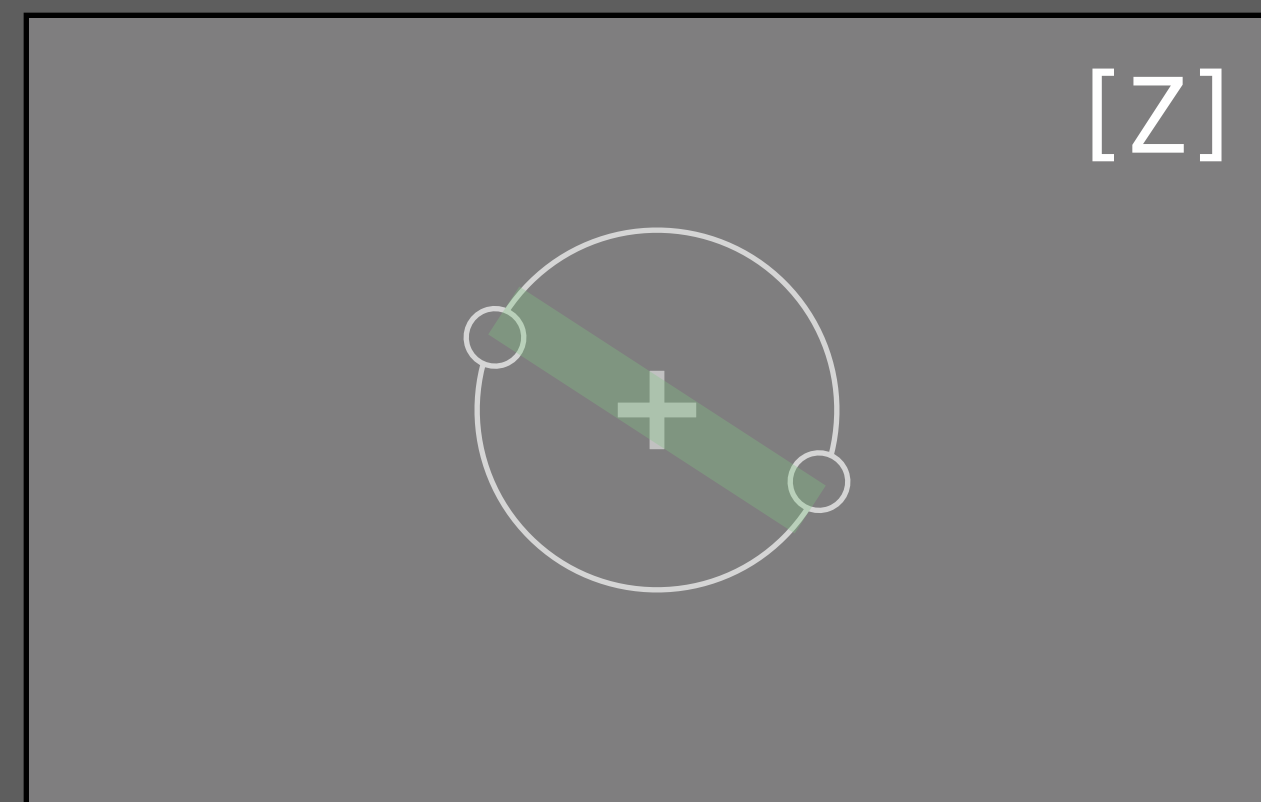
As soon as you press a button, the response dial appears, and the handels start spinning around the dial.

Back to our bars: we remembered the orientations of the GREEN and BLUE bar, and know we need to reproduce the GREEN bar first:



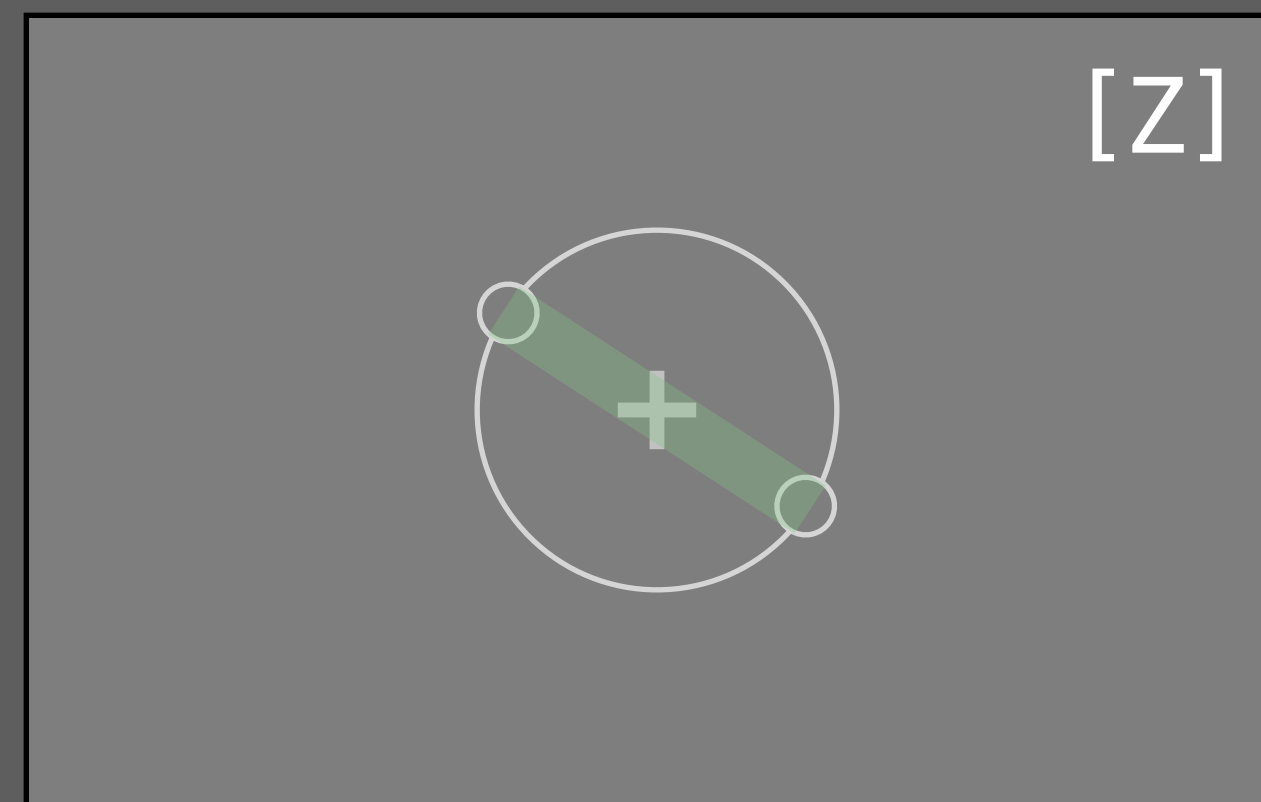
When you release the button, the handles stop spinning, and your response is made.

