

MaintScape Data Setup Reference

Suggested sequence for data loading	2
System Configuration	3
Building Cost Accounts	4
Building Location Types	6
Building Other System Administration Tables.....	7
Building Explorer – Locations.....	9
Building Part Location Types	12
Explorer Part Locations Input.....	13
Preparing Equipment Data Sheets	16
Equipment Data Collection Form	18
Building Security Roles	20
Building Trades Table	23
Building Staff Data	26
Building Vendor Data.....	30
Building PM and other Procedures	32
Build Equipment Class, Equipment Type and Equipment Files.....	39
Build Maintenance Schedules and Generate Master Schedule	44
Building the Parts File	47
Assigning Part Locations, entering minimum and maximum stocking quantities.....	49
Perform Physical Inventory and enter on-hand counts to MaintScape	55
Follow-up on-site assistance, 1 to 2 months after MaintScape implementation	61
Searching and Reporting within MaintScape	62
Reporting from Search Windows	63
Bulk Operations and various Shortcuts.....	63

Suggested sequence for data loading.

MaintScape allows you to enter data in practically any order, including “on the fly” but we find that it is easier and more orderly for you if the bulk of the initial data is input in a logical fashion; we will describe that below.

Getting Ready to Load Data

The purpose of this document is to help you load initial data to MaintScape. More detail on the procedures herein is contained in your Maintscape Reference Guide and in your on-line help file.

Before you begin, we strongly urge you to use the written Evaluation Tutorial or to read the Reference Guide, General Information Chapter (Getting Started through Navigation).

Additionally, it often helps to gather information on paper before starting your data input. To assist you, we have provided forms that may be useful; these can be printed and copied.

Setting up all the data regarding your equipment, staff, maintenance procedures, equipment locations, part locations, accounts and other data is a large and time consuming job. You do not need to do all of this before starting to use and gain the benefits of MaintScape. We suggest that if it is feasible, you attempt to define all or many of your Locations (Equipment Locations and other Facility Locations that can have a work order written against them). After that, set up your more critical Equipment and Preventive Maintenance Procedures and create PM schedules. Then start using MaintScape and build other data as you have the time and the need.

We also suggest the following:

- Go to the Evaluation Guide and review the data that we have pre-loaded as this will give you a pretty good understanding of how things might be set up.
- When you are trying something for the first time, try it in the Evaluation Copy and see if you are happy with the results (run some reports as this is a good way to see if you are doing what you thought you were doing).

Lastly, in the rest of this document, we attempt to illustrate the methods that we have found to be most efficient for initial data loading; there are other methods.

If you are having difficulty, feel free to call us and we will provide as much help as you require; it is easier if you are logged in to MaintScape so we can walk you through things; if your data is not working as you think it should, you can email us your database for review and suggestions.

Order of Entering Data

We will list our suggested order below and following that will provide more detail on each of these items.

- **Main Menu/System Administration/Setup Data/Code Tables** – enter the following
 - ❑ **Accounts** – these are your cost accounts; they should be entered first as many of the other entries contain a reference to these.
 - ❑ **Location Types** – these are the kinds of location that your facility or plant contains such as buildings, floors, parking lots, roofs, basements, grounds, other.
 - ❑ **Part Location Types** – these are the kinds of part locations that you use such as stockrooms, aisles, rows, bins, shelves, other.
- **Next, from Explorer, set up the structure (location hierarchy) of your plants or facilities (more detail later).**

The above data gives you a good starting point to prepare you for entering equipment or parts; then to enter equipment or parts, you will likely want to prepare data entry forms before proceeding; these forms are included in Attachment A. We will list the steps in logical order for entering equipment files and provide more detail later. The section following this will do the same for Parts Data Entry.

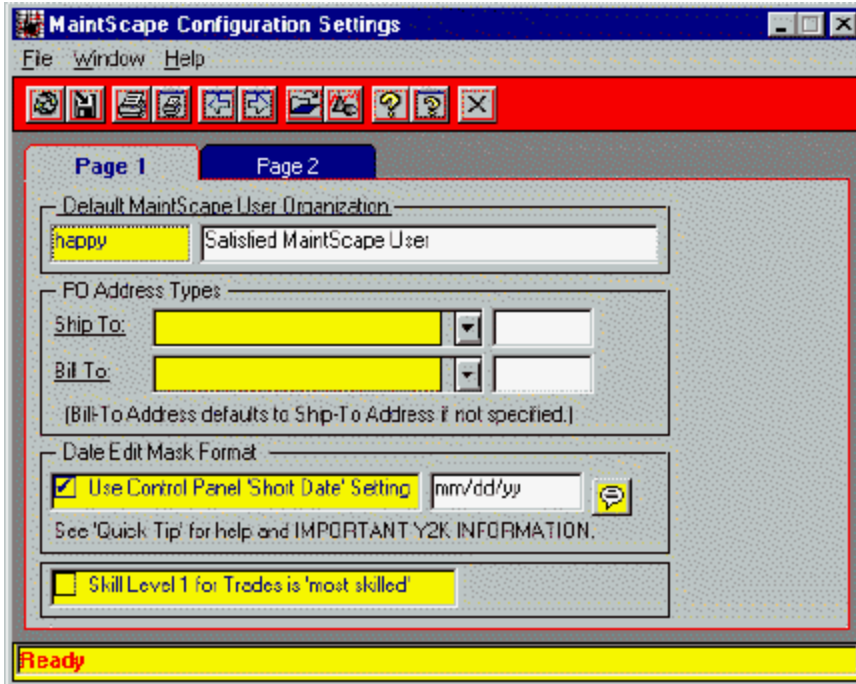
- **Equipment Classes** from **Main Menu/System Administration/Setup Data/Code Tables** (see detail later).
- **Equipment Types** from **Main Menu/Equipment Type/New**.
- **Equipment** from **Main Menu/Equipment/New**.

After you have entered Equipment, you will either want to setup Procedures and Maintenance Schedules or perhaps set up Parts prior to this step. For the moment, we will assume that you will set up Parts later. The steps involved are as follows, detail is later in this section.

- From **Main Menu/Procedure/New**, you will describe your PM or other recurring scheduled maintenance activities. You will need one Procedure for each type of PM that you perform on each type (such as make/model) of equipment. Example – a certain type of Boiler requires monthly, semiannual and annual PM thus you would create three procedures.
- From **Main Menu/Maintenance Schedule/New**, you will tell MaintScape which equipment to use which Procedures on.
- From **Main Menu/Maintenance Schedule/Generate All**, you will tell MaintScape how far into the future to generate your master PM schedule.

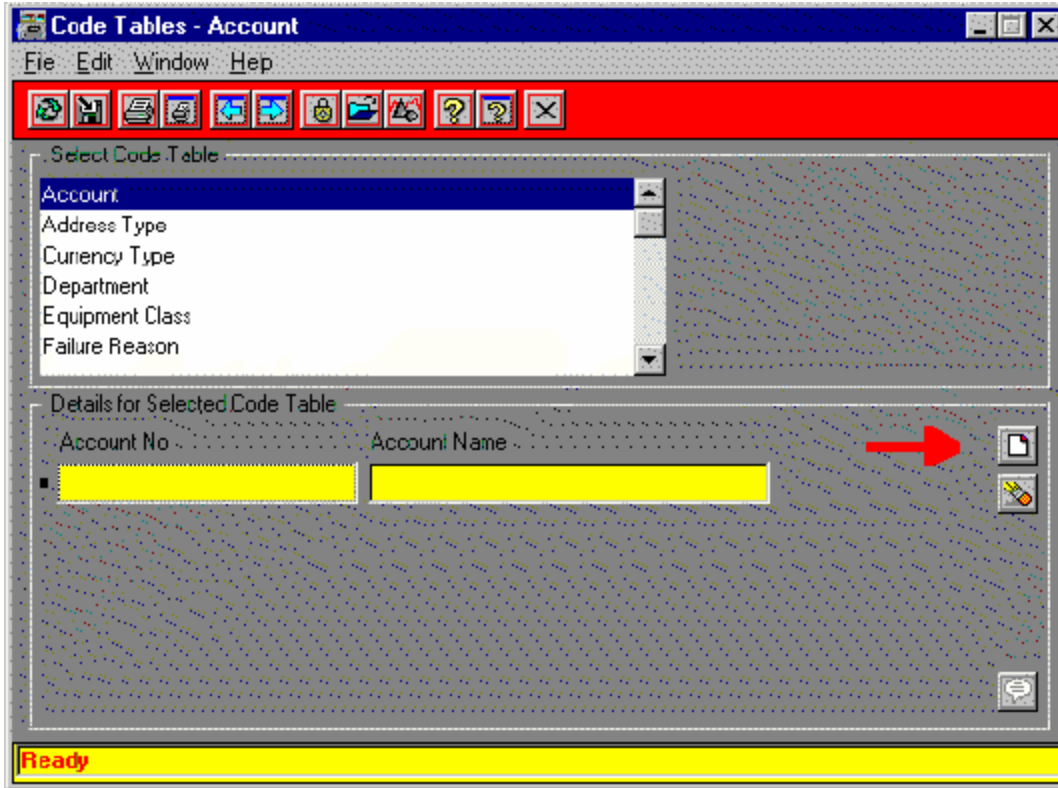
System Configuration


From Main Menu, click System Administration, click System Configuration to see a window similar to the one below.




If your company is not setup under Default MaintScape Organization then you will need to do so by right clicking in this field and clicking New.

Building Cost Accounts



From **Main Menu/System Administration/Setup Data/Code Tables** – click **Accounts** in the upper section and click the **New** button  to the right of the lower data area then enter the **Accounts Numbers** and **Account Names**, press **Tab** key to move to next account.

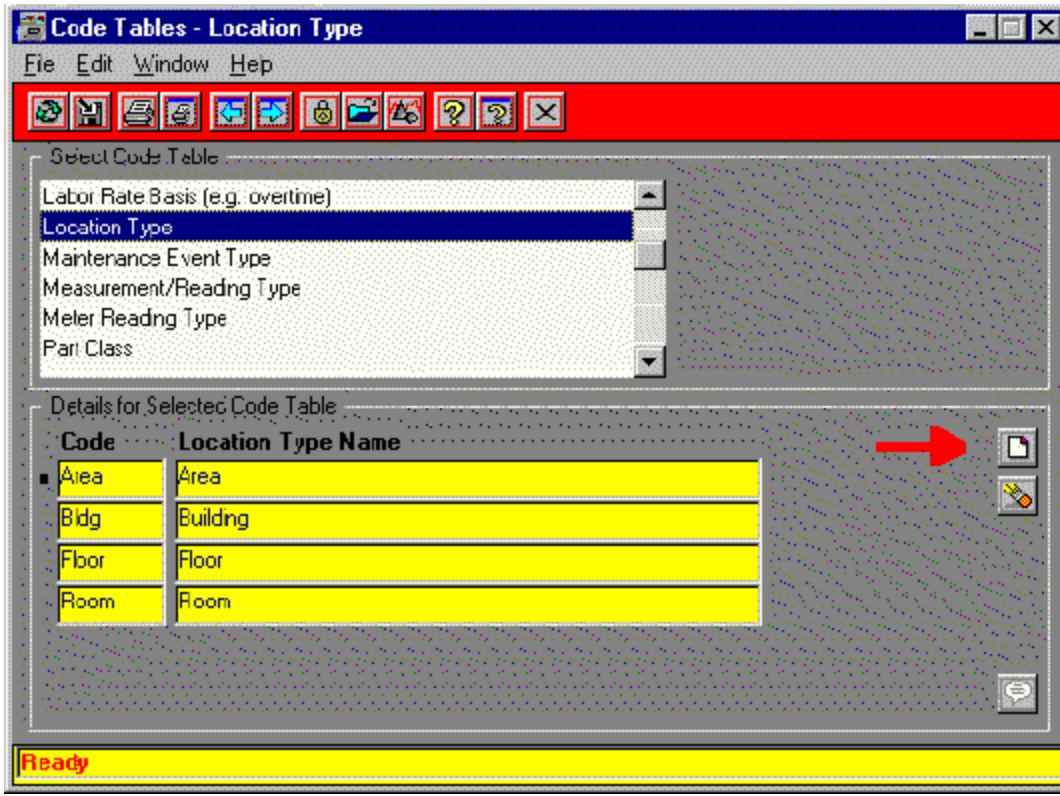
Click the **Save** button  on **Toolbar** when completed.


Click the **Close** button  on the **Toolbar** to exit the window.


Notes - accounts are the cost accounts that you wish to post the maintenance cost to. You may have many different cost accounts, depending upon type of work, which equipment, which plant, other factors or you may have only one account to which all maintenance is posted. Accounts are not a required entry in MaintScape so you may skip this section if you desire.


Many reports are available sorted and subtotaled by Account.

Building Location Types



From **Main Menu/System Administration/Setup Data/Code Tables** – click **Location Type** in the upper section and click the **New** button  to the right of the lower data area then enter **Code** and **Location Type Name**. These are simply the types of locations at which you have equipment or the types of Facility Locations which you will write work orders against; example Buildings, Floors, Rooms, Parking Lots, Equipment Yards, grounds, etc. These are simply the generic types; you will assign the specific buildings, rooms, parking lots, etc. through MaintScape at a later time.

Click the **Save Button**  on the **Toolbar** when completed.

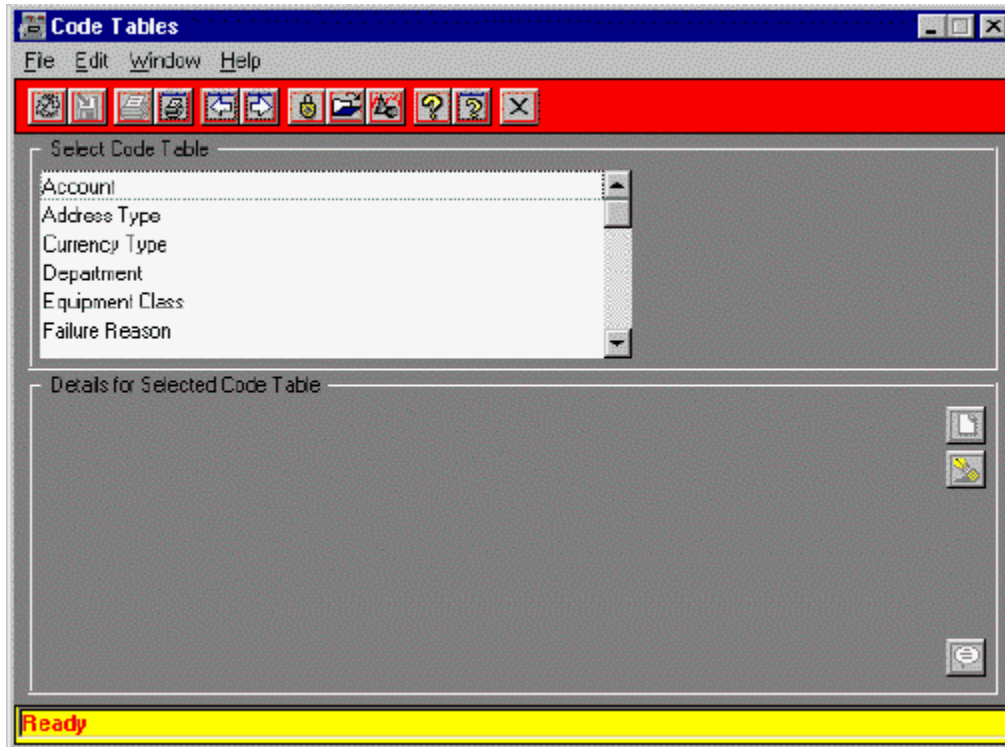
Click the **Close button**  on the **Toolbar** to exit the window.



Many reports are available sorted and subtotaled by Location.

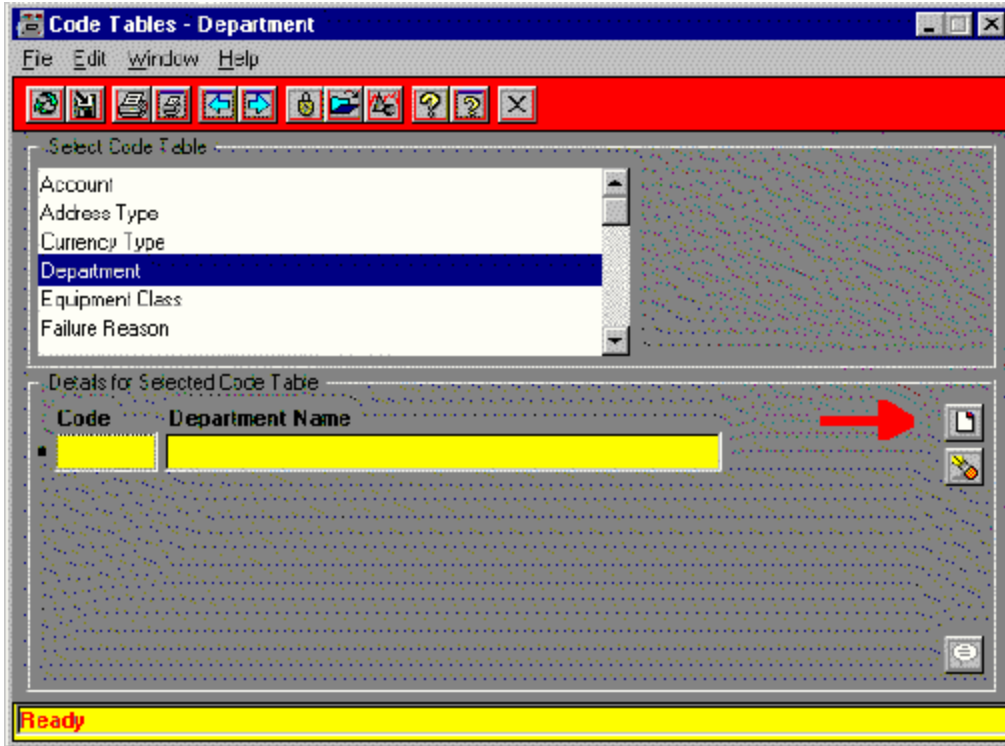
Location is not a required field.

Building Other System Administration Tables

From **Main Menu**, click **System Administration**, click **Setup Data**, click **Code Tables**. This will display the window below.

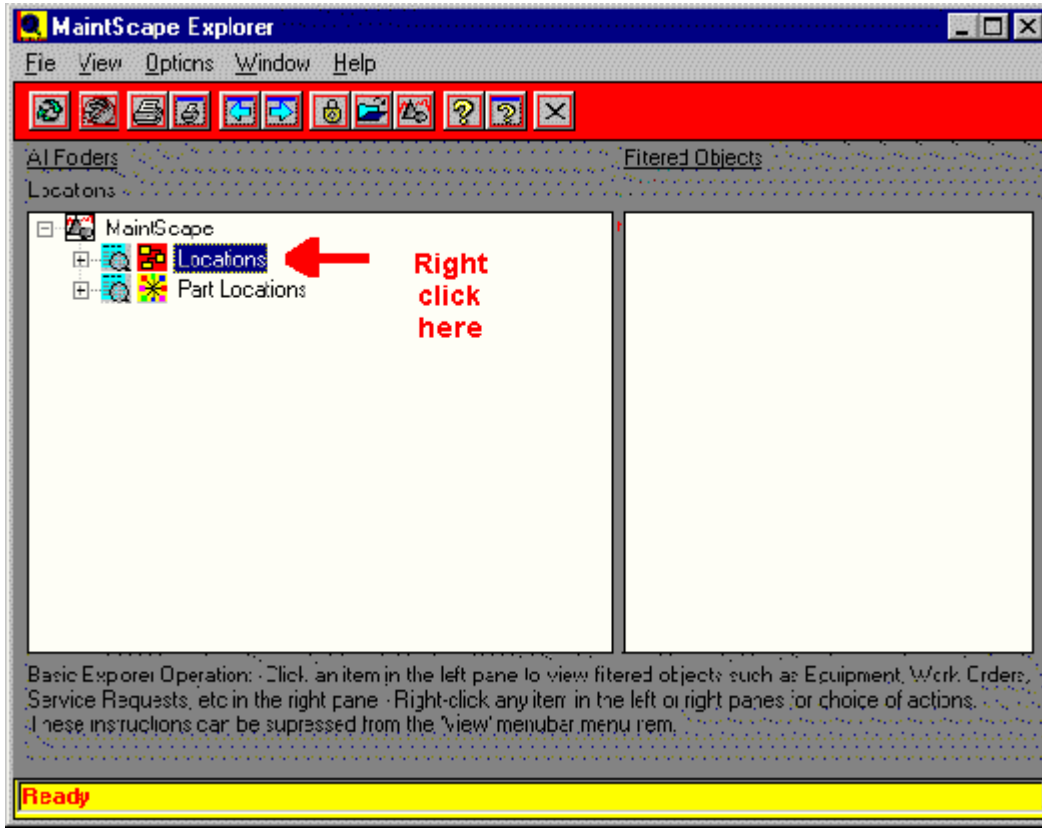


Click to highlight the desired table (use the scroll bar). In the lower section (Details for Selected Code Table), click the New button  to the right to add a new entry to the table, click the Delete button  to delete a highlighted table entry. See window below after Table is highlighted and New button has been clicked.



