



MaintSmart

- Auto-Print/Email
- Work Order Scheduler
- Personnel Work Scheduler

version 5.0

User Guide

(volume 3 of 3)

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Auto-Print/Email and Work Order Scheduler

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The MaintSmart Print Scheduler and Automatic Work Order Generation - Overview

New in MaintSmart 4.0 is the ability to email automatically any report or work order template as an email attachment. Previously available for a print job. For the purposes of this manual the phrase 'print job' also refers to email jobs. The term 'printer' could also refer to email recipient. MaintSmart provides a way for you to schedule then automatically print most available detail reports (Crystal Reports 2008). The print scheduler is available from the **Print Job Settings and Scheduler** navigation button at the top of the screen .

A print/email job is composed of three main parts.

- **Print Settings:** these tell MaintSmart how to print the print job.
- **Print Schedule:** this part tells MaintSmart when to print the report(s).
- **Report or Work Order:** this is what is actually printed. Customized report filters ('report definition') may be created then saved. MaintSmart creates the report with the data (and the relative date range) specified in the filter. Setting the report to use 'relative dates' insures that the data in the report is current and applicable.

After creating a print job configure the auto-print scanner.

MaintSmart provides a flexible print scanner that looks for scheduled print jobs and expired meters. When these print jobs are found MaintSmart automatically sends them to the printer or emails them without any user input whatsoever. Print jobs are then logged and may be reprinted. If an error is detected (no paper in printer) MaintSmart lists the error in the print log. MaintSmart also creates work orders from work order templates (boiler plates). These work orders may be calendar or event triggered.

Note: Report definitions use existing records from the database to create their report. You may also link work order templates to print jobs. In this situation MaintSmart actually creates a new record (creates a new work order from the template) then prints this new record. Work orders may be generated by calendar day/time or weekday/time. Additionally work orders may be created based upon expired meters. This topic is covered in detail in this manual.

1 - Printer Settings		2 - Print Schedules		3 - Print Jobs		Screen Defaults (optional)	
Email Job	Print Job	Print Job Name	Next Print Date/Time	Report			
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Weekly PMs	1/3/2011 8:00:00	PM List (default g			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Email Down Time	1/2/2011 12:00:00	Equipment Failure			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Email Down Time	1/3/2011 12:00:00	Equipment Failure			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Email Down Time	1/4/2011 12:00:00	Equipment Failure			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Email Down Time	1/5/2011 12:00:00	Equipment Failure			

Print Job: [2] Equipment Failures by Equipment - Next Print Date/Time: 1/2/2011



Using this Manual

The first section of this manual contains the help file for automatic printing. The second half contains several examples with step-by-step instructions of how to actually configure sample print jobs.

Text is color-coded: **Green**= take note. **Red**=important.

It is suggested that you read the overview topics (print settings, print schedules, print jobs and configuring the auto-print scanner) in the help portion of this manual before trying the examples.

MaintSmart's Auto-Print capability has the potential to handle nearly all printing and cyclical work issuance tasks automatically. By using this powerful feature you can free up your valuable time. The auto-print scanner even issues work and most reports while you're on vacation. Best of all the report, PM lists or work orders are printed or emailed as attachments at the day/time and to the printer/recipient of your choosing.

MaintSmart's auto-print scanner is extremely flexible. You are encouraged to try any possible scenario with it. For example try sending the same report to multiple printer at the same time (or different times). Try creating a print job that sends multiple reports to different printers at the same time. Keep in mind that once print jobs have been configured MaintSmart handles issuing the reports and recycling the next print date/time automatically. Additionally email attachment formats include: Adobe Acrobat, MS Word, MS Excel, Rich Text, HTML and more.

Tastee Baking Company - Sacramento

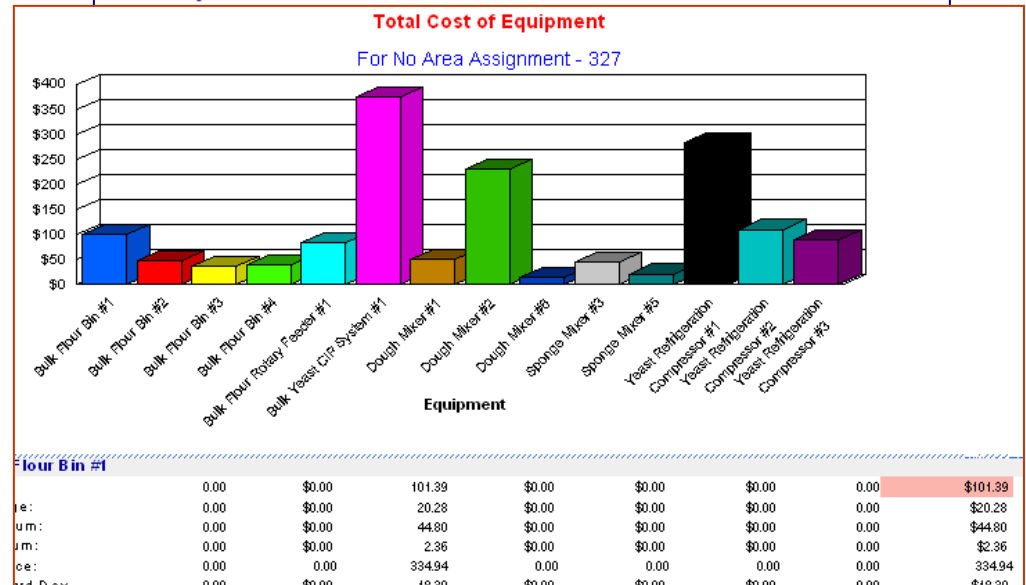
Work Order WO-109929

Job Reference: _____
Printed By: _____

Plant: 327
Priority: Emergency
Type: _____
Work Area: No Area Assignment - 327
Room: Buk Ingredients

Equipment: Buk Yeast CIP System #1

Location: _____
Building: _____
Asset #: _____
Serial #: _____





MaintSmart Auto-Print/Email Scheduler - Print Settings Overview

Print Settings Overview

Since emailed file attachments do not use a printer no printer setting is needed for emailed reports. Print settings consist of a printer name, driver, port, computer name and other attributes. Depending upon what is being printed by MaintSmart some of the attributes may be ignored.

Print Settings have a dual purpose:

- 1.) Print settings are used with print jobs to define where the print job is executed (printer name, driver, etc.).
- 2.) Print Settings may (optional) also used with screen defaults when the **File>>Print>>Print Settings>>Use MaintSmart Printer** menu item is checked.

Print Settings are used for automatically printing reports. **Printer Screen Defaults** (while they still use the printer settings) are used for manually printing from several selected screens (from their **Print** menu).

Print Settings Used With Print Jobs

Print Settings are linked to print jobs. It is important to note that the **Send To Printer, Automatically Print...** checkbox settings in the **Print Jobs** tab override the same checkbox settings in **Printer Screen Defaults** tab of the **Print Job Settings and Scheduler** screen. The print settings check boxes on the **Print Screen Defaults** tab are actually used with screen defaults during *manual* printing (**Print** menu) primarily. The checkboxes on the **Print Jobs** tab dictate how *automatically* printed print jobs react to print commands.

In most cases one (1) print setting is probably adequate. Each print setting defines a printer and printer attributes.

The Printer Setting: 'Email' is a placeholder for email jobs and is not available for edits.


1 - Printer Settings	2 - Print Schedules	3 - Print Jobs	Screen Defaults (optional)	
Print Setting	Printer Name	Computer	Printer Port	Driver
Email	Email	MAINTSMART2006	Email	Email
shop	Canon i560	MAINTSMART2006	N/A	N/A



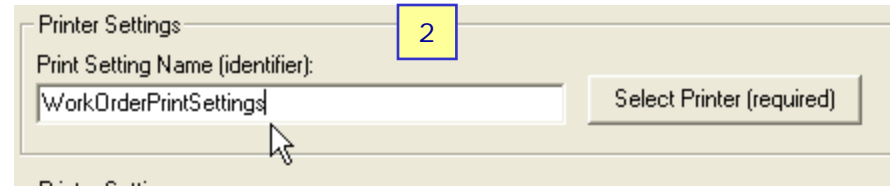
MaintSmart Auto-Print/Email Scheduler - Add New Print Setting

Adding a New Printer Setting

Important Note: Before attempting to create print settings and printer screen defaults you should read and thoroughly understand the following help topics: **Overview of Print Scheduler** and **Automatic Printing and Print Settings Overview**.

