The Route module is where the various master routes are created and stored. ALERE will allow you to create as many different routes as are required. Routes are one of the three key elements, including material lists (BOM's) and product configurations that are appended to work orders as they are created.

The following are components of the Route module:

Master Route

A master route consists of the route name and associated information plus a detailed listing of the operation steps to be performed, their sequence, the work centers that will be used, and the standards for setting up and running each step.

Routes support revision tracking to help you manage significant changes.

Each route can have up to 999 separate operation steps that can be built by copying individual steps from an operations library or manually creating them as needed.

Assign Material

Manufactured items can have their bills of material distributed over the operation steps that make up a route. In this manner a work order can be printed to show the list of material required for each step of the route.

Material is assigned by establishing a relationship between a master route and a BOM and then distributing the list of material to the appropriate route operation steps on which they will be used.

One master route can be associated with multiple different BOM's or vice versa.

The material planning process (MRP) can then be synchronized with the actual production floor when work orders are scheduled. This approach permits a very sophisticated management tool for coordinating material requirements throughout the factory.

Item/Route Association

The item/route association will identify which route will be used as the default instructions for producing an item. Having a default route for an item allows work orders that are created automatically to have a route.

The association is also used when costing a BOM so that labor and overhead costs can be calculated.

Copy Route

Copying a route will speed up the creation or modification of routes by allowing master routes, or work order routes.

It will copy an existing master route to a new master route, an active work order route to a new or existing master route, an existing master route header to another existing master route, an existing master route's operation steps to another existing master route, and an existing master route's header and operation steps to another existing master route.

Operation Library

An operation library allows a library of common operation steps to be created that can then be used to help build a master route.

Using predefined operation steps that can be simply inserted from a library can greatly speed up the process of building a new master route.

Another significant advantage is that by using steps from a library, it contributes to more uniform and accurate information.

Each operation step can contain:

- The preferred work center to be used
- A shrink factor to account for increases or decreases in the WIP quantities
- A batch size to set how many of the item are processed per cycle time
- The option to overlap steps by specifying whether or not partial quantities completed on a step will be immediately started on the next step
- Unlimited space to write up the instructions for the step
- A field to record the set up time required to prepare for the job
- A field to record the cycle time to complete each item or batch of items
- The labor grades required to perform the set up work and run the job
- The ability to account for split labor when a person runs more than one machine at a time

Fields that can be defined by the user can be used to "customize" routes to match the particular requirements of an industry.

Hyperlinks can be embedded in the notes fields of each step. This makes drawings, data sheets, pictures, and a host of supporting information readily available in one document.

Route Update

Many functions within ALERE manufacturing are dependent on routes and their accuracy. Initially creating them is a lot of work and maintaining them can be on ongoing chore.

The ability to update routes provides a way to easily ensure that the master route operation times are kept accurate based on the actual work orders using those routes.

<u>Route Reports</u>

A wide range of reports are readily available. There are control reports to list items and routes that are associated, details of routes, steps listed in the operation library, summaries of routes, links between work centers and routes, and BOM and route associations.

There are also activity reports to do time analysis.

All these reports may be viewed on a screen, printed, exported to a spreadsheet, or turned into a PDF file for distribution.