Back to our bars: we remembered the orientations of the GREEN and BLUE bar, and know we need to reproduce the GREEN bar first:



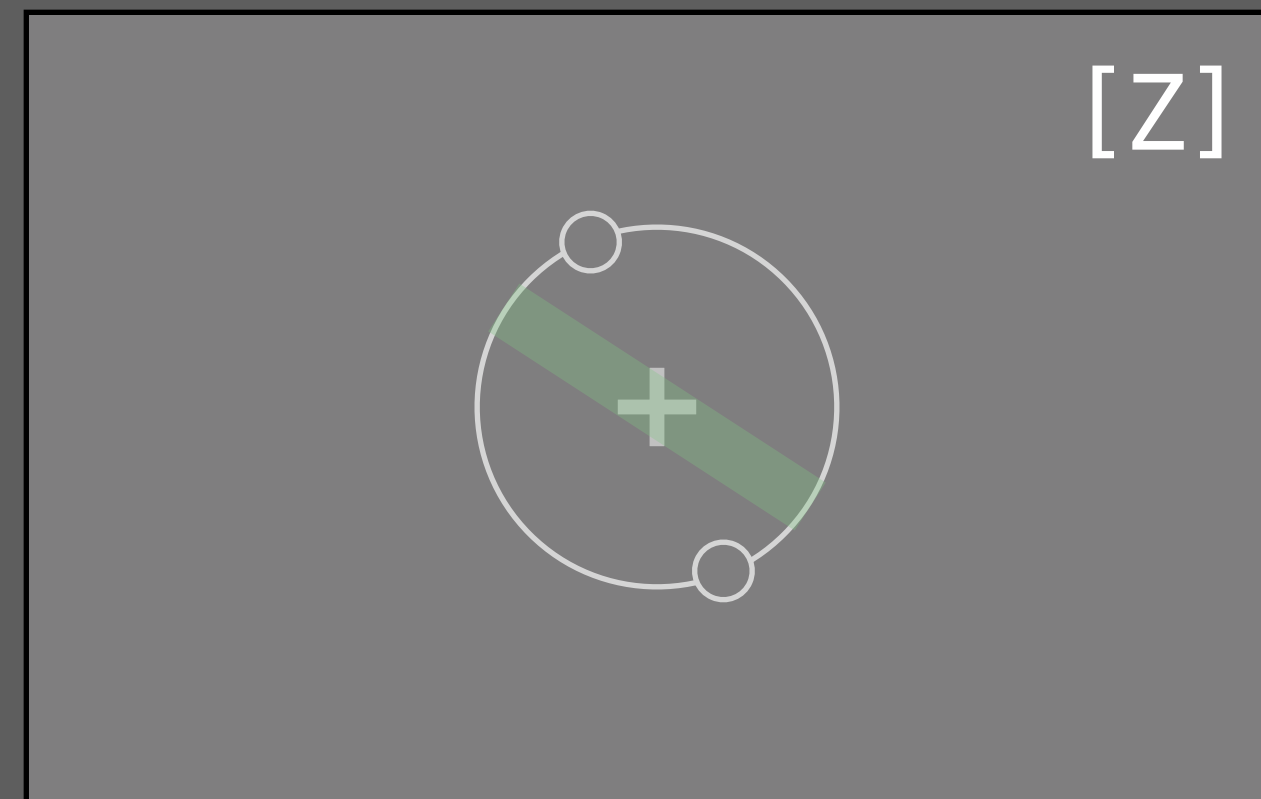
If you match the orientation of the handles to the one of the GREEN BAR you'll see they are quite similar (but not 100% identical)

Back to our bars: we remembered the orientations of the GREEN and BLUE bar, and know we need to reproduce the GREEN bar first:



