METHOD FOR CONTROLLING LASER LIGHT POWER, METHOD FOR DATA RECORDING INTO OPTICAL DISC, AND OPTICAL DISC RECORDING APPARATUS

ABSTRACT OF THE DISCLOSURE

A laser light power controlling method is provided which comprises the steps of irradiating onto an optical disc a laser light generated by a laser source driven under a data write signal; detecting a reflected portion of the laser light irradiated onto the optical disc; and detecting an undershoot of a detection signal of the reflected laser light and controlling the power of the laser light in accordance with the amount of the detected undershoot. Also, a method for writing data into an optical disc is provided which comprises the steps of irradiating onto an optical disc a laser light generated by a laser source driven under a data write signal; detecting a reflected portion of the laser light irradiated onto the optical disc; and detecting an undershoot of a detection signal of the reflected laser light and discriminating the level of the undershoot with reference to a predetermined threshold. Further, an optical disc recording apparatus is provided which comprises means of irradiating a laser light onto an optical disc correspondingly to a data write signal; a photodetector to detect a reflected portion of the laser light irradiated onto the optical disc; and an undershoot detector to detect an undershoot of a detection signal of the laser light detected by the photodetector; the power of the laser light being controlled in accordance with the amount of the detected undershoot. The optical disc may be a phase-change based one.

Figure 3