



MaintSmart

version 4.1

Equipment Hierarchy Set-Up Quick Start Tour

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Get the **MaintSmart User Manual** (197 pages) as Adobe:
http://www.maintsmart.com/MaintSmart_User_Guide.pdf

Get the **MaintSmart Purchasing/Inventory Manual**
<http://www.maintsmart.com/Support/MaintSmart3EPurchasingUserGuide.pdf>

Have a Question? Pick Up the phone and call toll-free: 1-888-398-0450 or +1-541-751-0450 or email us at sales@maintsmart.com Skype ID 'maintsmart'

How to Use the Quick Start Tour

Quick start is designed to give you a quick overview of one or more of MaintSmart's powerful features. It's recommended that you also download the MaintSmart User Guide. The User Guide covers all topics of MaintSmart in detail and provides a handy reference if you need to explore MaintSmart's features in depth. If you have any questions call (toll-free USA/Canada) 1-888-398-0450 or +1-541-751-0450. Email: support@maintsmart.com.

Important: The sample data contained in the Demo is for a manufacturing facility. However MaintSmart works great for building, fleets, schools, hospitals, etc. Top level entity: "Plant" may be easily changed to "Building", "School", "Fleet" etc.

How to Use the Quick-Start Tour:

This tutorial assumes you have already entered basic configuration data into MaintSmart or are using one of the "demo" databases provided with MaintSmart. For the purposes of this tutorial we'll use the manufacturing demo database. For information on configuring MaintSmart please see the full User Manual. The MaintSmart Demo is the full MaintSmart program with a 30 day limit. This time may be extended once if needed. The Demo contains three databases: Manufacturing Data, Building Data and a blank database that you may configure with your own data. If you decide to use the blank database you can simply email the System ID as displayed under:

Help>>About>>License>>Register along with a P.O. number or call in a credit card and we'll issue an immediate extension of the license.

Other resources are available too such as: web help, online tutorials, MaintSmart Help (menu items: **Help>>Contents**) and status bar help (set screen focus on many screen items by tabbing to the item with the <TAB> key. For the purposes of this Quick-Start Tour **topics or concepts of special importance are in green text. Warnings are presented in red text. Items of emphasis are underlined. Screen labels are in bold type.** The MaintSmart User Guide contains additional details and information on using MaintSmart. It is available for free from our web site: <http://www.maintsmart.com>

Click the "Airplane" icon on several selected screens for an audible guided tour of MaintSmart. Turn your speakers on if you have some.

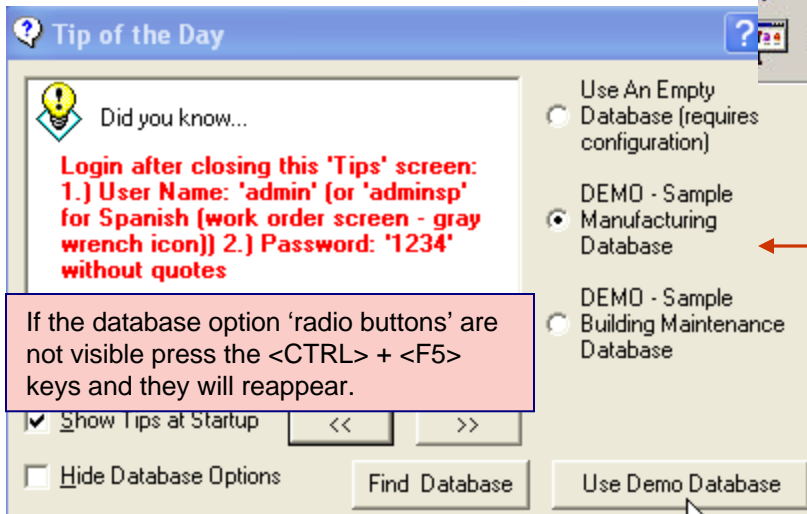
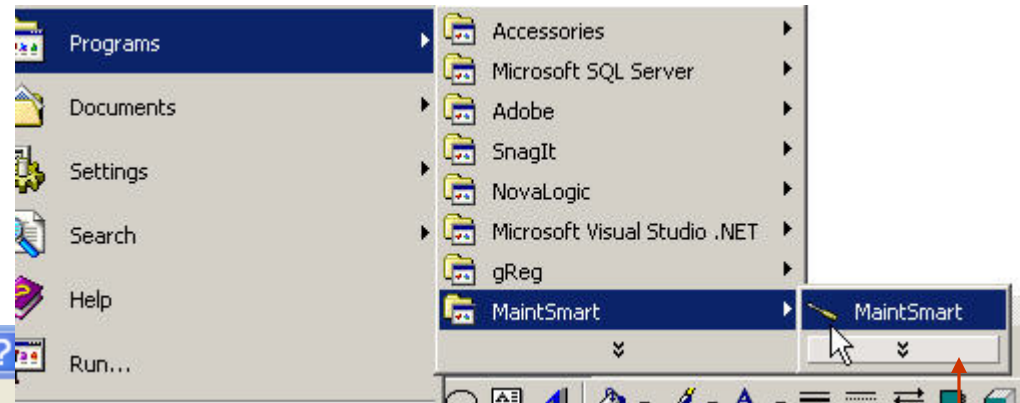


Other Quick Start Topics Include:

- PM Configuration
- Inventory and Purchasing
- Preventive Maintenance
- Analyzing MaintSmart Data



Log On to MaintSmart



Step 1: Start MaintSmart from **Windows>>Start>>Programs>>MaintSmart**. (or **MaintSmart Enterprise** When MaintSmart starts you'll be presented with a "Tips" screen. Select either Manufacturing Demo, Building Demo or Empty database. For the purposes of this tutorial we'll use the **Manufacturing Demo database**.)