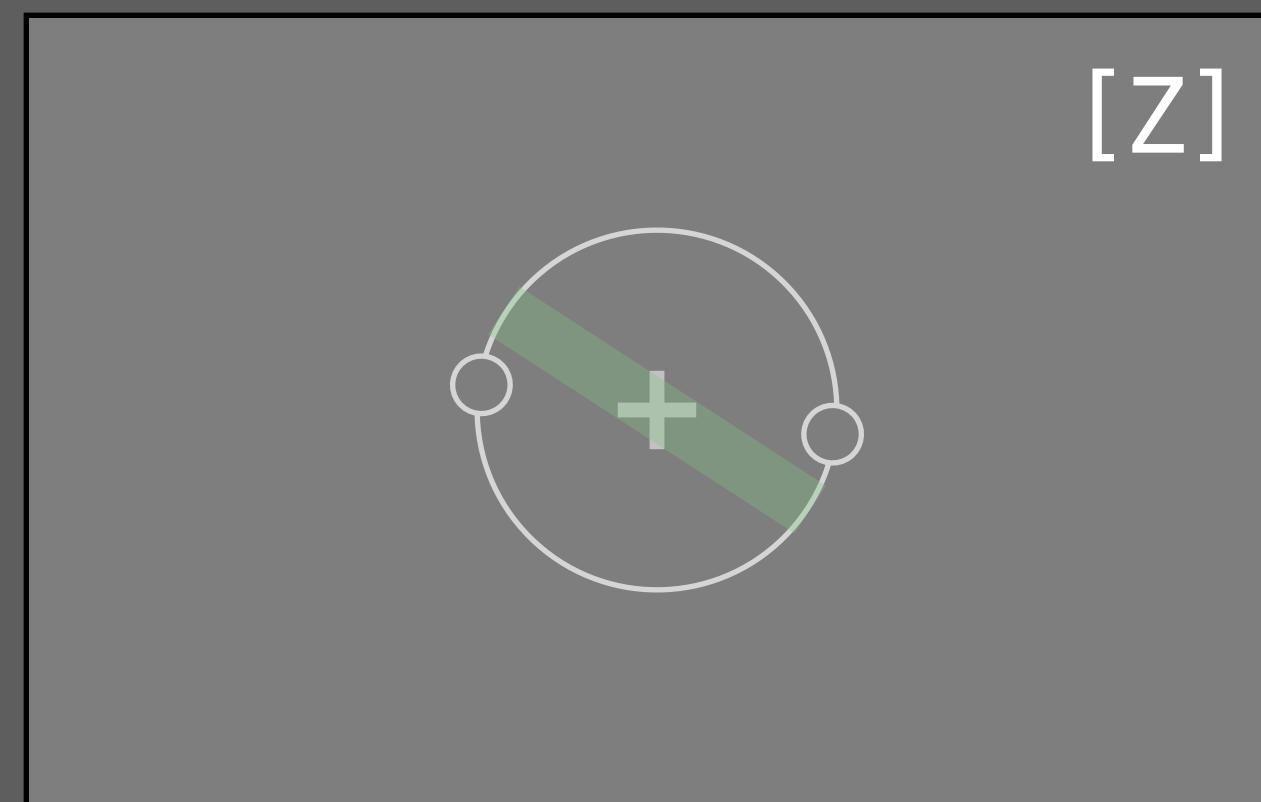
The close to the real orientation, the better. In this case, you pressed the button slightly too long. Had you pressed it shorter, it would have been identical.

Back to our bars: we remembered the orientations of the GREEN and BLUE bar, and know we need to reproduce the GREEN bar first:



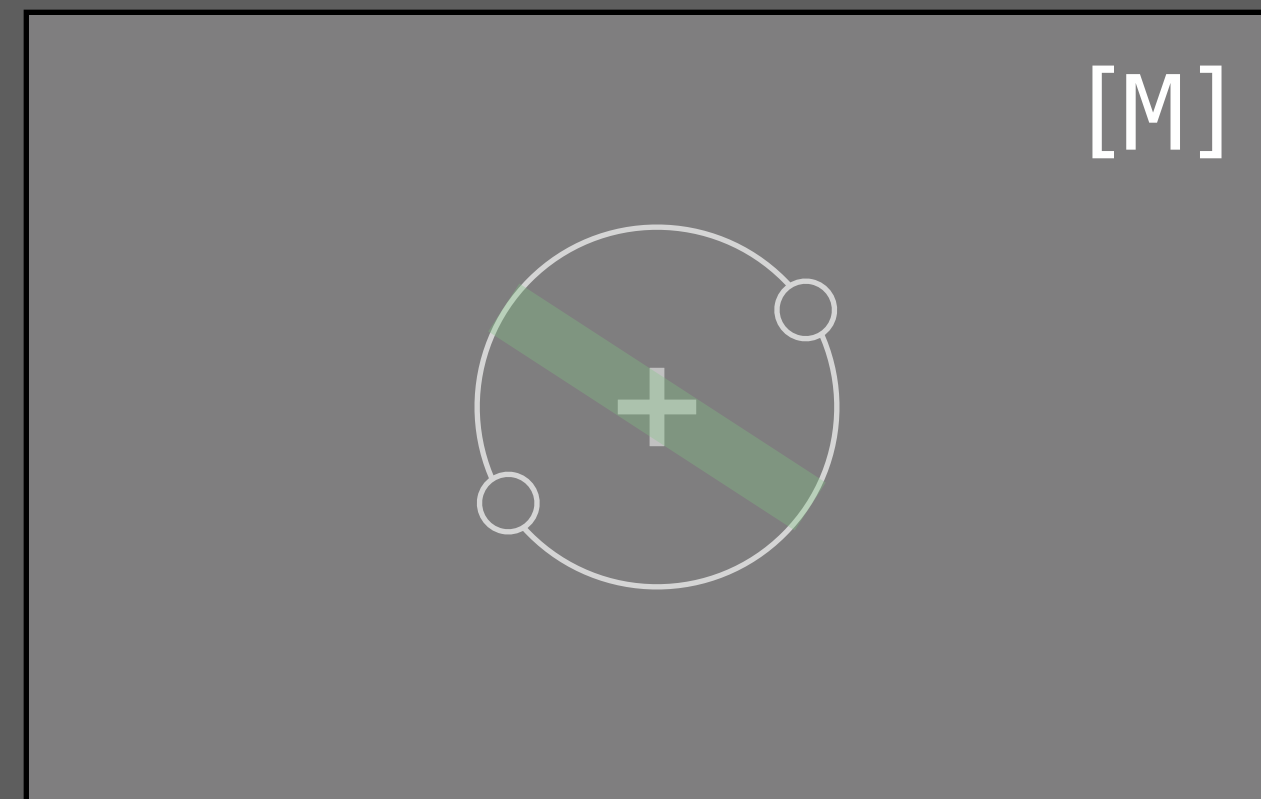
Had you pressed it even shorter, you would have missed the target

