

## Title (en)

Electronic detonators-exploder system for high-reliable stepped detonation.

## Title (de)

Elektronische Einrichtung mit hoher Zuverlässigkeit für aufeinanderfolgende Detonationen.

## Title (fr)

Dispositif électronique à haute fiabilité pour détonations successives.

## Publication

**EP 0434883 A1 19910703 (EN)**

## Application

**EP 89500134 A 19891229**

## Priority

EP 89500134 A 19891229

## Abstract (en)

This invention relates to an exploder detonator unit capable of electronically sequencing a blast. The exploder - - equipment of the unit which is described is intended to --direct the explosion sequence of several electronically --delayed detonators connected in parallel or series via a bifilar line that thus permits a simpler connection, and leads to handling at low risk voltage and current; in - - addition allowing simultaneous connection of several hundred detonators at the same time. The process, as far as the final detonation, is implemented in stages which involve specific actions by the user and include safety and control codes in each of them. Provision is made in the present invention that, if the connection control system gives a positive response, a change in the safety voltage to that of detonation is produced, a signal is activated and the final stage is proceeded to, whether of detonation or of disarming. In the present invention, the detonator element has a protection against any undesired electrical phenomenon, using switches that short-circuit and isolate the resistive element or igniter. In addition to all this, both the exploder element as well as the detonator element - - possess, in the present invention, a system for detecting the correct functioning as well as the connection of each detonator situated in the blast. These detonators are - - response-time programmable, a programming which can be --effected from the exploder itself. <IMAGE>

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**F42D 1/055** (2006.01)

## CPC (source: EP)

**F42D 1/055** (2013.01)

## Citation (search report)

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- [X] EP 0208480 A2 19870114 - MOORHOUSE D J [AU], et al
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