

ABSTRACT

Intended use: for remote inspection of a target in a monitored area.

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Subject matter: the monitored area is irradiated with microwave radiation using two or more elementary microwave emitters. The signal reflected from the monitored area is recorded by one or more parallel recording channels, the recorded signal undergoes coherent processing to obtain the maximum intensity values of the reconstructed configuration of the scatterers in the monitored area in dependence on the distance from the elementary emitters to the target. The information obtained as a result of such processing is displayed by constructing a microwave image corresponding to a three dimensional surface. In addition, a video image of the target is obtained by using two or more video cameras which are synchronized with the microwave emitters, the resulting video image of the target is converted, and the three dimensional video image and the microwave image are converted into a general system of coordinates. The technical result is an increase in the reliability with which the presence or absence of dielectric objects is determined in a covert inspection.

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