What is claimed is:

1. A calibration method for an acoustic sensor provided in a polishing apparatus in which a substrate held in a substrate holder is pressed against a polishing pad attached to a polishing table to thereby polish the substrate, comprising:

acquiring polishing sounds of the substrate using the acoustic sensor;

selecting at least two distinctive sounds, having distinctive frequencies respectively, from the acquired polishing sounds;

outputting the at least two distinctive sounds from a sound source coupled to any of the polishing table, the acoustic sensor, and the substrate holder to cause the at least two distinctive sounds to be input to the acoustic sensor; and

calibrating output values of the acoustic sensor, such that the output values of the acoustic sensor relative to the at least two distinctive sounds come within an allowable range, wherein the at least two distinctive sounds are a sound of a frequency having a distinctive peak among the polishing sounds acquired by the acoustic sensor.

2. The calibration method according to claim 1, wherein the acoustic sensor is an AE sensor mounted to the polishing table, and

the sound source is placed at a position corresponding to a polishing position of the substrate in the polishing pad or the polishing table.

3. The calibration method according to claim 2, wherein the sound source is an AE sensor for sound source, which has the same configuration as the AE sensor.

4. The calibration method according to claim 2, wherein the sound source is arranged directly above the AE sensor.

5. The calibration method according to claim 1, wherein the acoustic sensor is an

ultrasonic sensor coupled to an arm supporting the substrate holder, and

the sound source is placed at a position corresponding to a polishing position of the substrate in the polishing pad or the polishing table.

6. The calibration method according to claim 1, wherein the acoustic sensor is an ultrasonic sensor coupled to an arm supporting the substrate holder, and

the sound source is coupled to the acoustic sensor.

7. The calibration method according to claim 1, wherein the acoustic sensor is mounted to the substrate holder, and

the sound source is mounted to the substrate holder.

8. The calibration method according to claim 7, wherein the acoustic sensor is an AE sensor.

9. The calibration method according to claim 8, wherein the sound source is an AE sensor for sound source, which has the same configuration as the AE sensor.

10. The calibration method according to any one of claims 1, wherein an alarm is issued when any of output values of the acoustic sensor relative to the at least two distinctive sounds exceed an upper threshold or a lower threshold.