## United States Patent [19]

### Ishida et al.

### [54] AUTOMATIC FOCUS DETECTION SYSTEM [56]

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- [73] Assignee: Minolta Camera Kabushiki Kaisha, Osaka, Japan
- [21] Appl. No.: 51,138
- [22] Filed: May 15, 1987

### Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 946,578, Dec. 22, 1986, abandoned.

### [30] Foreign Application Priority Data

Dec. 27, 1985	[JP]	Japan	 60-298035
Dec. 27, 1985	[JP]	Japan	 60-298036
May 16, 1986	[JP]	Japan	 60-113315

- [51] Int. Cl.<sup>4</sup> ..... G03B 3/00; G03B 1/00

[11] Patent Number: 4,831,403

[45] Date of Patent: May 16, 1989

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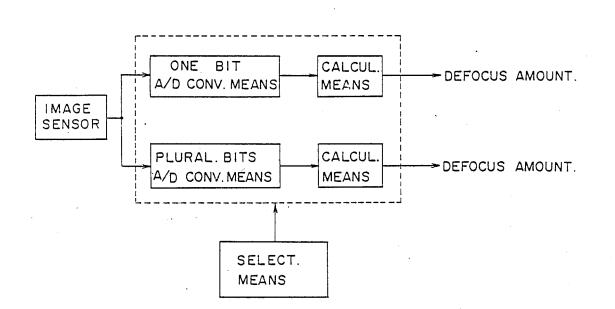
60-4913 1/1985 Japan .

Primary Examiner-W. B. Perkey Attorney, Agent, or Firm-Price, Gess & Ubell

### [57] ABSTRACT

A camera with an automatic focusing device has an objective lens mounted on a camera. An image formed by the objective lens is divided into a plurality of zones. In each zone, a brightness distribution is obtained so as to detect a rough focusing condition in each zone, thereby producing a plurality of rough focusing condition data. Based on the result of the rough focusing condition data, one zone is selected. Furthermore, a precise focusing condition is detected in the selected zone based on the light contained in the selected zone, so as produce a precise focusing condition data. Based on the precise focusing condition data obtained from the selected zone, the object lens is driven to an infocus condition.

### 14 Claims, 42 Drawing Sheets



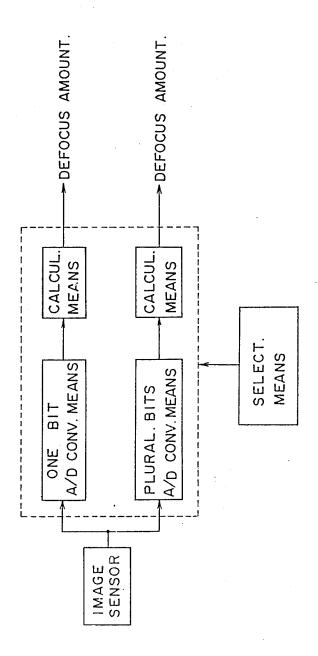
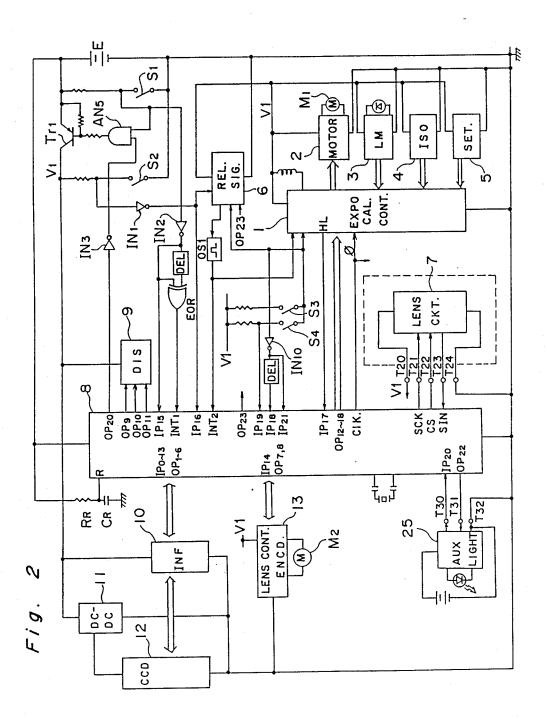


Fig.

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Fig. 3

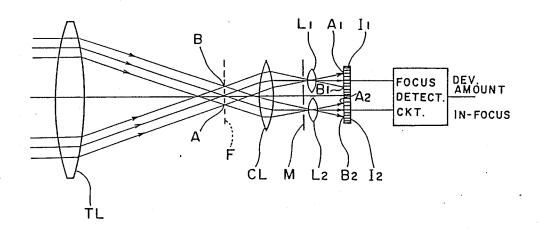
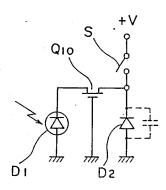


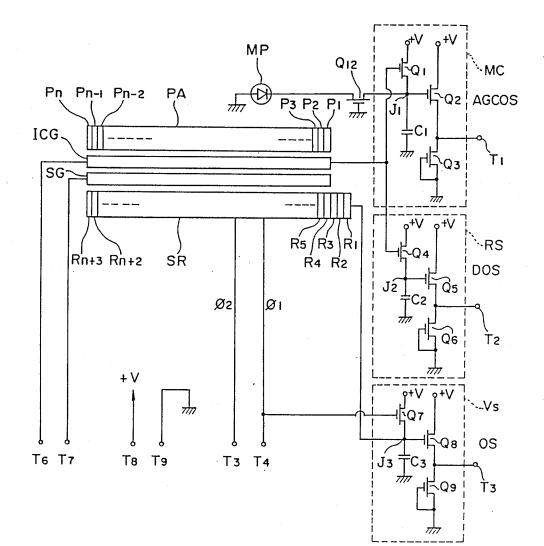
Fig. 5



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Fig. 4



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