If the database option 'radio buttons' are not visible press the <CTRL> + <F5> keys and they will reappear.

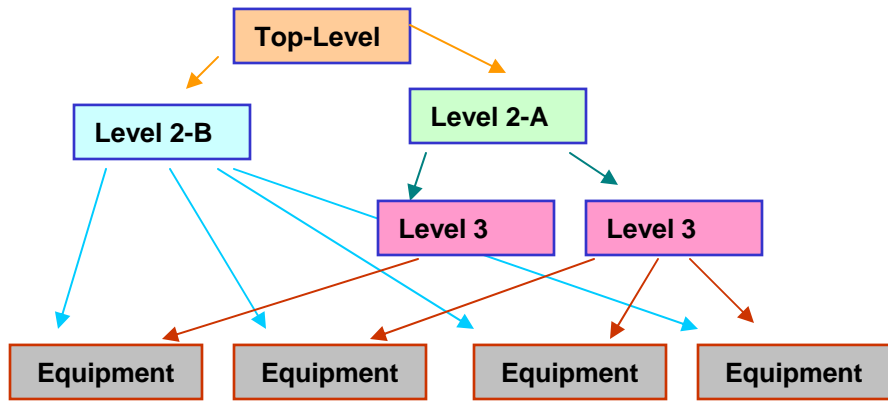
Step 2: For the sample databases the login is entered for you by default: When MaintSmart starts you'll be presented with a log in input screen. Select a "Plant" (or "Building") Enter **admin** for the user ID and **1234** for the password.

Spanish Language: To see work order data entry screen (partially translated) in Spanish enter the user name: **adminsp** and the password **1234**. MaintSmart may be translated into most languages. To see this partial translation open the work order data entry screen after logging in.



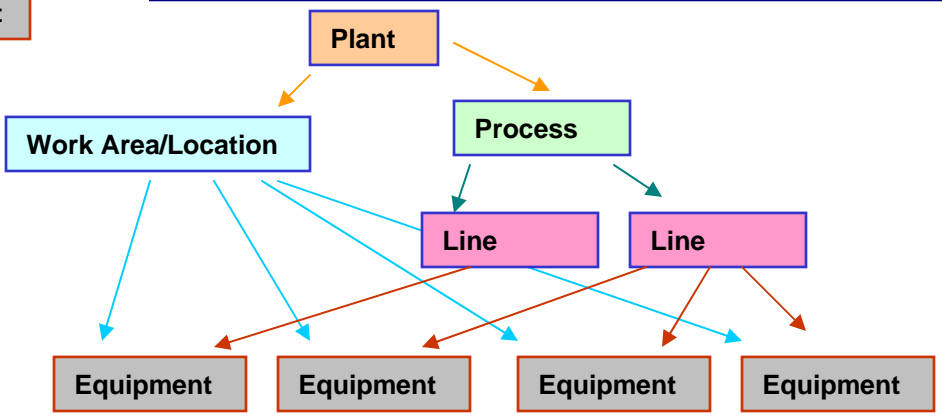
Understanding MaintSmart's Equipment Hierarchy

Equipment Hierarchy: General Description of Hierarchy Levels

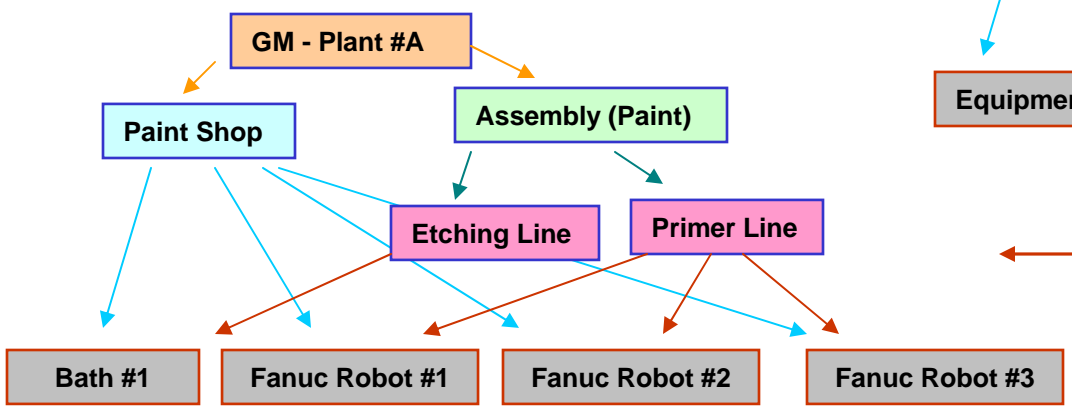


Be certain that you understand the difference between the equipment **hierarchy labels** and the **actual data items** contained within each level of the labeled hierarchy. If you have ANY questions call 1-541-751-0450 or email support@maintsmart.com.