Enter Code and use the second field for a longer entry.

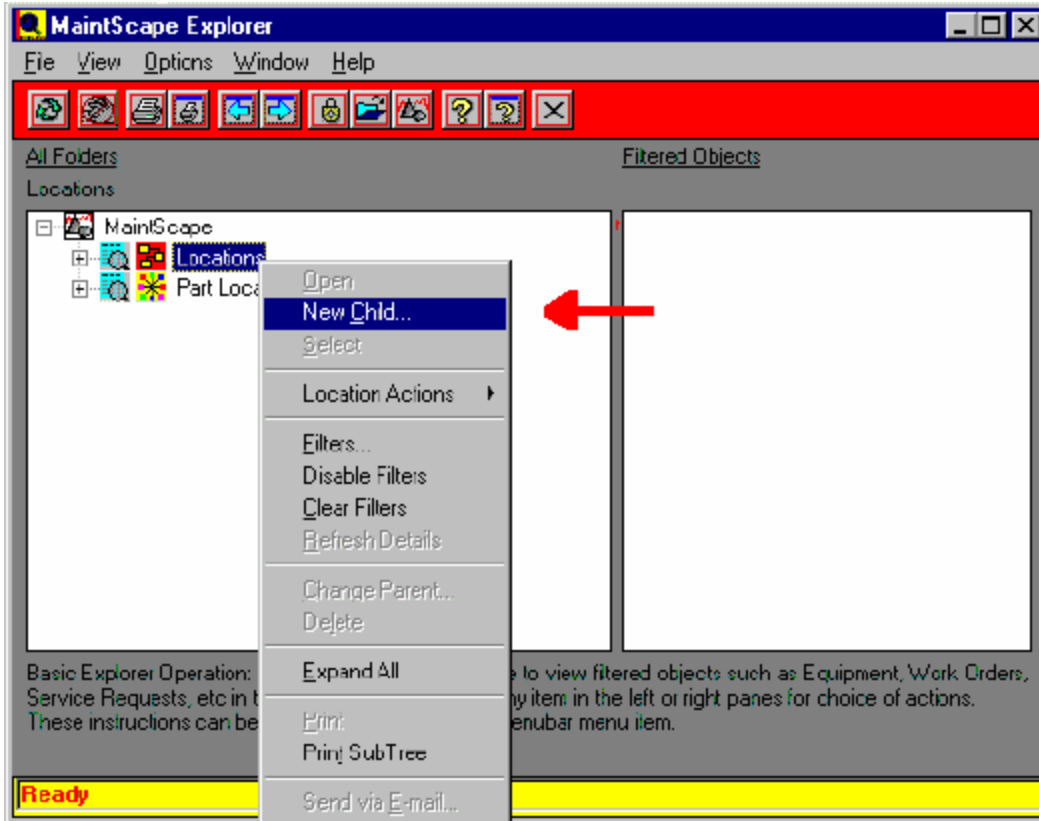
Building Explorer – Locations



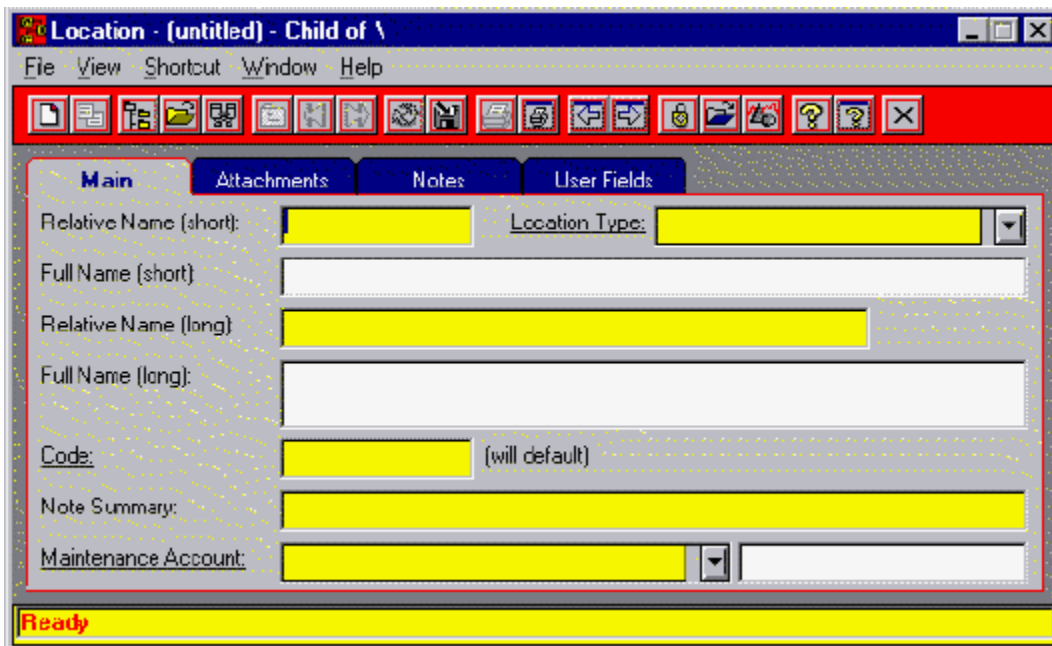
From **Main Menu/Explorer/Explorer** – from here you will build your location structure. This window works in a manner very similar to MicroSoft Windows Explorer, i.e a plus beside an entry indicates that there is more data below which can be viewed by clicking the plus. You will begin with nothing in this window except the entries “**Locations**” and “**Part Locations**”; here we will work with Locations (these are the locations at which you have equipment or against which you would like to write work orders).

Right Click on the entry below which you would like to add something (in the beginning this will be “Locations”. Before we start, imagine that you might want to create a structure that has Plants and/or Buildings then each Plant may contain Buildings and each Building may contain Floors and each Floor may contain Rooms; a Building might also have an associated Parking Lot or Equipment Yard or other Location Type (expand the Location structure in the MaintScape Evaluation Guide to get the idea).

The **Right Click** will display a pop-up menu; click on **New Child**.



This will display a window title “Location – (untitled) – Child of (whatever location you are adding below).”




Enter data as follows:

- **Relative name (short)** – enter the name that you desire for this specific location, i.e Plant 1, Building 3, School 5, Room 104, etc.
- **Location Type** – enter or use the combo box to lookup the generic location type such as Building, Room, Parking Lot, etc.
- **Code** – MaintScape will default to a numeric entry if you enter nothing; this is recommended.
- **Relative Name (long)** – MaintScape will default to the same name as Relative Name (short); change this is you like.
- **Maintenance Account** – enter or lookup a maintenance account if you would like to default to this account when work orders are created for this location.
- **Click Save on the Toolbar** to save the data.
- **Exit** the Window; this will return you to the Explorer Window with the new location added

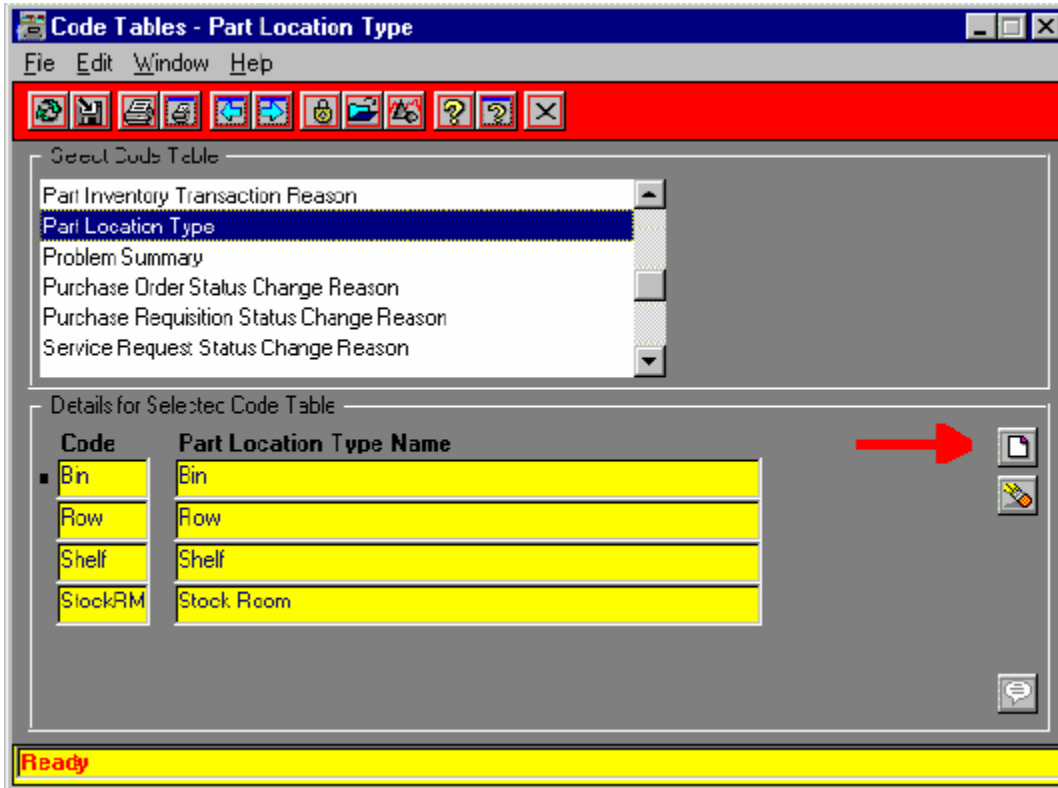
Note – if you wish to add another location below the same location that you added the previous location below, simply click the New Button (first button) on the Toolbar of the New Child Window rather than exiting and returning to Explorer.


- You are now ready to add the next location.


When completed click **the Close button**  **on the Explorer Toolbar** to exit the Explorer window.

Building Part Location Types

From **Main Menu/System Administration/Setup Data/Code Tables** – click to highlight Part Location Type.



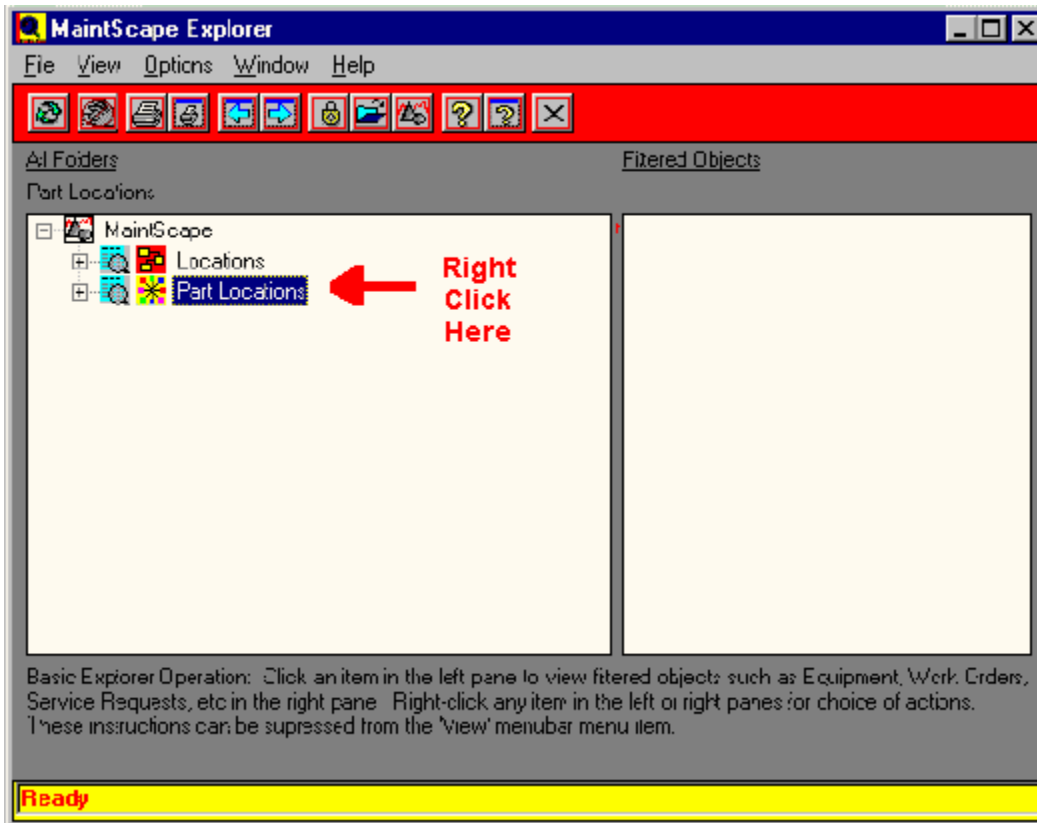
Click the **New Button**  to the right of the lower data table to add a New Location Type, **press the Tab key** to add another Part Location Type.

Click the **Delete button**  to the right to Delete a highlighted Part Location Type.

When completed click the **Save button**  on the **Toolbar** then click the **Close button**  to exit.

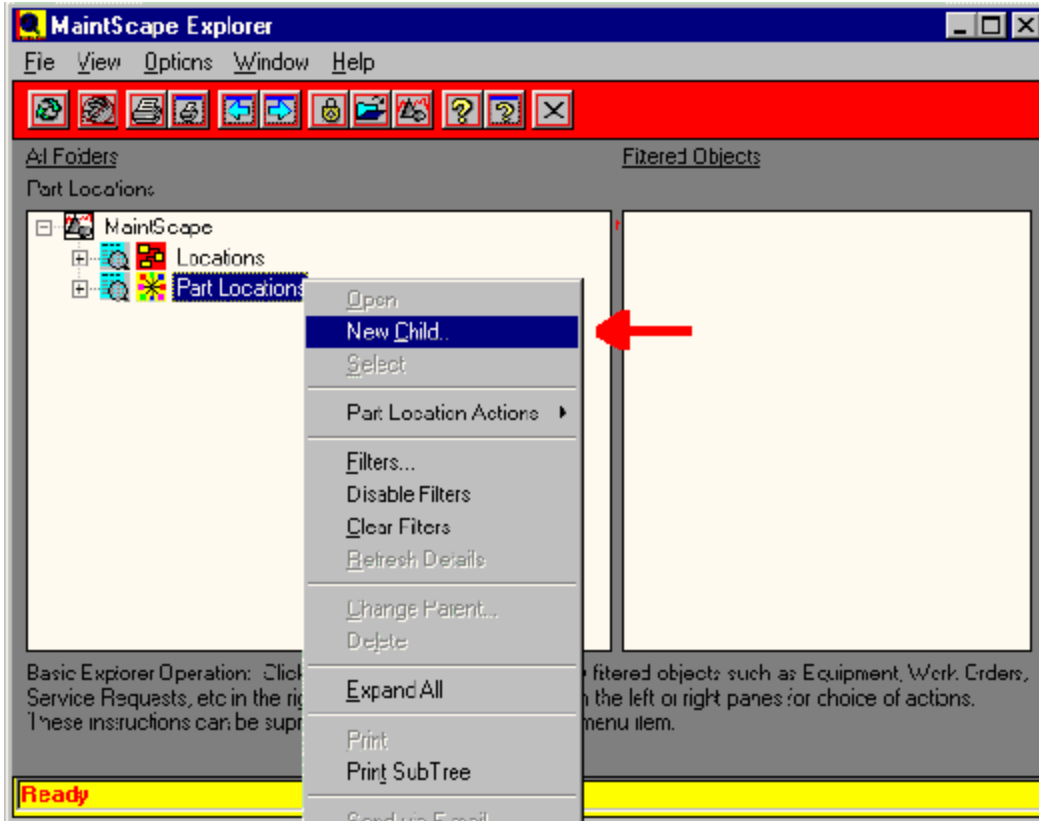
Explorer Part Locations Input

From **Main Menu**, click **Explorer** then click **Explorer** again -- from here you will build your location structure. This window works in a manner very similar to MicroSoft Windows Explorer, i.e a plus beside an entry indicates that there is more data below which can be viewed by clicking the plus. You will begin with nothing in this window except the entries “**Locations**” and “**Part Locations**”; here we will work with **Part Locations** (these are the locations at which you have parts).

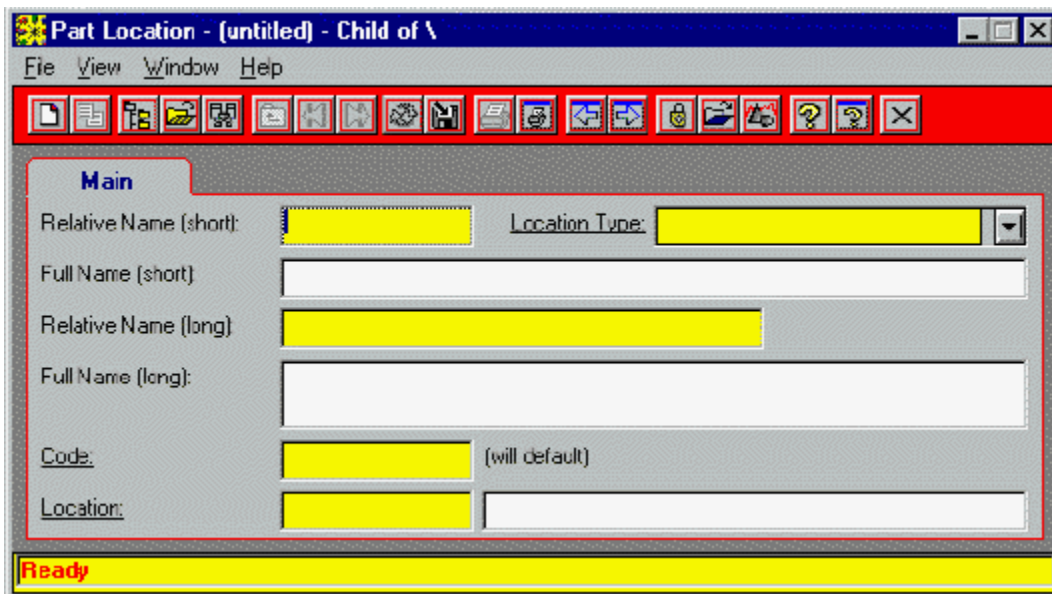


Right Click on the entry below which you would like to add something (in the beginning this will be “**Part Locations**”. Before we start, imagine that you might want to create a structure that has Multiple Stockrooms then each Stockroom may contain Aisles and each Aisle may contain Rows and each Row may contain Bins; the type of structure is entirely up to you (expand the Part Location structure in the MaintScape Evaluation Product to get the idea).

The **Right Click** will display a **pop-up menu**;



Click on **New Child**. This will display a window title “Part Location – (untitled) – Child of (whatever location you are adding below).



Enter data as follows:

- **Relative name (short)** – enter the name that you desire for this specific location, i.e Stockroom 1, Aisle 3, Row 5, Bin 10, etc.

- **Location Type** – enter or use the combo box to lookup the generic location type such as Stockroom, Aisle, Row, Bin, etc.
- **Code** – MaintScape will default to a numeric entry if you enter nothing; this is recommended.
- **Relative Name (long)** – MaintScape will default to the same name as Relative Name (short); change this is you like.
- **Save** the data.
- **Exit** the Window; this will return you to the **Explorer Window** with the new **Part Location** added

Note – if you wish to add another part location below the same location that you added the previous location below, simply click the New Button (first button) on the Toolbar of the New Child Window rather than exiting and returning to Explorer.

- You are now ready to add the next Part Location.

When completed click **the Close button**  **exit** the Explorer window.

Preparing Equipment Data Sheets

Different approaches and level of detail could be used for the fields '**Equipment Class**' and '**Equipment Type**'. We will briefly outline these below.

