System Installation

Introduction (Seminar 1)

This initial seminar examines the various system configurations concerning the installation of the ManuDyn system. That is, where and how is the software system configured to describe your operation, what menu (access) facilities are available to users and employees (and your clients through the B2B facility), how a new user may be added and granted access to ManuDyn, the setup for Tax settings, together with what is required to provide system access.

The system installation does not require anything to be done on the computer and/or local area network. All that is required is that you have access to the internet. To begin we need to define some basic information concerning the system architecture and organisation:

- The code stack is made up a "User Interface" comprising JavaScript, ASP.NET (generating HTML), and CSS and a "Server Side" system comprising ASP.NET utilizing various .NET languages.
- ManuDyn uses an MS SQL database (with CLR functions). There are facilities in the system to export and/or import the SQL database so that direct data access is available through a suitable SQL manager, however there is no independent facility to run or operate ManuDyn in a local area environment.
- There are many external reports that have been added to the "Reporting Library" and may continue to be added from time to time in the future. These reports may change from time to time and are not considered to be part of the ManuDyn system.

In the discussion that follows it is assumed that you have some basic familiarity with the system having done/viewed the initial video tutorials. This seminar is not intended to teach you the basics of the system operating but rather to look at the various setup/configuration options within the system.

In general, the configuration of the system needs to be carried out by your system supervisor after consultation with management and operational personnel. It does not require a computer IT specialist; however, some computer literacy would be an advantage.

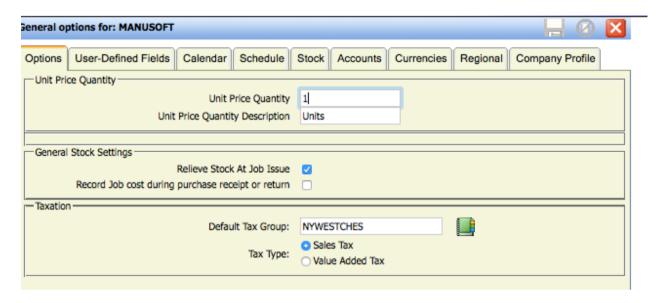
Configure ManuDyn to suit the Client's operation.

This process is carried out via the *System Settings* button on the main system menu. The principle objective of configuration is to set up the system to describe how the Client (you) manufacture what it is that you're manufacturing through your factory.

The final system configuration may not be completed during this initial discussion. It may take some weeks before that is done. The tasks that need to be done at this stage should be confined to a "general" configuration and should be followed up later with a more "detailed" setup (once you fully understand what is required).

Setup Task 1 – The General Options

This dialog may be accessed from the *System Settings/General Options* menu item which presents the *Options* tab in the initial screen display as follows:



The items to set on this page are:

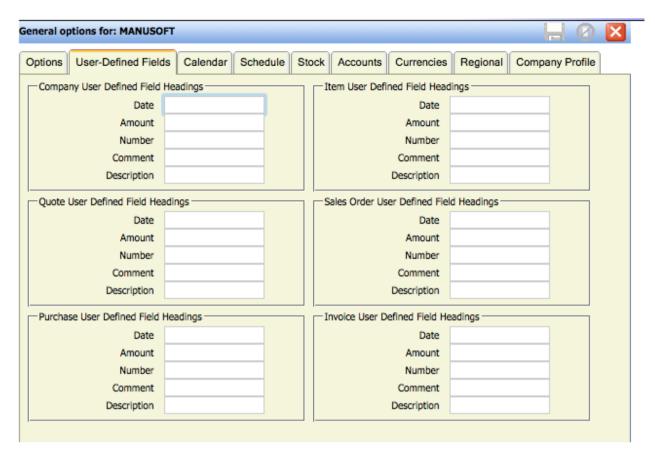
- i. The Unit Price Quantity and the Unit Price Quantity Description.
- ii. How raw material stock is to be relieved.
- iii. The default Tax Setting.

The **Unit Price Quantity** is usually 1, that is the reference when displaying quotes and pricing is on a "per unit" basis. In some situation an alternative for example may be "per 100 units" etc.