Equipment Hierarchy: Labeled Hierarchy Levels (User-Defined)



Equipment Hierarchy: Actual Hierarchy Data Items (User-Defined)

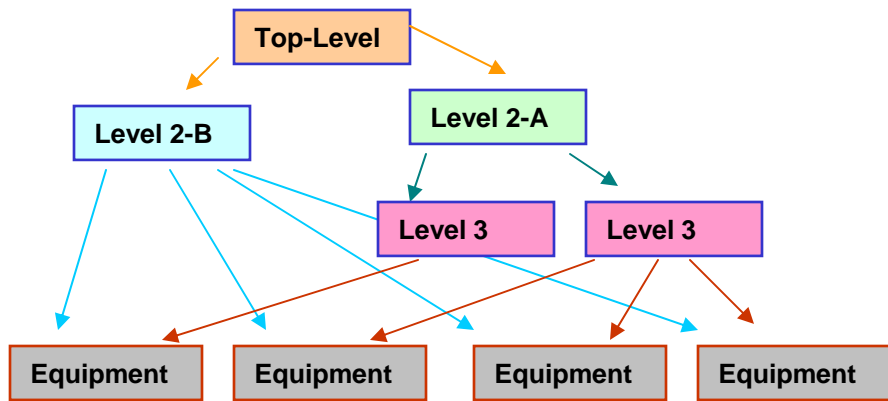


Example: Plant: General Motors <contains> Process: Assembly (paint). This process <contains> Line: Primer Line. This line <contains> Equipment: Robots 1-3. This Equipment is also contained by Work Area/Location: Paint Shop.

Labeling MaintSmart's Equipment Hierarchy

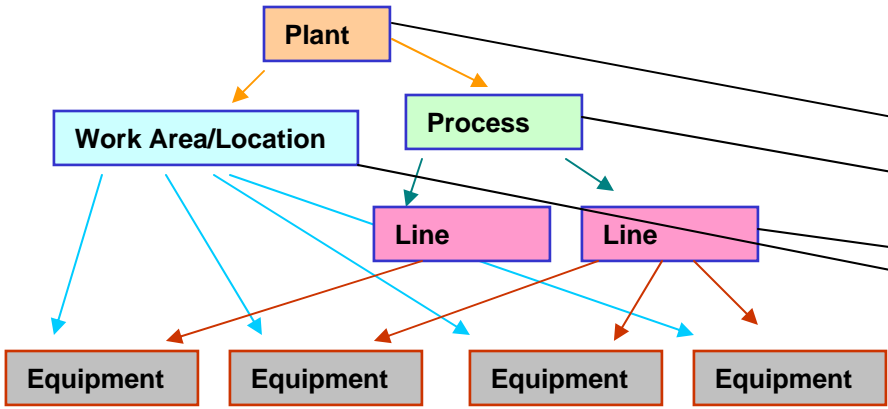


Equipment Hierarchy: **General Description of Hierarchy Levels**



Open 'Program Configuration' to label the 'Equipment Hierarchy.'
 NOTE: All yellow background buttons are for configuration (set-up).

Equipment Hierarchy: **Labeled Hierarchy Levels (User-Defined)**



Configuration | Configuration - More | User Access

Connection String
 pw Database Password="" Jet OLEDB:Create System Database=False; Jet OLEDB:Encrypt...

Always Use This Database (should be checked unless testing Demo database(s)) Set Database Location

Default Name: *Type in the names (labels) of the equipment hierarchy levels that best fits your maintenance operation. Simply close the 'Program Configuration' screen to save these changes. These labels are cascaded to all parts of the program and all reports but may be easily changed from this screen at anytime.*

address: Plant

State: Plant

Hierarchy #1: Top-Level Entity (Plant, Building, Fleet) (12 char.) → Plant

Hierarchy #2-A: This level contains hierarchy #3 (20 char.) → Process

Hierarchy #3: This level contains equipment (20 char.) → Line

Hierarchy #2-B: This level contains equipment (20 char.) → Work Area/Location

Maintenance Personnel Description (20 char.) → Technician

The above hierarchy descriptions must be unique. NO DUPLICATES.

Save All Above As Global Settings On Exit From This Screen

Labeling MaintSmart's Equipment Hierarchy



Set up Top Level(s) (Level #1) 'Plant'.

IMPORTANT NOTE: Do not confuse the LABEL for each of the equipment hierarchy levels with the actual physical levels that you enter as data. For example: the level **label** might be 'Line' and the **actual data** (physical level) might be 'Oven Line #3'.

General Motors - [Plant and Technician]

File Filters Options Window Help

Notice how label for Top-Level (Level #1) changes to the text 'Plant'..

Plant ID	Plant Identifier	Address	City
327	GM - Plant #B	1212 S. Main St.	Florence
328	GM - Plant #C	216 S. Fairmont	North Ber
329	GM - Plant #D	1234 Main Street	Coos Bay
330	GM - Plant #A	601 Piquette	Detroit

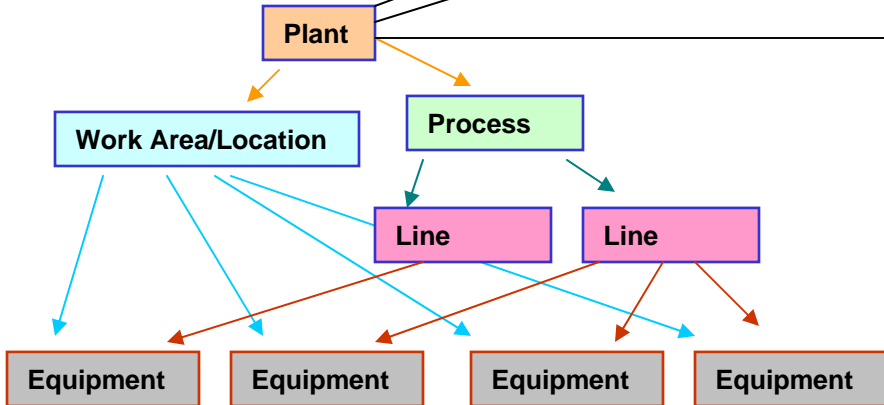
Location/Contact | Billing Information |