Back to our bars: we remembered the orientations of the GREEN and BLUE bar, and know we need to reproduce the GREEN bar first:



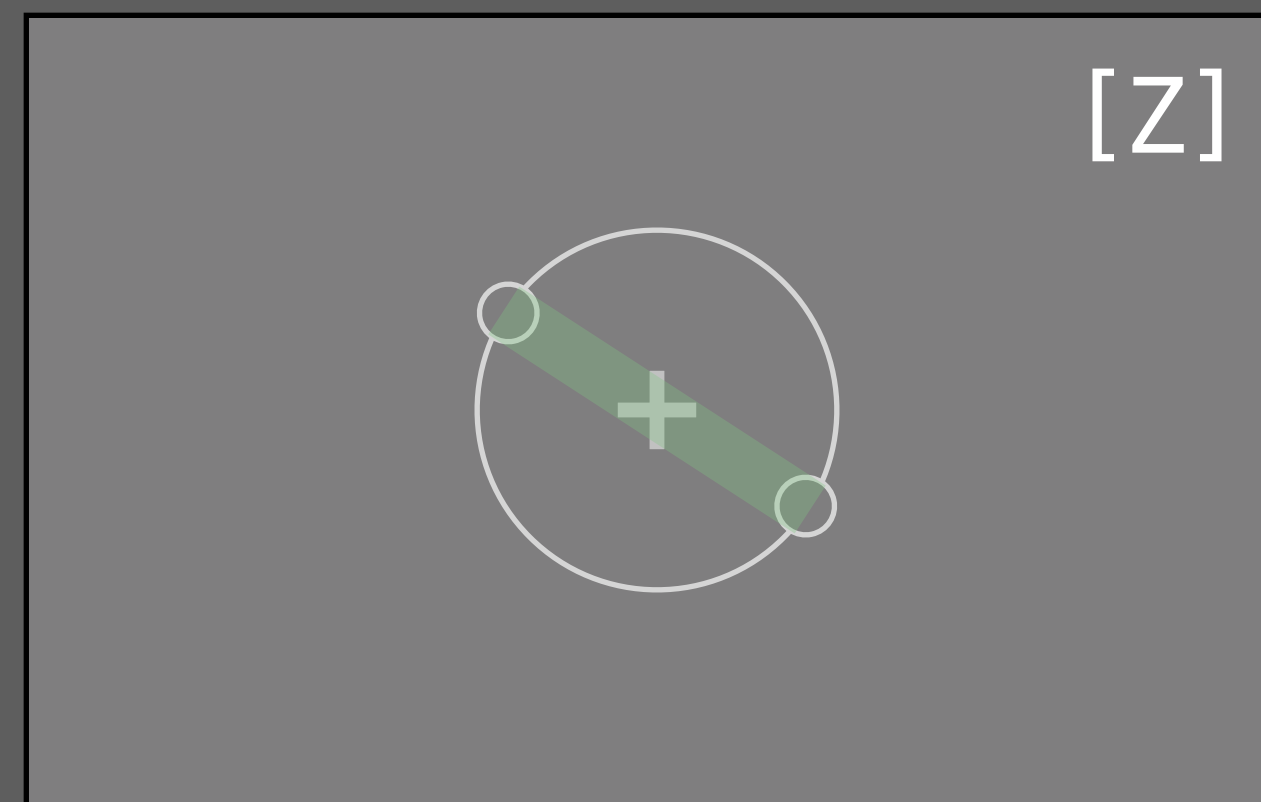
Had you pressed it longer, you would have also missed the target

Back to our bars: we remembered the orientations of the GREEN and BLUE bar, and know we need to reproduce the GREEN bar first:



Had you pressed the wrong button [M], you would have been even more off

Back to our bars: we remembered the orientations of the GREEN and BLUE bar, and know we need to reproduce the GREEN bar first:



In other words: you need to press the correct button, but also time the duration of your button press to get it right!