The **General Stock Settings** are usually set to relieve inventory at the point of Job Issue. This allows stock to be issued and relieved according to the Bill-Of-Material (BOM) which is by far the simplest approach. Not relieving at the point of job issue does not necessarily gather all BOM item in a single action and may require some addition operator processing.

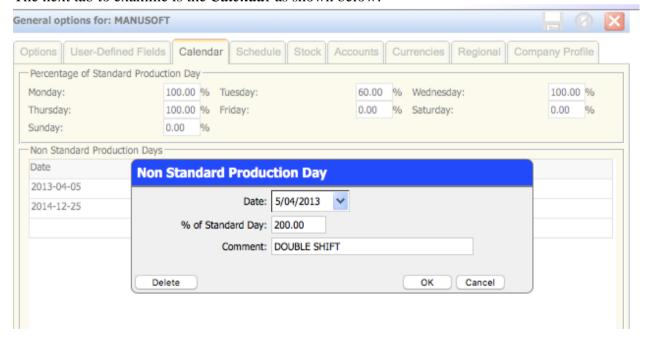
Setting a tax default will require you to have already defined the tax options in *System Settings/Tax Settings* which is discussed below. Perhaps at this time they should be left blank if you have not already set the tax scales.

The second tab is the *User-Defined Fields* tab and is shown below:



This dialog allows you to set some "special" fields of your own design. The fields are against specific areas of the database and data entry is via the "Other" tab associated with each database. This item is usually configured later when you find a need to enter some information not covered by the standard system specification. We should leave it blank for now and come back to it if you discover a need for an additional field.

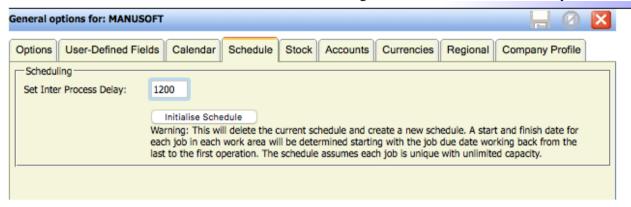
The next tab to examine is the *Calendar* as shown below:



Firstly, this tab allows you to define a "Standard Production Day" and what percentage of the hours in a "Standard Day" are available to do work. You can also set specific non-standard days to cover, for example, public holidays (zero%) and/or double shifts (200%). The Calendar is obviously

critical for scheduling. The actual hours available in any one day for any work centre are covered in the *System Settings/Work Areas* setup discussed below.

The next tab is the *Schedule* tab and what we are setting here is the Inter-Process Delay:



The **Inter-Process Delay** defines the "wait" time between operations. It defines the number of operations that can be carried out on a specific job in any day. For example, an Inter-Process Delay of 1440 minutes means that only 1 operation may be scheduled per day for each job. It is clearly a major tool for generating the "Job-Shop Schedule" within the system.

Next, we should look at the *Stock* tab shown below. In this instance the term "stock" refers to the nature of the inventory that you are holding in your warehouse. We must describe how it is held and dispensed – that is by the Metre or Kilogram or by the Unit with a unit description of Box, Sheet or Roll etc.

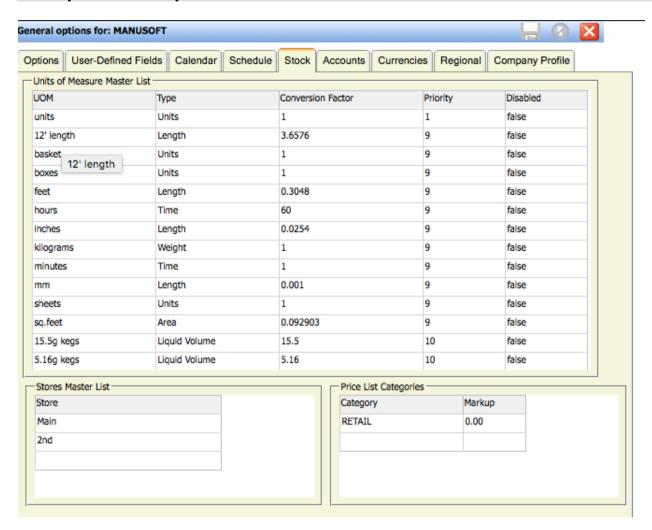
We are also defining a conversion rate from the Product Units of Measure which is defined in *System Settings/Product Type-Critical Sizes* tab which is described later.