Approach 1

Equipment Class could be very broad/general such as:

- Truck
- Boiler
- Chiller
- Fork Lift
- Pump
- Web Press
- Plater
- Printing Equipment
- Timing Equipment
- Projection Equipment

In this case, **Equipment Type** might be a general breakdown (irrespective of make and model) of each of the Equipment Classes, such as:

For the Equipment Class of '**Projection Equipment**'

- Positive Viewer or QC Station or
- QC Pickups or Rewinders or
- Ultrasonic Splicers or Silver Cell Controller Amps or

For the Equipment Class of '**Pump**'

- Water Cooled or Air cooled

Approach 2

Equipment Class could be a bit more specific such as:

- Water Cooled Pump or Air Cooled Pump or
- 120 volt AC Unit or 240 volt AC Unit or
- Projection QC Station or Projection Rewinder or
- Projection Ultrasonic Splicer

Equipment Type could be a specific **Make and Model**, example for the Equipment Class of Water Cooled Pump we might have Equipment Types such as:

- Make and Model 1
- Make and Model 2
- Make and Model 3

Approach 3

Equipment Class could be more general/broad as in Approach 1

Equipment Class could be Make and Model Specific as in Approach 2

Many customers favor Approach 2 or Approach 3 for the following reasons:

- 1. If you specify a Bill-of-Materials (BOM) this is generally done at the Equipment Type level thus Make and Model is most specific. The BOM specified at the Equipment Type level is inherited by each individual equipment of this Make and Model.**
- 2. Many of our reports select, summarize and subtotal maintenance hours, parts and costs at the Equipment Type level within each Equipment Class. Thus if you are using Make and Model as your Equipment Type you have a very good mechanism for comparing various models of equipment from various manufacturers to determine which is more or less costly to maintain.**
- 3. PM procedures (and other procedures), by definition, are specific at the Make and Model level.**

The following page contains a suggested form for gathering of equipment data, you may make as any copies of this form as you desire and distribute these to the people who will gather this data. Note that we have not included any Meter or Measurement Point information on this form as this is likely better done in a separate step after you have gathered the basic information and commenced MaintScape usage.

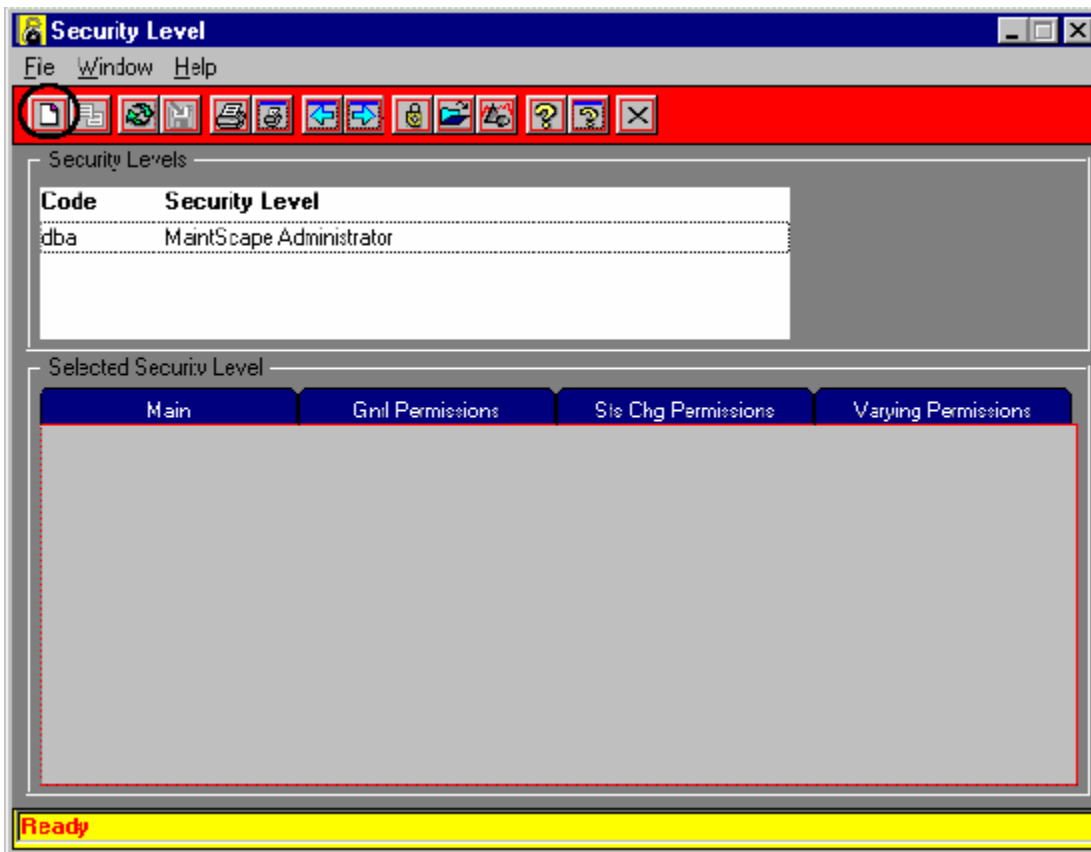
Building Security Roles


Each person who is authorized to access MaintScape will be assigned a Security Role. It is the Security Role which both authorizes and controls the access and functionality that each person will be granted.

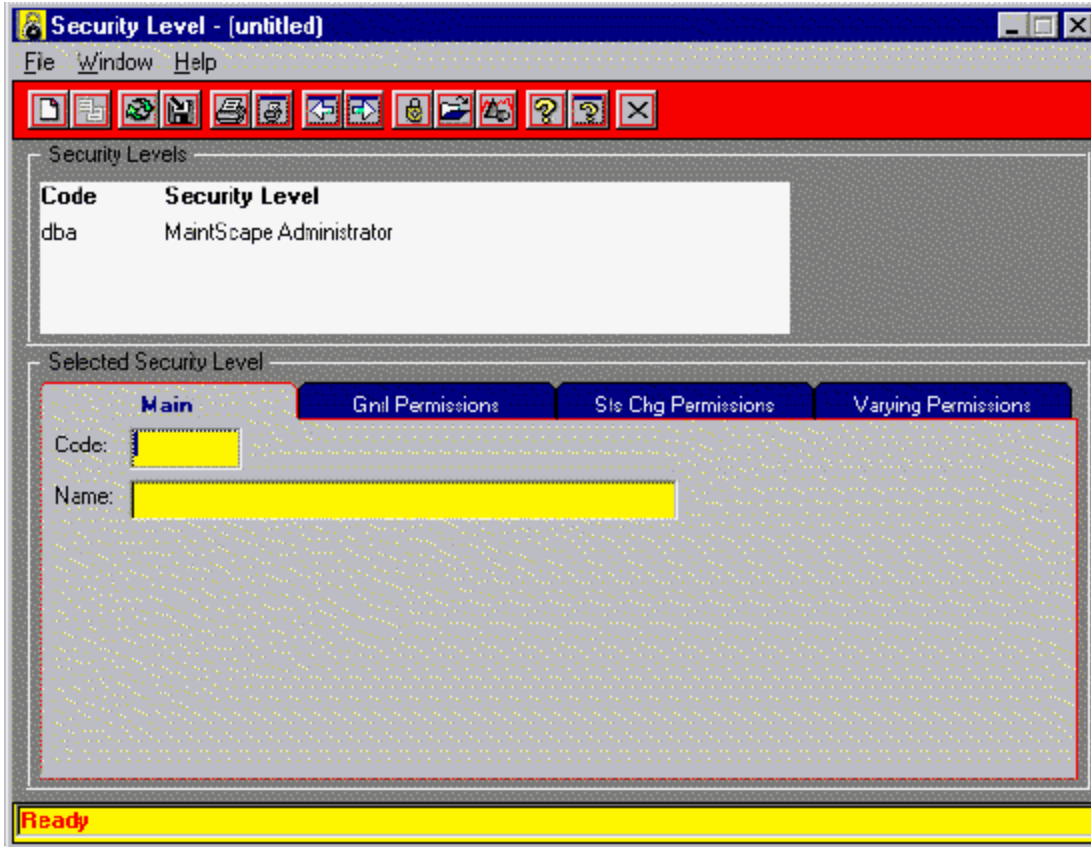
Most MaintScape customers establish Security Roles to reflect job function such as Technician, Supervisor, Manager, Parts Buyer, Receiving Person, etc. This is based upon the assumption that most staff of a specific group such as Technicians will require the same rights and privileges.

A separate Security Role always exists in MaintScape and can be granted to one or more people, this Security Role is Database Administrator (DBA). This Security Role automatically has access to all privileges within MaintScape. We strongly recommend that this Security Role be granted to only one or a few individuals and that only this Security Role be granted access to additions, deletions and modification of the data contained under Main Menu/System Administration. This is to ensure that your data (primarily lookup tables) retains consistency, i.e you do not have equipment classes such as Boiler, Boyler, Boler, etc.

To access Security **from Main Menu click on the Security Icon then click Security Levels**. This will display the following window.



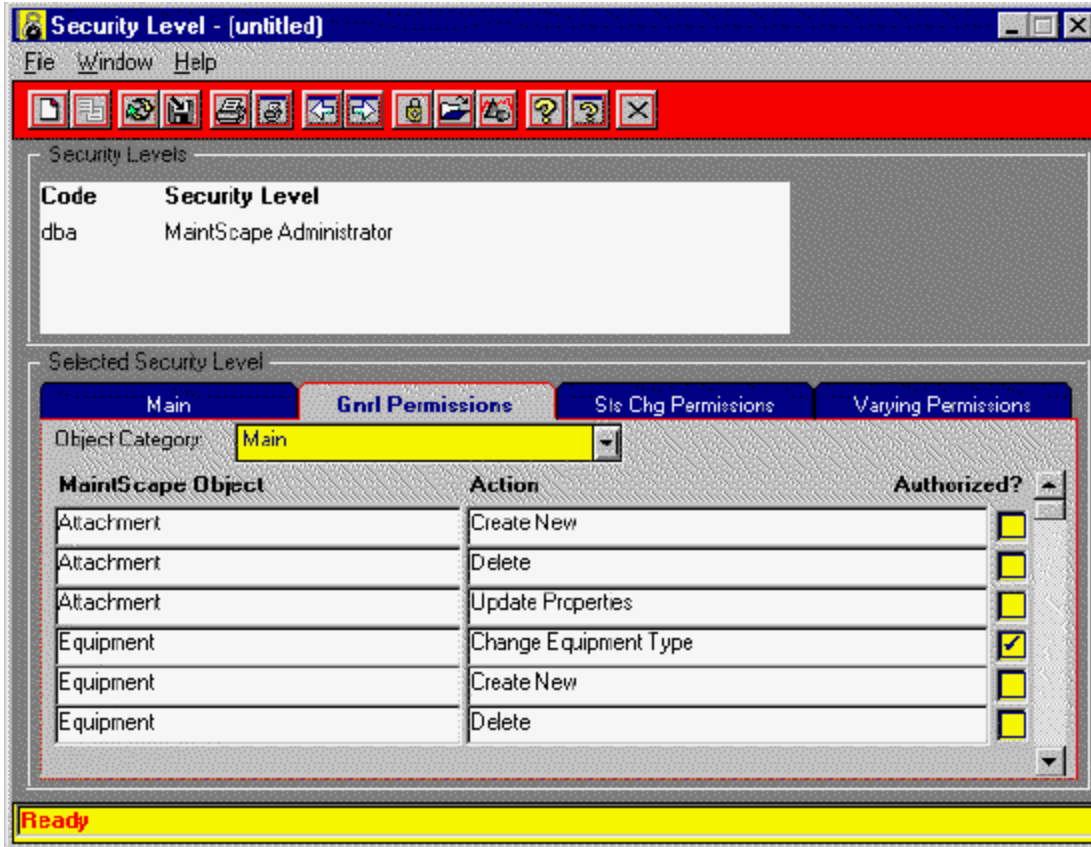
Click on the New button  on the Toolbar (circled). This will display the following window.



Code – enter any code you desire, examples – Technician, Manager, Supervisor, Receiving, Purchasing, etc.

Name – enter a name as you desire, perhaps a longer term than used in code.

Now you are ready to indicate the rights to be granted to this Security Role, there are many tables to complete. **Start by clicking the Gnl Permissions page** to display the window below.



You are viewing the **Object Category** titled 'Main'. The colored boxes to the right (under the title 'Authorized' allow you to click and place a checkmark to allow that Action. In the window above we are showing one checkmark to illustrate this.

Place a checkmark next to each Action which you wish to grant to this Security Role, note the scrollbar to the right to view many more actions under the 'Main' Object Category.

After you have completed the 'Main' Object Category, **click the combo box  for the Object Category and select the next Object Category.**

After you have completed all Object Categories on the Gnrl Permissions page, **click to select the Sts Chg Permissions page. Place check marks for all Actions for each Object (again using the Combo box to select all the Objects).**

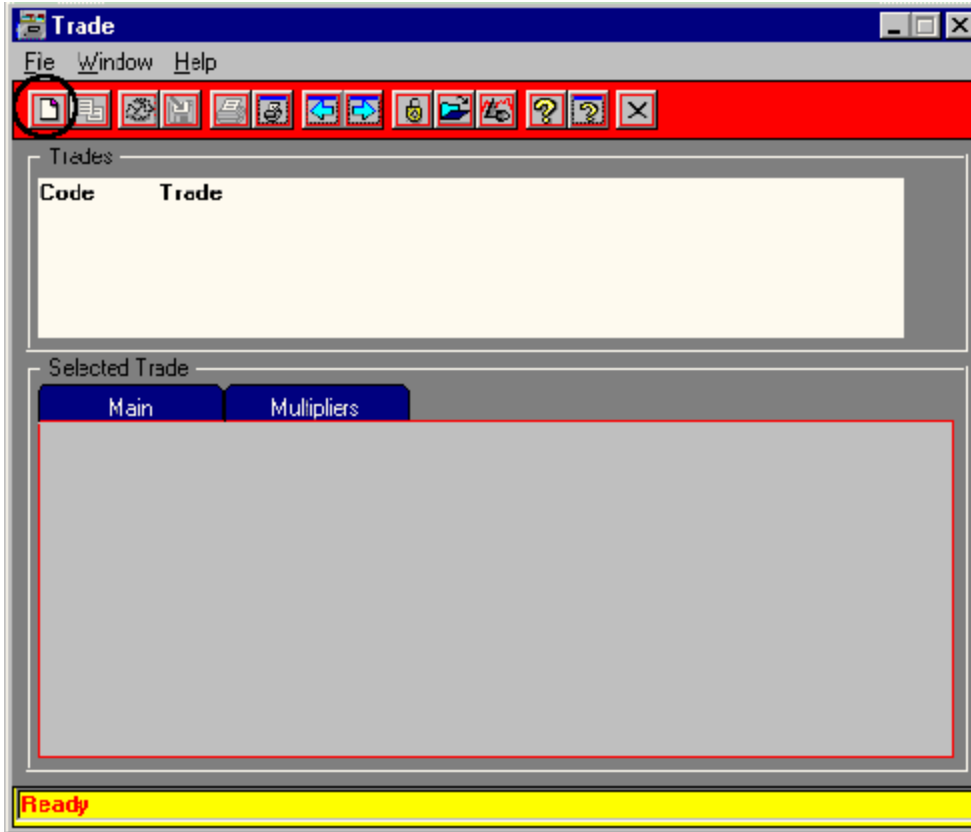
After you have completed all objects on the Sts Chg Permissions page, click the **Save button  on the Toolbar** to save your data.

Note that the upper section of the Security Level window displays the Security Levels that have been created. To view and/or change any of these, click to highlight the desired Security Level.

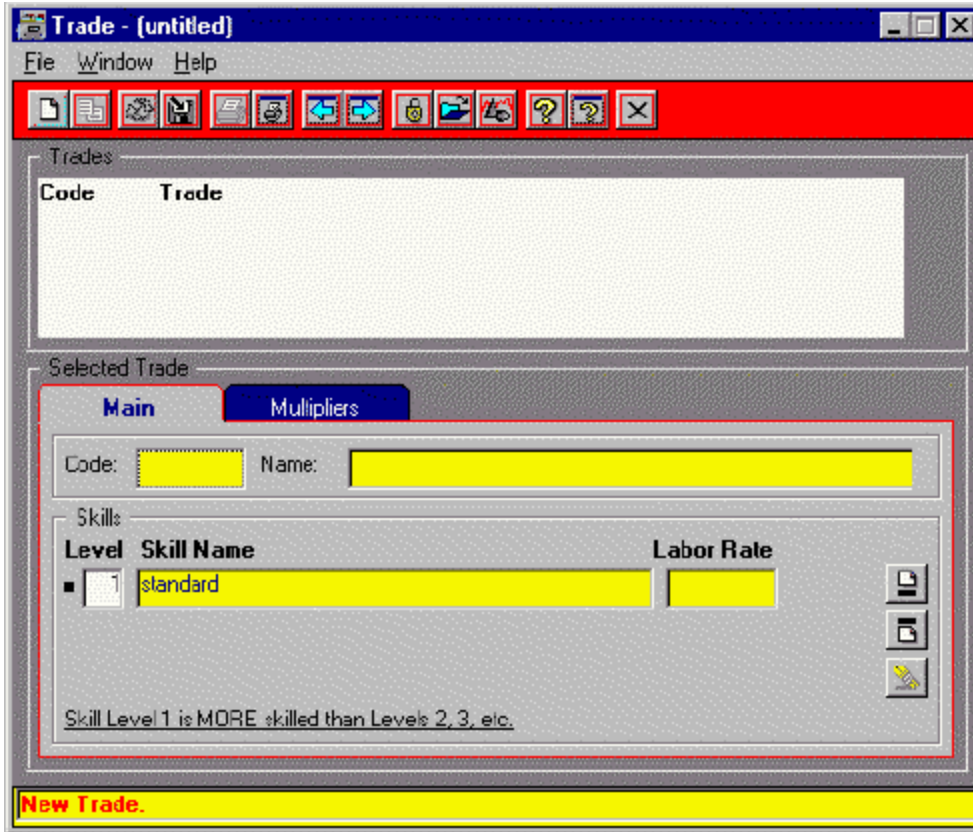
When completed, **click the Close button  to exit Security.**

Building Trades Table

From the **Main Menu**, click **System Administration** then **Setup Data** then **Trades**. This will display the window below.



Click the New button  (circled in our example above). This will display the following window.



Code – enter a code for the Trade such as elec, mech, plmbng, etc.


Name – enter a longer name such as electrician, mechanic, plumbing, etc.


The Lower Skills data area allows you to add as many skills to the selected trade as you desire.


Level is preset to 1, leave this as is. As MaintScape is shipped, Level 1 is the highest skill level; this is reversible if you choose so that Level 1 could be the lowest skill level.

Skill Name is preset to standard, leave this if this is your highest skill level for that trade, if it is not the highest level then change this to the highest level, such as Expert, Senior, Master, etc.

Labor Rate – enter a labor rate in dollars and cents according to your base currency. This is the hourly rate that will be used to post maintenance work performed by that Trade/Skill. Most users do not use actual pay of an individual as the Labor Rate and instead use a rate representing an average for that Trade/Skill and reflecting a burdened rate (includes overhead for office space, benefits, supervision, uniforms, other). This is recommended so that when people of the same Trade/Skill but at different pay rates are used on different equipment, the rate is standardized and therefore does not make one equipment appear to be more costly to maintain than another equipment even though each utilized the same number of hours of the same Trade/Skill. Note that the capability exists under Staff to also enter a Personal Labor Rate which can be used to identify the exact cost of an individual. When a personal rate and a trade/skill rate both exist, MaintScape will detect this and ask you which rate you would like to utilize on the Work Order.

To add the next highest skill to this trade, click the 'add below' button  to the right.

 allows addition of a skill below the highlighted skill.