Plant

Plant Code: 330 Location/Uniqued Identifier: GM - Plant #A

City: Detroit State/Province: MI

Equipment Hierarchy: **Labeled Hierarchy Levels (User-Defined)**



Configuring the Top-Level (Level #1) of the Equipment Hierarchy

Plant		Work Area/Location			Technician		Technician-Skills		Technician-Extra Data	
Plant ID	Plant Identifier	Address	City	State/Province	Postal Code	Country	Phone	FAX	Contact	Notes
327	G					USA	399-9263	399-8230	Bob Schluff	
328	N					U.S.A.	541-367-0450	541-369-9396	Daniel Cook	
329	C					USA	777-0099	666-0098	Bob Smith	

Type in all required fields (yellow background boxes). The 'Plant Code' may be between 100-900 but is best to let it auto-increment. This 'Plant' is represented by it's 'Location/Unique Identifier' throughout the program.

Step 1: Click 'New' button.
Step 2: Enter information for this 'Plant' in each box on both screen tabs ('Location/Contact' and 'Billing Information').
Step 3: Press 'Save' button.

Location/Contact | Billing Information

Plants

Plant Code: 330 Location/Uniqued Identifier: GM - Plant #A Address: 601 Piquette

City: Detroit State/Province: MI Postal Code: Country: U.S.A

Contact: Phone: FAX:

Notes:

Copy To Plant Billing Info

Add Plant

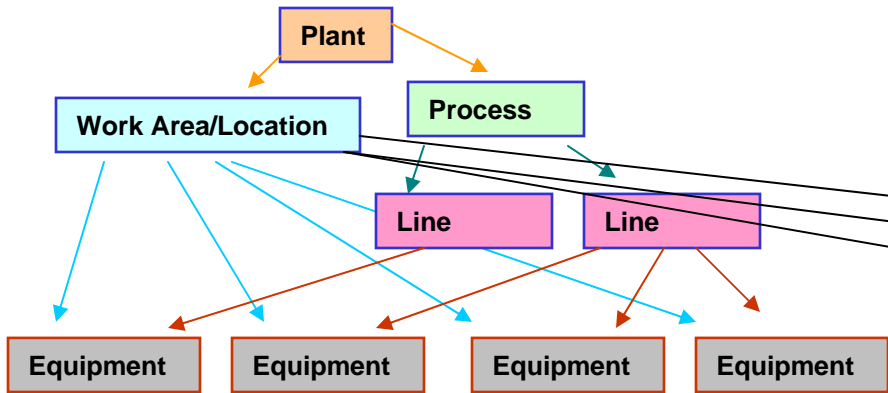
This is the top-level entity and contains all Lines, equipment, employees, etc. You may create up

Configuring Level #2-B of the Equipment Hierarchy



Equipment Hierarchy: **Labeled Hierarchy Levels (User-Defined)**

Set up Level 2-B 'Work Area/Location'



Step 1: Click 'New' button.
Step 2: Enter a 'Work Area/Location' in yellow box.
Step 3: Press 'Save' button.

Work Area/Location ID	Plant ID	Work Area/Location Desc.	Work Area/Location Num
3270001	327	Paint Shop	
3270003	327	Oven	
3270004	327	Inspection	
3270005	327	Cooler	
3270007	327	Welding	7
3270008	327	Interior	8
3270009	327	Chassis Shop	9
3270010	327	Inactive	

Plant	Work Area/Location
327	Paint Shop
327	Oven
327	Inspection
327	Cooler
327	Welding
327	Interior
327	Chassis Shop
327	Inactive
327	Utilities
327	Bun Oven/Proofer

Work Area/Location

Plant: Work Area/Location (unique):

Add Work Area/Location

If you want to use zone-maintenance (optional) then create a Work Area/Location for each employee's PM equipment. Otherwise Work Area/Locations can be used as a logical grouping of equipment items from the maintenance perspective.

Type in all required fields (yellow background boxes). The 'Work Area/Location' must be unique within each 'Plant'. Equipment may be later added to this level of the equipment hierarchy.

Configuring the Level #2-A of the Equipment Hierarchy



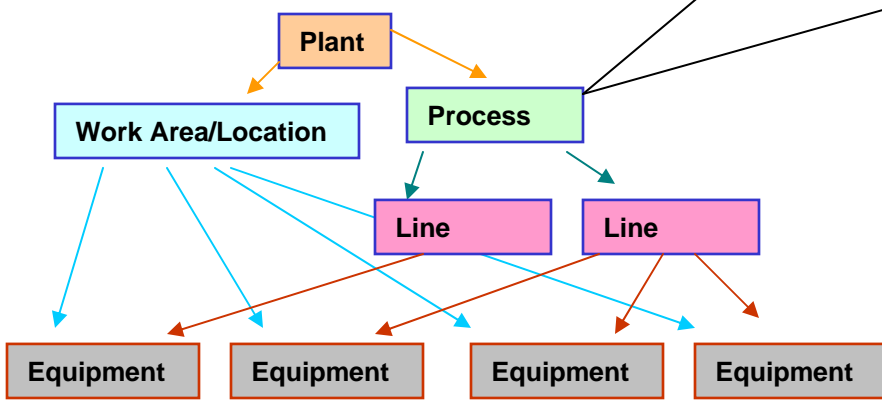
Set up Level 2-A 'Process' and Level 3 'Line'

Process			
Plant Identifier	Process	Process Number	Plant ID
GM - Plant #B	Assembly (Interiors)	327308	327
GM - Plant #B	Assembly (Mechanical)	327309	327
GM - Plant #B	Assembly (Ovens)	327304	327
GM - Plant #B	Assembly (Paint)		
GM - Plant #B	Building Exterior		
GM - Plant #B	Other		
GM - Plant #B	Outside Grounds		
GM - Plant #B	Plant-General		
GM - Plant #B	Vehicles		

Process:	Process Description:
Plant:	
GM - Plant #B	Assembly (Interiors)

NOTE: the 'Process Number' and 'Plant ID' are used internally by MaintSmart. These numbers are created automatically and you will never need to interface with them as MaintSmart uses only user-friendly text descriptions.