Unit of Measure Definition			
Type:	Length	Disabled	
UOM:	feet		
Conversion Factor:	0.3048		
Priority:	9		
Delete		ОК	Cancel

Basically, if you decide to work in millimetre units (mm) then if you store and/or purchase items by an imperial measure you will need to set up the appropriate conversion tables.

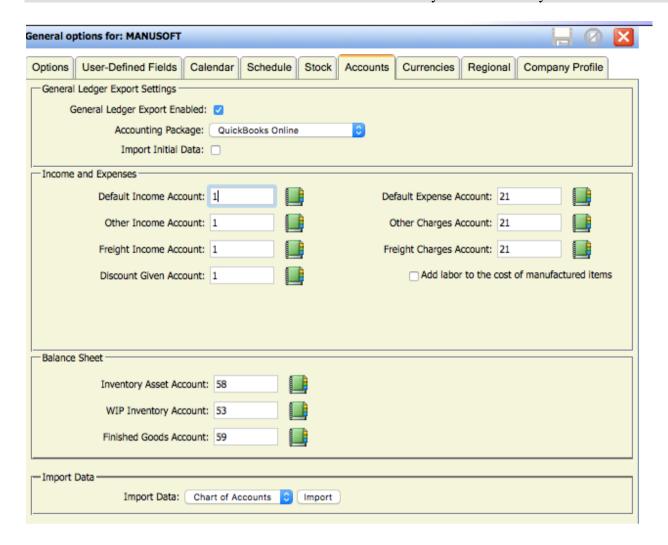
This tab is also where "Stores" or 'Warehouses" are defined. Again, a multi-warehouse operation is complex and at this stage it is recommended that just a "Main" store be defined.

This entire area is a complex one to define and a minimalist setup should be done at this time.



Next, we shall look at the *Accounts* tab shown below. If the system is linked to an external accounting system, such as *QuickBooks® Online*, then the default account allocation will be automatically imported and set. All you need to do is enable the General Ledger Export option and select the nature of the accounting system.

Where there is no general ledger defined in ManuDyn then the Import Initial Data option should be set. Otherwise you can define account allocation separately. These allocations are included on any accounts transactional data export.

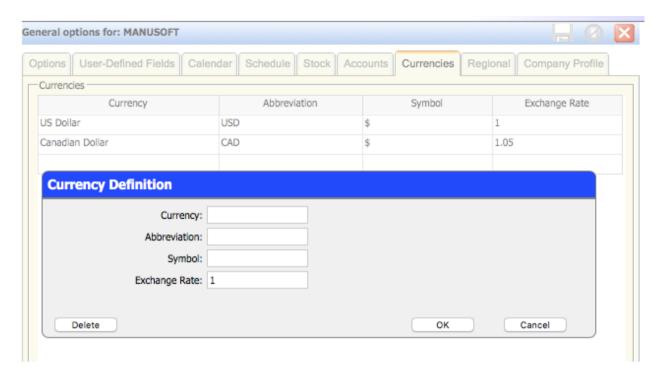


The *Currencies* setting is a critical tab to define. The first currency listed in the Currency table MUST be your local currency with a conversion rate of 1. This defines how the system is to operate internally when it comes to displaying and recording currency amounts.

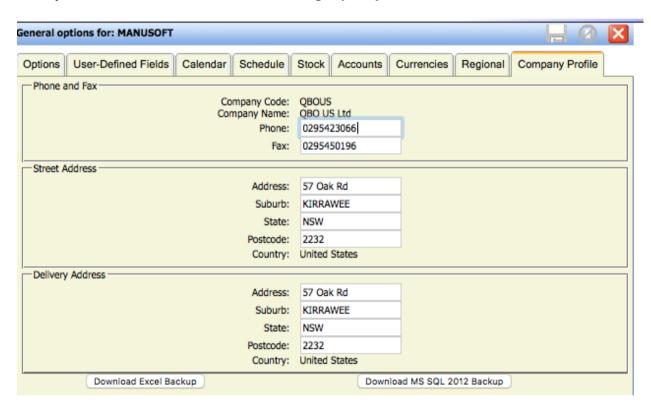
Internally within the system there is only one currency assigned for monetary amounts recorded and that is the default currency. IF you nominate a Company (Customer or Vendor) to be a foreign currency customer or vendor THEN the system will also record on a transactional basis the currency that was used, its amount (in the foreign currency) and the conversion rate at the time the transaction was raised.