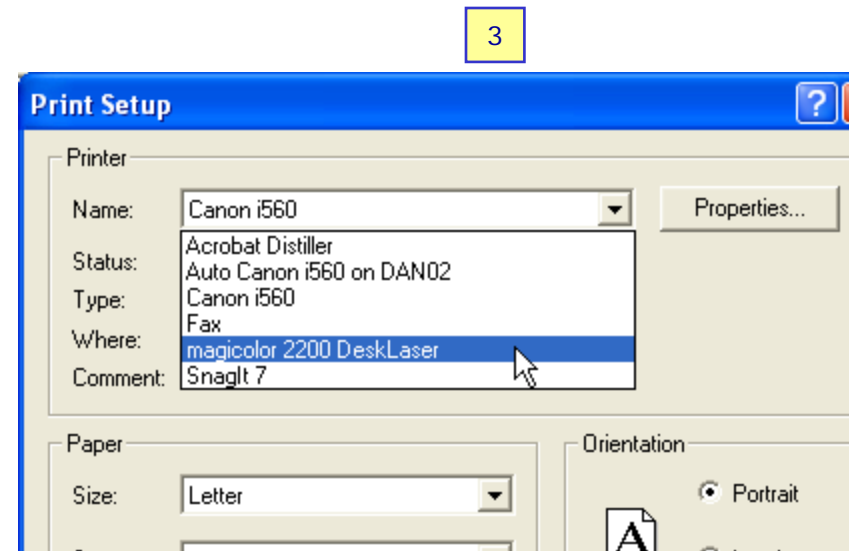
To create a new printer settings/defaults record open the **Print Settings** tab of the **Print Job Settings and Scheduler** screen . Follow these steps to create the new record:

- 1.) Press the button labeled **New**.
- 2.) Type in a print setting name into the box labeled **Print Setting Name**.
- 3.) Press the **Select Printer** button and select an appropriate printer.
- 4.) Press the **Save** button.



Printer Settings

Print Setting Name (identifier):



Print Setup

Printer

Name:

Status: Acrobat Distiller

Type: Auto Canon i560 on DAN02

Where: (Selected)

Comment: SnagIt 7

Paper

Size:

Orientation

Portrait



MaintSmart Auto-Print/Email Scheduler - Edit/Delete Print Setting

Editing/Deleting a Printer Setting

To edit or delete an existing printer settings record open the **Print Settings** tab of the **Print Job Settings and Scheduler** screen . Follow these steps to edit or delete a record:

To edit a printer setting follow these steps:

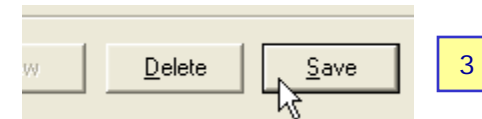
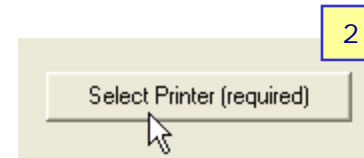
- 1.) Left click the row in the grid that you want to edit.
- 2.) Press the **Select Printer** button. Make changes as needed.
- 3.) Press the **Save** button to keep the changes or the **Cancel** button to cancel the changes.

Note: changes to print setting take place immediately. Any print jobs that execute after the changes to print settings use the new settings without changing the print job record.

Deleting a **Print Setting** also deletes all screen defaults and print jobs that use that print setting. Use great care when deleting print settings.

To delete a printer setting follow these steps:

- 1.) Left click the row in the grid that you want to delete.
- 2.) Press the **Delete** button.



Deleting a Print Setting also deletes all screen defaults and print jobs that use that print setting. Use great care when deleting print settings.

1

Print Setting	Printer Name	Computer	Printer Port	Driver
Email	Email	MAINTSMART2006	Email	Email
shop	Canon i560	MAINTSMART2006	N/A	N/A



MaintSmart Auto-Print/Email Scheduler - Printer Screen Defaults Overview (optional)

Printer Defaults Overview

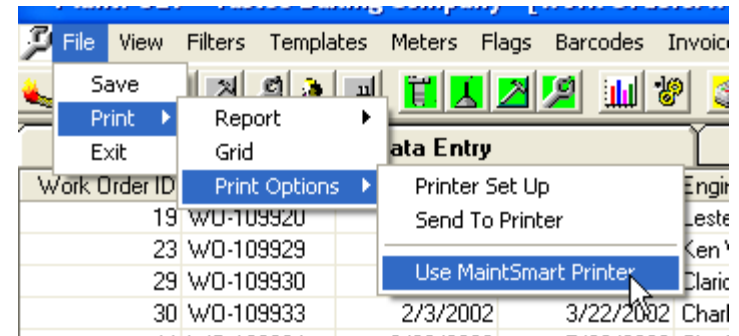
Screen Defaults:


Screen defaults provide a way for MaintSmart to know what print settings you (as a logged on user) should use when printing from a particular screen. Selected data input and print log screens provide a menu item: **File>>Print>>Print Settings>>Use MaintSmart Printer** that, when checked, instructs the program to use the settings linked to this user/screen. Below is a summary of how MaintSmart designates Default Printer Settings (this only occurs if **File>>Print>>Print Settings>>Use MaintSmart Printer** is checked. Otherwise MaintSmart either print previews or send print jobs to the local computer's default printer as designated in Windows Control panel).

Screen defaults are also used in controlling how scheduled print jobs are handled when scanned by the MaintSmart print job scanner.

MaintSmart looks for then sets printer default settings in the following order:

- 1.) Looks for User/Screen settings. Uses these if found.
- 2.) Next MaintSmart attempts to locate a defaults record with the user name of the logged on user and the special screen designation called 'AllOther'. 'AllOther' is a catch-all for the user where particular screens have not been linked to printer defaults.
- 3.) If no record is found then MaintSmart looks for a record using the default user named 'Printer100' (actually this user is automatically created for each top-level entity so the name may vary as it's a composite of the word 'Printer' and the top-level entity code). This is a good option to use as an administrator in the case where you want all print jobs created by MaintSmart's auto-print functions to always go to the same place and this place is not defined by the default (Windows) system printer.
- 4.) Lastly if MaintSmart still doesn't find an appropriate printer defaults record MaintSmart prints to the default system printer.




 Printer screen defaults may be used to automatically set the printer for various screens based upon the logged on user. Essentially this function provides printing profiles (manual printing) for each configured user/screen in the **Screen Defaults** section.



MaintSmart Auto-Print/Email Scheduler - Add New Printer Screen Default (optional)

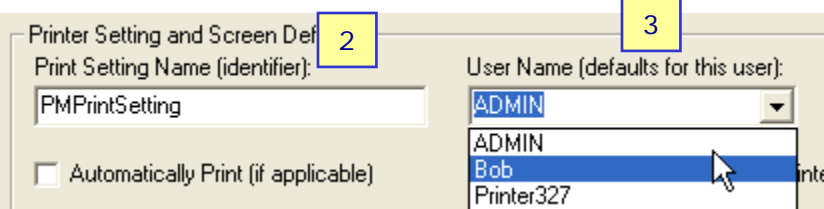
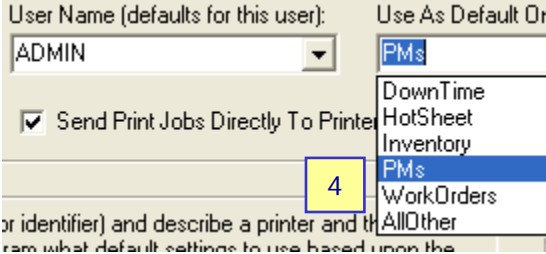
Adding a New Screen Default

Important Note: Before attempting to create screen defaults and printer settings you should read and thoroughly understand the following help topics: **Overview of Print Scheduler** and **Automatic Printing and Print Settings and Printer Defaults Overview**.

To create a new printer screen defaults record open the **Printer Screen Defaults** tab of the **Print Job Settings and Scheduler** screen . Follow these steps to create the new record:

- 1.) Press the button labeled **New**.
- 2.) Select the print setting name into the box labeled **Print Setting Name**.
- 3.) Select a user name. This is used as part of the associated printer screen defaults record that is simultaneously created with these printer settings.
- 4.) Select a screen name. **Note:** Select 'AllOther' for a catch all for screens that don't have defaults.
- 5.) Check the checkboxes below the boxes as needed. In some cases the **Automatically Print** checkbox doesn't have an effect on the print setting. Checking **Send To Printer** causes the print commands issued from the default screen to be sent to the printer directly instead of displaying a print preview screen. In most cases you would check all three of these check boxes. Press the **Save** button.

Note: These checkboxes are overridden by the same checkboxes in the **Print Jobs** tab. Remember - these defaults affect *manual* screen printing from the selected screen. Print jobs use the setting on the **Print Jobs** tab.




MaintSmart Auto-Print/Email Scheduler - Edit/Delete Printer Screen Default (optional)

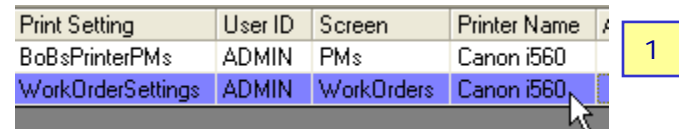
Editing/Deleting a Printer Screen Default

To edit or delete an existing printer screen defaults record open the **Screen Defaults** tab of the **Print Job Settings and Scheduler** screen . Follow these steps to edit or delete a record:

To edit a printer screen default follow these steps:

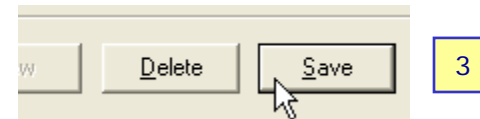
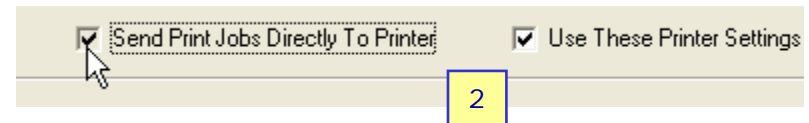
- 1.) Left click the row in the grid that you want to edit.
- 2.) Make changes to the check boxes.
- 3.) Press the **Save** button to keep the changes or the **Cancel** button to cancel the changes.

