

Abstract

1. Optical scanning device.

2.1 Items of data are recorded above one other by means of pits and also in a magnetic layer on an optical recording medium which represents a combination of an optical and a magneto-optic recording medium. Both the items of data stored by means of the pits and those stored in the magnetic layer can be read out simultaneously with the help of a light beam by means of a suitable optical scanning device.

2.2 The light reflected from the recording medium (CD) is directed onto a first or a second photodetector (PD1, PD2) by means of a first polarisation beam splitter (PO1) in dependence on its direction of polarisation. The difference signal formed in a first differential amplifier (DV1) from the output signals of the first and second photodetector (PD1, PD2) is the data signal (MSN) obtained from the magnetic layer of the recording medium and it is subject to cross-talk. The light reflected from the recording medium (CD) is also guided via a $\lambda/4$ plate (PL3) and a second polarisation beam splitter (PO2) to a third and a fourth photodetector (PD3, PD4). The difference signal ES formed in a second differential amplifier (DV2) from the output signals of the third and fourth photodetector (PD3, PD4) is basically the interference signal which is causing the cross-talk and which is caused by reflection at the edges of the pit and is superimposed on the magneto-optic data signal (MSN) at the output of the first differential amplifier (DV1). The difference signal ES is supplied via an amplifier having an amplification factor that is less than 1 to the inverting input of a third differential amplifier (DV3) whose non-inverting input is connected to the output of the first differential amplifier (DV1). The magneto-optic data signal (MS) can be derived free of cross-talk from the output of the third differential amplifier (DV3).

2.3 Magneto-optic recording and reproduction apparatus.

3. Figure 1

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