This allows you to "print" the documentation in the foreign currency and record currency variations between, for example, raising an invoice and actually receiving payment. With regard to sales analysis reporting and other cost reporting the analysis is always done in the "home" or default currency.

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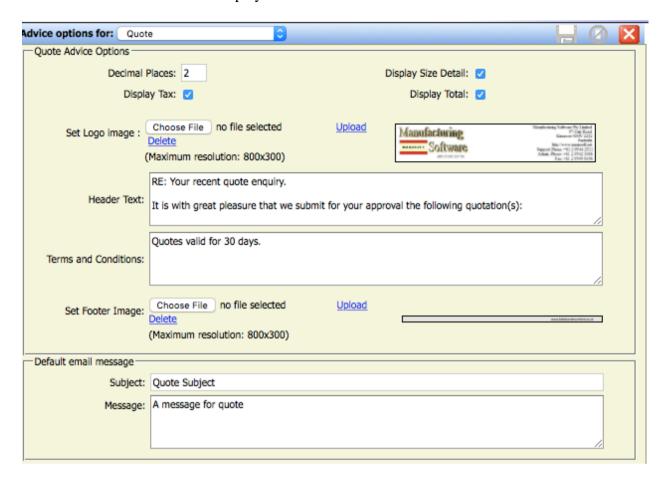
Finally, in this section we will look at the *Company Profile* tab.



Apart from the obvious things listed here you should note the facility to "Download" a copy of the database. Though you cannot run the system locally you will be able to examine the data in a suitable viewer (and retain an independent backup) of the system.

Setup Task 2 – The Printout Options

This dialog may be assessed from the *System Settings/Printout Options* menu item which presents an initial screen similar to the display below:



Each "Advice" in the system needs to be configured. You need to upload a letterhead for things such as Quote and Order Advices and also define "header" and "footer" text for each advice (where applicable). There are a number of set up options, particularly for the Job Ticket which relate to how that ticket is presented including whether barcodes are desired, etc.

The presentation of each advice will change markedly on your selections here so some thought needs to be put into this (and some experimentation). At this time a simplistic setup is appropriate with, say, the letterhead on all advices.

Setup Task 3 – The Product Types

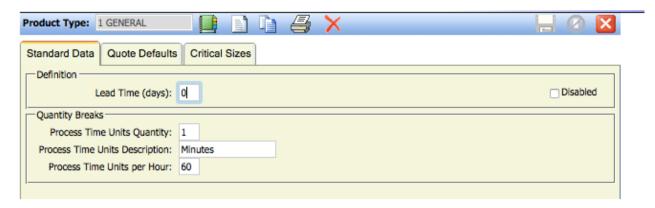
This dialog may be assessed from the *System Settings/Product Types* menu item. First a product type needs to be defined, for example the "General" type shown below (to cover All Products).

There are 3 things that need to be defined against each Product Type, namely:

- i. The Standard Data
- ii. The Quote Defaults
- iii. The Critical Sizes.

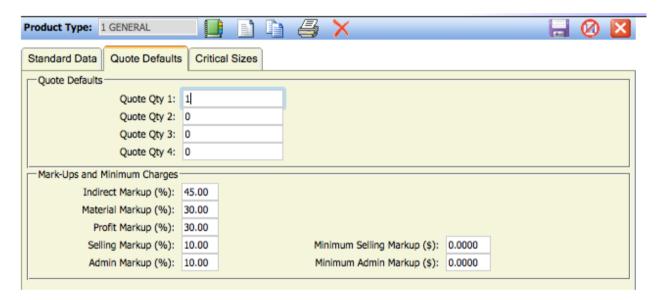
The first thing to set against the *Standard Data* of a product type is the *Process Time Units Quantity* definition. If process time units are in minutes, then the settings are as shown below. If they are in hours then the "Process Time Units Quantity" would be 1, the "Units Description" would be "Hours" and the number of "Process Time Units per hour" would be "1"

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The other thing to set is the **Lead Time** for the product type. This lead time is used for Purchasing or more specifically when setting the "Due Date" for Sub-assemblies generated by the system internally (plus the Due Date of the final assembly).