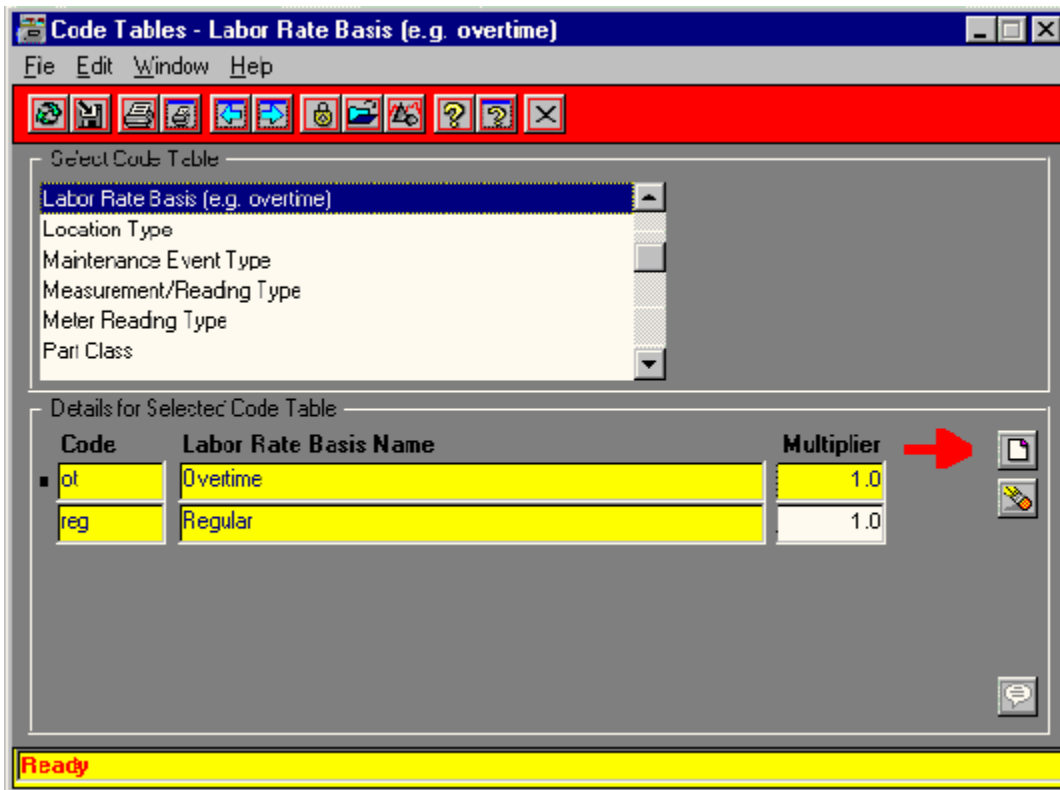
 allows addition of a skill above the highlighted skill.


The **upper data area 'Trades'** allows you to click to highlight a Trade to work with in the 'Skills' data area.

The Multipliers page allows you to specify an overtime multiplier for a Trade that is non-standard from the company Multiplier specified under System Administration/Setup Data/Code Tables/Labor Rate Basis.

When finished, click the **Save button**  on the **Toolbar** then click the **Close button**  to exit.

To specify overtime rates for costing of work performed, go to **Main Menu/System Administration/Setup Data** and click to highlight the **Labor Rate Basis table**. This will display the window below.



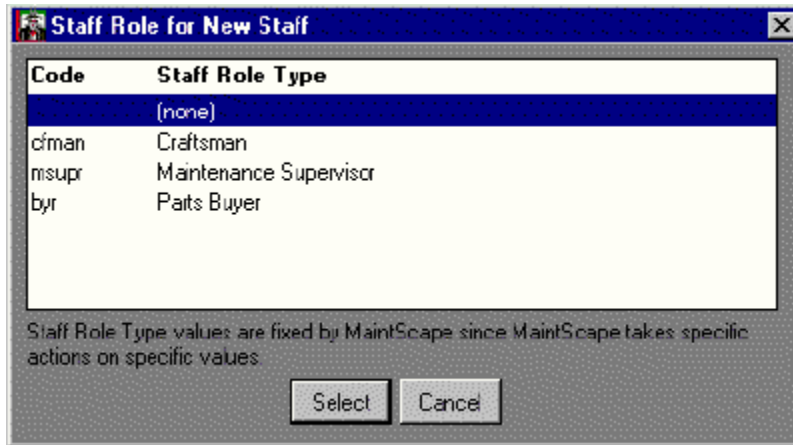
Click the **New button**  to the right to add an overtime category and a multiplier for that category. A multiplier of 1.5 for a category called overtime would cost overtime work at 1.5 times regular work.

You may add as many overtime categories as you choose, such as overtime, holiday, Saturday work, etc.

When finished, click the **Save button**  on the **Toolbar** then click the **Close button**  to exit.


Building Staff Data

From **Main Menu**, click **Staff** then **Click New**. This will display the window below.



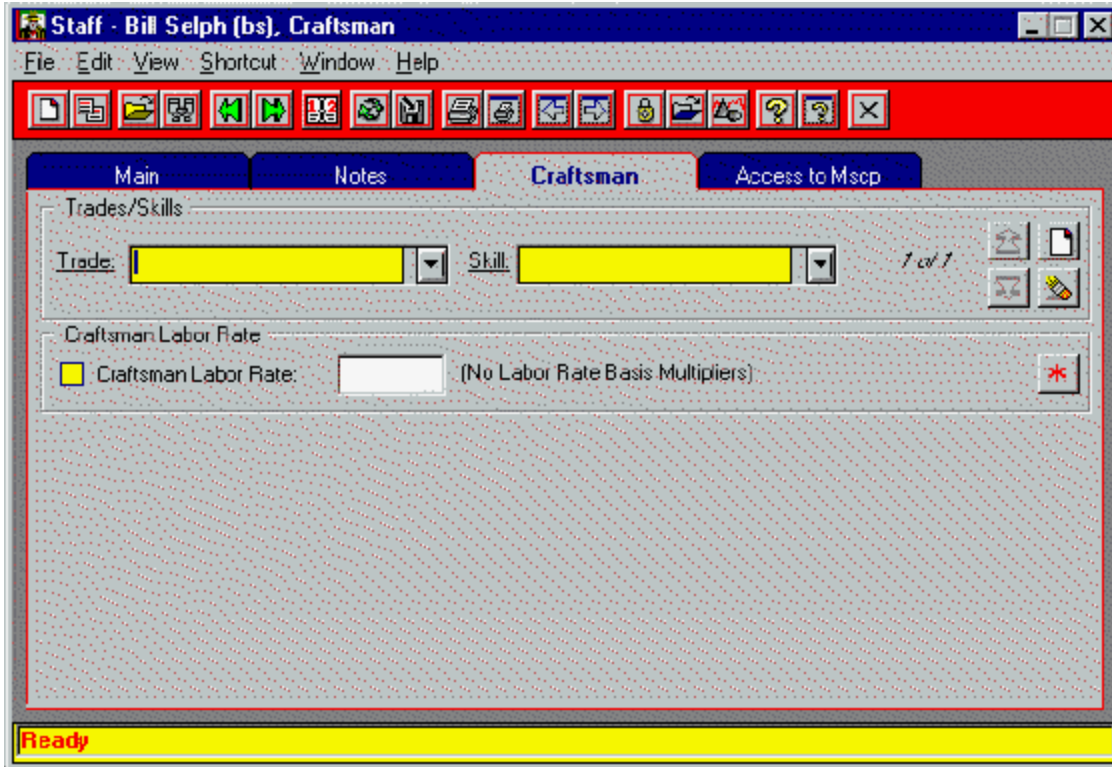
Double click the Role desired for this person. This will display a window similar to the following.

On the Main Page:

- You must enter a **Code** and a **Name**. All other data on this page is optional.
- Note that you can click the **New button**  to the lower right to add additional roles for this person.


The **Notes Page** allows optional freehand notes. These might include items such as training certifications, review information, medical information, spouse's name, etc.

Click to select the Craftsman page, you will see the window below.



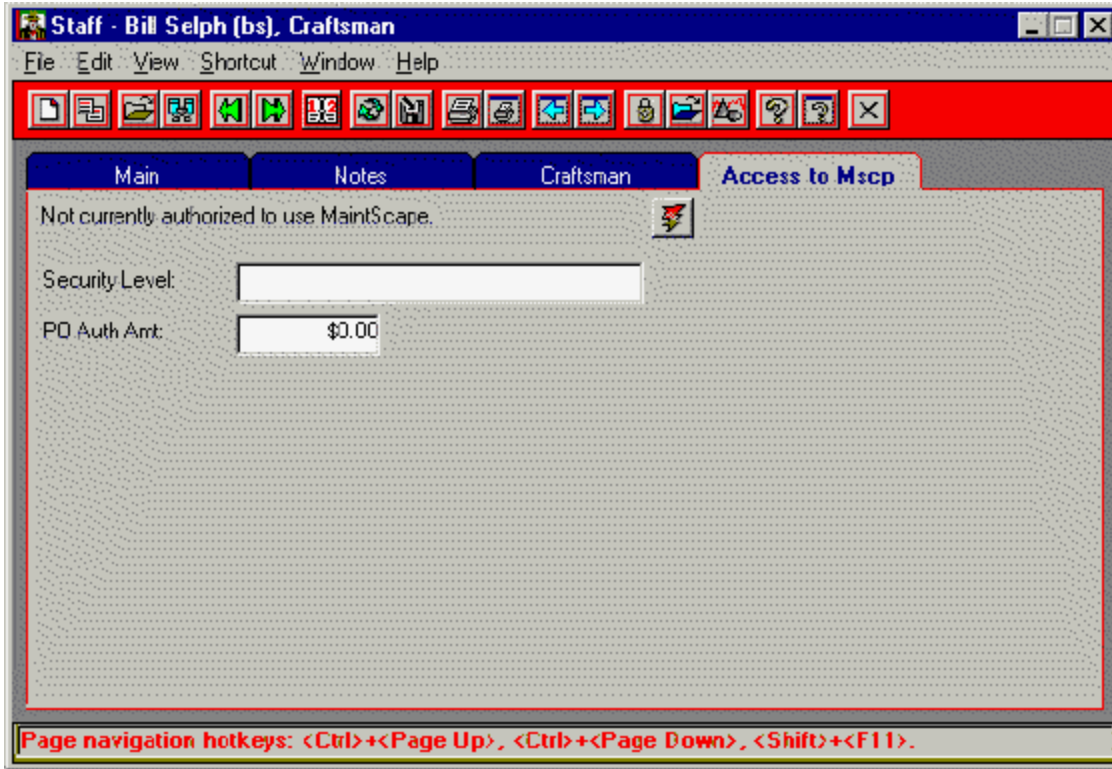
Trade – use the combo box to select a Trade if desired.

Skill – use the combo box to select a Skill.

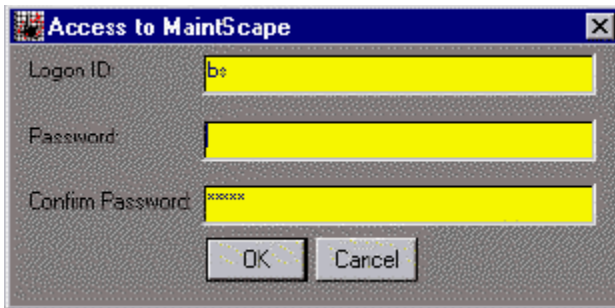
Click the **New** button  to the right of the 1 of 1 to add another Trade/Skill for this person.

Craftsman Labor Rate – click to place a checkmark in the box to the left if you wish to add a personal labor rate for this person, then enter the labor rate in dollars and cents.

Click to select the Access to Mscp page. You will see the window below.



Click the Actions button  and click **Grant Access to MaintScape** to authorize this person to access MaintScape.




Logon ID will default to the persons Code from the Main Page, you may change this if you desire.

Password – enter a password.

Confirm Password – enter the password again for confirmation.


Note that most users choose the same Logon ID and Password as their network Logon ID and Password.

Click OK when complete. This will return you to the previous window.

Security Level – use the **combo box**  to select a Security Level.

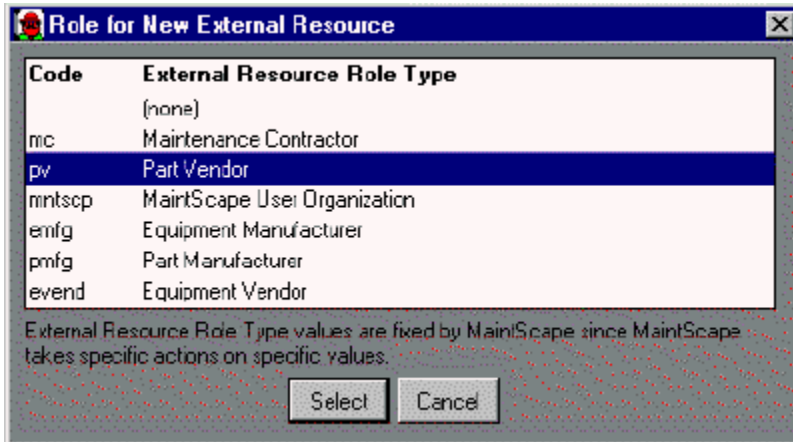
PO Auth Amt – enter an amount if this person has been granted rights to create or authorize POs and has a limit.

Before you leave this page, click the **Actions button**  again simply to observe how the choices have changed.

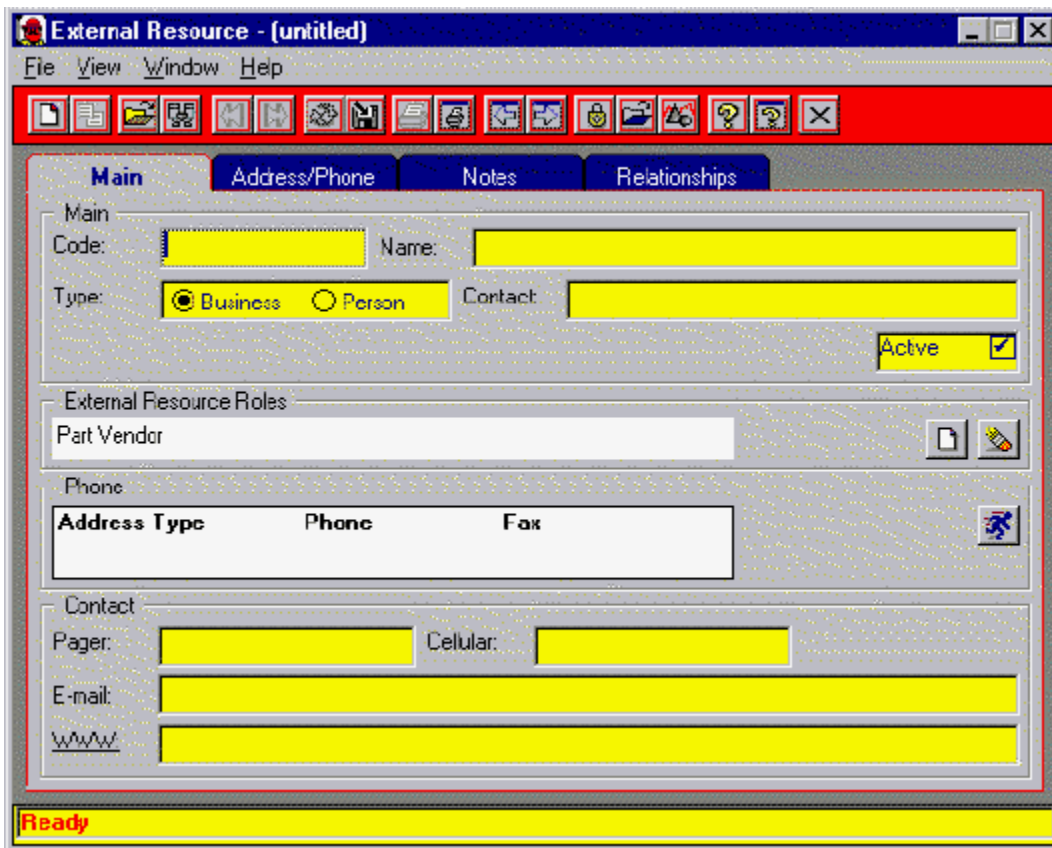
Click the **Save button**  on the **Toolbar** then click the **Close button**  to exit.

Building Vendor Data

From **Main Menu**, click **External Resources/New**; this will display the Role for New External Resource window shown below.



Double Click Part Vendor; this will display the External Resource (untitled) window shown below.




Enter a **Code** such as ABC Co. or as you like.

Enter a **Name** – generally more English oriented name for the Part Vendor.


Note that **Active** will be checked; this indicates that this is an active vendor; you can uncheck this at any time.

Optionally enter a **Contact Name** if you like and any **Contact data** in the lower part of the window.

Enter any desired Vendor data to the other Notebook pages (**Address/Phone, Notes, Relationships**).

If this Part Vendor has other Roles, such as Part or Equipment Manufacturer or other, click the **New button**  to the right of External Resource Roles and select another Role.

Click the **Save button**  on the **Toolbar**.

If you desire to enter **another Part Vendor**, click the **New button**  **on the Toolbar** and repeat the process.


When you are completed, click the **Close button**  **on the Toolbar to exit the window**.

Building PM and other Procedures

You will need to build a Procedure for each different type of maintenance procedure that you do on each different Equipment Type. Lets say you have Boilers of the Equipment Type 'Hoffman model 73y' and that you perform monthly, quarterly and annual PM on these Boilers. Then you would build three Procedures, i.e Monthly PM, Quarerly PM and Annual PM. Later under Maintenance Schedules, Attachment 20, we will show you how to assign these Procedures to specific equipment and generate the Master Maintenance schedule.

From **Main Menu**, click **Procedure** then click **New**; this will display the following window.

Procedure Code – enter a code for the procedure as you wish. I like to use something that is readily understandable such as Hoffman Boiler Monthly PM.

For WO Type – leave this set to Preventive Maintenance, note that you could use the **Combo Box**  to select any type of WO to ultimately be generated on a recurring basis, i.e Inspection, Calibration or other.

Procedure Name – this will default to the same as Procedure Code, you may change it if you like.

For WO Priority – this is defaulted to Medium, change it with the Combo Box if you like.

Proj Dntm – **optional** this field allows you to enter Projected Equipment Downtime if you wish; this is useful for planning maintenance around Production Schedules.

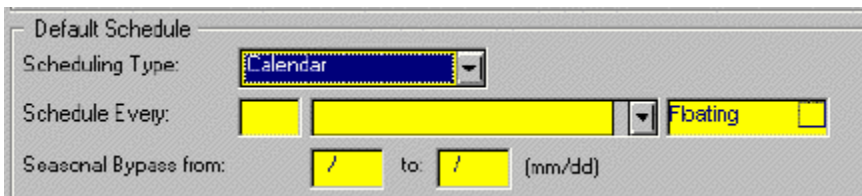
Account – optional – you may use this field to select a Cost Account, all Work Orders that will be generated will then automatically be costed to that Account, note that if you are assigning an Account in the Equipment record (likely) you will not need to do this unless PM is costed to a different Account than other work.


