

# Training

## Downloading and Printing Unicode Characters with Labelase® Producer

Today's computers are designed to accept and process text using the writing systems from around the world. Unicode is the international standard for encoding all of the world's languages and writing systems.

Labelase® Producer version 2 and later now fully supports the Unicode system. With Unicode compatibility, Producer can accept and print characters from around the world.

In order to download data to Producer, both your host system and Producer must agree on how that data is encoded. In the days of Producer 1, all data was encoded as ASCII text, meaning that each character was sent as a single byte of data. While this was simple, it made it impossible to download and print all of the world's variety of languages. Now that Unicode is supported by Producer, a new method of character encoding must be used that is backward compatible with the old ASCII system, but yet also provides full support for all writing systems.

To ensure backward compatibility and to extend Producer's capabilities to Unicode, the UTF-8 character encoding system was selected as the interchange format for data download to Producer. UTF-8 is a character encoding capable of encoding all of the Unicode code points. UTF-8 is variable length and uses 8-bit code units.

If you were previously downloading ASCII data to Producer 1 and you wish to upgrade to the new version 2 you don't have to worry about compatibility. Producer 2 will accept your existing ASCII download without conversion. If you want to include Unicode code points in your download, you must encode them as UTF-8 within the download file.

More information on [Unicode](#) and [UTF-8](#) is available on Wikipedia.

Note that although Producer can accept Unicode code points encoded as UTF-8, when it prints those characters on a tag the selected font must support those characters. Not all fonts are Unicode compatible, and not all [Unicode fonts](#) support all code points.

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