

at constant periods, said tracking tracks and clock tracks each being arranged alternately, and record zones in which information is to be recorded and each of which is provided between each of the tracking tracks and each of the clock tracks so that only one of each of the tracking tracks and each of the clock tracks is alternately positioned between two adjacent record zones, said apparatus comprising;

means for producing and projecting at least three beam spots on the recording medium, said producing and projecting means projecting said beam spots on the record zone, the tracking track and clock track, respectively, at the time of recording to write information in said record zone while detecting a tracking signal and a clock signal, and said producing and projecting means projects said beam spots on the tracking track and two or more record zones respectively at the time of reproduction to simultaneously read out the recorded information in said two or more record zones while detecting the tracking signal;

tracking signal detection means for detecting the tracking signal from the beam spot projected on the tracking track at the time of recording;

means for changing over said tracking signal detection means in accordance with the positional relation between said projected record zone and the tracking track so as to always obtain the tracking signal from the beam spot projected on the tracking track at the time of recording;

and clock signal detection means for detecting the clock signal from the beam spot projected on the clock track at the time of recording.

12. Apparatus according to claim 11, wherein at the time of recording, information is written in by a first one of said beam spots while detecting the tracking signal and clock signal by second and third spots, and at the time of reproduction, information is read out by the

second and third spots while detecting the tracking signal by the first spot.

13. Apparatus according to claim 12, wherein said apparatus comprises means for forming at least three beam spots on the recording medium; means for detecting the tracking signal from any one of said first, second and third spots; and means for changing over the spot for the detection of the tracking signal from one to another in accordance with the positional relation between the projected record zone and the tracking track.

14. Apparatus according to claim 13, wherein said apparatus further comprises means for detecting a focusing signal from any one of the first, second and third spots.

15. Apparatus according to claim 12, wherein said beam spot forming means comprises a light source, a grating for splitting the beam emitted from said light source and a condenser lens for focusing said split beams on the recording medium.

16. Apparatus according to claim 12, wherein said tracking signal detection means comprises three photo detectors disposed to receive the lights from the first, second and third spots respectively.

17. Apparatus according to claim 16, wherein said photo detector has a light-receiving surface divided into two areas by a dividing line parallel to the direction along the length of the tracking track and said tracking signal is derived from the difference between the detected signals by said two areas.

18. Apparatus according to claim 16, wherein said changeover means includes a switch through which any one of the photo detectors disposed to receive the lights from the second and third spots is selectively connected to tracking control means.

19. Apparatus according to claim 12, wherein the light intensity of the second and third spots is lower than that of the first spot.

* * * * *

40

45

50

55

60

65