Proc Class – optional – this field allows you to restrict the use of a procedure as explained below;

- Equipment – restricts use to equipment as opposed to locations
- Equipment Class – restricts use to a specific Equipment Class, will ask for the Equipment Class
- Equipment Type – restricts use to a specific Equipment Type, will ask for the Equipment Type
- General – no restrictions on use
- Location – restricts use to locations as opposed to equipment

Scheduling Type – use **combo box**  to select **Calendar** or **Meter**

If Calendar is selected you will see the window change as below

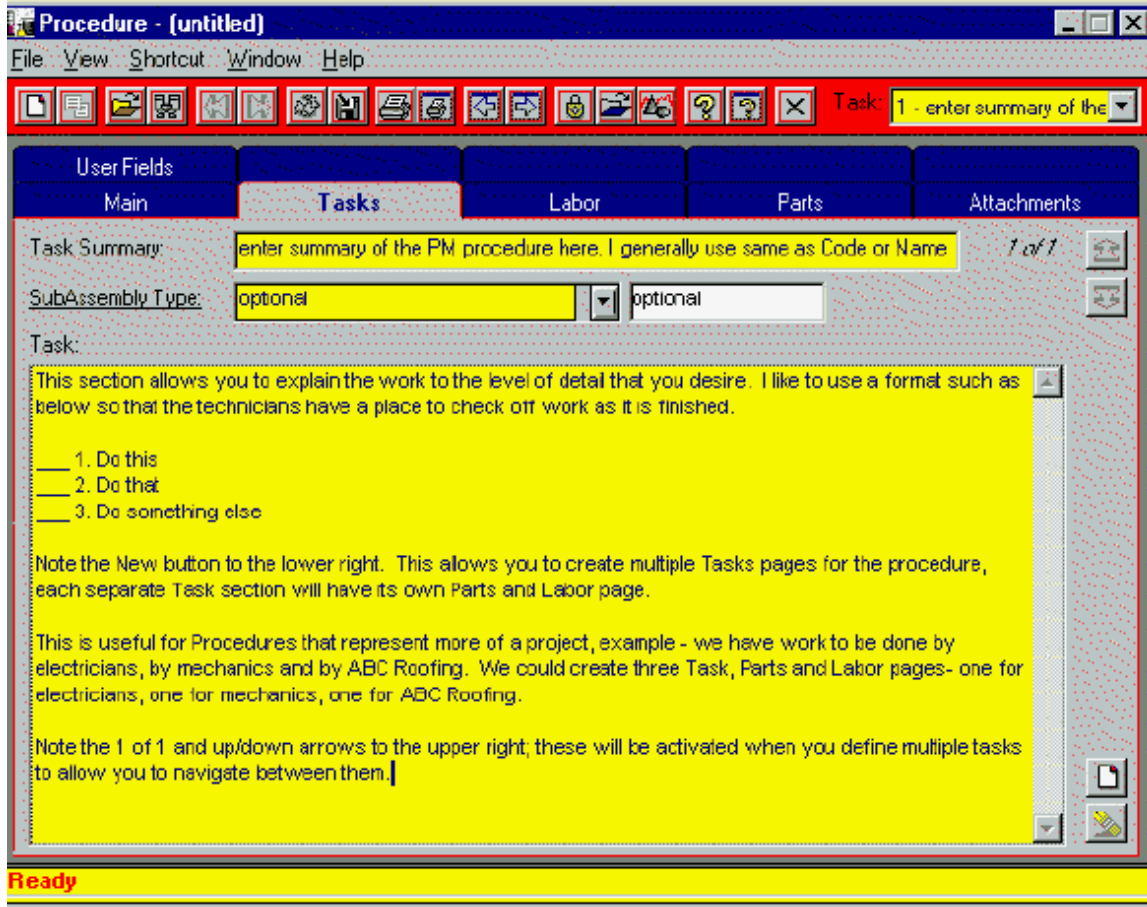


Schedule Every – enter a quantity such as 1, 2, 3 in the first box, **use the combo box**  **to select a measure such as days, weeks, months in the second box**

Floating – place a checkmark if you want the WOs that will be generated to be floating, leave blank for fixed. Fixed Scheduling will retain the schedule such as 1st of every month irrespective of when the previous month's PM was actually completed. Floating will float the next PM to reflect the actual date that the previous PM was completed, i.e if monthly PM was scheduled on 1st of every month but the June PM was not done until June 20th, then the July PM will be adjusted to July 20th.

Seasonal Bypass – allows you to enter a From and To month/day for the period during which no PM should be scheduled, i.e in a cold climate bypass air conditioner PM through the winter months.

When you are finished with the Main Page, click to select the Tasks page shown below with instructions.



You must enter at least a Task Summary, other data is optional.

When finished, **click the Labor Page** to display the window below. Note that we are going to illustrate placing three types of labor on this procedure to show you how this is done so you will see three windows; most times you would have only one labor type and one window.

Below is the 1st Labor Type entry.

Labor Type: Staff Contractor Unassigned 1 of 1

Required Trade: **Req Skill:**


Craftsman: Bill Selph bs

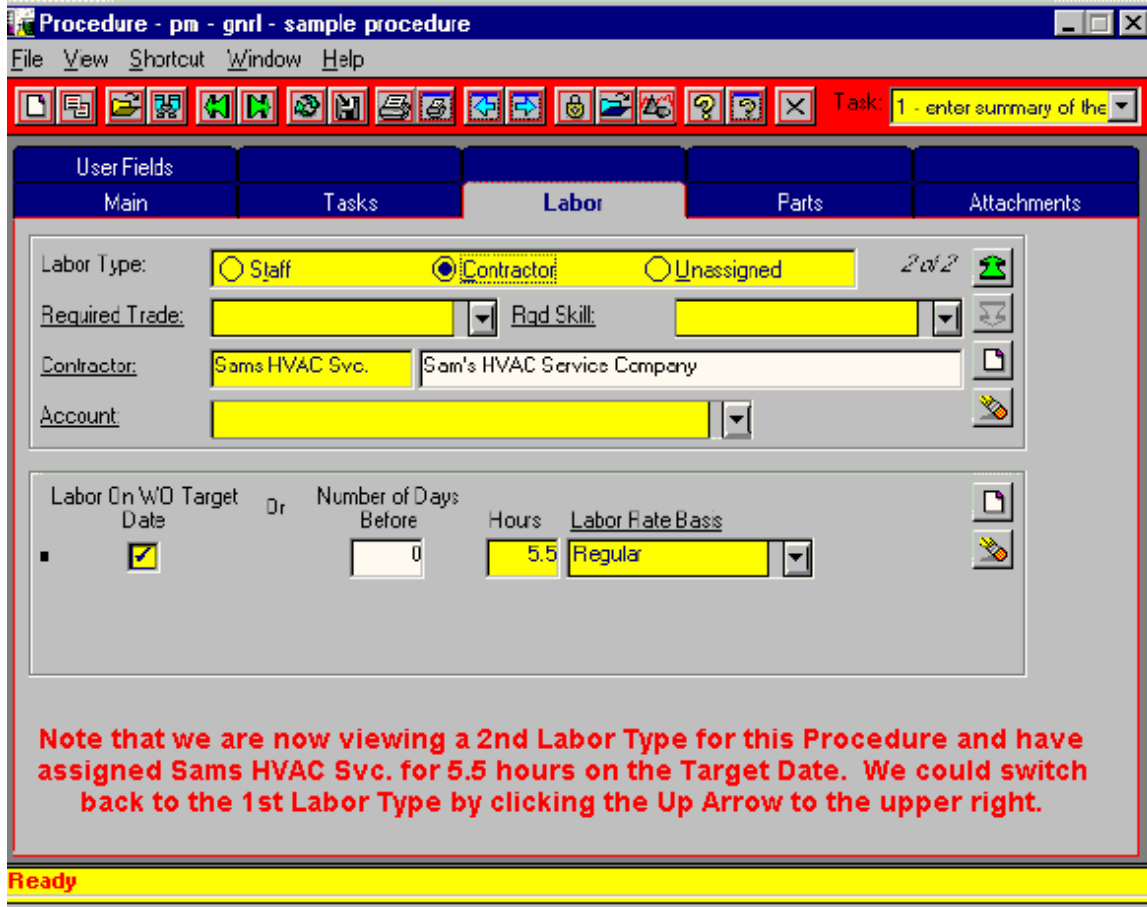
Account:

Labor On WO Target Date	Or	Number of Days Before	Hours	Labor Rate Basis
<input checked="" type="checkbox"/>		0	4	Regular
<input type="checkbox"/>		1	7	Regular

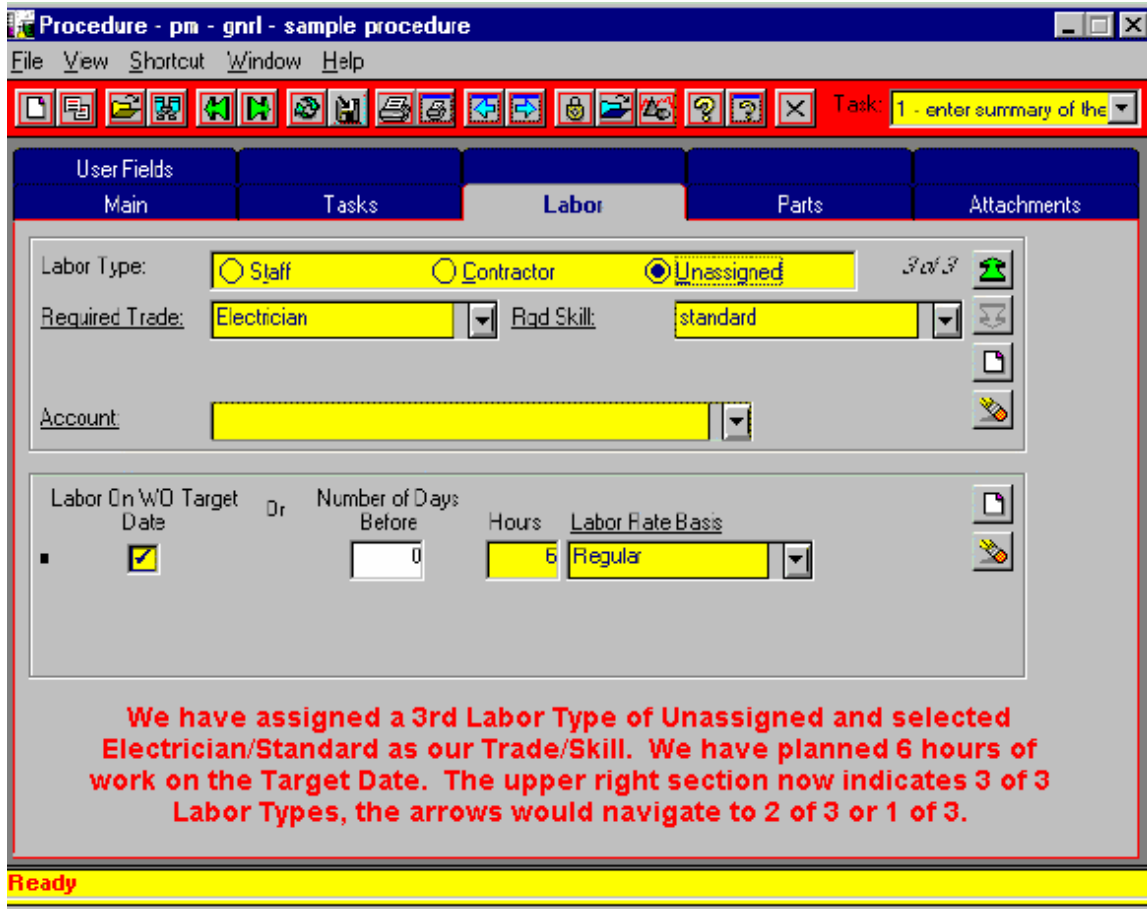
This is labor entry 1; we have selected Labor Type of Staff and Craftsman of Bill Selph. Bill's work requires 11 hours so we split this over two days by clicking the new button in the Labor on WO Target Date (lower) data section. On the second entry, we removed the checkmark and specified the work to be done 1 day before the due date for 7 hours. We will then click the New button to the right of Craftsman to add a 2nd Labor Type.

Ready

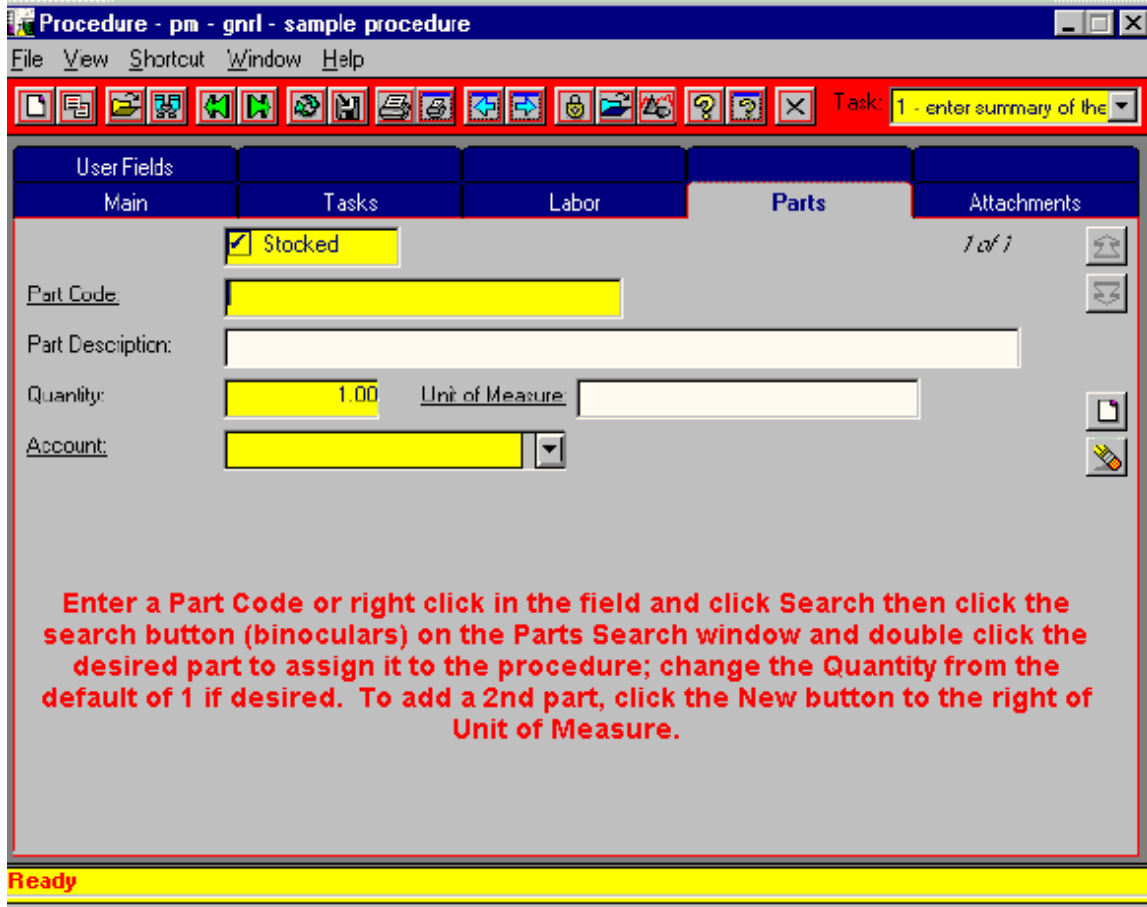
We have now clicked the **New button**  to the right of the Craftsman line to add a 2nd Labor Type of Contractor and see the window below.



Now we will click the **New** button to the right of **Contractor** to add a 3rd Labor Type of Unassigned. Unassigned allows us to select a Trade and Skill without specifying a Craftsman. When the work is actually done, we will change the Labor Type assignment on the WO to the Craftsman.



We will now click to select the **Parts Page** and see the window below.



We could click to select the **Attachments** page if we wanted to assign any Attachments to this Procedure.

Click the **Save button**  on the **Toolbar** then click the **Close button**  to exit.

Later in Attachment 20 we will assign Procedures to Equipment and schedule the work.

Build Equipment Class, Equipment Type and Equipment Files

You will have completed data entry forms with information identifying Equipment Class, Equipment Type, Equipment ID and Location. Use this data to build the three files associated with Equipment as follows.

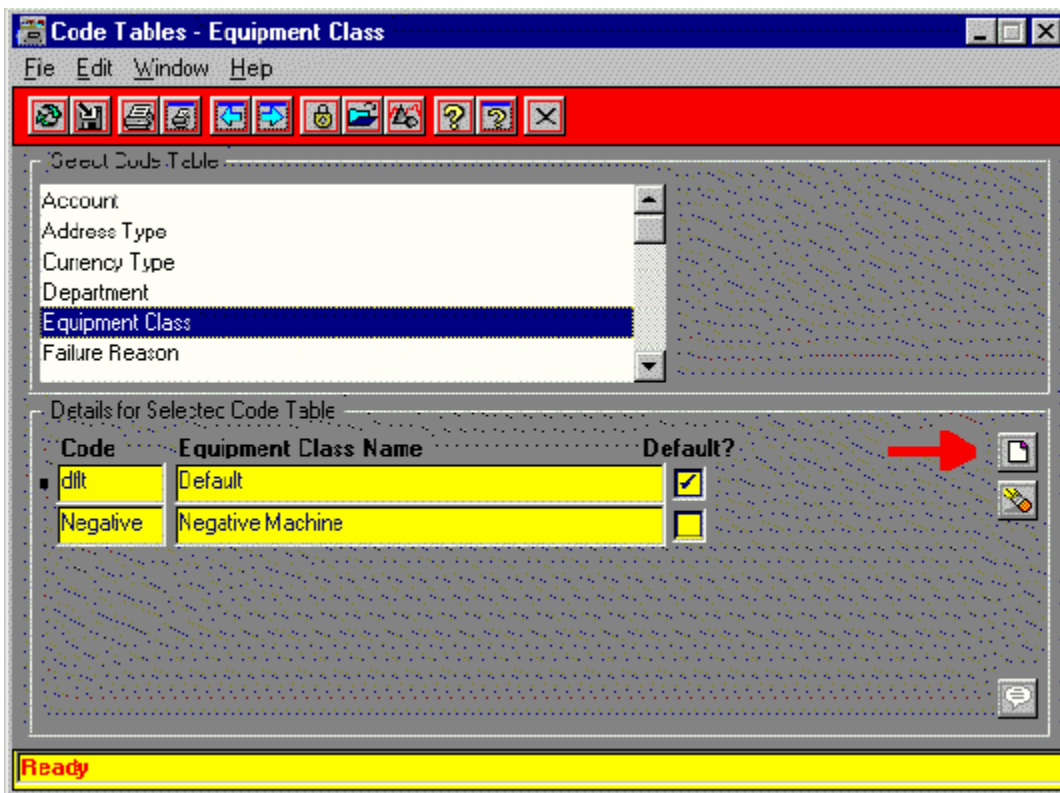
It is very important to understand the relationship between Equipment, Equipment Class and Equipment Type. Each Equipment record must include Equipment Class and Equipment Type.


Equipment Class is a very general classification of equipment such as boiler, shredder, welder, truck, air conditioner, etc.



Equipment Type is a finer classification of an Equipment Class (generally much like Year, Make and Model), example Equipment Type is 1994 Dodge Ram model 145 and its Equipment Class is Truck; both of these may be assigned to Equipment Record "Truck 123".

Equipment Class

Browse through your equipment forms and pre-enter as many equipment classes as you can note. From **Main Menu/System Administration/Setup Data/Code Tables** – click **Equipment Class** in the upper window to observe the following window.

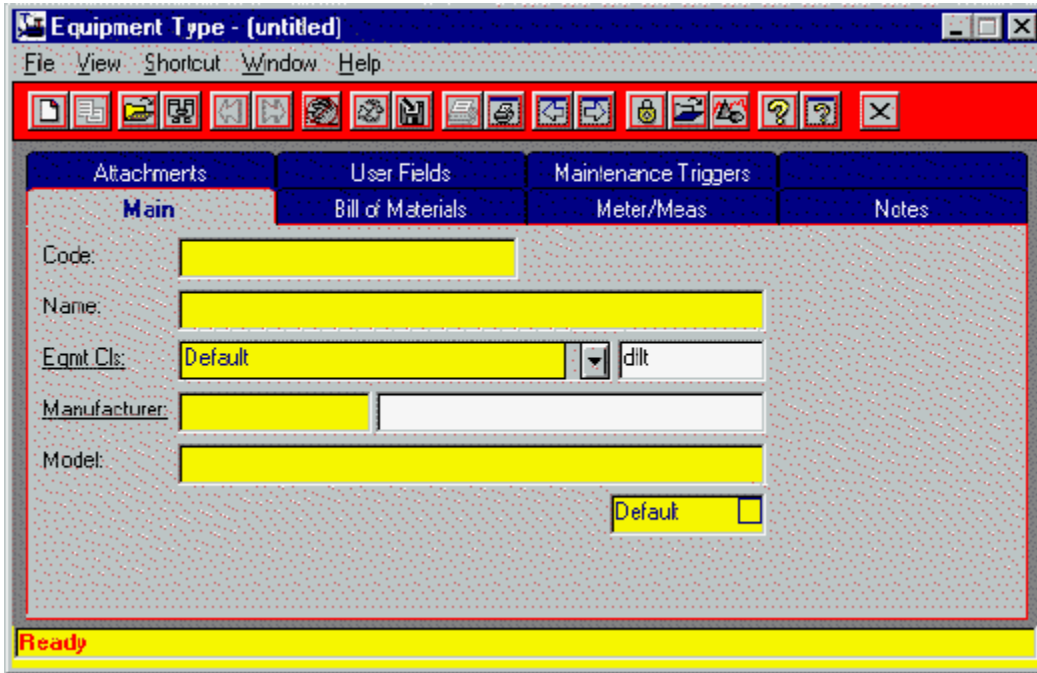



Click the **New button**  to right of the lower window and enter **Code** and **Equipment Class Name**. Press the **Tab** key to move to the next line for entry.

Click the **Save button**  on the toolbar, click the **Close button**  on the toolbar to **Exit** the window when completed.

Equipment Type


Browse through your equipment forms and pre-enter as many equipment types as you can note. From **Main Menu/Equipment Type/New** you will observe the following window.



