Although the majority of questions raised in biological research concern 3D-problems, most super-resolution setups still do not attain an axial resolution comparable to that in the lateral dimension. In super-resolution scanning microscopy numerous approaches, that aim at improved axial resolution, employ only a single objective lens. They typically feature a trade-off between axial resolution and lateral resolution. The use of two opposing lenses, known as a 4Pi arrangement, yields super-resolution not only laterally but also axially without this compromise. The number and complexity of alignment procedures, however, hinders a widespread application. Here, a number of steps are presented that aim at the simplification of 4Pi-STED alignment. A particular aspect of the presented setup is its high level of system stability. The accomplished improvements have been demonstrated empirically. Such measures are crucial to establish 4Pi-STED as a reliable and user-friendly method for isotropic nanoscopy.