Abstract: A classical result of Paley and Marcinkiewicz asserts that the Haar system on $[0, 1]$ forms an unconditional basis in $L^p$ provided $1 < p < \infty$. The purpose of the paper is to study related weak-type inequalities, which can be regarded as a version of this property for $p = 1$. Probabilistic counterparts, leading to some sharp estimates for martingale transforms, are presented.

2000 AMS Mathematics Subject Classification: Primary: 60G42; Secondary: 60G46.

Keywords and phrases: Haar system, martingale, weak-type inequality, Bellman function, best constants.