

The present invention relates to facilities for processing optical images. The proposed method of pattern recognition in a digital correlator consists in that an arbitrary object $a(x, y)$, including reference objects, is transformed into a synthesized phase object $\psi(x, y)$, which is formed from the object $a(x, y)$ by using the standard iterative Fourier transform algorithm at defined initial phase distribution $\psi_0(x, y)$. The synthesized phase objects are introduced into the optical system of the correlator instead of real objects and used in the pattern recognition process. The proposed method provides a possibility to generate correlation signals in the form of a δ -function for arbitrary objects, formalize the pattern recognition procedure, increase the signal-to-noise ratio, increase the sensitivity of the correlator to the changes in the structure of the object, and control the sensitivity, resulting in the increase of reliability in pattern recognition with the use of correlation systems based on Van der Lugg correlator or Fourier transform.