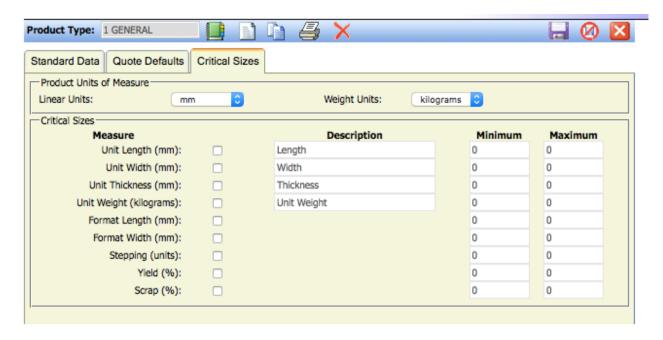
The Quote Defaults shown below define what quantity breaks you wish to examine by default when quoting and the defaults mark-ups that are applied to the *Standard Job Cost Quoting Formula* examined in a later Seminar (see Seminar No. 5 on Quoting & Estimating.)



The final tab to set up for each product type is the *Critical Sizes*. Here you have to define how the linear and weight units are to be defined (what you are going to refer to them as) and also which "sizes" are critical.

If a size is set as a critical size, then all items assigned that product type will need to have a value entered against that size in the system. Secondly you can set limits to ensure that "sizes" beyond these bounds are not entered against the appropriate items.

This is all about placing restrictions on what you need to enter and can enter against a Manufactured Item, because, for example, your machinery cannot handle products outside of a certain range.



Setup Task 4 – The Work Areas

This dialog may be accessed from the *System Settings/Work Areas* menu item. The initial display requires the operator to either select an existing Work Area (via the Lookup) or enter a new Work Area which is to be defined. The screen display upon doing this is a s shown below.

The essential things to define here are the **Recovery Rate** and the **Efficiency Factor**. The recovery rate is used during Quoting and Estimating to turn the time estimates into "dollars" in order to determine the Labour Cost component of the Quote.

You can also define some default **Process Detail** (work instructions) and default **Setup Time** and **Process Time** and indeed set up a "formula basis" for these defaults. The use of formulas is examined in detail in Seminar No. 4 (Part Definition) and will not be discussed here. Again it's a refinement that is typically added later once the system is operational.

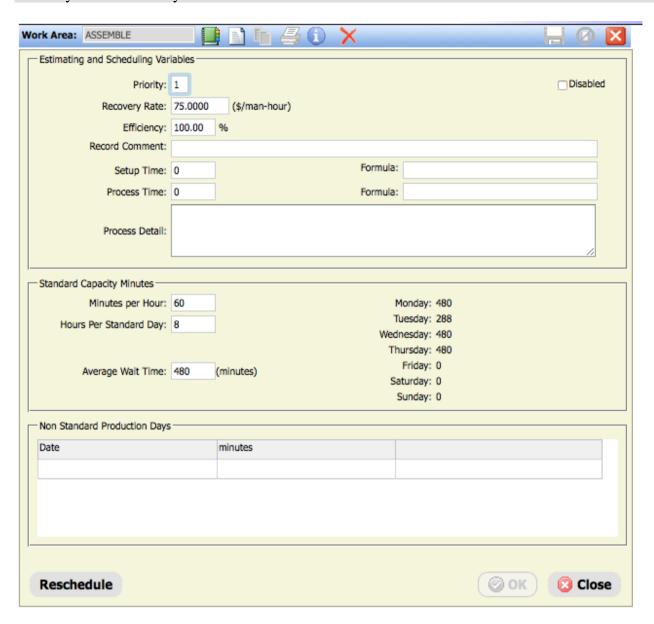
Finally on this tab we set some other things related to scheduling. The **Standard Capacity** in minutes/hour and hours/day, an average "wait time" between processes and whether this process has non-standard production days (refining the Calendar availability).