- **Code** – enter the code you desire for this Equipment Type
- **Name** – will default to the code; change it if you like.
- **Eqmt. Class** – enter or lookup the Equipment Class to which this Equipment Type belongs
- **Manufacturer and Model** – are optional
- **Click the Save button  on the toolbar.**

There are many other pages that can be completed but we will not do so at this time.

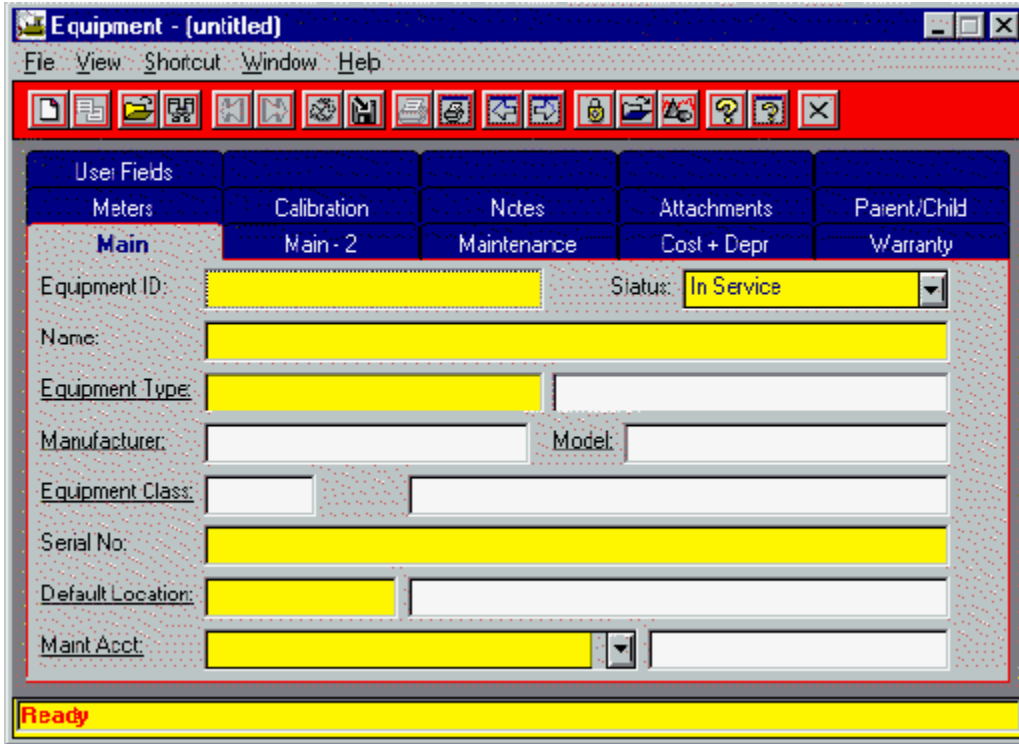
Click the **New button  on the Toolbar** to enter another Equipment Type.

Click the **Close button  on the toolbar** to Exit the window.

Equipment

Again, use your completed data entry forms to enter the specific equipment data.

From **Main Menu/Equipment/New** you will see the following window.



- **Equipment ID** – enter the desired ID for the equipment; many people use Asset Number.
- **Name** – enter a unique name for the equipment, such as Boiler 103
- **Equipment Type** – enter or right click and Search, see Attachment 30 for information regarding Searching.
- **Manufacturer, Model** and **Equipment Class** will be completed by MaintScape from your Equipment Type record
- **Serial Number** is optional
- **Default Location** – enter a location or right click in the field and use one of the search functions to look it up, we recommend Search using Explorer.
- **Maint Account** – optional, enter the cost account number; note this and much of the other data will be automatically picked up by MaintScape when you create a work order for this equipment; entering the data here saves entering it many times when you create Work Orders.

Click the Save button  on the Toolbar.

There are many other pages for additional equipment. You may want to enter to some of these now or may not care about this data. Most of these are likely self-explanatory; two (Parent/Child and Maintenance) may not be and we will explain those below. You may also input any additional data later if you wish.

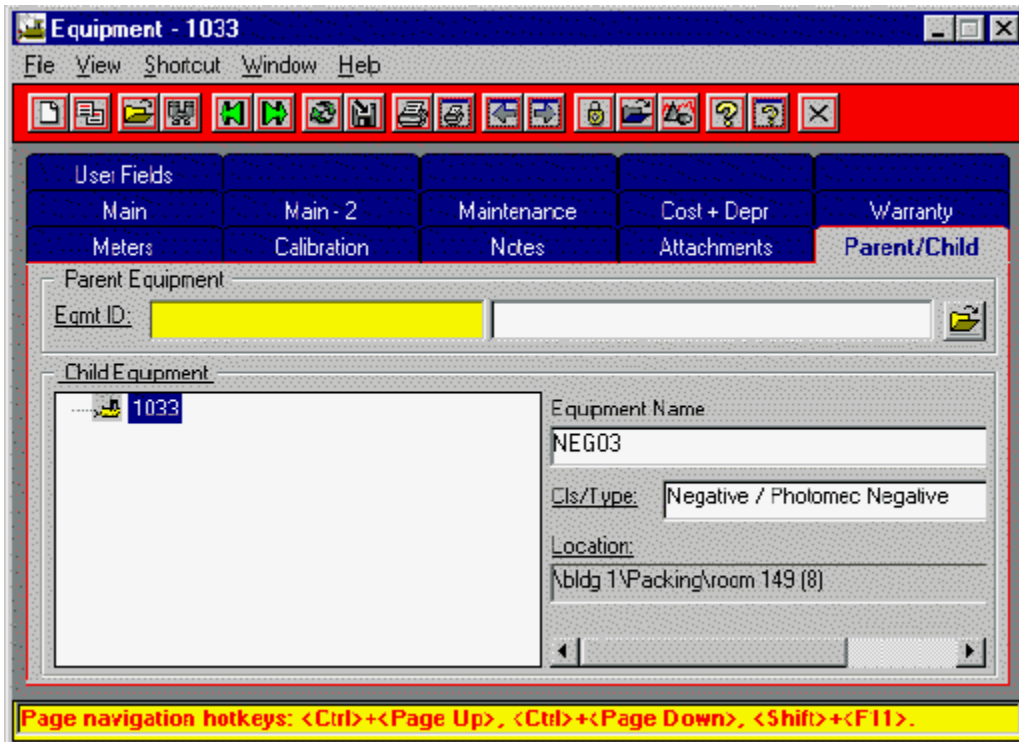
If you wish to enter additional equipment, click the **New button**  on the **Toolbar**. If you have finished for now with equipment entry click the **Close button**  on the **Toolbar**.

Parent/Child Equipment allows you to describe equipment relationships. These are valuable when you have a situation in which the down condition of a piece of equipment causes other equipment to be unusable. Examples of this include situations such as a process manufacturing line, assembly line, equipment all serviced by common chiller line, electrical power, water supply, etc.

If you have described the relationship MaintScape can provide information such as the following in order to allow you (while one equipment in the relationship is down) to find outstanding or upcoming near term work for other equipment on the line and perform all of this while down. A few examples include:

- Find all open work orders and/or service requests for all equipment in the relationship that may not have been critical enough to take the equipment down and do these while the equipment is unusable.
- Find all upcoming work (say PM and such due in the next 7 days or so) for all equipment in the relationship that will require outage of the equipment and do these while the equipment is unusable.

To describe Parent/Child relationships, click to select the Parent/Child page, you will see the window following.



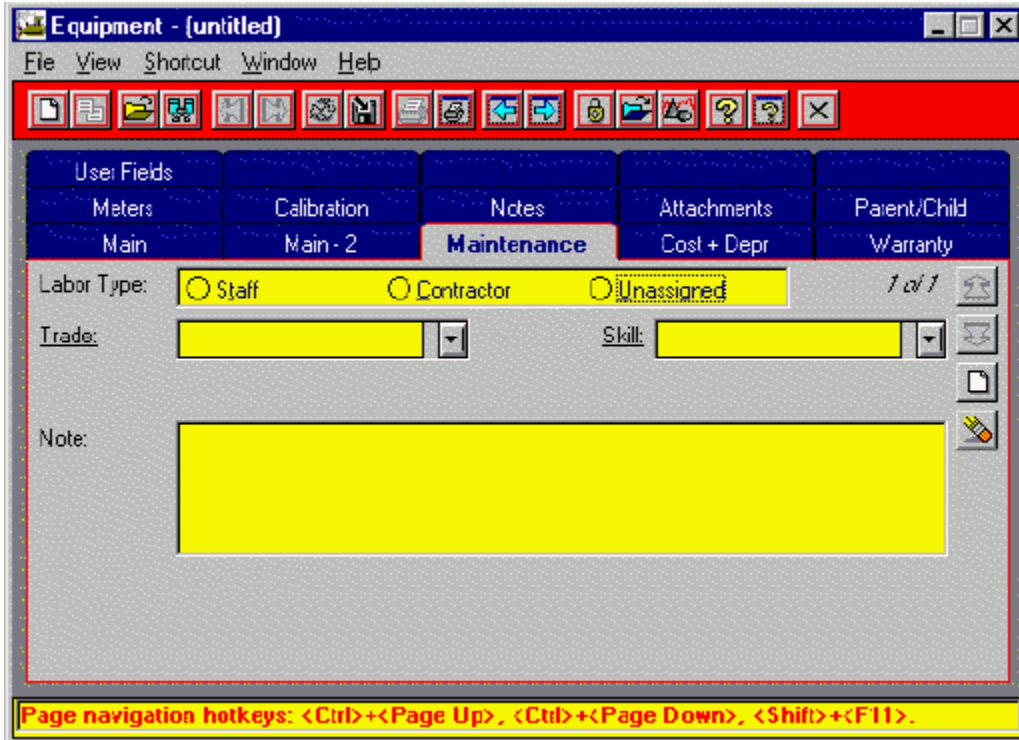
You will always build these relationships from the bottom up as follows.

Eqmt ID – enter or right click and search for the Parent Equipment ID. For information on Searching, see Attachment 30

Note that you can build the tree structure as complicated as you desire, i.e. something like the below.


- Parent Equipment
 - Child Equipment 1
 - Grand Child Equipment 1
 - Great Grand Child Equipment 1
 - Child Equipment 2
 - Grand Child Equipment 2

To Access the Maintenance page, click to select Maintenance page and see the window below.



This page allows you to pre-assign maintenance responsibility for specific equipment to any combination (you can assign as many as you like) of:

- **Staff** (an individual) – by clicking to select Labor Type 'Staff' and select the person under 'Craftsman'
- **Contractor** (an outside contractor) – by clicking to select Labor Type 'Contractor' and enter or search under 'Contractor'
- **Unassigned** (a trade and skill) – by clicking to select Labor Type 'Unassigned' and selecting a 'Trade' and 'Skill'

Note – use the **New button**  **to the right** to make multiple selections.

You could even do an assignment such as the following:

- Electrical problem on Shift 1 – assign Bob Jones
- Electrical problem on Shift 2 – assign Jose Garcia
- Mechanical problem on Shift 1 – assign Helen Smith
- Mechanical problem on Shift 2 – assign Contractor John Bacon

Build Maintenance Schedules and Generate Master Schedule

Under Attachment 11 we built maintenance procedures such as Boiler Monthly PM, Boiler Quarterly PM, Guage Calibration, Pump Weekly Inspection, Forklift 250 hour usage PM, Crane Weekly Safety Inspection, etc. **but we did not tell MaintScape which equipment requires these procedures or when to start scheduling them; we will do so now.**

From **Main Menu**, click **Maintenance Schedule** then click **New** to access the following window.

The screenshot shows the 'Recurring WO Schedule - (untitled)' window. The 'Main' tab is selected. The 'Recurring WO Schedule' section has 'Status' set to 'Active'. The 'Work Order Subject' section has 'Maintain.' set to 'Equipment'. The 'Procedure' section has a 'Procedure' field. The 'Schedule' section is circled in red and includes 'Sched Type', 'Schedule Every', 'Seasonal Eypass from', 'Last Closed', 'Next Due', 'Next Generate', and a 'Floating' checkbox. A red arrow points to the 'Next Generate' field.

We will assign each Procedure to as many equipment records as required and tell MaintScape when to begin scheduling of each Procedure/Equipment assignment.


Maintain – leave set to Equipment, note that if you were scheduling Location work orders (such as paint Room 1) you would change this to Location.



Equipment ID – enter or search for the desired Equipment, for searching information see Attachment 30.



Procedure – enter or search for the desired Procedure. You may use Search to search the entire Procedure File or Compatible Procedure Search to search only the Procedures for the Equipment Type which you have entered. For searching information see Attachment 30.

After you have entered the fields above, MaintScape will complete the data in the Schedule section (circled above); note that you may change any of this if this particular equipment should be scheduled more or less frequently (perhaps it is in a particularly dirty area or one that has heavy vibration).

Next Generate – enter a date to commence this scheduling; note that you may right click in any Date field and Select from Calendar.

Click the **Save button**  **on the Toolbar**. You have now saved this assignment of Procedure to Equipment. We could generate the schedule now but instead we will generate all schedules later.

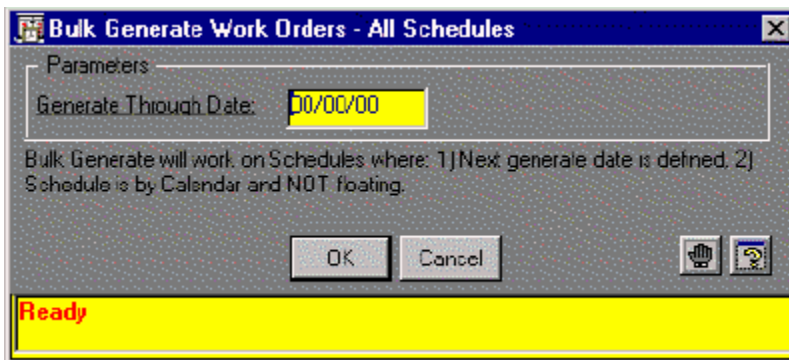
To Assign another Procedure to the same Equipment – click the **Duplicate button**  **on the Toolbar** then **change the Procedure field**. Click the **Save button** .

To Assign another Equipment to the same Procedure – click the **Duplicate button**  **on the Toolbar** then change the Equipment field. Click the **Save button** .

To Generate the Master Schedule

This process can be done at any time and can be done as many times as you wish. Note that if you are building your Procedures and Maintenance Schedules a bit at a time over an extended period of time and choose to Generate each time you have built a few more Maintenance Schedules, MaintScape will know what it has previously generated and will not duplicate these.

From Main Menu click Maintenance Schedule then click Generate All; this will display the following.




Enter a date through which you would like to generate your master schedule and click OK. During your initial usage make this date only 2 or 3 months into the future until you are comfortable that you are achieving the desired results. Note that if the results are different from those expected you will need to delete the WOs which were generated, modify your data and generate again.

After you are comfortable with the process and the results, you will likely generate through the end of your fiscal year and generate again sometime before the beginning of the next fiscal year.

What happens when MaintScape generates the master schedule

MaintScape will utilize the Maintenance Schedules and Generate Through Date to generate Scheduled Work Orders with a Target Completion Date. This may take some time, consider the following small scenario:

We have 20 equipment receiving daily PM, 50 equipment receiving monthly PM and 100 equipment receiving quarterly PM and generate our schedule for an entire fiscal year; MaintScape would generate 8,240 Scheduled Work Orders.


There could be problems causing WOs to not generate (such as no Next Generate Date), MaintScape will produce a report notifying you of the problem areas. After generation and the report, close the windows with the **Close** button  on each open window.

Building the Parts File

From **Main Menu**, click **Parts** then click **New Part**. This will display the window below.

Required data includes:

Code – enter a part code as you desire. **Note** that MaintScape allows an internal part code (this field), a manufacturer's part code and a vendor's part code for each vendor of the part. **Code** can be the same as a manufacturer or vendor part number.

Class – use the combo box  to select a part class, note that you can right click in this field and click New to add a new part class on-the-fly.

Name – this will default to Code but you can change it to a better explanation if you like.

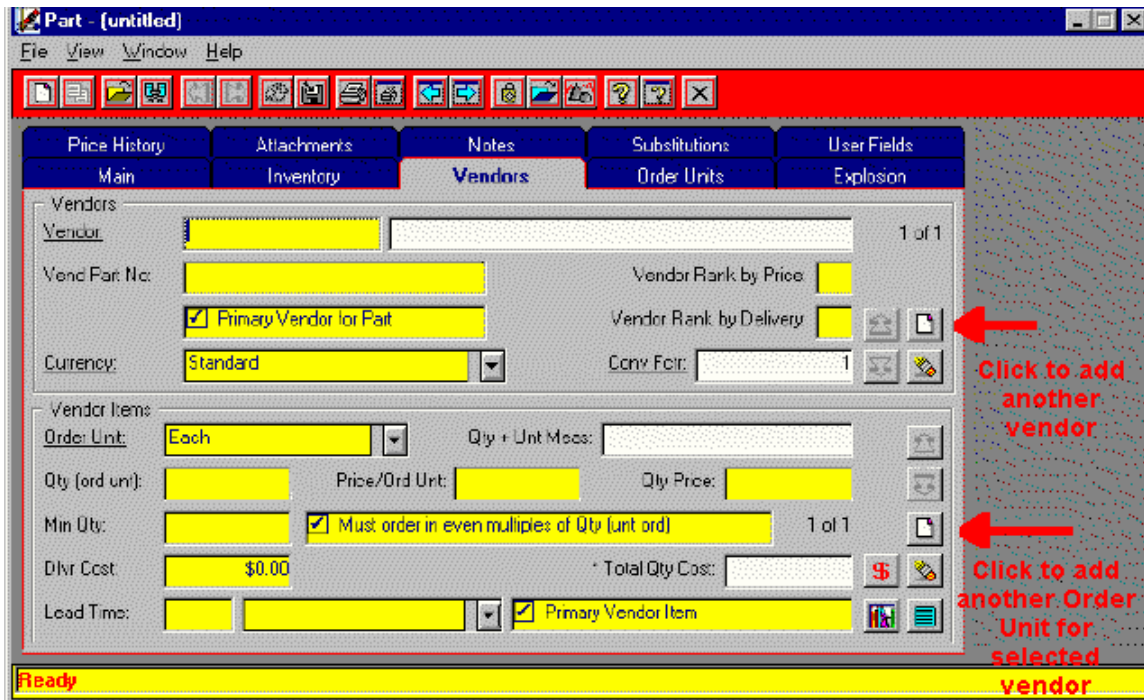
Optional data includes:

Mfg. – enter or right click and click Search, note that New on the right click menu allows you to add-on-the-fly.

Mfg. Part No. – manufacturer's part number.

See **MaintScape Reference Guide** for other fields on this page.

Click the Vendors Page to assign Part Vendors and Ordering Units.



Upper Data Area, Vendors – this section allows you to assign one or more vendors for this part.


Vendor – enter or right click and Search or New to add-on-the-fly.



Vendor Part No. – enter a part number for the vendor.

Primary Vendor for Part – click to check or uncheck.


Vendor Rank by Price – enter number if desired, 1 is lowest cost.

Vendor Rank by Delivery – enter number if desired, 1 is shortest delivery time.

Currency – use the combo box  to select if this vendor is priced in a currency other than your standard currency.

Use the **New button**  to the right to **add additional vendors**. Use the **Delete Button**  to delete the selected vendor. The **Green Arrow keys** (when more than one vendor is created) move back and forth between vendors.

Lower Data Area, Vendor Items - this section allows you to add one or more **Order Units** (each, box, case, roll, etc.) and other data for each vendor.