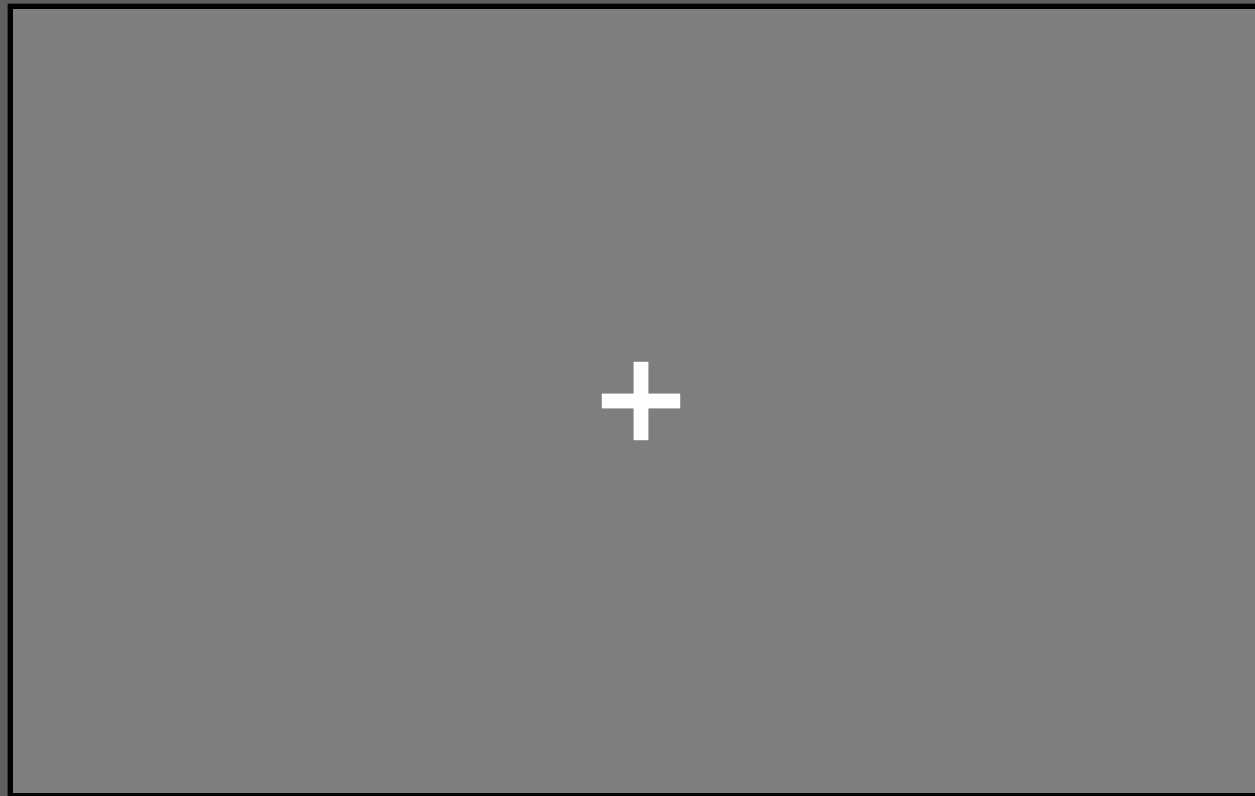
Try to get it as close to the orientation of the bar as you can

Back to our bars: we remembered the orientations of the GREEN and BLUE bar, and know we need to reproduce the GREEN bar first:



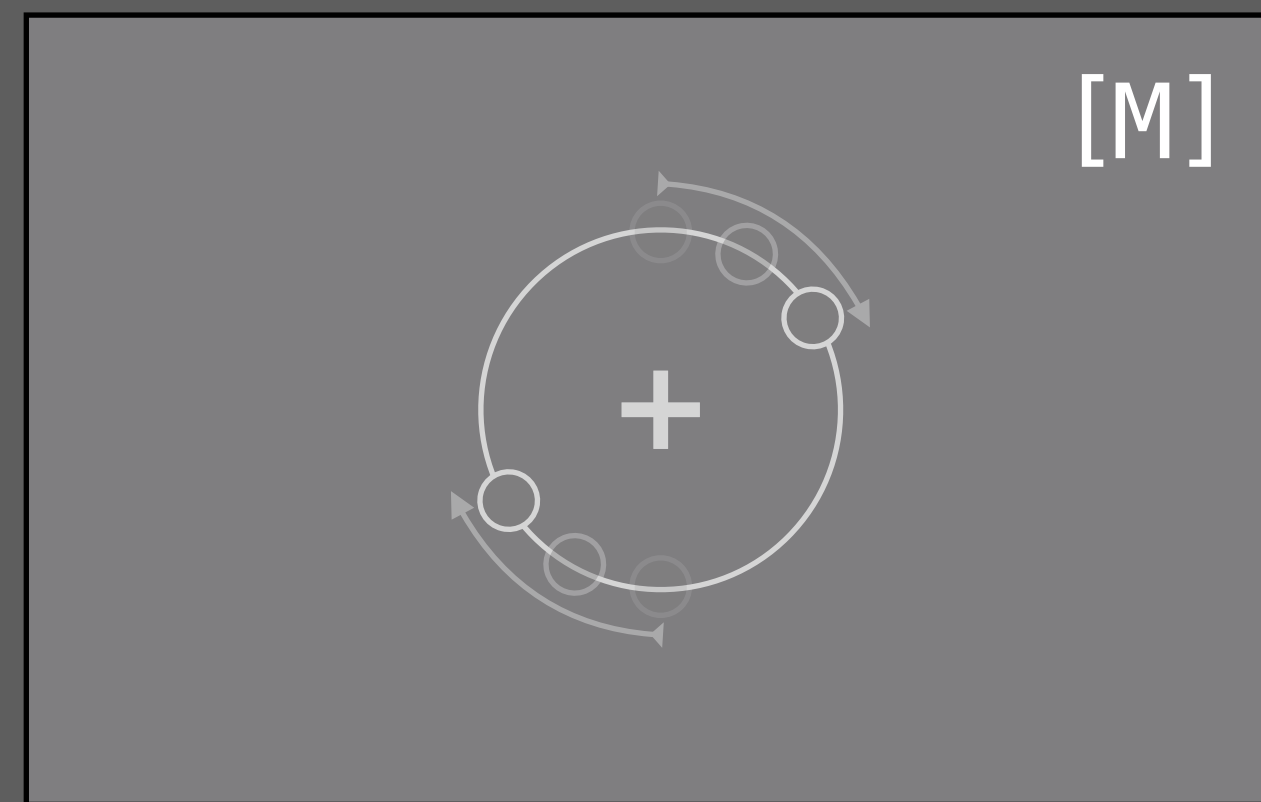
After reproducing the first bar, the dial disappears

