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Addendum to 'On the stability of functional equations on square-symmetric groupoid'. (English) Zbl 1112.39022

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Summary: Let $(X, \diamond)$ be a square-symmetric groupoid, and $(Y, *, d)$ a complete metric divisible square-symmetric groupoid. In this paper, we investigate the Hyers-Ulam stability problem, using the functional inequality $d(g(x \diamond y), g(x) * g(y)) \leq \epsilon(x, y)$ for approximate mapping $g\colon X \to Y$ of the functional equation $f(x \diamond y) = f(x) * f(y)$. In particular, we investigate the case of $f(x) * f(y) = H(f(x)^{1/t}, f(y)^{1/t})$ on some set Y in which $H\, Y \times Y \to Y$ is a continuous homogeneous function of degree t.

MSC:

39B82 Stability, separation, extension, and related topics for functional equations

39B52 Functional equations for functions with more general domains and/or ranges

39B72 Systems of functional equations and inequalities

Keywords:

Hyers-Ulam stability; Cauchy functional equation; Square-symmetric groupoid

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