Print Setting	User ID	Screen	Printer Name
BoBsPrinterPMs	ADMIN	PMs	Canon i560
WorkOrderSettings	ADMIN	WorkOrders	Canon i560



To delete a printer screen default follow these steps:

- 1.) Left click the row in the grid that you want to delete.
- 2.) Press the **Delete** button.





MaintSmart Auto-Print/Email Scheduler - Print Schedules Overview

Overview of Print Schedules

Print scheduling is available from the **Print Schedules** tab of the **Print Job Settings and Scheduler** screen. Print schedules are a component a print job. Print schedules tell MaintSmart when to print a particular print job. MaintSmart continuously scans the database for print schedules that have become due. Once a print job's schedule is due the print job prints to the designated printer automatically. After successful printing MaintSmart calculates the next print date based upon the schedule parameters.

You'll designate a user-friendly name for the schedule when you create the schedule initially. One schedule name may have many different date, weekdays and times associated with it. This might be desirable if you wanted to print the same report within one print job several times a week. Keep in mind that in most cases the data within the printed report is going to be current (if relative dates are used with report definitions) so the same report printed at different times will likely have different data in it.

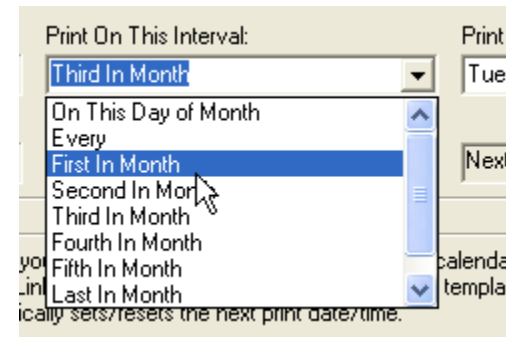
Print schedules offer the following choices of print day:

On This Day of the Month (numeric calendar day) If there is no X day in month then uses last day of month.

- Every (weekday)
- First In Month (weekday)
- Second In Month (weekday)
- Third In Month (weekday)
- Fourth In Month (weekday)
- Fifth In Month (weekday) If there is no 5th weekday in month then MaintSmart uses last day of month.
- Last In Month (weekday) last occurrence of a weekday
- Last Day of the Month (last actual day of the month)
- Every () Days (day interval) ***New in MaintSmart 4.0***



MaintSmart offers a flexible set of print schedule intervals. Print jobs are automatically recycled to the next appropriate print date/time based upon the interval/time selection.



Clock time is by a 24-hour clock. Settings that control how often the schedule is checked for print jobs are available from


the **Program Configuration** screen

Print Schedule	IntervalName	Week Day	Schedule Calendar
calendarDay	Every () Days		
calendarDay	Every	Monday	
Daily	Every	Monday	
Daily	Every	Tuesday	



MaintSmart Auto-Print/Email Scheduler - Add a New Print Schedule

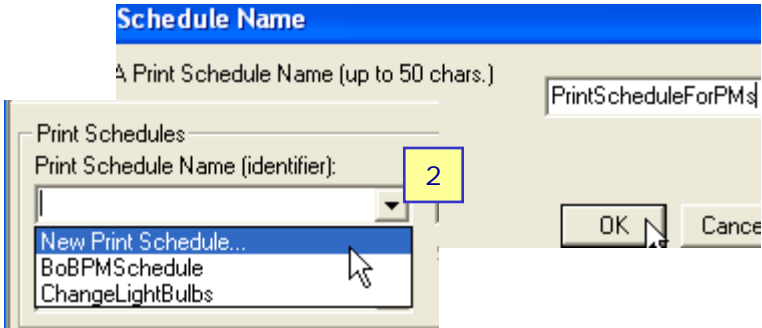
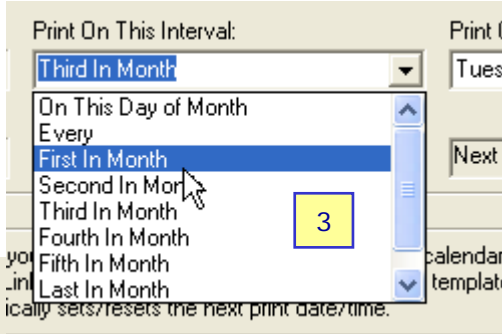
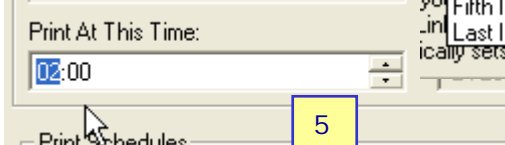
Adding a New Print Schedule

To create a new print schedule record open the **Print Schedules** tab of the **Print Job Settings and Scheduler** screen .

Follow these steps to create the new record:

- 1.) Press the button labeled **New**.
- 2.) Select the **New Print Schedule...** item from the drop-down box labeled: **Print Schedule Name**. Type a new schedule name into the resulting pop-up input box. Alternatively you may select an existing schedule from this drop-down box and add another schedule instance to this existing schedule.
- 3.) Select a print interval from the following choices:
 - On This Day of the Month (numeric calendar day)
 - Every (weekday)
 - First In Month (weekday)
 - Second In Month (weekday)
 - Third In Month (weekday)
 - Fourth In Month (weekday)
 - Fifth In Month (weekday)
 - Last In Month (last occurrence of a weekday)
 - Last Day of the Month (last actual day of the month)
 - Every () Days
- 4.) Choose the weekday, day interval or calendar day for this print job as appropriate.
- 5.) Enter the time of the print job (24-hour clock). To adjust the time box left-click the hour or minute value then either use the up/down arrow on the side of this box or use the up/down arrow keys on your keyboard.
- 6.) Press the **Save** button. Notice that the next scheduled date/time is listed in the gray box above the buttons.


Hint: It's possible to create a schedule that prints at predetermined times every day (or designated days) or even multiple times the same days. When creating print schedules remember that the schedule is applied as a whole to the print job. If you have a print job that must be executed at the same time and or days it is easier to create one schedule that contains all of these *schedule instances into one schedule (schedule name)*.



MaintSmart Auto-Print/Email Scheduler - Editing/Deleting a Print Schedule

Editing or Deleting a Print Schedule

To edit or delete a print schedule record open the **Print Schedules** tab of the **Print Job Settings and Scheduler** screen .

Follow these steps to edit a schedule instance:

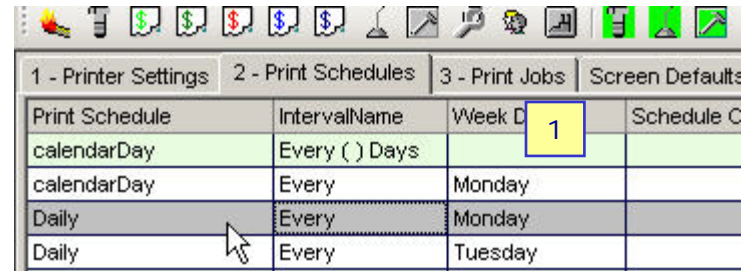
- 1.) Left-click the grid row containing the schedule you want to work with.
- 2.) Make the changes in the available boxes below the grid.
- 3.) Press **Save**.

Note: Changes to an existing schedule do NOT affect the next scheduled date/time of existing print jobs already queued for printing. Once the print job executed the new date/time from the edited schedule is used in the print job.

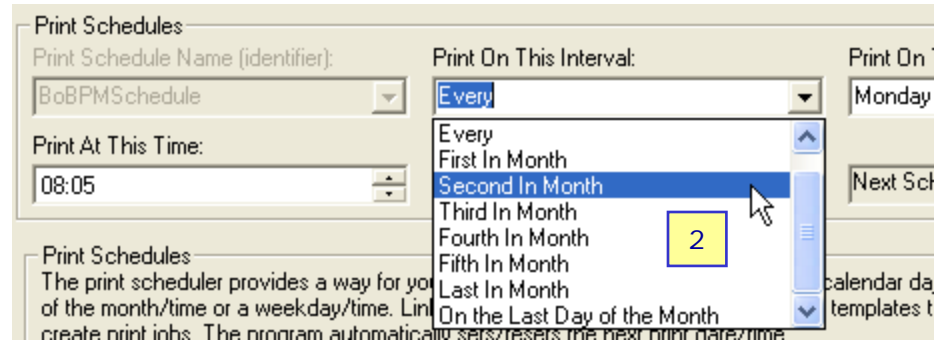
Follow these steps to delete a schedule instance:

Note: Deleting an existing schedule instance also permanently deletes any print jobs that use that schedule instance.

- 1.) Left-click the grid row containing the schedule you want to work with.
- 2.) Press **Delete**.