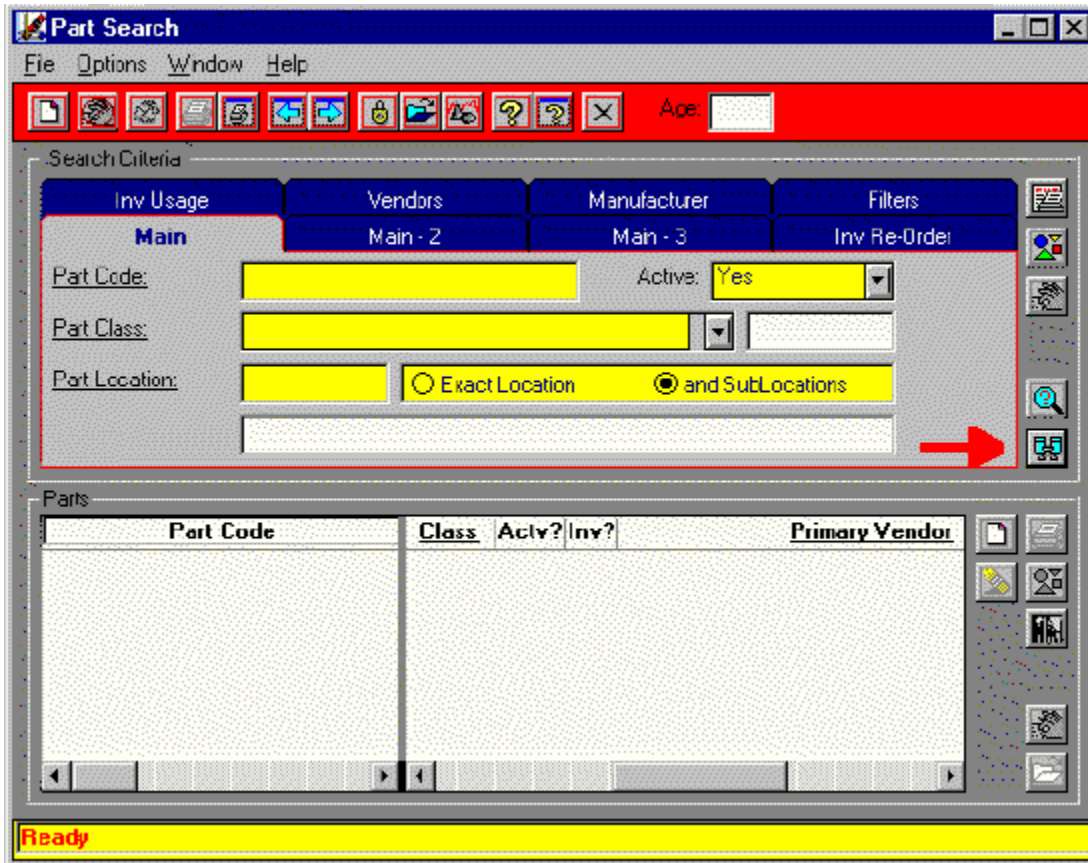
Order Unit – click the combo box  to select. Use the **Order Units page** if the desired **Order Unit** is not available.

Qty (Ord Unt) – enter the desired quantity of this order unit. **Price/Ord Unt** – enter the price for this order unit.

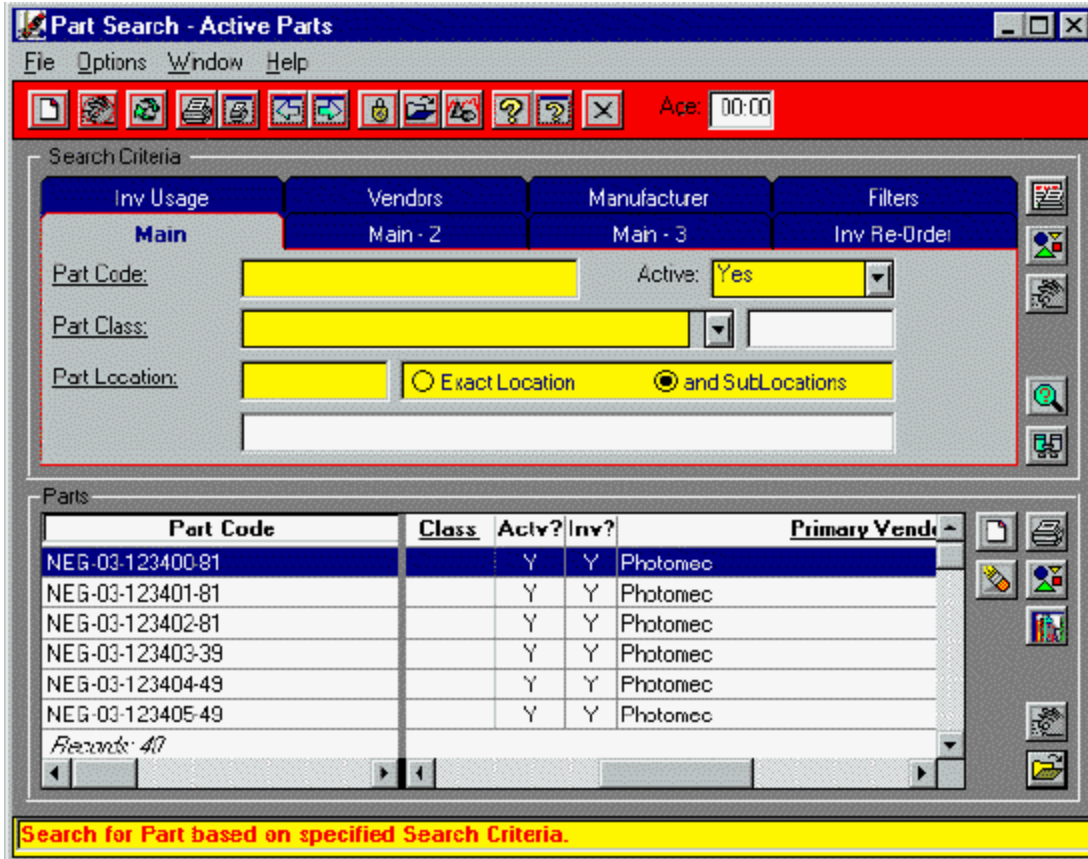
Enter other fields as desired. Enter other pages as desired.

Assigning Part Locations, entering minimum and maximum stocking quantities

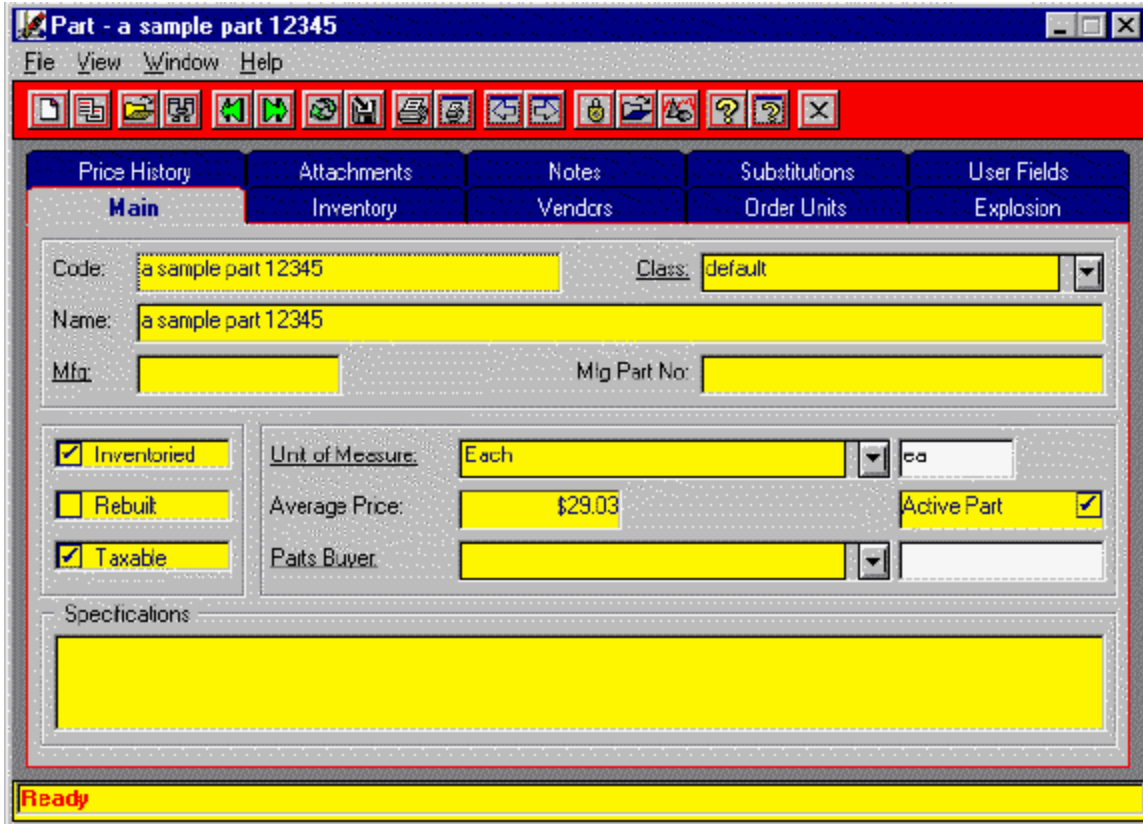
From **Main Menu** click **Parts**, click **Parts Search and Report**, this will display the following window.



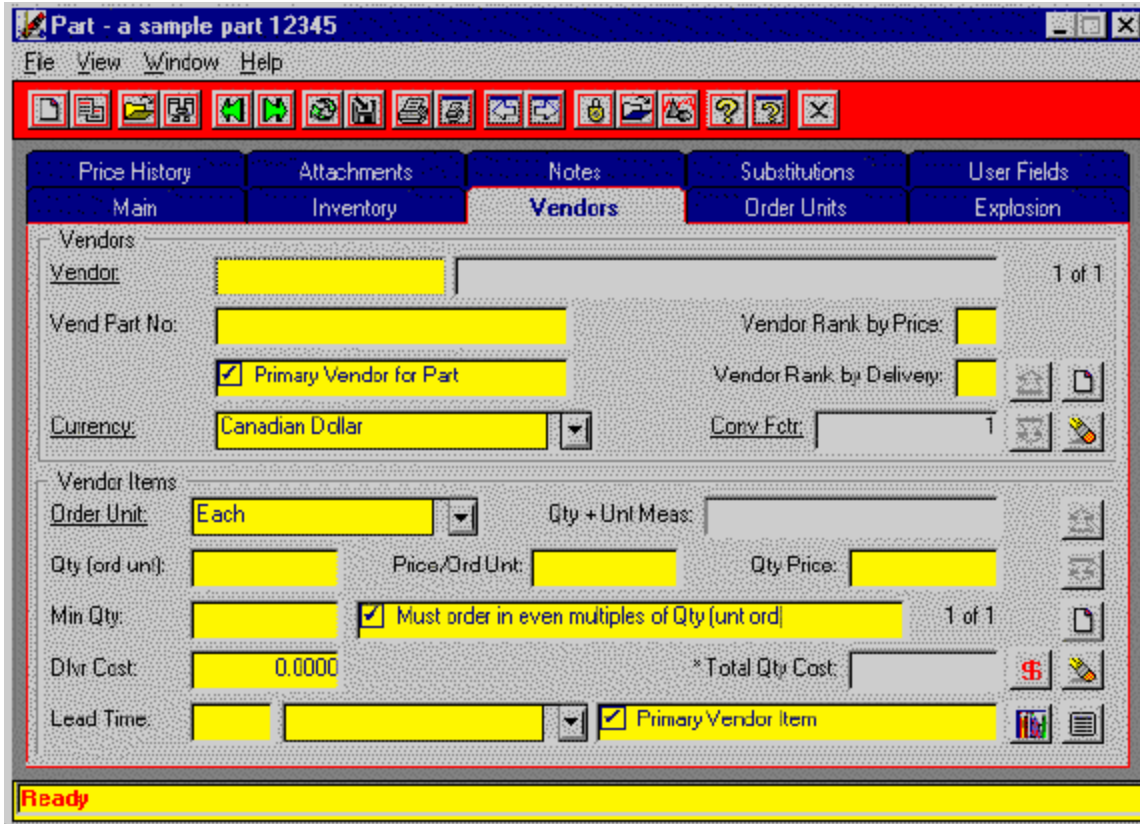
Enter data to no fields and click the **Search button**  to search the entire parts file, the display will change as follows.



Double click the first part in the lower section (highlighted above) to open that part record, you will see a window similar to the following.



Click to select **Vendors** page, you will see the following window.



The **upper data section, Vendors**, allows you to establish a Vendor or Vendors for this part.

The **lower data section, Vendor Items**, allows you to establish Ordering Information for each Vendor, example 1 each, 1 box or 4, 1 case of 12.

Establish a Vendor for the Part

Vendor – enter or right click and search, for searching information see Attachment 30.

Vendor Part No. – enter the Vendor Part Number

Vendor Rank by Price – enter if desired, 1 being the lowest price vendor

Primary Vendor for Part – should be checkmarked if this is the vendor you most often order from

Vendor Rank by Delivery – enter if desired, 1 being the fastest delivery vendor

Currency – if you operate with multiple currencies enter the currency applicable to this vendor


Now you are ready to enter Ordering Information for this vendor

Order Unit – use the combo box  to select the ordering unit (each, box, case, etc.)


Qty (ord unt) – enter the desired order quantity Price/Ord Unt – enter the price per order unit

Min Qty – enter the minimum quantity required to obtain this price, Checkmark the Must Order selection if you must order in even multiples of the order unit, i.e cannot order a half case

Delv Cost – enter any applicable delivery cost

Lead Time – enter **quantity in 1st field** and use **combo box**  by **2nd field** to select the unit (days, weeks, etc.)

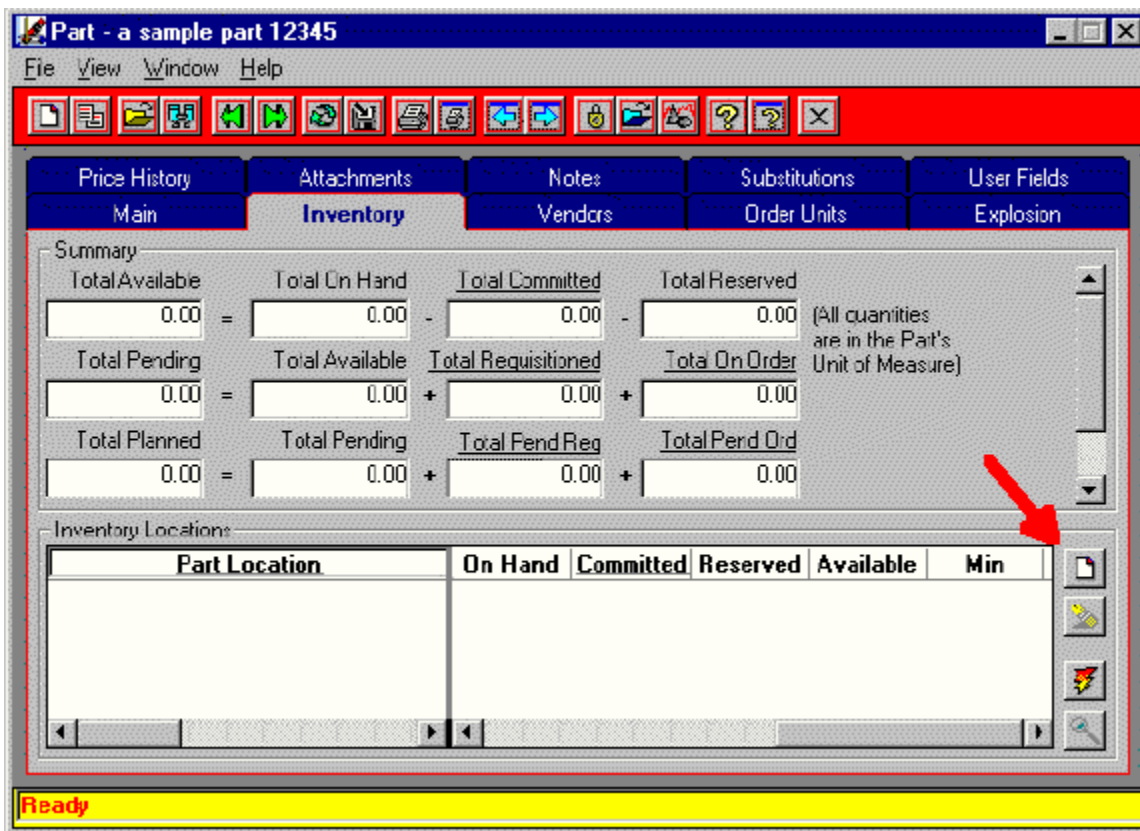
Primary Vendor Item – checkmark this if this is the most common ordering unit


If you desire to **setup another ordering unit from this vendor**, click the **New button**  to the right of **this lower data area**.

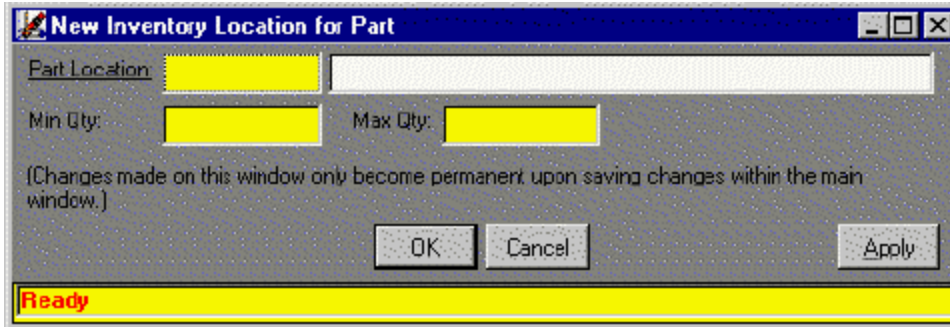
If you desire to **setup another vendor**, click the **New button**  to the right of the upper data area.

Establishing Inventory Data (stocking location, minimum quantities and maximum quantities.

Click to select the **Inventory** page to view the window below.




Click the **New button**  to the right of the lower window to define a new stocking location. This will display the New Inventory Location for Part window shown below.




Enter a Part Location or right click and use either Search or Search using Explorer, for Searching information see Attachment 30.

Enter both a **Min Qty** and a **Max Qty**. Note that later Inventory Re-order Queries will normally trigger when a part reaches the minimum stocking quantity and will suggest a re-order quantity to stock to the maximum.

Click **Apply** if you wish to **add another stocking location**, if finished with this part's stocking locations, Click **OK**; this will return you to the **Part/Inventory Page**.

We could use the **Actions Button**  to shortcut to Inventory Transactions in order to establish starting on-hand quantities for this part but likely you will do this at a later date after performing an inventory count.

Click the **Save button**  **on the Toolbar** to save the part.


Only perform this indented section if you wish to enter on-hand part value

Highlight a desired **Part Location** in the lower section of the Inventory window.

If you would like to set a **starting on-hand quantity**, click the **Action** button (lightning bolt) to the right of the lower data window and click **New Inventory Transaction**.



On the **Part Inventory Transaction (untitled) window**, for **Transaction Type**, select **adjust to**.


Quantity – enter the current on-hand quantity.

Click **Save**  **on Toolbar** then **Close**  **on Toolbar** to return to the Part/Inventory page.

Repeat these steps if there are **additional Part locations**.

You have now established a part, vendors, ordering quantities, min/max, stocking locations and possibly onhand counts and you are ready for the next part.

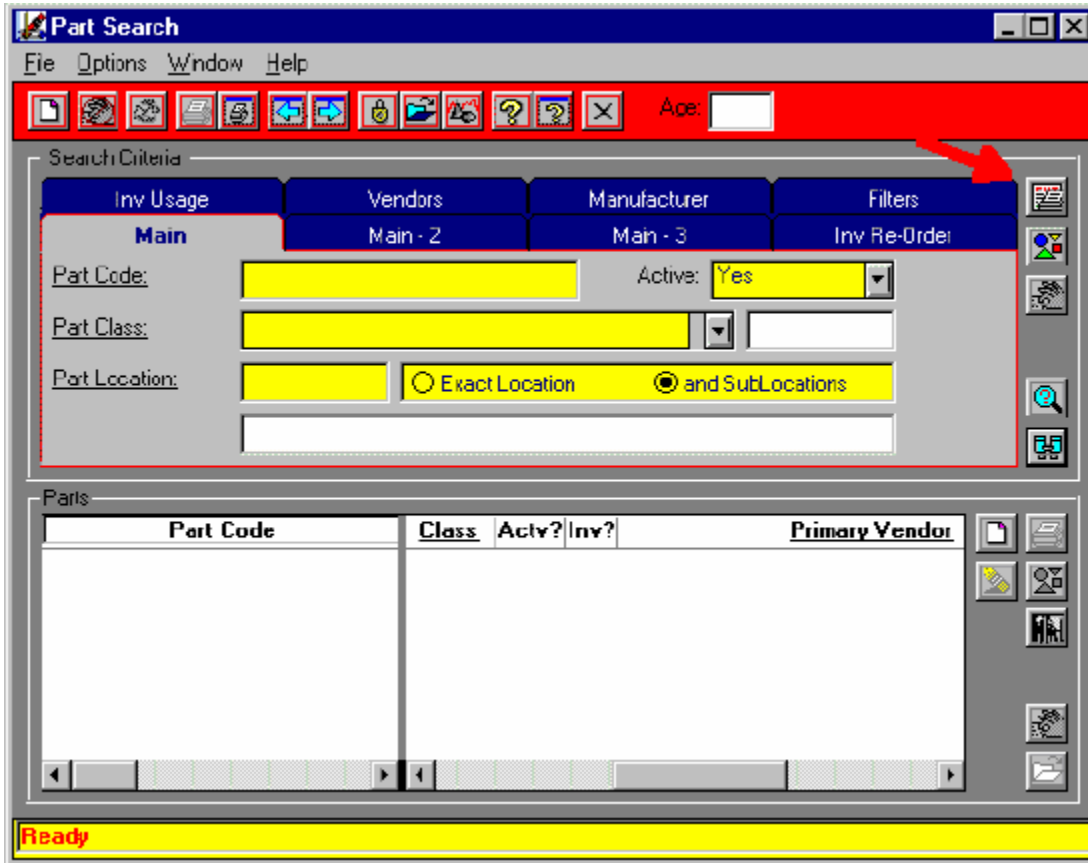
Click to select the Vendors page then click the right pointing green arrow   to move to the next part found during your Part Search and repeat the process starting with Establish a Vendor for the Part.

