

ABSTRACT OF THE DISCLOSURE

The present invention aims to prevent a main drive pulse from being moved to a rank having a potential to cause a non-rotating state. A detection segment for detecting a rotating state of a stepping motor is divided into a first segment immediately after the drive with a main drive pulse, a second segment, and a third segment and, when the stepping motor is rotated by the main drive pulse, the main drive pulse is not changed when a detection signal exceeding a reference threshold voltage is detected at least in the first and second segments. When it is detected only in the first and third segments, or detected only in the third segment, the rank is moved upward and, when it is not detected in any segment, or detected only in the first segment, the rank is moved upward after the drive with a corrective drive pulse. When it is detected only in the second segment or detected only in the second and third segments, the rank is moved downward.

Fig. 3