Print Schedule	IntervalName	Week D	Schedule C
calendarDay	Every () Days	1	
calendarDay	Every	Monday	
Daily	Every	Monday	
Daily	Every	Tuesday	



Print Schedules

Print Schedule Name (identifier): BoBPMSchedule

Print At This Time: 08:05

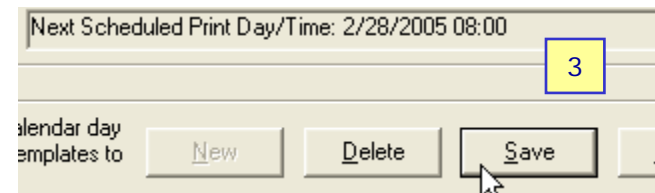
Print On This Interval: Every

Print On: Monday

Next Sch: Next Sch

calendar da: calendar da

templates t: templates t



Next Scheduled Print Day/Time: 2/28/2005 08:00

3

alendar day: aalendar day

emplates to: emplates to

New Delete Save



MaintSmart Auto-Print/Email Scheduler - Overview of Print Jobs

Overview of Print Jobs

Important Note: New in MaintSmart 4.0 is the ability to email automatically any report or work order template as an email attachment. Previously available for a print job. For the purposes of this manual the phrase 'print job' also refers to email jobs. The term 'printer' could also refer to email recipient.

Print jobs provide a way to schedule reports, PM lists or work orders for unattended printing or emailing to the printer/recipient of your choice at designated intervals/times.

Print jobs use two different mechanisms for creating report instances:

- 1.) **Report Definitions** (custom filtered detail reports (Crystal Reports)).
- 2.) Work Orders created from **Work Order Templates**.

The primary difference in the above reporting mechanisms is that item 2.) creates a new record (work order) whereas item 1.) simply read data from the database without creating a new record.

Print jobs are composed of several parts:

Print Job Name: a description of the print job or print jobs.

Print Schedule: a defined print schedule.

Print Settings: print settings such as printer name and driver

Report, Work Order or Grid Filter: the item targeted for printing

Print Job Property Settings: send to printer and activation properties

Print job execution follows this basic sequence:


The auto-print scanner looks for print jobs where the current date/time is greater than or equal to the next print date/time for these print job records. Depending upon how the scanner is set the print jobs that are due for printing/emailing immediately print based upon the prints settings linked to this print job and the Print Job Property Settings (checkbox settings).

After the print job has completed the status of the print job is logged into the **Print Job Log**. The **Print Job Log** displays error text and other attributes regarding the print job instance. You may also attempt a reprint from the Print Job Log to the linked printer or to the default system printer. If an error is detected during the printing process MaintSmart may (depending upon severity of error) either turn off auto-print altogether, deactivate auto-print for this one print job instance, attempt a reprint in one hour or do nothing at all (other than log the error).



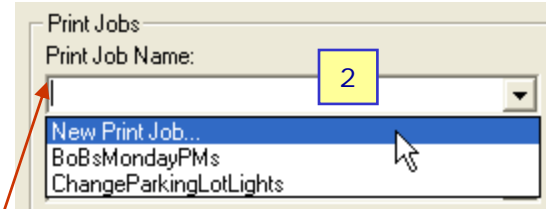
MaintSmart Auto-Print/Email Scheduler - Adding a New Print Job

Adding a New Print Job

To create a new print job record open the Print Jobs tab of the **Print Job Settings and Scheduler** screen .

Follow these steps to create the new print job:

- 1.) Press the button labeled **New**. Select the radio button: **Print Job**.
- 2.) Select the **Print Job Name** item: **New Print Job...**Type in a print job name into the resulting input box. The print job name is simply an identifier. Multiple print job instances may be added to one print job name. Print job instances may have different print job property settings within the same print job name.
- 3.) Select a print schedule.
- 4.) Select a print setting. **Note:** the print setting is only used for the printer name, driver and port characteristics. *The auto-print and send to printer settings of the print job override the print settings properties for these same properties.*
- 5.) Select the type of report (see note on the right) to target for this print job instance. Notice that different boxes become enabled based upon this selection.
- 6.) Select the report to print for this print job or create a new report definition by pressing the **Reports** button..



Two (2) Types of Reports To Link To a Print Job

Existing/New Report Definition: to create a new report definition press the **Reports** button next to the report definition drop-down box.

Work Order From the Work Order Template: MaintSmart creates a new work order from the template then prints it. Requires a report format selection too.



MaintSmart Auto-Print/Email Scheduler - Adding a New Print Job

Adding a New Print Job (continued)

7.) Check the appropriate checkboxes to set the print job properties. If **Send To Printer** is *NOT* checked and the print job is activated MaintSmart print previews each print job. This can quickly clutter the screen.

8.) Press **Save**. This print job will print at the next scheduled date/time when the auto-print scanner determines the print job is due.

Email List [X]

7

Always Send This Print Job Directly To Printer Automatically Print Scheduled Items (if applicable)

This print job automatically prints on the **Next Print Date/Time** as shown in the data grid provided the **Print Scanner** has been set to run in the **Program Configuration** screen. More on this in a later topic.

1 - Printer Settings		2 - Print Schedules		3 - Print Jobs		Screen Defaults (optional)	
Email Job	Print Job	Print Job Name	Next Print Date/Time	Report			
<input type="checkbox"/>	<input checked="" type="checkbox"/>	BobsMondayPMs	1/5/2011 8:00:00 AM	PM List (default)			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Email Down Time	1/2/2011 12:00:00 AM	Equipment Failure			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Email Down Time	1/3/2011 12:00:00 AM	Equipment Failure			

More information regarding the print job is available by scrolling grid left to right. Illustrates frozen column (yellow).

1 - Printer Settings		2 - Print Schedules		3 - Print Jobs		Screen Defaults (optional)	
Email Job	Print Job	Print Job Name	Print Setting	Printer Name	Send To Pri		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	BobsMondayPMs	BobsPMPrinter	magicolor 2200 DeskLaser	<input checked="" type="checkbox"/>		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Email Down Time	Email	Email	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Email Down Time	Email	Email	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Email Down Time	Email	Email	<input type="checkbox"/>		



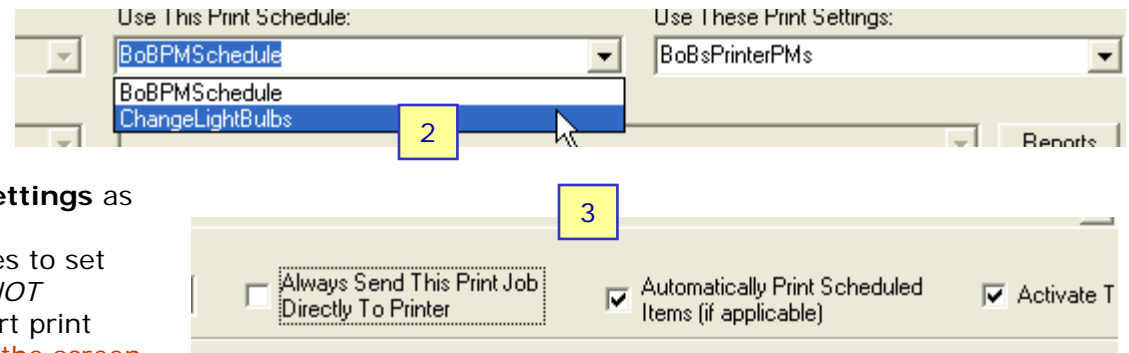
MaintSmart Auto-Print/Email Scheduler - Editing /Deleting a Print Job

Editing/Deleting a Print Job

To edit or delete a print job record open the **Print Jobs** tab of the **Print Job Settings and Scheduler** screen .

Follow these steps to edit a print job:

- 1.) Left-click the grid row containing the print job you want to edit (it turns blue).
- 2.) Change the **Print Schedule** and/or **Print Settings** as needed.
- 3.) Check or uncheck the appropriate checkboxes to set the print job properties. If **Send To Printer** is *NOT* checked and the print job is activated MaintSmart print previews each print job. **This can quickly clutter the screen.**
- 4.) Press the **Save** button to keep these changes and immediately activate the changes.



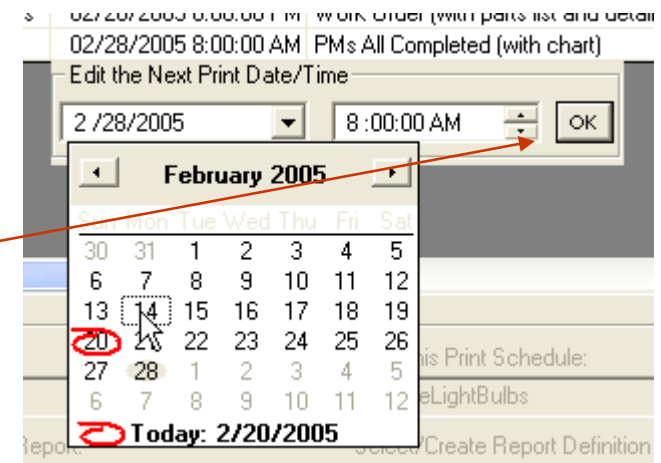
Follow these steps to delete a print job:

- Note:** Deleting a print job permanently deletes this record.
- 1.) Left-click the grid row containing the print job you want to delete.
 - 2.) Press the **Delete** button.

you may also temporarily change the **Next Print Date/Time**. This is useful when you want to advance or skip a print job instance. This is done without entering "edit mode" (that is selecting an entire grid row like you normally would when editing a record).

Click the cell that contains the **Next Print Date/Time** for the date you want to change. A small button appears. Click the small button. Change the date and/or time as needed then press the **OK** button.