When you have completed the last part found during your Part Search and click the Arrow, MaintScape will notify you that there are no more Parts. At that time, click the Close button  on the Toolbar.

Perform Physical Inventory and enter on-hand counts to MaintScape

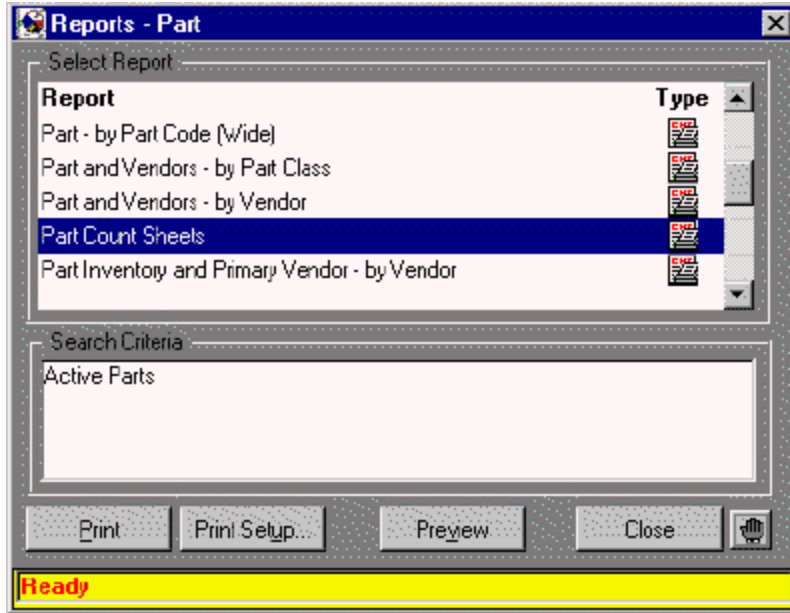
Printing Count Sheets

From **Main Menu** click **Parts** then click **Part Search and Report** to access the window below.




Enter data to **no** fields so that you will be reporting on the entire parts file.

Click the reports button  to access **Parts Reports**.



Scroll down and click to highlight Part Count Sheets.

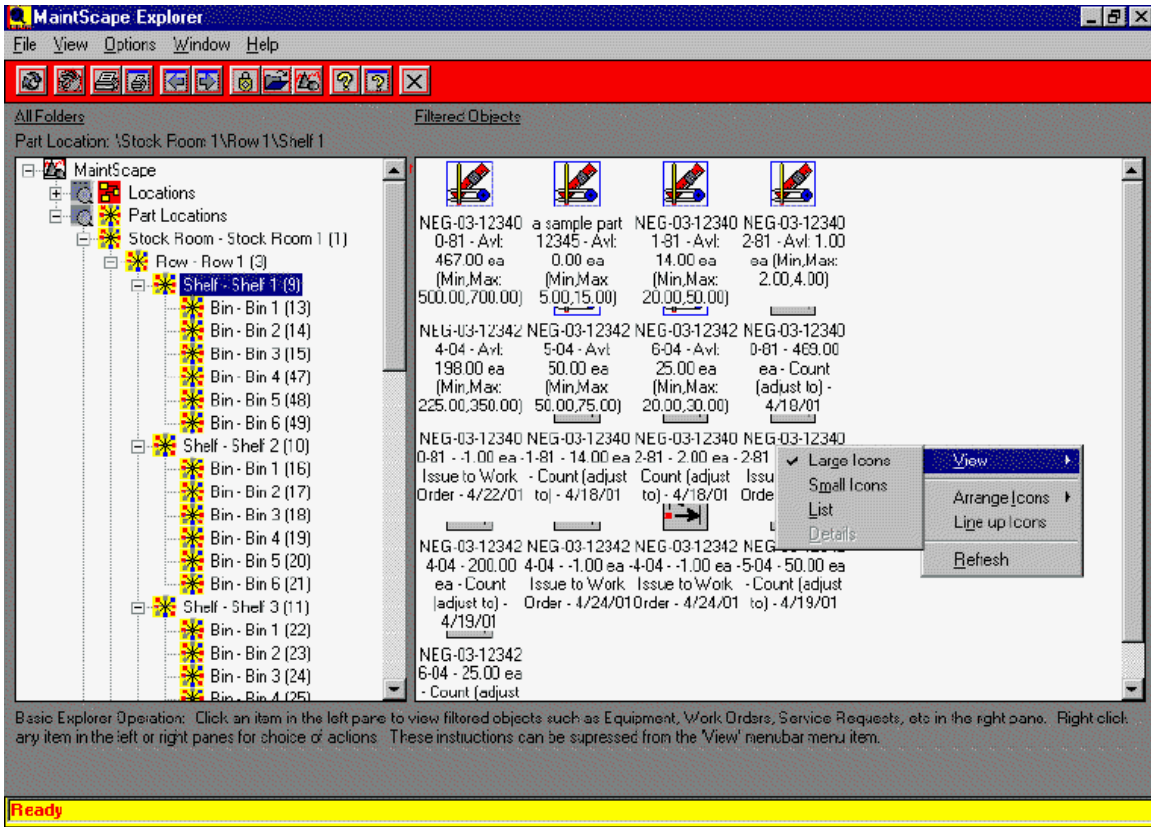
Click Print at the lower left. This will print data sheets (sorted in the same order that your part warehouses are designed) to use in recording part on-hand counts.

After Printing, click the Close button  on the Part Search and Report Window Toolbar to exit.

Use the count sheets to perform your physical inventory.

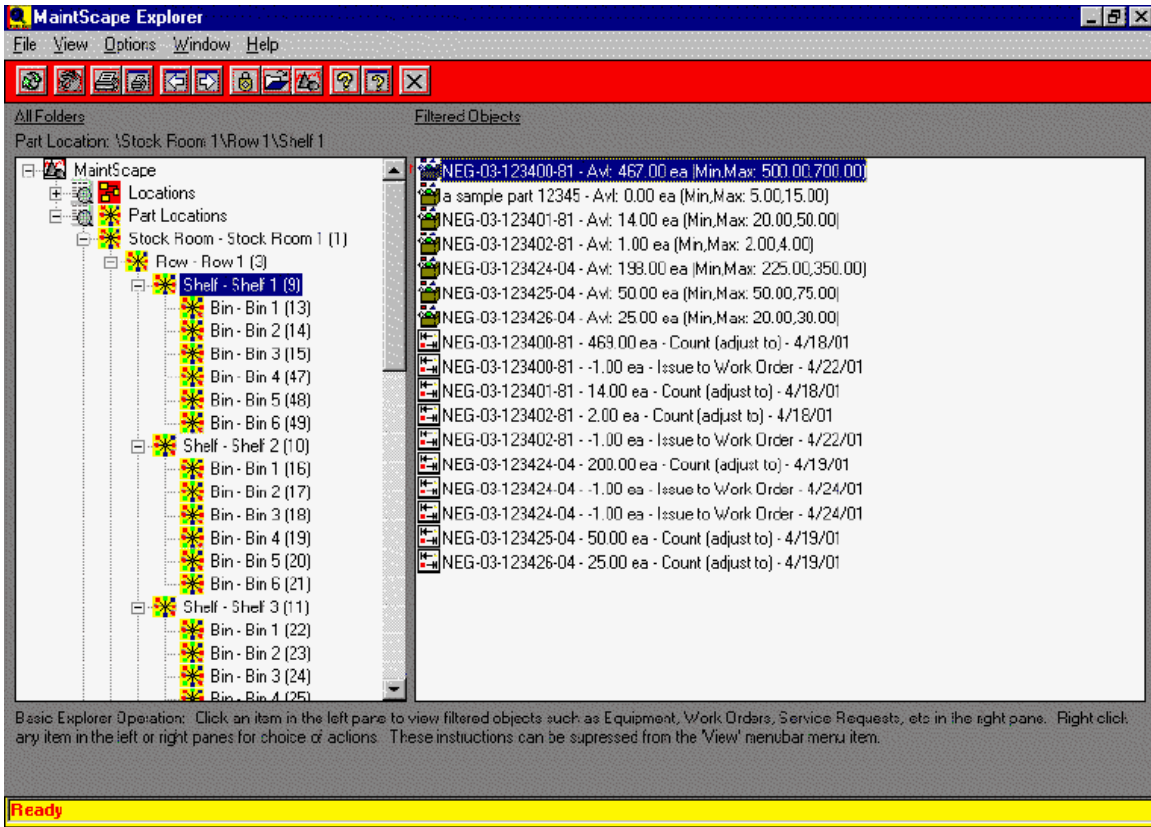
Entering Part on-hand counts

From **Main Menu** click **Explorer** then click **Explorer**, scroll down the left window pane to **Part Locations** and click to highlight the first **Part Location**, this will likely display the window below.




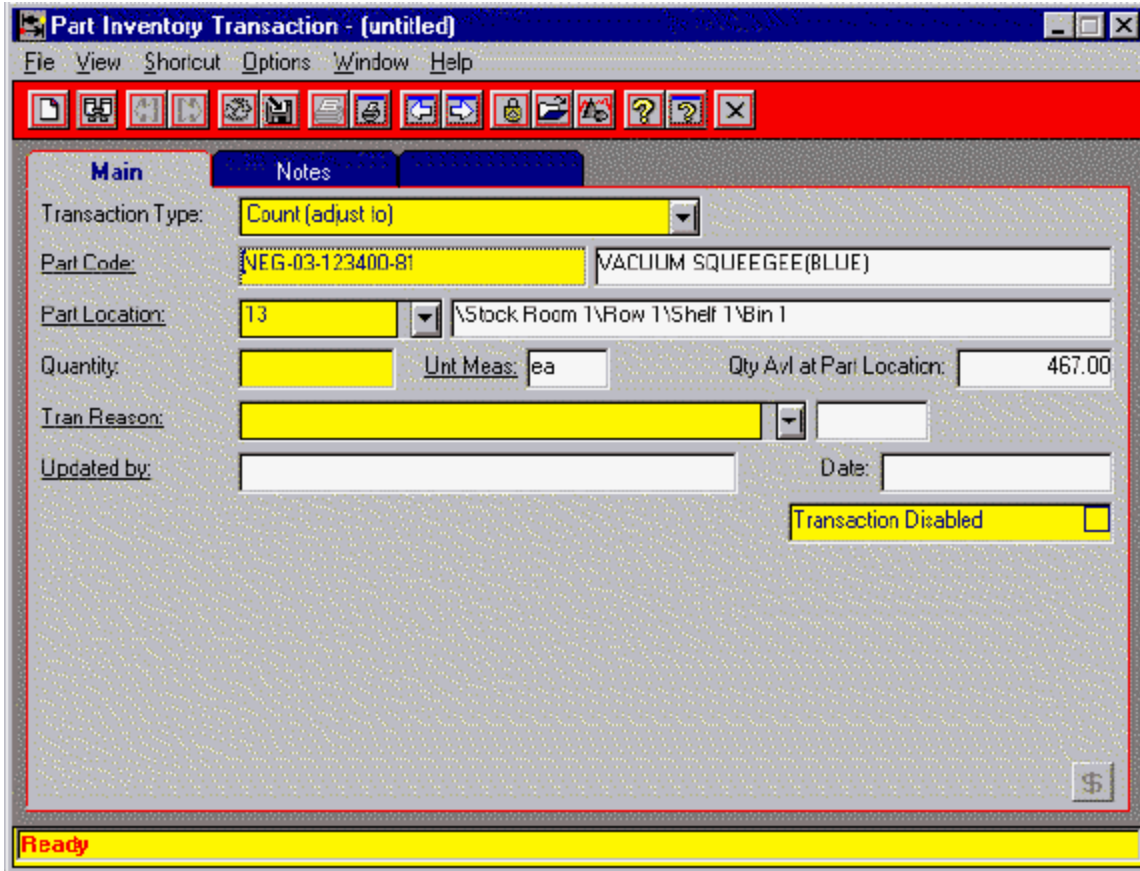
Right click on a blank area of the right window pane and pause your cursor over View to see the view shown above.

Click List to change your view as below.



Right click on the first part (highlighted above), pause cursor over Part Actions, pause cursor over Inventory Transactions and click New Inventory Transactions' to display the following window.


Transaction Type – if this is not set to 'Count adjust to' then use the combo box  to change it and the window will change as follows.



Quantity – enter actual on-hand count (from count sheets)

Transaction Reason – select Initial Setup to MaintScape

Click the **Save button**  on the Toobar.

Click the **Close button**  on the Toolbar to return to Explorer.

Repeat the process for each part at this location.

Click in the left window pane to highlight the next location and repeat the process above.

When all locations and parts are completed, click the Close button  on Explorer Toolbar.

Follow-up on-site assistance, 1 to 2 months after MaintScape implementation

Our experience has shown that with MaintScape (and any other software), only a limited amount can be absorbed and retained during an initial training session covering a great deal of information.

Often users become somewhat discouraged and fall into a routine of using simply the basics, and probably inefficiently.

Follow-up sessions allow us to spend time on a one on one basis with your staff, working at the computer, and helping them with the functionality they must utilize. We often find a great many roadblocks due to lack of understanding, assumptions or general unawareness of certain features and functionality. This is virtually always dramatically improved with the one on one sessions. These, to be effective, must be after the staff have been using MaintScape for a little while but not so long after that they have become completely discouraged or drifted away from using the system.

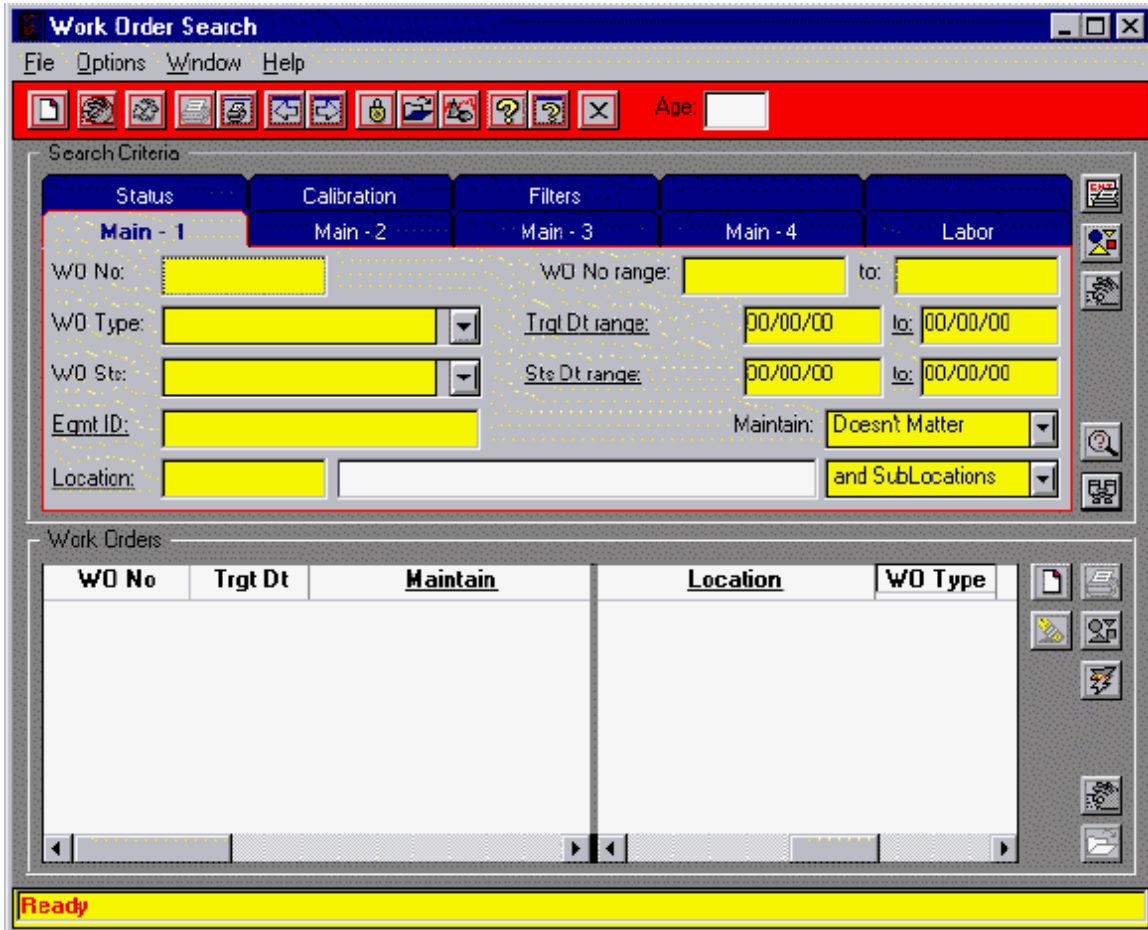
Should you agree that these sessions are desirable, we will need to discuss who how many staff we will be working with, what shifts they work, etc. and devise a schedule to handle all the appropriate staff on their work shifts.

Searching and Reporting within MaintScape

Each major file has a Search and Report Window, example Equipment, Parts, Work Order, Staff, External Resources, Purchase Requisitions, Purchase Orders, Inventory Transactions, Service Request.


All Search and Report windows work the same way, simply the fields, reports and such are different.

Since it is the most complex, we will explain how to use Search and Report Windows with Work Order Search and Report as our example.




The upper data area, titled 'Search Criteria'

This data area has multiple pages with many fields. Any combination of fields can be used to define and limit the search.

Clicking the **Search button**  performs the search and displays the results in the lower data area 'Work Orders'

If you enter data to no fields and perform a search, the entire file will be displayed in the Work Orders area.

If you have entered data and wish to remove that data and start another search, simply click the **New button**  on the **Toolbar** and all fields will be blanked.

The Lower Data Area, titled 'Work Orders'

This area will display the results of the search. The scroll bar to the right allows scrolling through the results.


You can change the sort order of the results by clicking on any column, in the case of Work Orders, this might be WO No., Target Date, Location, WO Type, WO Status or others. Note that you can use the scroll bar at the bottom to view more fields; you can also maximize any search window.

You can open any Work Order by double clicking anywhere in its line in this area.

Examples of Searches:

- All Work Orders of Type PM, Status Scheduled and Target Date range of next week.
- All Work Orders of Status Closed and Status Date of yesterday, last week, last month, etc.
- All Work Orders containing Part 1
- All Work Orders closed by John Jones
- All Work Orders in Building 1
- All Work Orders for equipment of the Class Boiler, Slitter, Forklift, Truck, etc.

Reporting from Search Windows

All Search windows have a **Reports Button**  to the upper right of the upper data area. To access the reports, **click the Reports Button**.

This button will display all reports of the type associated with that Search Window, in this case WO Reports.

Reports, as is the case with searches, are sensitive to the contents of the fields on various pases of the upper 'Search Criteria' data area, i.e. if no fields are entered then the entire file is reported upon, if various fields are entered, these will define the reporting criteria, example report on all Work Orders closed last month by Juan Gonzalez.

It is not necessary to perform a search to view reports.

Bulk Operations and various Shortcuts

These are available through buttons to the right of the lower data area. Pause your cursor over various buttons and view the purpose in the yellow status bar at the bottom of the screen.

Many other operations can be performed beyond Search, Report, Bulk Operations and Shortcuts but they are beyond the scope of this attachment.