Back to our bars: we remembered the orientations of the GREEN and BLUE bar, and now we need to reproduce the GREEN bar first:



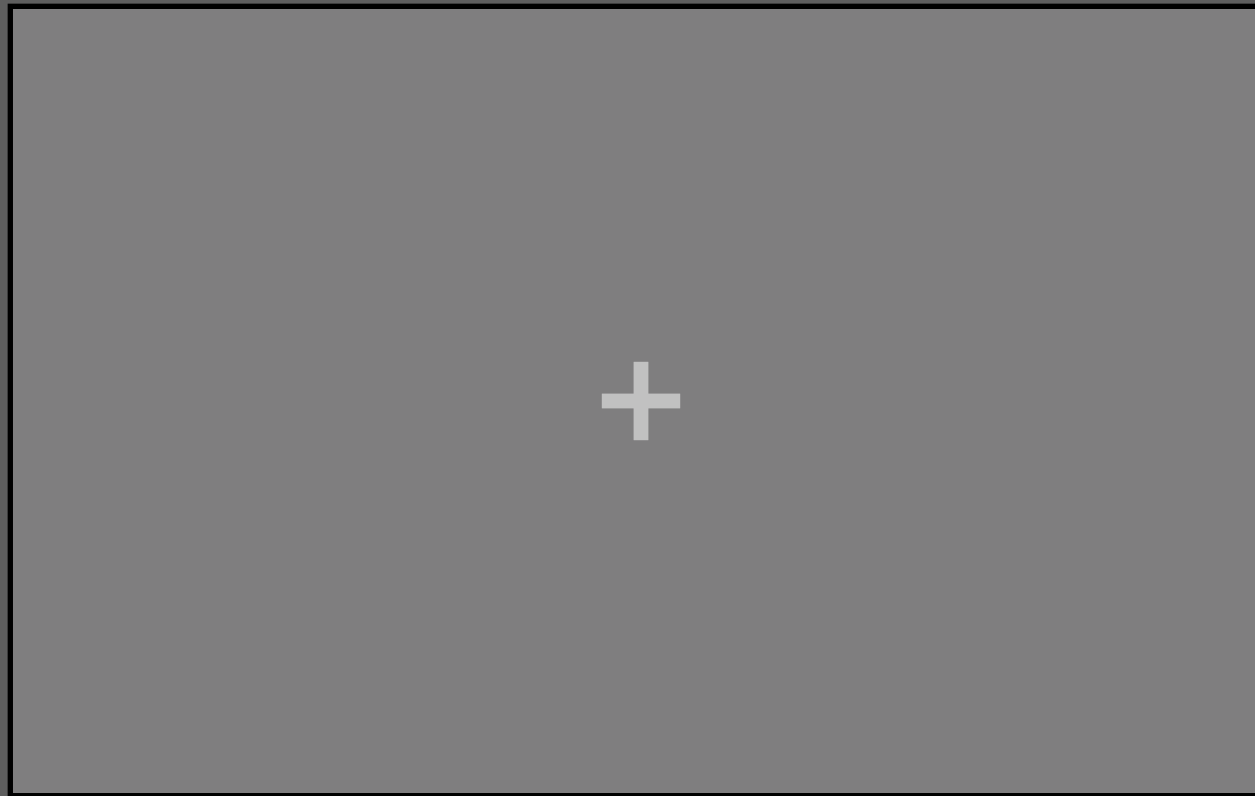
As soon as the color of the fixation cross increased in brightness again, you can start reproducing the orientation of the second bar.

Back to our bars: we remembered the orientations of the GREEN and BLUE bar, and know we need to reproduce the GREEN bar first:



It was tilted to the right, so you need to press [M] with your right hand to reproduce it.