All-in-all Work Areas are critical for the operation of the system. They define the operations that are carried out within the Factory, the process to which employees clock on/off, how Manufactured Items are to be defined and quoted and how jobs are to be scheduled.

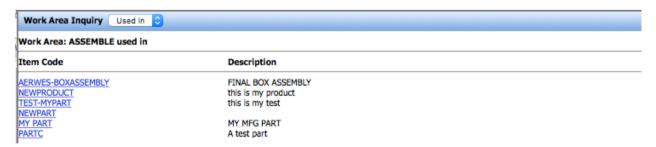
Don't rush in to define these yet, but rather give some careful thought coming up with the minimal number of work centres to begin with. You can always add others if your initial list is found to be inadequate. It is much more difficult to remove a Work Area than it is to define one.

To remove a Work Area from the list you have to ensure that there are no current jobs that use the Work Area and moreover that there are no Manufactured items (or Parts) that reference it.

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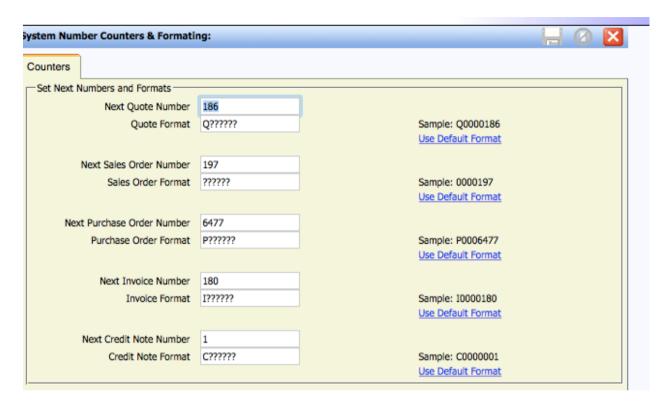


If you need to remove a Work Area a useful tool is the "info" icon adjacent to the Work Area name shown above. This option produces a list similar to that shown below of all the Parts that you would have to modify before you could remove and/or delete a Work Area.



Setup Task 5 – The Number Counters

This dialog may be assessed from the *System Settings/Number Counters* menu item which is shown below:



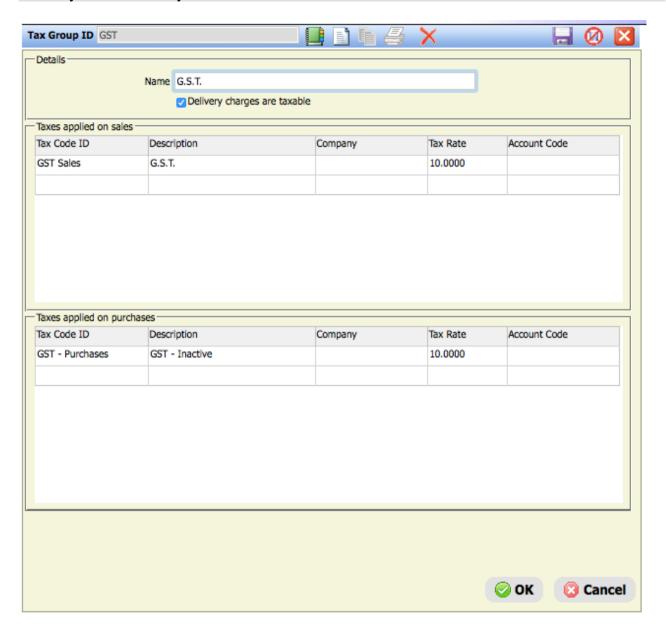
In this dialog you can set the starting point from which the number counters are indexed and also if you wish set a prefix which helps operators differentiate a number easily.

