Title: A generalization of Gajda’s equation on commutative topological groups

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In the present paper we deal with the following generalization of the sine-cosine equation
\[ \int [f_1(x + y - t) + f_2(x - y + t)]d\mu(t) = g(x)h(y) \]
for complex valued functions \( f_1, f_2, g \) and \( h \) defined on a commutative topological group \( G \), where \( \mu \) is a complex measure defined on \( G \).

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