# Manual for assembly with extended Gerber

www.beta-layout.com

Along with the Gerber data which we already have for circuit board production, we also require additional information for assembly.

**1**  **Parts lists** (**BOM**)
You can find a template showing how the required parts list should appear in this download in German („BOM_Vorlage_2003.xls" and „BOM_Vorlage_2007.xlsx") and in English („BOM_Vorlage_2003_ENG.xls" and „BOM_Vorlage_2007_ENG.xlsx").

It is essential that the parts list should contain all of the components, even those which are **not to be assembled.**
Use the column „Place Yes/No" for this.

If we are to order the parts for you, then we require additional information about the distributor and also a corresponding order number. Please note here that the parts can be supplied in machine-compliant packaging.

**2**  **Pick & Place file**
Export this file from your layout file. Along with the component names, component values and housing shapes, this also contains information on the assembly positions such as the x and y coordinates, the rotation angle and the circuit board side. A demo file can be found in the download as „Gerber_Pick&Place.txt".

The individual columns in this file are separated by „TAB". If the corresponding information has not been completely exported, then it must be added later.

Apart from the components, at least two reference marks must be listed with corresponding x and y coordinates.
Please note here that these points are clearly labelled in the layout diagram.
Information on the circuit board position must be given to provide us with a reference point for the component coordinates (see demo file).
The coordinates of the lower left corner of the circuit board are preferably chosen for this.

**3**  **Layout diagram**
The components, component names and external contour of the circuit board must be easy to recognise in the layout diagram.
This diagram is used, among other things, for the final visual inspection.

The design of polarised components (e.g. diodes, electrolytic capacitors, ICs, connectors, etc.) must be labelled here in the same way as the reference marks given in the Pick&Place file.

**4**  **Stencil**
We require the paste data matching your circuit board to prepare a suitable stencil for applying the soldering paste.
Please transmit these with the other production data.

# Beta

L A Y O U T

create : electronics

GmbH
PCB-POOL®
Im Aartal 14
65326 Aarbergen