A Complete Course in Electrical Engineering - First Edition Primer

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Part I

Communication Engineering

Chapter 1

Introduction

1.1 North Ameican Black and White Television (For Historical Purposes)

The picture is divided into 525 lines, which constitute a frame.Each frame is decomposed into two interlaced fields, each of which consits of 262.5 lines.For convenience of presentation, we will we will refer to the two fields as I and II.

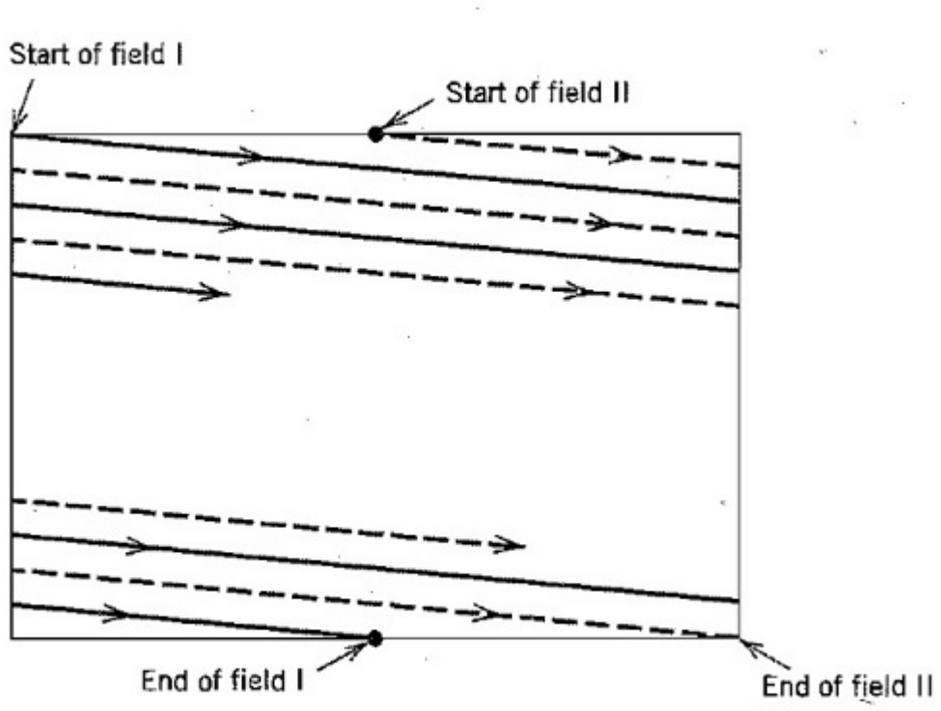

FIGURE Interlaced raster scan.

The time taken for each field to be scanned is 1/60 s .Correspondingly the time taken for a frame or a complete picture to be scanned is 1/30 s. With 525 lines in a frame , the line scanning frequency is 15.75 kHz.

Thus , by flashing 30 still pictures per second on the display tube of the TV receiver, the human eye perceives them to be moving pictures.