Bill of Materials

The **axis diplomat** Bill of Materials (BOM) module provides for the maintenance of the lists of components and sub-assemblies required to make the stock items manufactured by the company. The resultant database can be used to print parts explosions (i.e. kit lists) and where-used lists, as well as detailed assembly costings. The BOM database is also used by the Material Requirements Planning (MRP) module.

Assemblies and Sub-assemblies

These are products which are made, usually in house, from a list of components. An assembly is an item which is never used in any other assembly; it is a finished stock item which can be sold. A sub-assembly is an assembly which is also used as a component in one or more other larger assemblies. It may also be a saleable stock item, e.g. a spare part, or it may be purely internal and only ever exist on the shop floor as work in progress.

Components

A component in a Bill of Materials may be classified as one of the following:

- Material
- Operation
- Other Cost

A component may also be a sub-assembly and made up of other components. All components and sub-assemblies have a two line description and, optionally, an additional specification

Material components may be further classified as Stocked, Resaleable, Bought In or Manufactured.

Stocked materials are those for which stock levels are maintained. Resaleable materials are those items which are sold to customers and therefore have trade and retail pricing information.

Bought in materials are purchased, as required, from external suppliers. A bought in assembly item implies an assembly which is manufactured under sub-contract.

Manufactured materials are those assemblies and sub-assemblies that are made in house from their components.

Overhead Costs

The system caters for overhead costs, sub-contract costs and other user defined costs.

Overhead costs can be specifically defined for an assembly or they can be specified as a percentage overhead cost rate against materials (e.g. for handling), labour rates, machines and/or operations (e.g. heat, light and floor space) as required.

Sub-contract and other user defined costs can be set up and included in the BOM for costing purposes only.

Batch (or recipe) Costing

A costing batch quantity (i.e. a recipe quantity) can be specified for assemblies which are costed to make a batch quantity of the assembly rather than a single item.

This batch quantity may, or may not, be the same as the `quantity to make' (i.e. the manufacturing batch quantity). Its purpose is to enable the accurate specification and costing of 'trace' ingredients required to make the assembly. All requirements for quantities actually being manufactured will be automatically scaled up or down by the MRP module.

Costing Reports

Parts explosions can be printed showing current or standard costs to four decimal places. Percentage overheads can be included or excluded as required and percentage margins calculated against trade or retail prices.

Rolled Up Costing

Assembly and sub-assembly costs can be re-calculated from the component costs, including operation costs (if present), at any time, for inspection only or as a permanent update. The calculated rolled up cost can also, optionally, include any percentage overhead costs defined for the components. The roll up costings can be applied to current cost or to the standard cost figures held for each item.

Material Requirements Planning and Manufacturing

The Bill of Materials module information is also used as the basis for The **axis diplomat** Material Requirements Planning module.

Material Requirements Planning provides the ability to forecast the demand for materials required by manufacturing. This demand is automatically calculated based on the number and variety of customer sales orders plus any internal works orders for stock based on sales projections.

Provisional planning (i.e. trial kitting) provides a powerful `what if' requirements analysis. Material scheduling generates works orders and purchase requirements for planned orders.