Next Print Date/Time	Rej
02/21/2005 8:00:00 AM	PM
02/28/2005 6:00:00 PM	Wc
2/28/2005 8:00:00 AM	PM



Email Configuration

Overview of Email Configuration - Sender Configuration

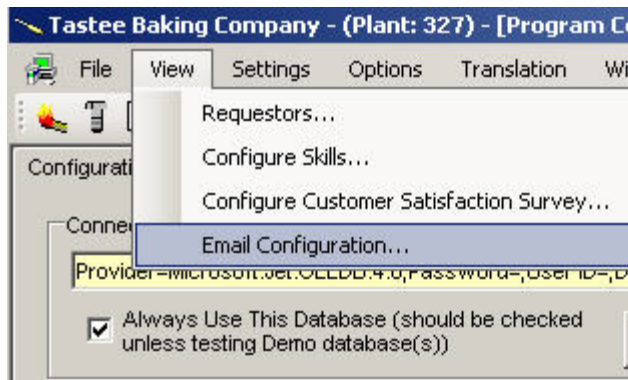
MaintSmart uses an emailing component to send reports to email addresses. [To begin using this email component you must first configure the senders' email settings.](#) These settings include email address, server name, port, as well as other settings (including security settings). MaintSmart uses SMTP for sending email. MaintSmart does not receive email rather your default email program receives the email. In order for a logged in user to send email they must have email settings configured. [You may use the same email setting for more than one user. In fact it may make sense to configure groups of users with the same email settings. This simplifies this process however it will not be possible for the receiver to determine who sent the email \(if multiple user IDs are linked to the same email address\) from the sender email address alone.](#)

Configuring email also may include defaults such as Email Priority, Delivery Notification, Attachment Format, and other settings. These settings are linked to individual email addresses (users) but may be updated in bulk by multi-selecting many email users at once. Remember these are all sender settings. There are basically two strategies for configuring sender email:

- 1.) Link multiple user IDs to one email address and its settings. This might be useful where you have many users within the same department (for example) and want to simply link all users within this department to the same sender email.
- 2.) Link each user or groups of users to their own specific sender email address.

User (receivers of email) email addresses are pulled from the maintenance technician database, the requestor database. Both the technician and requestor email data is suggested from the passwords data email field when linking either the requestor or the technician to a user ID.

This part of MaintSmart will require information regarding your SMTP email server. Typically this will require IT or a person in a network administrator position to acquire this information..




In many cases the SMTP server will require authentication.

The 'Email Settings' dialog box is shown with the 'Administrator Settings (Sender Email Settings)' tab selected. It features a table with columns: User ID, User Display Name, Group, FromAddress, Plant Identifier, DefaultSubject, and DefaultBody. A yellow callout box points to the table with the text 'One or more User ID is linked to one email address.' Below the table, there are fields for 'Plant:' (Sacramento), 'SMTP Server:' (smtp.maintsmart.com), 'SMTP Port:' (25), and 'Requires Authentication' (checked). The 'SMTP Authentication' section includes 'SMTP Account Name:' (maintenance@maintsmart.com) and 'SMTP Account Password:' (masked with asterisks). On the right, there are fields for 'Sender Email Address:' (maintenance@maintsmart.com), 'Email Priority:' (Normal), and 'Delivery Notification:' (On Success). A 'Users:' list contains: Bill * Bill, billybob * billybob, Bob Allen * Bob, Christian Thomas * ADMIN, elmo * elmo, and Kris * Kris. There are 'Select All', 'Deselect All', and 'Refresh' buttons. Below the users list are checkboxes for 'Extract Email From User Name' (unchecked) and 'Use Email Address as Account Name' (unchecked). At the bottom, there are checkboxes for 'Activate' (checked), 'Can Edit Email' (unchecked), 'Is HTML' (unchecked), and 'Log Email' (checked). There are also 'Keep Entries' (checked), 'New', 'Delete', 'Save', and 'Cancel' buttons.



MaintSmart Auto-Print/Email Scheduler - Adding a New Email Job

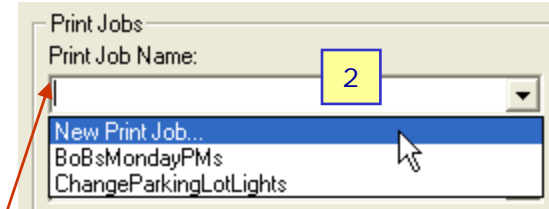
Adding a New Email Job

To create a new email job record open the **Print/Email Jobs** tab of the **Print Job Settings and Scheduler** screen . 

Follow these steps to create the new email job:

- 1.) Press the button labeled **New**. Select the radio button: **Email Job**.
- 2.) Select the **Print/Email Job Name** item: **New Print/Email Job**...Type in a email job name into the resulting input box. The email job name is simply an identifier. Multiple email job instances may be added to one email job name. Email job instances may have different email job property settings within the same email job name.
- 3.) Select a print schedule.
- 4.) There is no need to select a Print Setting.
- 5.) Select the type of report (see note on the right) to target for this email job instance. Notice that different boxes become enabled based upon this selection.
- 6.) Select the report to email for this email job or create a new report definition by pressing the **Reports** button..

...CONTINUED NEXT PAGE.....



Two (2) Types of Reports To Link To a Print Job

Existing/New Report Definition: to create a new report definition press the **Reports** button next to the report definition drop-down box.

Work Order From the Work Order Template: MaintSmart creates a new work order from the template then emails it. Requires a report format selection too.

This is a large screenshot of the 'Print Jobs' configuration window. It contains several fields and buttons:

- 1:** A yellow box highlights the 'Email' radio button.
- 2:** A yellow box highlights the 'Print/Email Job Name' dropdown menu, which currently shows 'BoBsMondayPMs'.
- 3:** A yellow box highlights the 'Use This Schedule' dropdown menu, which shows 'BoBsPMSchedule'.
- 4:** A yellow box highlights the 'Use These Print Settings' dropdown menu, which shows 'Email'.
- 5:** A yellow box highlights the 'Select The Type of Report' dropdown menu, which shows 'Existing/New Report Definition'.
- 6:** A yellow box highlights the 'Select/Create Report Definition To Print Report From' dropdown menu, which shows 'Daily Check List'.

 At the bottom, there are three text input fields for 'Email (To) List (display only):', 'Email (CC) List (display only):', and 'Email (BCC) List (display only):'. A red 'X' icon is visible next to the 'Email List' button.



MaintSmart Auto-Print/Email Scheduler - Adding a New Email Job

Adding a New Print Job (continued)

7.) Click the Email List button.

8.) When the Export Report screen appears choose email addresses from the leftmost list by left clicking them then clicking either the To>> or the CC>> button(s). NOTE: you may also click the + button below each of the target lists to type in an unconfigured email address.

9.) Select or type other appropriate settings such as Email Priority, Delivery Notification, etc.

10.) Press **Use Selected**. The addresses and other configuration settings for this email job will be transferred to the Print/Email Job screen and will be saved after the **Save** button is clicked on the Print/Email Job screen. ...CONTINUED NEXT PAGE....

Email Settings:

- Priority: sets email priority.
- Subject: set email subject.
- Use Report Title: makes title of report the email subject.
- Body: sets email body.
- Delivery Notification: email delivery notification (on failure, on success, none)
- Attachment Format: sets format of attachment.
- Attachment Name: may be auto-named or user set.
- Log Message: logs the message after send.
- Append Text to Email Body: attempts to convert report into text then embeds text of report into email body.
- Insert User Name into Body or Subject: inserts the logged on users name into subject or body of email.
- Delete Attachment After Send: normally attachments are saved to a temporary folder. Checking deletes instead of saving.



MaintSmart Auto-Print/Email Scheduler - Adding a New Email Job

Adding a New Email Job (continued)

11.) Make sure that **Use Default Email Sender** is checked.

12.) Press **Save**. This email job will send at the next scheduled date/time when the auto-print/email scanner determines the email job is due.

NOTE: the SMTP email sender (page 17) must be configured first before email will be able to be sent.

The screenshot displays the 'Print Jobs' configuration window. At the top, there are radio buttons for 'Print Job' and 'Email Job', with 'Email Job' selected. Below this, there are dropdown menus for 'Print/Email Job Name' (set to 'BobsMondayPMs'), 'Use This Schedule' (set to 'BobsPMSchedule'), and 'Use These Print Settings' (set to 'Email').

The next section contains two dropdown menus: 'Select The Type of Report' (set to 'Existing/New Report Definition') and 'Select/Create Report Definition To Print Report From' (set to 'Daily Check List').

Below these are two more dropdown menus: 'Select Existing Work Order Template To Create Work Order From' and 'Use This Report File Format For This Report'. A 'Refresh' button is located between them.

The 'Email List' section features three text boxes: 'Email (To) List (display only):' containing 'bflub@hotmail.net', 'Email (CC) List (display only):' containing 'dcook@maintsmart.com' and 'dcoo@softcom.net', and 'Email (BCC) List (display on)'. A green checkmark is visible next to the 'Email List' button.

At the bottom, there are three checkboxes: 'Always Send This Print Job Directly To Printer.' (unchecked), 'Automatically Print Scheduled Items (if applicable)' (unchecked), and 'Use Default Email Sender' (checked). A yellow box with the number '11' is placed over the 'Use Default Email Sender' checkbox.

