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(54) Title: METHOD AND APPARATUS FOR THERMALLY WRITING SERVO PATTERNS ON MAGNETIC MEDIA

(57) Abstract

A method (200) and apparatus (300) for thermally writing a magnetic servo pattern (150, 270, 400, 500, 600, 650, 700) on a magnetic disc medium (204, 314, 670) prior to assembling the medium (204, 314, 670) in a disc drive (100) are provided in which the medium (204, 314, 670) is first magnetized in a uniform magnetization direction (206, 408). A plurality of magnetic domains (220, 250, 252, 272, 410-414, 501-503, 602, 604, 651-653, 710-712) are then thermally written on the medium (204, 314, 670), on magnetic domain at a time, by individually heating each magnetic domain with a light beam (212, 312, 672) while exposing the magnetic domain to a magnetic field (209, 674). The magnetic field (209, 674) has an orientation (216, 415) that is opposite to the uniform magnetization direction (206, 408). The light beam (212, 312, 672) forms an illumination pattern (214, 678) on the medium (204, 314, 670) having a shape that at least partially defines a boundary of each magnetic domain (220, 250, 252, 272, 410-414, 501-503, 602, 604,651-653, 710-712).



