Abstract

Human factors issues have been identified as a significant contributing factor to mishaps in UAS operations. This paper describes the design of a state of the art ground control station and a Human-Machine Interface (HMI) for operating group 4 and 5 UAS’s (i.e., MQ-1, MQ-9) using a human-centered design approach. The paper details how consideration of operator limits including physical (i.e., ergonomic), perceptual, and cognitive informed the design of the station. In addition, we describe how the design was refined through iterative testing to ensure the performance objectives were obtained.