The bottom of the window includes a 'Print Jobs' section with a text area containing instructions: 'Enter/select a print job identifier, select a print schedule and settings. Next select the type of report to print. Create a new report definition if needed ('New' button). Tell the program how to print this report. The checkboxes at the bottom override the print settings.' To the right of this text are three buttons: 'New', 'Delete', and 'Save'. A yellow box with the number '12' is placed over the 'Save' button.



MaintSmart Auto-Print/Email Scheduler - Editing /Deleting an Email Job

Editing/Deleting a Email Job

To edit or delete a email job record open the **Print/Email Jobs** tab of the **Print/Email Job Scheduler** screen.

Follow these steps to edit an email job:

- 1.) Left-click the grid row containing the email job you want to edit.
- 2.) Change the **Print Schedule** and/or **Recipients List** as needed. To edit recipients list or other email message parameters click the Email List button. Make changes as needed to the Export Report screen for this email job then press Use Selected button to return new data to main Print/Email Job screen.
- 3.) Press the **Save** button to keep these changes and immediately activate the changes.

Follow these steps to delete a email job:

Note: Deleting a email job permanently deletes this record.

- 1.) Left-click the grid row containing the email job you want to delete.
- 2.) Press the **Delete** button.

Follow these steps to deactivate an email job job:

- 1.) Left-click the grid row containing the email job you want to delete.
- 2.) Press the **Deactivate** button. Press **Save**.



you may also *temporarily* change the **Next Email Date/Time**. This is useful when you want to advance or skip a print job instance. This is done without entering "edit mode" (that is selecting an entire grid row like you normally would when editing a record).

Click the cell that contains the **Next Print Date/Time** (email in this case) for the date you want to change. A small button appears. Click the small button. Change the date and/or time as needed then press the **OK** button.

Next Print Date/Time	Rej
02/21/2005 8:00:00 AM	PM
02/28/2005 6:00:00 PM	Wc
02/28/2005 8:00:00 AM	PM

2 3

02/20/2005 8:00:00 AM Work Order (with parts list and detail)

02/28/2005 8:00:00 AM PMs All Completed (with chart)

Edit the Next Print Date/Time

2/28/2005 8:00:00 AM OK

February 2005

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	1	2	3	4	5
6	7	8	9	10	11	12

Today: 2/20/2005



MaintSmart Auto-Print/Email Scheduler - Overview of Report Definitions

Overview of Report Definitions

Report definitions are filtered detail reports (Crystal Reports 8.5) that may be linked to print jobs. These reports may have multiple filters including a date range filter. You may also (suggested) check the **Use Relative Date** checkbox to cause your filtered report to always produce current data.

For example: Suppose you want to create a report definition for Bob's PM task-list that only displays tasks due in the coming week. You could create the report with the following filter selections:
(assume the current date is 2/14/2005)

- 1.) Technician: 'Bob" (only retrieve PMs where assigned to Bob.).
- 2.) Due Date between 1/1/1980 (retrieve all overdue PMs from the distant past) and 2/21/2005. This date range represents one week from 'today' (since assumed date is 2/14/2005) and everything due before a week from today. Stated another way this date range represents the PM tasks due in the coming week.
- 3.) Check **Use Relative Date**. This causes MaintSmart to always use PMs that are due now or up to one week from today (weekly PMs for Bob). From now on no matter when this print job gets executed it will always contain current data because we checked **Use Relative Date**.

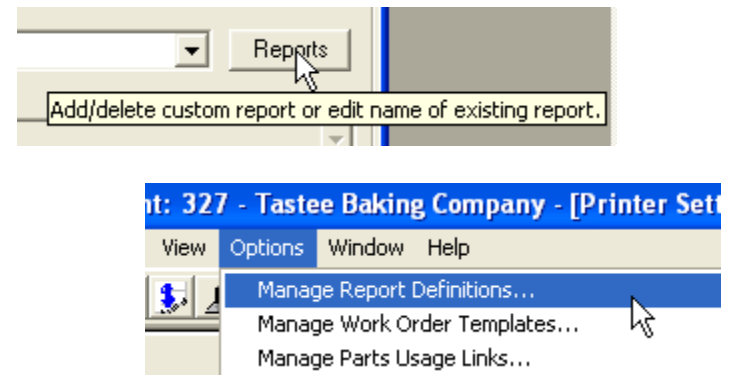
Report definitions may be edited by changing the report filter script. This script determines what data is displayed in the report. Below is an example of a report filter script:

```
{QPMTasks_CR_Avg.PlantCode}=327 and {QPMTasks_CR_Avg.Interval}=7 and {QPMTasks_CR_Avg.EmpNum}=5306 and  
{@DateDue}>= today -300 and {@DateDue}<= today +32
```

This script populates a report with PM data where the plant code is 327, the task interval is 7, the employee is 5306 and the due date range is 300 days before today and 32 days from today. You should have a full understanding of what these scripts

mean before manually editing them


To access the **Report Definitions** screen click the Reports button on the **Print Job Settings and Scheduler** screen **Print Jobs** tab. Alternatively you may select the menu items:
Options>>Manage Report Definitions.





MaintSmart Auto-Print/Email Scheduler - Adding a New Report Definition

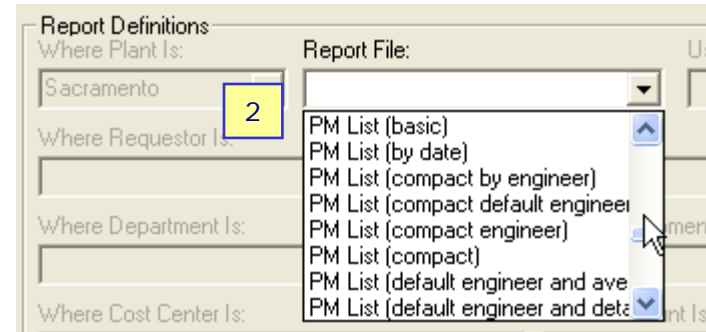
Adding a New Report Definition


To work with report definitions open then **Print Job Settings and Scheduler** screen . Press the small button labeled **Reports** next to the **Report Definition** drop-down or select the menu item: **Options>>Manage Report Definitions...**

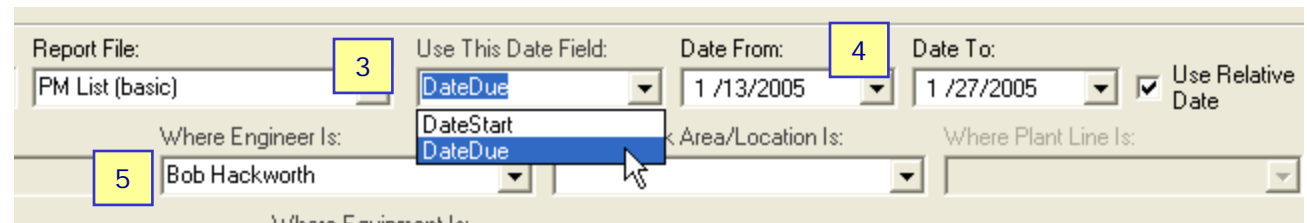
When the **Report Definitions** screen appears follow these steps to create the new record:

- 1.) Press the button labeled **New**.
- 2.) Select a report from the drop-down box labeled: **Report File**.
- 3.) Select a date field from the **Use This Date Field** drop-down. (In many cases only one option is available for date field)
- 4.) Select a date range from the date selectors labeled: **Date From** and **Date To**. Check the **Use Relative Date** checkbox if you want this filter to be a floating date range filter (default).
Note: In most cases you'd want **Use Relative Date** checked (default). By checking the **Use Relative Date** checkbox MaintSmart can generate a floating date range that references the current date.

Continued on next page...



 Suppose you wanted MaintSmart to generate a PM list for all PMs due between a week before "today" and a week after "today" (assume the date is 1/20/2005). In this case you select "Due Date" for the date field then select **Date From:** 1/13/2005 and **Date To:** 1/27/2005. Thereafter (since this is a **floating date range** or "**relative date**") MaintSmart always retrieves current data a week before and a week after the current date when creating this PM list. (see image below)





MaintSmart Auto-Print/Email Scheduler - Adding a New Report Definition

Adding a New Report Definition (continued)

5.) Choose other available filters as needed to define this report.

6.) Press the **Save** button.

7.) (Optional Step) To test the new report simply left-click the grid row containing the report and then press the **View Report** button. Keep in mind that if this is a date sensitive report there may be times when no data appears in the report and other times when it does have data.

Below illustrates the use of report definition filters. The more filters you use the more concise the report will be but it'll contain less data.

