

Publication of a New EAN Symbol Marking Manual



GS1 Japan prepared and published the “JAN Symbol Marking Manual” in March 2015. (*1)

Fig. 1 JAN Symbol Marking Manual



Background on Writing the Manual

EAN symbols have been used for nearly 35 years in Japan, and have become one of the supply

chain infrastructures.

Recently GS1 Japan has been notified of an increase in the number of EAN symbols that are difficult to read because of poor symbol printing quality. This is due to a surge in the number of products marked with EAN symbols and the diversification of the shapes and materials used for packaging.

Now, more than 10,000 companies (mostly SMEs) in Japan apply for a new GS1 Company Prefix every year. Most of the new users do not have knowledge on how to make a quality EAN symbol. Therefore, to maintain the efficiency of operations using barcodes, a growing number of users must be educated that they need to mark their products with appropriate symbol according to the standards.

Given this situation, GS1 Japan decided to prepare an EAN symbol marking manual to encourage the brand owners to understand the importance of an EAN symbol's quality, its basic features, cautionary notes on printing the symbols, and advice on how to locate the symbols

*1 In Japan, the local name Japanese Article Number = JAN has been established to promote the widespread use of EAN codes and EAN symbols. Names such as the JAN code (GTIN - 13) and the JAN symbol are commonly known.

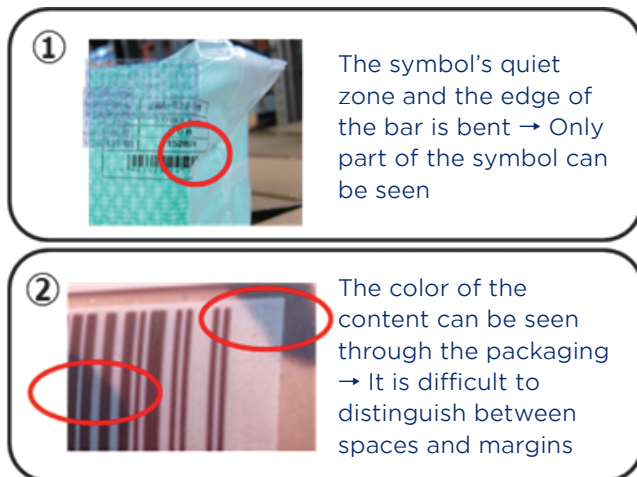
appropriately. A working group of experts from equipment or services providers for printing, marking, scanning and verifying barcodes was established to prepare the manual, in order to ensure that the manual reflected real examples of the symbols in the market.

Outline of the Manual

1) Review of the Basics

The manual first reviewed the basics of the symbol and emphasized that the following points

Fig. 2 Examples of symbols that are difficult to read



should be noted:

1. Importance of securing quiet zones (margins)
2. Clear bars and spaces
3. Securing a bar width and height that comply with the standards
4. Ensuring a sufficient contrast of the bars and spaces

Currently, many small EAN symbols are used in Japan. Also, many combinations of colors are used to represent the spaces and bars, for marketing and packaging design purposes, and some symbols are of a low quality. The manual explains how these symbols are often difficult to read and discourages their use.

2) Location on the Products: Importance of “How They Are Seen” by the reading device on the Final Product

Next, the manual emphasizes that it is important that EAN symbol remains to be high quality when

the product reaches its final physical form for distribution.

The manual shows examples gathered from scanning device manufacturers that they found “difficult or unable to read”, along with explanations of what the problem was for each case, and how to improve the quality of the symbols.

For example, in the case of ①, the EAN symbol is printed on the corner of a bag-shaped package, and the edge of the symbol becomes bent when the product is filled, making it impossible to recognize the bars/spaces and the margins. (Furthermore, in this case, the spaces are not colored, so they can be seen through.) The manual explains the symbol needs to be printed further to the left, and the importance of printing white spaces (and not simply making the spaces transparent).

In the case of ②, the EAN symbol is printed on a plastic container. There is no problem with reading the symbol when the container is empty, but when the container is filled with its content (in this case, ice cream), the color of the content can be seen through the plastic on the outside surface of the container. The color of the ice cream interferes both the bars and the spaces, making the width difficult to read and causing problems that make the scanning time-consuming or impossible. In this case also, the manual encourages the use of whiter margins.

3) The Importance of Reviewing the Quality and “Barcode Inspections”

Furthermore, regarding the quality of EAN symbols, the manual explains the importance of symbol print quality verification not only when the symbols are first printed on the packaging materials, but also when the product is packaged and reaches its final state for distribution. The manual has been well received by brand owners, retailers/wholesalers and device manufacturers/printing companies. GS1 Japan plans to update the content of the manual as needed, and to offer further manuals that reflect the times.

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