Equipment Hierarchy: Labeled Hierarchy Levels (User-Defined)



Configuring Level #2-A of the Equipment Hierarchy



Set up Level 2-A 'Process' and Level 3 'Line'

Plant Identifier	Process	Process Number	Plant ID
GM - Plant #B	Outside Grounds	327100	327
GM - Plant #B	Building Exterior	327101	327
GM - Plant #B	Vehicles	327102	327
GM - Plant #B	Assembly (Ovens)	327304	327
GM - Plant #B	Other	327305	327
GM - Plant #B	Assembly (Interiors)	327308	327
GM - Plant #B	Assembly (Mechanical)	327309	327
GM - Plant #B	Plant- General	327310	327

Step 1: Press the 'New' button
Step 2: Type in the 'Process' ('Assembly (Paint)' in this case)
Step 3: press the 'Save' button to save this new record.

NOTE: In some cases the equipment hierarchy level label ('Process' in this example) may not perfectly represent all of the contained data. You should strive for a 'best-fit' when labeling the hierarchy levels but don't expect it to always fit perfectly. For example: a 'Process' called 'Offices' although this data needs to be entered at some level of the equipment hierarchy it may not actually be a 'Process' per se.

Process Description: Assembly (Paint)

Plant Identifier	Process	Process Number	Plant ID
GM - Plant #B	Outside Grounds	327100	327
GM - Plant #B	Building Exterior	327101	327
GM - Plant #B	Vehicles	327102	327
GM - Plant #B	Assembly (Ovens)	327304	327
GM - Plant #B	Other	327305	327
GM - Plant #B	Assembly (Interiors)	327308	327
GM - Plant #B	Assembly (Mechanical)	327309	327
GM - Plant #B	Plant- General	327310	327
M - Plant #B	Assembly (Paint)	327314	327

Process Description: Assembly (Ovens)

To change (edit) an existing record left mouse-click the grid row containing the record you want to change. Next make changes in yellow box below the grid and then press 'Save'.

Configuring Level #3 of the Equipment Hierarchy

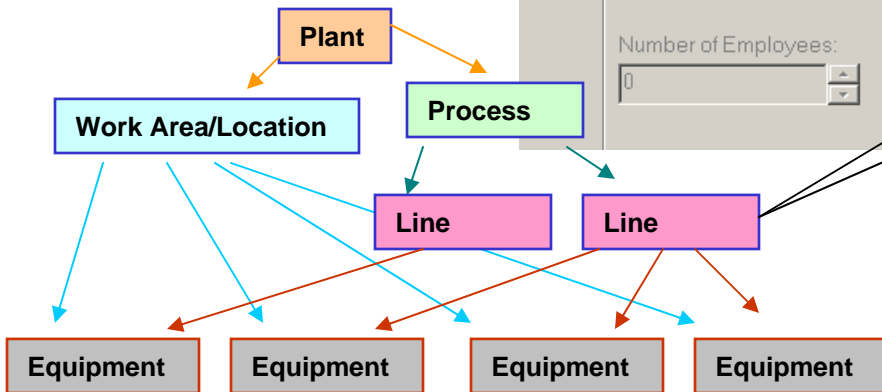


Set up Level 2-A 'Process' and Level 3 'Line'

These are the actual 'Lines' that have been created.

Process						Line	
Plant Identifier	Process	Line	Personnel Count	Wage Rate	Affects Schedule	Plant ID	Process Number
GM - Plant #B	Assembly (Interiors)	Caulking Line	0	\$0.00	<input type="checkbox"/>	327	327308
GM - Plant #B	Outside Grounds	Parking Area	4	\$26.05	<input type="checkbox"/>	327	327100
GM - Plant #B	Outside Grounds	Security	7	\$26.05	<input checked="" type="checkbox"/>	327	327100
GM - Plant #B	Other	Bulk Storage	0	\$26.05	<input type="checkbox"/>	327	327305
GM - Plant #B	Assembly (Ovens)	Oven Line #1	4	\$20.00	<input checked="" type="checkbox"/>	327	327304

Equipment Hierarchy: Labeled Hierarchy Levels (User-Defined)



Line configuration form showing:

- Plant: [Dropdown]
- Process: [Other]
- Line (unique): [Bulk Storage]
- Number of Employees: [0]
- Hourly Wage: [26.05]
- Checkbox: The Equipment Run-Time Schedule is Lengthened When Equipment in This Line Fails Causing Lost Labor Hours for Non-Maintenance Personnel

Configuring Level #3 of the Equipment Hierarchy

Set up Level 2-A 'Process' and Level 3 'Line'

This utility concatenates the 'Process' with the 'Line' to aid in keeping the 'Line' name unique. It is optional and normally not needed. If you want to use it you must check this menu item.

