Research has shown that jury decisions are influenced primarily by the strength of the evidence, but also by the way the evidence is presented. Slight variations can affect jurors’ decisions about the responsibilities of the parties and ultimately, the verdict rendered. Understanding of the concept “beyond reasonable doubt” varies strongly between individuals and there is currently no agreed definition of this term. Judges routinely provide jurors an explanation of the burden of proof and the presumption of innocence. Few Australian studies have investigated jurors’ understanding of these concepts and how they influence perceptions of and weight assigned to the evidence. This study investigated the influence of judicial instructions on the understanding and application of the standard of proof in a simulated criminal trial. University students, recruited through an online jobs website, served as mock jurors (N = 180). Half of the mock-jurors received standard Australian directions regarding the burden of proof, while the remaining jurors received no instructions. Measures of understanding of the presumption of innocence, burden of proof and quantitative measures of jurors’ perceptions of “beyond reasonable doubt” were collected before and after the presentation of a video-taped simulated trial. Overall, the results showed that participants understood that defendants are presumed innocent until proven guilty, although they were more uncertain about who bears the burden of proof. The inclusion of judicial directions on beyond reasonable doubt increased jurors’ understanding of the presumption of innocence, which in turn influenced their verdict choice.