Setup Task 6 – The Tax Settings

This menu item is accessed via the *System Settings/Tax Settings* menu item. The initial display requires the operator to either select and/or create a Tax Group ID. The organisation of the Tax Tables within ManuDyn is similar to how they are laid out in QuickBooks®. That is, a tax rate must be defined for Sales and Purchases separately, but they can be grouped under the same Tax Group reference as shown below.

County, State and Local Authority taxes may be defined, all of which show on the appropriate advices (invoices etc).

Note The Default Tax Group that applies may be set up in the *System Settings/General Options* – *Options* tab as described above in **Setup Task 1**.



Setup Task 7 – The Users

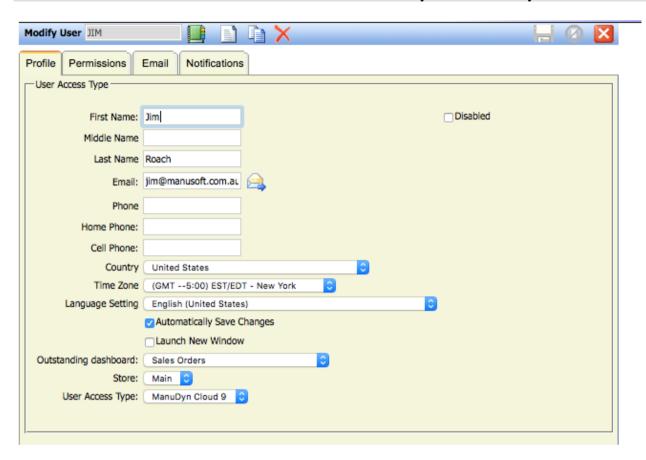
This dialog may be assessed from the *System Settings/Users* menu. The initial display requires the operator to either select and/or create a User. In ManuDyn Users are the people actually operating the system for purposes of data entry and/or data output.

Each user may be assigned access rights to various sections of the system as well as Management and Administrative rights to define the system set up and/or user access.

Upon selecting the User the screen display is as shown below. The things to be defined include:

- i. The User's Profile
- ii. Their Permissions
- iii. Their contact details
- iv. Their Notifications.

Each of these are described in detail below:

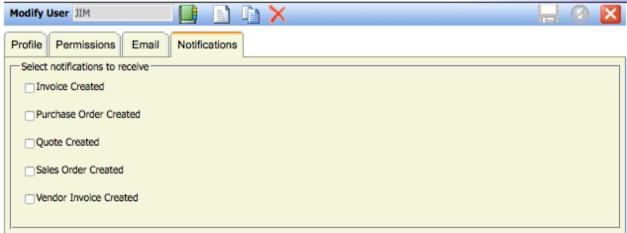


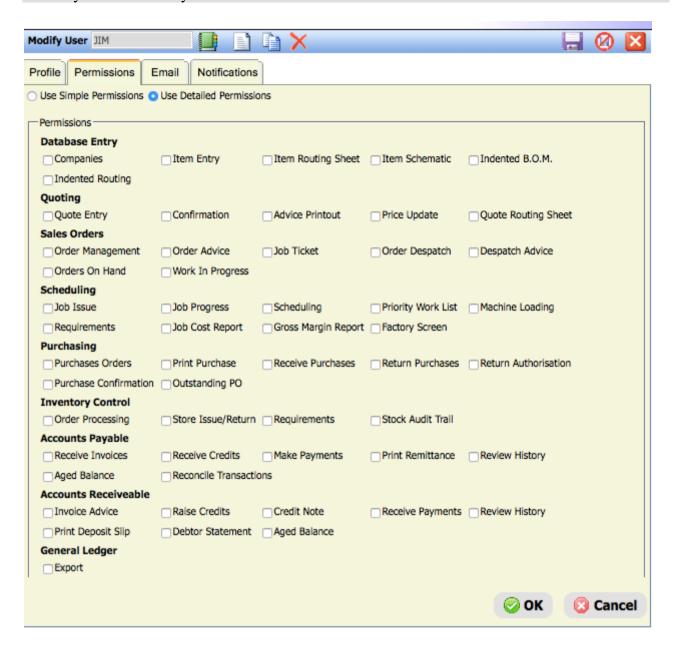
The User's name and details are defined in this tab including the presentation of the system "dash board" which can be configures for each user.