If this box is not visible then simply type the 'Line' name into the 'Line (unique)' box.

Step 1: Press the 'New' button

Step 2: Select the 'Process' to add the 'Line' to.

Step 3: Type in the name of the 'Line' into the 'Line (unique)' box OR optionally use the 'Include Process in Line...' utility (see red box above).

Optional Step 4: Enter the count of employees (non-maintenance) normally working on this 'Line' if stoppages on this 'Line' interrupt the process and cause lost product, manufacturing time or any other 'opportunity cost'. Enter their average wage rate in the 'Hourly Wage' box. Check the checkbox.

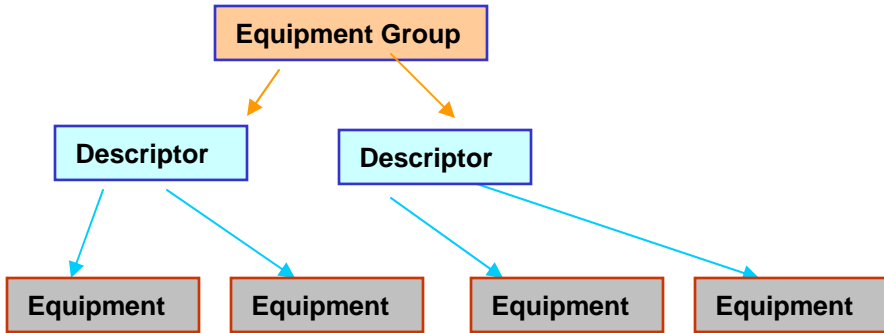
Step 5: Press the 'Save' button to save this new record.

Configuring Equipment

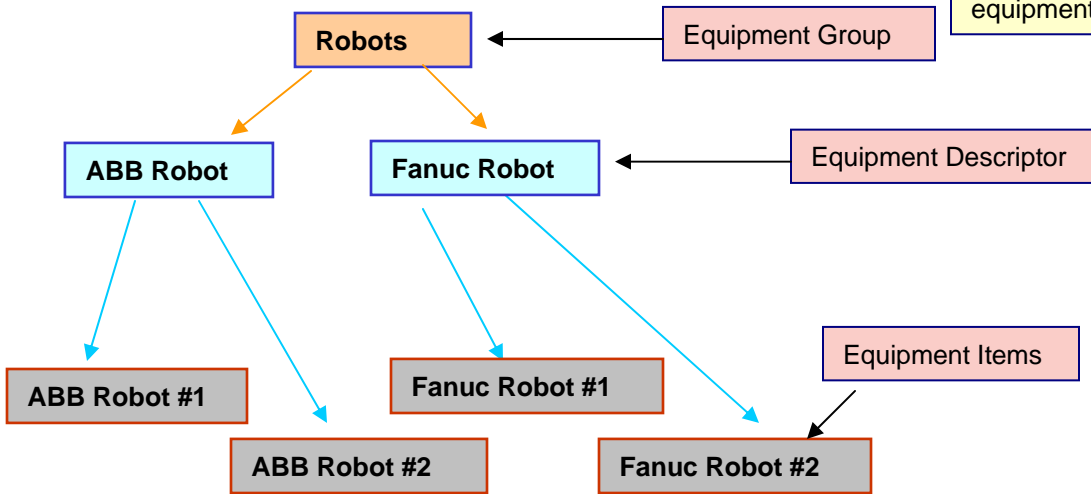


Equipment Set-Up: Relationship of Equipment Groups, Equipment Descriptors and actual physical Equipment items.

Set up Equipment Groups, Equipment Descriptors and Equipment Items



Equipment Groups are used to classify and group similar equipment. Equipment groups are used primarily for filtering equipment item drop-down boxes to limit the selections and make it easier to find the equipment item needed.



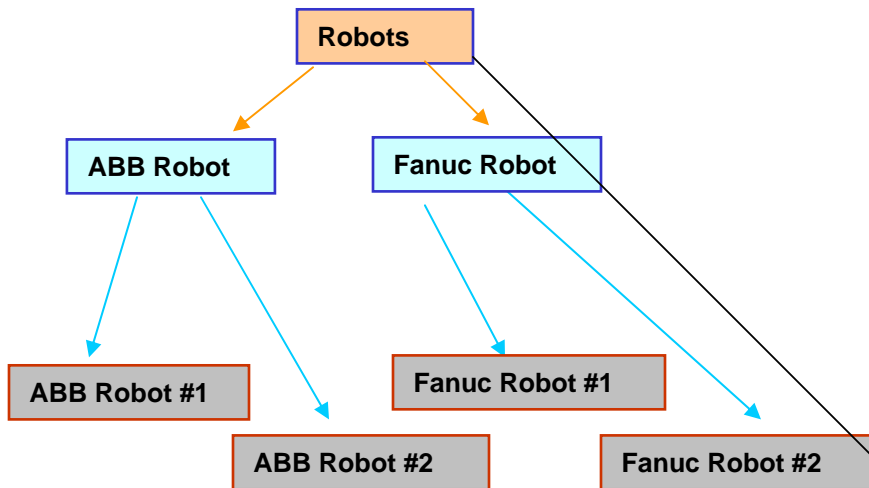
Equipment Descriptors are simply text items that are used to help you build your equipment item list quickly and consistently. Descriptors are NOT the actual physical equipment and therefore when naming descriptors a general name should be used. (see example on left). Equipment descriptors are building blocks to use when creating actual physical equipment items.

Equipment Items are the actual physical equipment that are maintained. Equipment items are displayed in user-friendly text that you configure. You may use the equipment descriptor to help you build your equipment list.

