

Barcode

Barcode, a printed series of parallel bars or lines of varying width that is used for entering data into a computer system. The bars are typically black on a white background, and their width and quantity vary according to application. The bars are used to represent the binary digits 0 and 1, sequences of which in turn can represent numbers from 0 to 9 and be processed by a digital computer. The presence or absence of a bar of a particular width in a particular position in a sequence is read by the computer as either a 0 or 1. Most such codes use bars of only two different widths (thick and thin), though some codes employ four widths. The numbers represented by a barcode are also printed out at its base.



bar code (Universal Product Code)

Barcode information is read by an optical (laser) scanner that is part of a computer system. A handheld scanner or barcode pen is moved across the code, or the code itself is moved by hand across a scanner built into a checkout counter or other surface. The computer then stores or immediately processes the data in the barcode. The barcodes printed on

supermarket and other retail merchandise in the United States are those of the Universal Product Code, or UPC, which assigns each type of food or grocery product a unique code. In the UPC system, the five digits on the left are assigned to a particular manufacturer or maker, and the five digits on the right are used by that manufacturer to identify a specific type or make of product. This is usually the only information contained in a barcode.

Barcoding was introduced in the 1970s and is now a ubiquitous part of routine commercial transactions. Grocery stores use the codes to obtain price and other data about goods at the point of purchase by the consumer. At a typical supermarket checkout counter, a scanner is used to identify a product through its barcode, and a computer then looks up the item's price and feeds that number into the cash register, where it becomes part of the bill for the customer's purchases.

The chief advantage of barcode systems is that they allow users to process detailed information at the moment the barcode is scanned, rather than simply storing information

for later processing. For example, ski resorts can affix the codes to skiers and scan the bars when skiers enter ski lifts, thereby allowing the resort to monitor patterns of slope use. Various barcode systems are now used to track a vast range of products as they are manufactured, distributed, stored, sold, and serviced. These products range from processed foods and dry goods to drugs and medical supplies, automotive parts, computer parts, and even library books.

The Editors of Encyclopaedia Britannica This article was most recently revised and updated by Adam Augustyn, Managing Editor, Reference Content.

Citation Information

Article Title: Barcode

Website Name: Encyclopaedia Britannica

Publisher: Encyclopaedia Britannica, Inc.

Date Published: 24 October 2019

URL: <https://www.britannica.com/technology/barcode>

Access Date: April 08, 2021