Note Changing the User Password is done via the *My Profile* option described below.

System security and access rights is maintained through the **Permissions** tab where a user may have "Simple" permissions – which effectively gives them access to everything, or "Detailed" permissions, which can be used to restrict access to individual routines. In the example shown below the user has access to NO areas in the system. To grant access you need to check the appropriate functional area.

The *Email* tab sets the obvious but the *Notifications* tab will need some explanation:





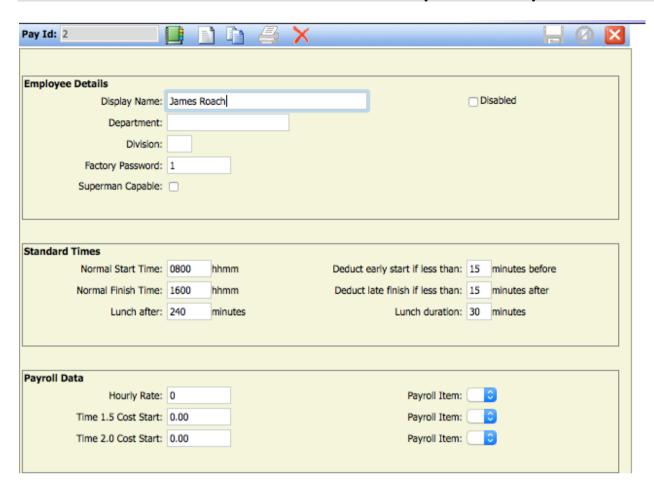
Basically if a notification is set then an email will be received by the User in respect of the functional area whenever a transaction is created. It's a good way of keeping track of what is Invoiced and Purchased on a daily basis for example.

Setup Task 8 – Employees

This dialog may be accessed from the *System Settings/Employees* menu item. The initial display requires the operator to either select and/or create an Employee. In ManuDyn Employees are the people who clock on/off Jobs in the factory.

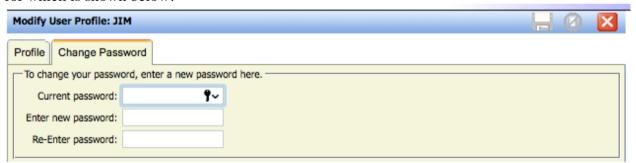
The information set up for an Employee includes their name, department and division; their password for accessing the Factory Screen, as well as their start time and hourly rate as appropriate.

In ManuDyn Job Costing may be determined by either an "Employee Based" or "Work Area Based" recovery rate. The former is set here and latter in *System Settings/Work Areas*



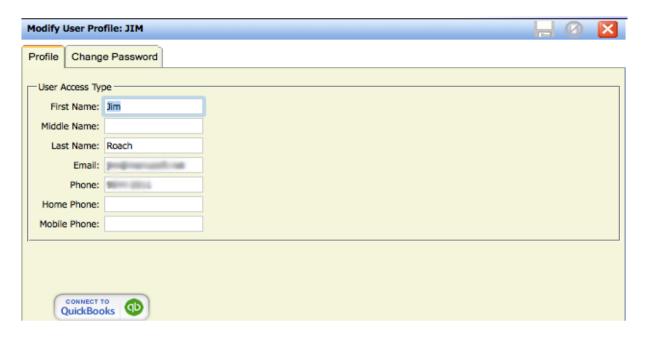
Setup Task 9 – The User Profile

The final setup option to look at is the *System Settings/User Profile* menu item. The screen display for which is shown below:



This profile is for the User that is currently logged in. It displays the name and contact information and where QuickBooks® Online is the selected Accounting Link, there is an option to upload the base data in ManuDyn to QuickBooks®.

Note This is also where the User may alter their password as shown below:



Concluding Remarks

The set up for ManuDyn is not complicated but is involved. The installer will need to know what they are doing. This is particularly the case where multiple Stores or Warehouses are involved, where multi-currency operations are prevalent and where there are divisional activities at discrete manufacturing locations. The key requirement here is that the operation of each of these situation be carefully considered.

The installer should contact ManuDyn Support if they are uncertain as to the correct set up procedure.

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