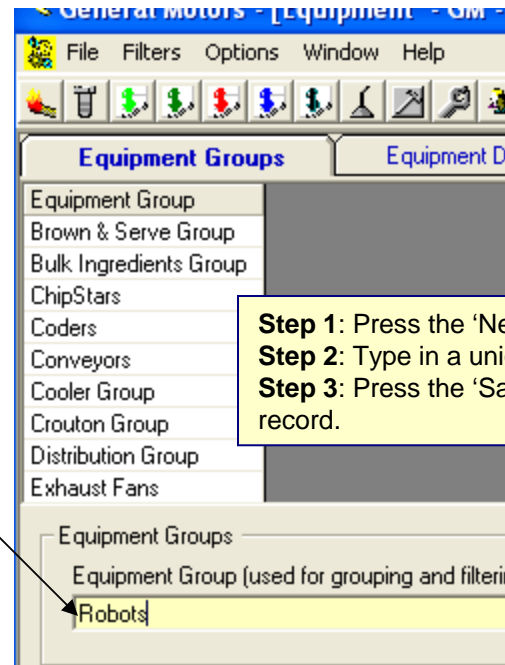
Configuring Equipment Groups



Set up **Equipment Groups**, Equipment Descriptors and Equipment Items



Equipment Groups simply provide a filter when looking for an equipment item. That's it.



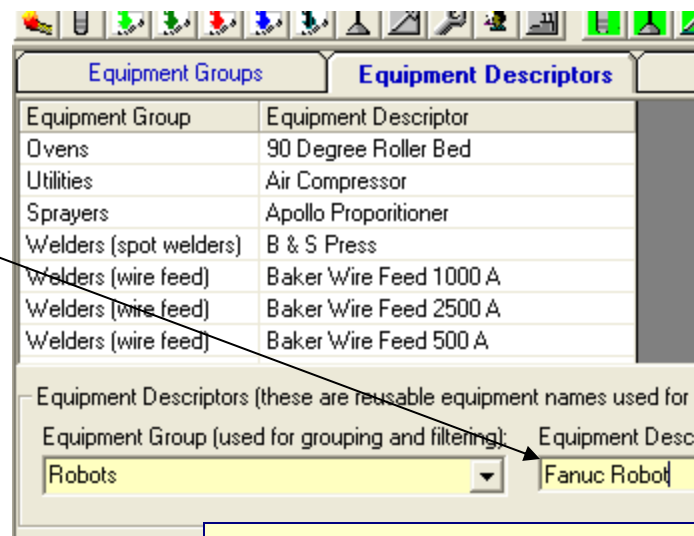
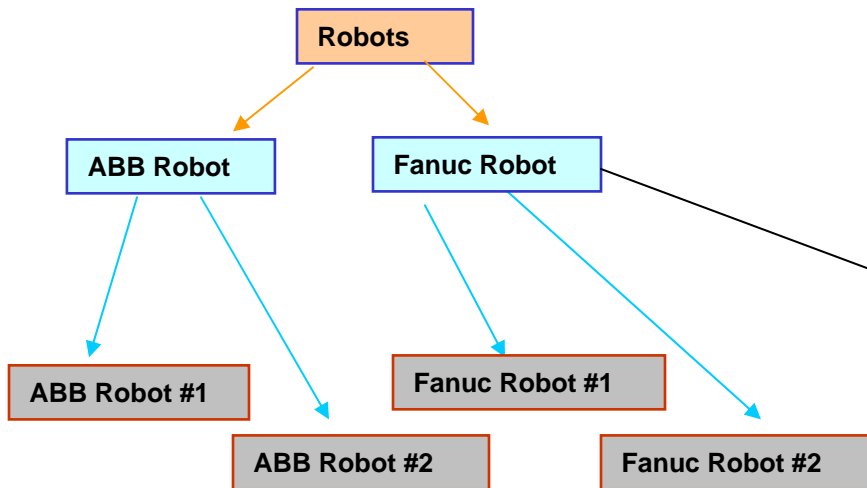
Step 1: Press the 'New' button
Step 2: Type in a unique Equipment Group.
Step 3: Press the 'Save' button to save this new record.

Equipment Groups are NOT part of the equipment hierarchy but rather simply a filtering tool.

Configuring Equipment Descriptors



Set up Equipment Groups, Equipment Descriptors and Equipment Items



Equipment Descriptors are not the actual physical equipment item. Descriptors are simply text data used as building blocks for easily and consistently creating the equipment items (in the next and final step)

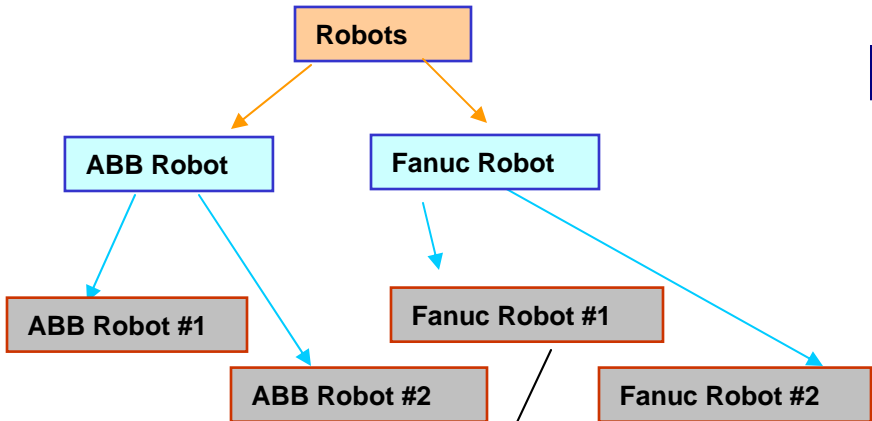
Step 1: Press the 'New' button
Step 2: Select the Equipment Group.
Step 3: Type in a unique Equipment Descriptor.
Step 4: Press the 'Save' button to save this new record.