Report Definitions

Where Plant Is: Sacramento Report File: PM List (basic) Use This Date Field: DateDue Date From: 1 /13/2005 Date To: 1 /27/2005 Use Relative Date

Where Requestor Is: Where Engineer Is: Bob Hackworth Where Work Area/Location Is: Where Plant Line Is:

Where Department Is: Where Equipment Is: 5

Where Cost Center Is: Where Account Is: Where Vendor Is:

Where Task Is: Where Status Is: Where Type Is: Where Priority Is:

No Filter
Adjust Diverter
Adjust Rounder Bars as Needed
Align Pressure Rolls
Blow Out Line Up Holes
Calibrate Gauge(s)
Calibrate Gauges
Calibrate Probe(s)/Sensor(s)

Time Down: >= Repair Time: >= Impact Time: >= Where Interval Is:



MaintSmart Auto-Print/Email Scheduler - Editing/Deleting a Report Definition

Editing or Deleting a Reports Definition

To work with report definitions open then **Print Job Settings and Scheduler** screen . Press the small button labeled **Reports** next to the Report Definition drop-down or select the menu item: **Options>>Manage Report Definitions....**

To edit an existing report definition you'll need to manually edit the report definition script. This script must be constructed properly or the reporting engine will generate an error when MaintSmart attempts to print it. This requires advanced skills and knowledge of the underlying data tables and fields that provide the data source for these reports.

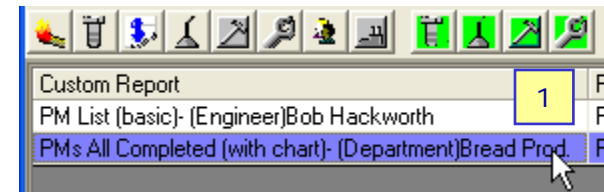
Note some of the characteristics of the script on the right:

- 1.) Data fields are surrounded by curly braces ({}).
- 2.) String parameters are enclosed by single quotes (').
- 3.) Numeric parameters are not enclosed by quotes.
- 4.) Date fields always use 'today' and count days in one or both directions from 'today' so that you always have current data.

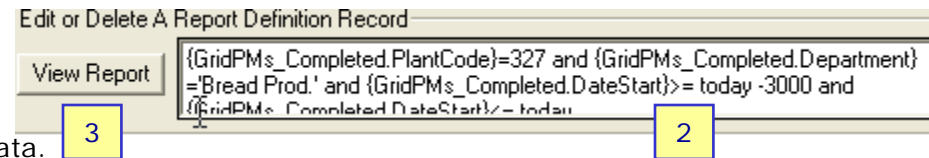
To edit a report script follow these instructions:

- 1.) Left-click the grid row containing the script you want to change
- 2.) Edit the script in the text box at the bottom of the screen.
- 3.) Press the **View Report** button to insure that the edited script is a valid script.
- 4.) The report appears if no errors are found in the script. This doesn't necessarily mean that the script is going to produce data in the report though. If an error in the script or report is detected then a message is displayed indicating the error description.
- 5.) Press the **Save** button when satisfied with the report script. Changes to report definitions are immediately reflected in all print jobs that use this changed report definition.

To delete a report definition record left mouse-click the row containing the record then press the **Delete** button. **Deleting a report definition also deletes all print jobs linked to this report definition.**



You may manually edit the report filter script.




Below is an example of a report script:

```
{QPMTasks_CR_Parts_Avg.PlantCode} = 327 and
{QPMTasks_CR_Parts_Avg.MachineCode} = 32722900
1 and {QPMTasks_CR_Parts_Avg.Interval} = 7 and
{QPMTasks_CR_Parts_Avg.Task} = 'Check and Oil
Chains' and
{QPMTasks_CR_Parts_Avg.EmpINum} = 5308 and
{QPMTasks_CR_Parts_Avg.DateStart} >= today -396
and {QPMTasks_CR_Parts_Avg.DateStart} <= today
```



MaintSmart Auto-Print/Email Scheduler - Configure the Auto-Print/Email Scanner

Auto-Print/Email Scanner Properties and Options

MaintSmart offers several ways to automatically print filtered reports and even create work orders based upon a date/time or by expiration of a meter. To access the auto-print scan properties open the **Program Configuration** screen  then select the second tab named **Configuration – More**. There are actually two distinct auto-print scanning functions available: Auto-print scheduled print jobs and auto-print (and create) work orders from metered work order templates. Once the auto-print is running the recipients of the auto-printed reports will not notice any difference between these two functions though.

Note: It's best to enable auto-print scanning from only one designated computer. MaintSmart must be running and a user must be logged on for the auto-print to activate.

Hint: Follow these two steps to create a 'log on' used only for scanning for print jobs and expired meters:

1.) **Create a user group** (Example: 'printer') that has only the following user permissions:

DownTime: View
WorkOrders: View
Inventory: View
PMs: View
Presentation: None
Analysis: None
Configuration: None

2.) **Create a user** (Example: 'printmonitor') and add this user to the above user group.

3.) Log on with this user, then minimize MaintSmart and let it take care of the rest.

The above settings scan for print jobs but not expired meters. Scan rate is once per minute.



MaintSmart Auto-Print/Email Scheduler - Configure the Auto-Print/Email Scanner

Auto-Print Scanner Properties and Options (continued)

There are two distinct auto-print scanning functions available:

1.) Auto-Print Scheduled Print Jobs

Scheduled print jobs consist of either a report definition, a work order template or an existing grid filter (PMs only in version 4.0). MaintSmart executes these print jobs when the print job scanner detects a scheduled date/time that is greater than or equal to the current date/time. The print settings used by this print job are dictated by the print settings linked to this print job. The three option buttons at the top of the **Auto-Print Scanner** dictates that print jobs are printed from the scanning computer and **Report Properties** framed area on this screen. The options are listed below with a brief explanation:

A.) Always Print Scheduled Print Jobs Regardless of Logged On User

This setting scans all scheduled print jobs and prints them as they become due without regard for who is logged on.

B.) Only Print Scheduled Print Jobs That Area Linked To the Logged On User

When this setting is selected MaintSmart scans all scheduled print jobs that use the currently logged on user in the print setting/default. Using this feature you may limit the auto-print jobs to just the scheduled print jobs referenced to you.

C.) Disable All Scheduled Print Jobs

This option disables the print job scanner (for scheduled print jobs)

There is an important difference between the work orders and report definitions or filters.

The difference is that work order templates actually *create a new record in the database* and then prints this new record (work order). Report definitions and filters *only read existing data from the existing records* in the database and display this data in the subsequent report. In all likelihood this difference is transparent to the end user of the reports. *The point is with scheduled work order templates MaintSmart is adding records rather than simply reading records.*

MaintSmart scans the database for print jobs every X minutes as defined in the drop-down box labeled: **Schedule Scan Rate**. **Continued next page...**

Only print jobs where the print setting/default is linked to the currently logged on user.

Settings above this line belong to scheduled print jobs. (except for schedule scan rate)
Settings below this line belong to metered work orders.

Auto-print scanner looks for print jobs every one minute.



MaintSmart Auto-Print/Email Scheduler - Configure the Auto-Print/Email Scanner

Auto-Print Scanner Properties and Options (continued)

2.) Auto-Print (auto-create) Work Orders From Metered Work Order Templates

It is often useful to schedule a work order for creation and printing as print job. This is fine if you want this work order to be triggered from by a date/time. In some cases however you may want to trigger a work order from a work order template by some other mechanism. MaintSmart provides auto-printing of metered work orders to address this situation. **Continued on next page...**

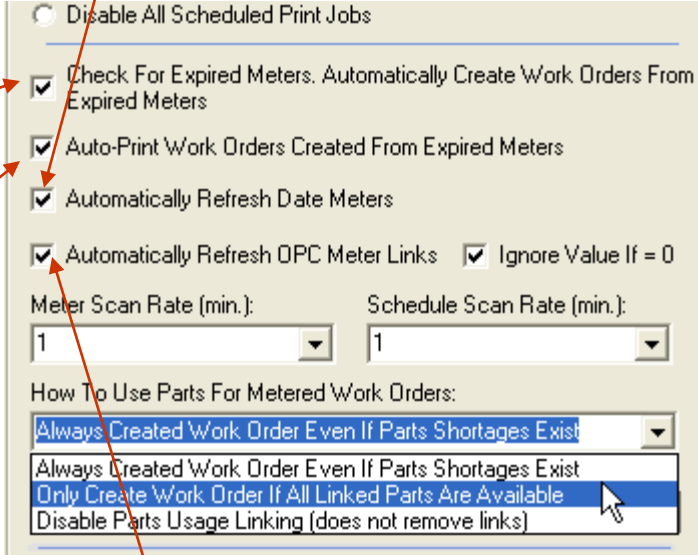
Meters that expired from any source create a work order. (i.e. manual update to meter screen (current reading), OPC meter data read automatically from PLCs or other OPC data sources or DDE meters and "Day" meters that increment by the system clock).

Print work orders that are created from metered work order templates.

MaintSmart determines where to send a metered work order as follows (in this order):

- The printer defined in print settings that is linked to the "workorders" screen default is used.
- Printer for the logged on user and the *default screen* ("AllOther") is used. This is a catch-all screen default.
- Printer defined in printer setting that uses the *default user* "Printer100" (example) is used. This user is created automatically by MaintSmart for use with the auto-print scanner only.
- Default system printer as defined in **Windows>>Control Panel>>Printers** is used.

Automatically update "Day" meters. Meter records are updated automatically.



Disable All Scheduled Print Jobs

Check For Expired Meters. Automatically Create Work Orders From Expired Meters

Auto-Print Work Orders Created From Expired Meters

Automatically Refresh Date Meters

Automatically Refresh OPC Meter Links Ignore Value If = 0

Meter Scan Rate (min.): Schedule Scan Rate (min.):


How To Use Parts For Metered Work Orders:

Automatically update OPC linked meters. Meter records are updated automatically.