Back to our bars: we remembered the orientations of the GREEN and BLUE bar, and know we need to reproduce the GREEN bar first:



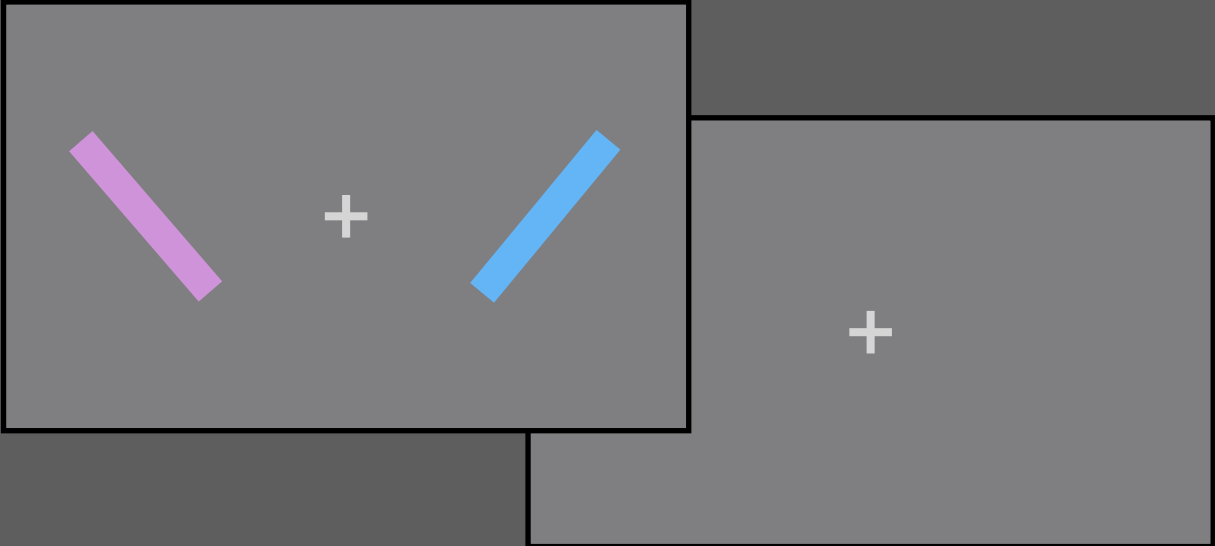
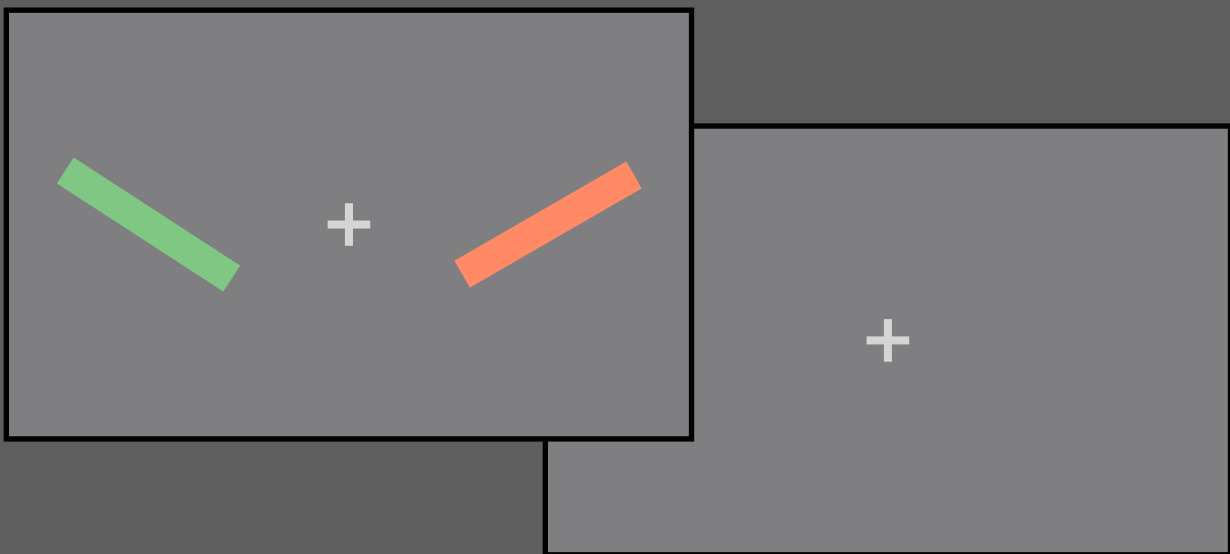
The dial disappears again, and you'll receive feedback

SUMMARY *GOAL:* remember the orientation of coloured bars, and reproduce them in the correct order (example: green first, blue second)

