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Addendum to ‘On the stability of functional equations on square-symmetric groupoid’.

(English) [Zbl 1112.39022](#)

Nonlinear Anal., Theory Methods Appl., Ser. A, Theory Methods **62**, No. 2, 365-381 (2005).

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 $g: X \rightarrow Y$ 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 $H: Y \times Y \rightarrow Y$ 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

Cited in **8** Documents

Keywords:

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

Full Text: [DOI](#)

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