

Title (en)

Fire control system with a double measure of angles.

Title (de)

Feuerkontrollsystem mit doppelter Bestimmung der Winkelabweichungen.

Title (fr)

Système de conduite de tir à double écartométrie.

Publication

EP 0089273 A1 19830921 (FR)

Application

EP 83400464 A 19830307

Priority

FR 8204214 A 19820312

Abstract (en)

1. A fire control system comprising a tracking device (22) which can be directed according to two independent axes by orientation motors, and an electronic circuit (14) associated to the tracking device in order to control the motors in such a way that the tracking device is permanently directed onto a target (18), characterized in that the tracking device comprises a first optical means (70, 72) for a simultaneous reception and transmission according to an identical optical tracking axis (36) of an infrared radiation of a wavelength of about 3 to 5 μm and of a visible radiation, both issued by the target, and a second optical means (74, 76) conceived to separate the radiations and direct them respectively to a detector (54) which is sensitive to the infrared radiation, and to an image detector (56) which is sensitive to the visible light, and further characterized in that the associated electronic circuit (14) comprises a first divergence measuring circuit (58), this circuit receiving the output signals of the detector which is sensitive to the infrared radiation, and delivering two divergence signals called "divergence signals concerning hot points", and a second divergence measuring circuit (60), this circuit receiving the signals from the image detector and supplying two divergence measuring signals called "divergence measuring signals relating to the visible light", and a circuit (64) for selecting the control mode, this circuit receiving a plurality of couples of orientation control signals including the two couples of divergence measuring signals, and transmitting one selected couple of control signals to the orientation motors.

Abstract (fr)

Il comporte un dispositif de visée orientable selon deux axes indépendants et dirigé en permanence vers une cible grâce à une double écartométrie: une écartométrie (58) sur "points chauds" est réalisée à partir de la réception de rayons infrarouges émis par la cible, et une écartométrie (60) sur image visible est réalisée à partir de rayons lumineux visibles. Ces différents rayonnements sont reçus par un même ensemble optique (34) porté par le dispositif de visée, cet ensemble comprenant des moyens pour recevoir et séparer les deux rayonnements selon le même axe de visée et pour les diriger respectivement sur un détecteur infrarouge à quatre quadrants et sur un détecteur d'image. Le dispositif de visée est piloté manuellement (en mode d'acquisition) ou par l'un ou l'autre des circuits d'écartométrie (en poursuite). Application: notamment aux systèmes de conduite de tir sur aéronefs.

IPC 1-7

F41G 3/06; **F41G 3/22**

IPC 8 full level

F41G 3/06 (2006.01); **F41G 3/22** (2006.01)

CPC (source: EP)

F41G 3/06 (2013.01); **F41G 3/22** (2013.01)

Citation (search report)

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