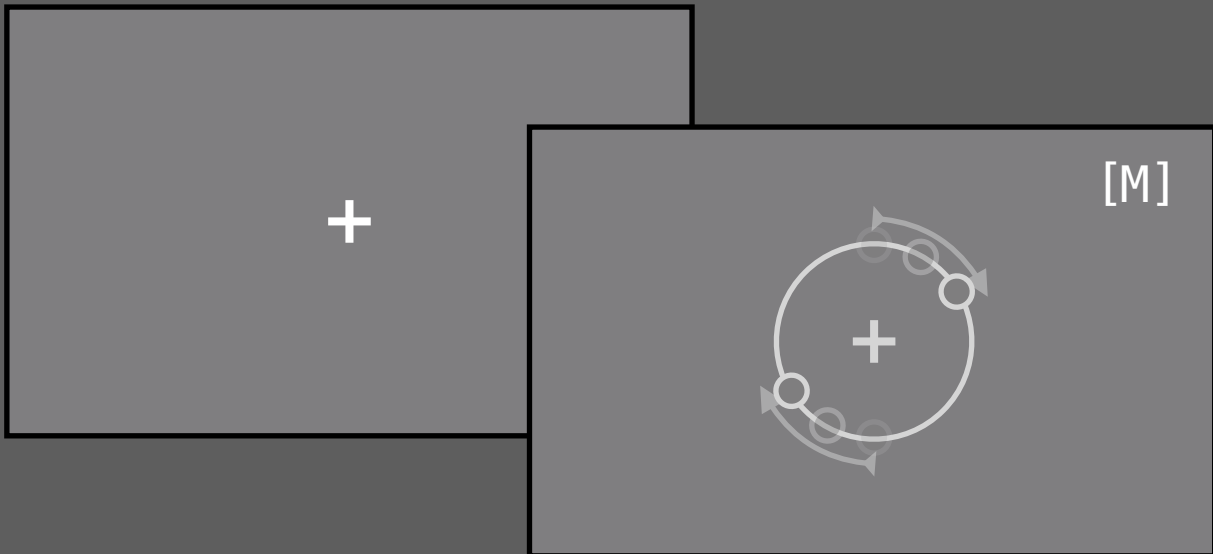
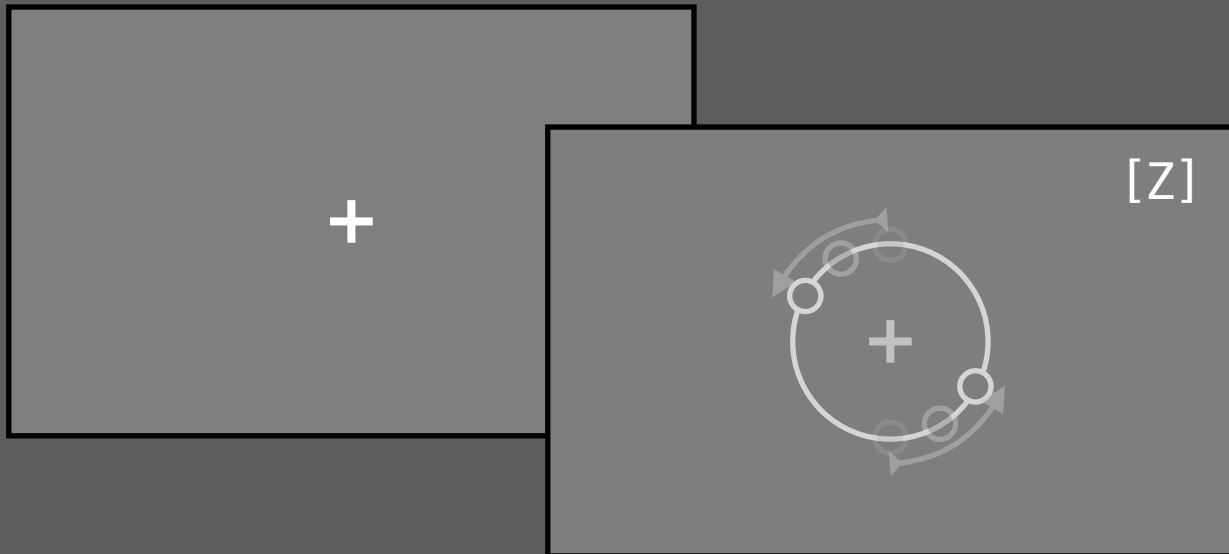
Before block:
color & order cue



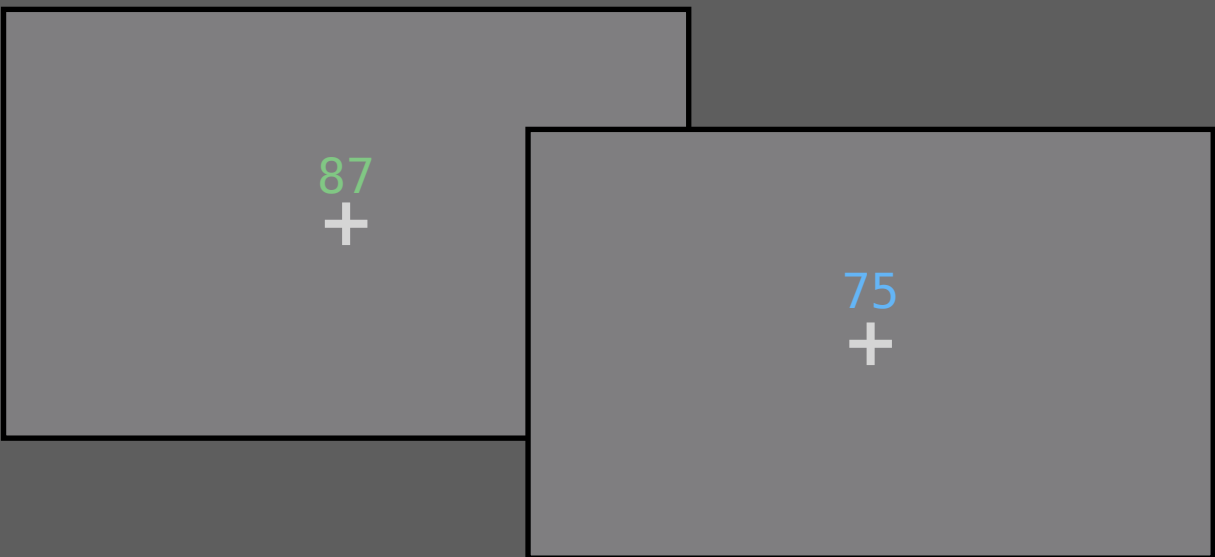
During trial:
view & memorise the bar orientations



After delay:
reproduce the orientations in the
correct order using the response dial



End of trial:
feedback (0–100%) for each report



ALL CLEAR?