Equipment Descriptors have a secondary use : call for more information on this: 1-541-751-0450

Configuring Equipment Items (actual physical equipment)



Set up Equipment Groups, Equipment Descriptors and Equipment Items



Equipment Items are the actual physical equipment items located in your facility. These items are associated with a 'Line' and a 'Work Area/Location'. The Equipment Descriptor may be concatenated with the 'Equipment Index' to auto-create an 'Equipment Display Name'. This user-friendly name is how this equipment is represented throughout MaintSmart.

- Step 1:** Press the 'New' button
- Step 2:** Select data for each yellow box.
- Step 3:** Accept auto-created 'Equipment Display Name' or type in your own equipment name.
- Step 4:** Press the 'Save' button to save this new record.

Equipment Groups		Equipment Descriptors		Equipment Items	
Plant Identifier	Equipment	Equipment Index	Line		
GM - Plant #B	90 Degree Roller Bed		1 Parking Area	Inspection	<input checked="" type="checkbox"/>
GM - Plant #B	90 Degree Roller Bed #1		1 Security	Oven	<input checked="" type="checkbox"/>
GM - Plant #B	90 Degree Roller Bed #2		2 Lighting	Paint Shop/Transfer	<input checked="" type="checkbox"/>

Equipment Item List (configure your physical equipment items here)

Plant: Line: Work Area:

Equipment Descriptor: Robots

Equipment Name: Equip. Index:

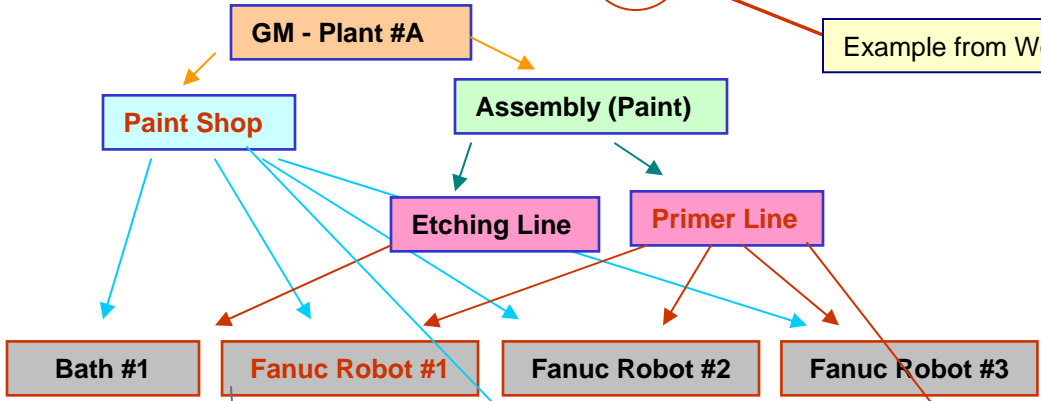
Equipment Display Name (shown in drop-down boxes, grids): In Use

Add Equipment

Equipment items are the actual equipment in your operation. Equipment items are created from the 'Equipment Name' and 'Equipment Index'. MaintSmart creates an equipment code used internally by

The 'Equipment Index' has no significance other than to help build the 'Equipment Display Name'.

Example: Equipment Item and Position in Hierarchy



Example from Work Order Data Entry screen

Below is a practical example of how the MaintSmart equipment hierarchy works. Notice user friendly 'Equipment Display Name' in 'Equipment' box.

Date Assigned	Date Completed	Technician
01/18/2006 05:34:00 AM		Ken Wright
01/18/2006 05:00:00 PM	01/18/2006 09:36:00 PM	Charlie Huston
01/18/2006 05:00:00 PM		
01/18/2006 05:00:00 PM		
01/18/2006 05:00:00 PM		

Left-click the filter icon to display the pop-up menu with all 'Equipment Groups'. Select a group and it populates 'Equipment' drop-down box with equipment from that group only OR simply select equipment from full list without filtering.

- Furnace
- Generator
- Make Up Group
- Mixing Group
- Ovens
- Pan System Group
- Printers
- Refrigeration Groups
- Robots
- Saws
- Sprayers
- Utilities
- Welders (robot welders)
- Welders (wire feed)

Equipment	Task
Fast Refrigeration Compressor #1	Set Knife
Degree Roller Bed #1	Check a
en Burner Control/Oven Extension #2	Check C
ugh Mixer #1	Check C
Degree Roller Bed	Blow Out

Selecting the equipment causes the 'Line' and 'Work Area/Location' to auto-populate.

Plant	Work Order Number	Date/Time Assigned or Status
GM - Plant #B	WO-147	6 / 1 / 2007 11:00

Equipment: Fanuc Robot #1

Task: PLC Group

Replace Bad I/O Card

Technician (optional): Ken Wright

Requestor: Bill Wilson

Cost Center: CC-123-456 - AnyTown Plant

Account: MR-5552-009899 - Machine Repair

Work Area/Location: Paint Shop

Line: Primer Line

Comments or Short Instructions (optional 255 chars.): Replace burned up Input/Output card 1747-OA16