MaintSmart Auto-Print/Email Scheduler - Configure the Auto-Print/Email Scanner

Auto-Print Scanner Properties and Options (continued)

To access the auto-print metered work orders scanning configuration properties open the **Program Configuration** screen  then select the second tab named **Configuration – More**. From the framed area labeled: **Auto-Print Scanner and Report Properties** The following is a listing of the various settings:

A.) Check For Expired Meters. Automatically Create Work Orders From Expired Meters:

MaintSmart checks for expired meters every X minutes as defined in the drop-down box labeled: Meter Scan Rate.

B.) Auto-Print Work Orders Created From Expired Meters:

MaintSmart automatically prints these work orders that are created as a result of A.) being checked. MaintSmart uses the 'workorders' print settings for the printer name, printer driver and port properties. It's best to have this checkbox checked after configuring a 'workorders' print setting/screen default. Otherwise each time the print job is executed MaintSmart open a new print preview screen. These screens can quickly clutter the screen.

C.) Automatically Refresh Date Meters:

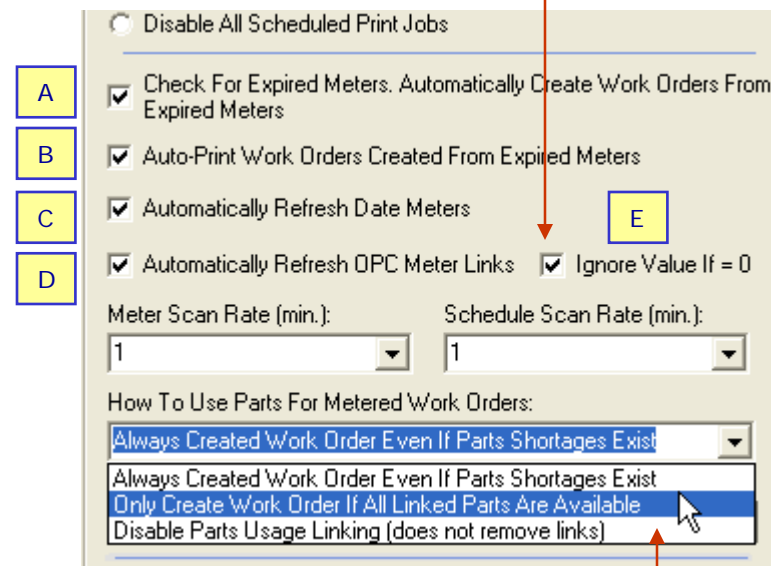
MaintSmart increments Day meters by one each day.

D.) Automatically Refresh OPC Meter Links:

MaintSmart updates OPC linked meter readings at the Meter Scan Rate. Expired meters immediately create a work order and attempt to print the work order if B.) (above) is checked.


E.) Ignore Value If=0 checked causes MaintSmart to ignore meter values when they are 0. This is useful if your OPC connection is interrupted.

Checked ignores zero (0) values when updating meters table. Only non-zero updates are written to the meters table. Prevents invalid data from being used in the case where your OPC server is disconnected.



The screenshot shows the configuration window for the Auto-Print Scanner. It includes the following elements:

- Disable All Scheduled Print Jobs:** A radio button that is currently unselected.
- Check For Expired Meters. Automatically Create Work Orders From Expired Meters:** A checked checkbox, labeled with a yellow box 'A'.
- Auto-Print Work Orders Created From Expired Meters:** A checked checkbox, labeled with a yellow box 'B'.
- Automatically Refresh Date Meters:** A checked checkbox, labeled with a yellow box 'C'.
- Automatically Refresh OPC Meter Links:** A checked checkbox, labeled with a yellow box 'D'.
- Ignore Value If = 0:** A checked checkbox, labeled with a yellow box 'E'. A red arrow points from the explanatory text above to this checkbox.
- Meter Scan Rate (min.):** A dropdown menu set to '1'.
- Schedule Scan Rate (min.):** A dropdown menu set to '1'.
- How To Use Parts For Metered Work Orders:** A dropdown menu with three options:
 - Always Created Work Order Even If Parts Shortages Exist (selected)
 - Only Create Work Order If All Linked Parts Are Available
 - Disable Parts Usage Linking (does not remove links)

 You may instruct MaintSmart on how to use parts linked to work order templates when a work order is generated automatically from one of these templates.



MaintSmart Auto-Print/Email Scheduler - Configure the Auto-Print/Email Scanner

Auto-Print Scanner Properties and Options (continued)

1.) How To Use Parts For Metered Work Orders:

There are three options for how MaintSmart handles automatic parts usage when a metered work order is created. Choose the one that best suits you:

- A.) Always Created Work Order Even If Parts Shortages Exist
- B.) Only Create Work Order If All Linked Parts Are Available
- C.) Disable Parts Usage Linking (does not remove links)

2.) Report Format For Metered Work Orders:

Choose the report format for use with metered work orders.

3.) Meter Scan Rate:


Scan cycles that detect expired meters (or print jobs) immediately attempt to create the report (and /or work order if applicable) and print it. As metered work orders are created they are logged into a print log that is available for inspection or manual printing. Scheduled print jobs (as opposed to metered work orders) are logged in a separate print log.

3

1

2

Select a report format.

 You may instruct MaintSmart on how to use parts linked to work order templates when a work order is generated automatically from one of these templates.




MaintSmart Auto-Print/Email Scheduler - Overview of the Print Logs

Overview of Print Job Logging

Whenever a print job is executed automatically from MaintSmart the print job is logged. Print job logging accomplishes two purposes. From the print job log you may determine if a print job actually printed ('printed' could also include print preview if 'send to printer' is off for this particular print job). Secondly print jobs may be printed from the print job log directly by selecting them individually or by using MaintSmart to select and print all un-printed print jobs.

There are two different print job-logging screens in MaintSmart. One screen logs scheduled print jobs (including scheduled work orders created from templates), the other screen logs all work orders created from metered work order templates.

One of the primary differences between the metered work order log is that this screen also provides a note describing what parts were used, if any. The scheduled (as opposed to metered) work order templates do not display this note in the print job log. Parts linked to work order templates for automatic usage are used in both cases though (if available) and this usage instance is logged as a parts used record in the Parts Used section of MaintSmart.

To access the print log screens open the **Print Job Settings and Scheduler**  screen then select the menu items **View>>Print**

Job Log or **View>>Metered Work Orders Print Job Log**.




Access the Print Job Log or the Metered Work Order Print Job Log from the Print Settings and Scheduler screen.

b Number	Print Time	User ID	Printer Name	Report	Report File	Print Status	Error
1	02/21/2005 8:05:05 AM	ADMIN	Canon i560	Work Order (basic)	egWOAssign.rpt	0	Printed Successfully. No error det
2	02/21/2005 8:10:05 AM	ADMIN	Canon i560	PM List (basic)	pmlist.rpt	0	Printed Successfully. No error det



MaintSmart Auto-Print/Email Scheduler - Using the Print Log (scheduled print jobs)

Using the Print Job Log

To access Print Job Log open the **Print Job Settings and Scheduler** screen . Select the menu items **View>> Print Job Log**.

The **Print Job Log** logs all scheduled print jobs that have already been called by MaintSmart to print. This log is especially useful for detecting print jobs that failed to print and why they failed to print. Print jobs may be executed from the print job log manually too by selecting the grid row containing the print job then pressing the **Print** button.

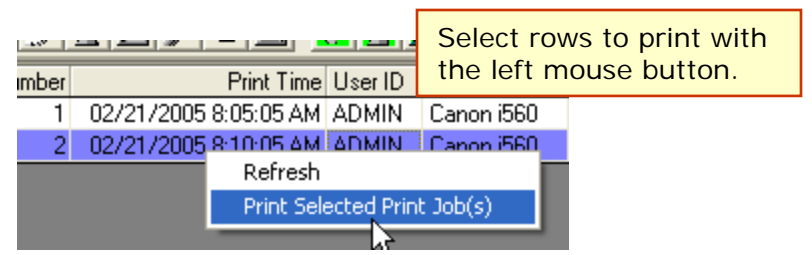
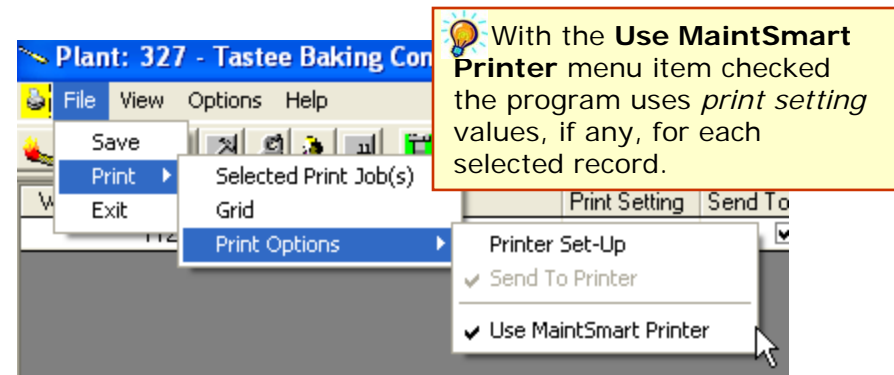
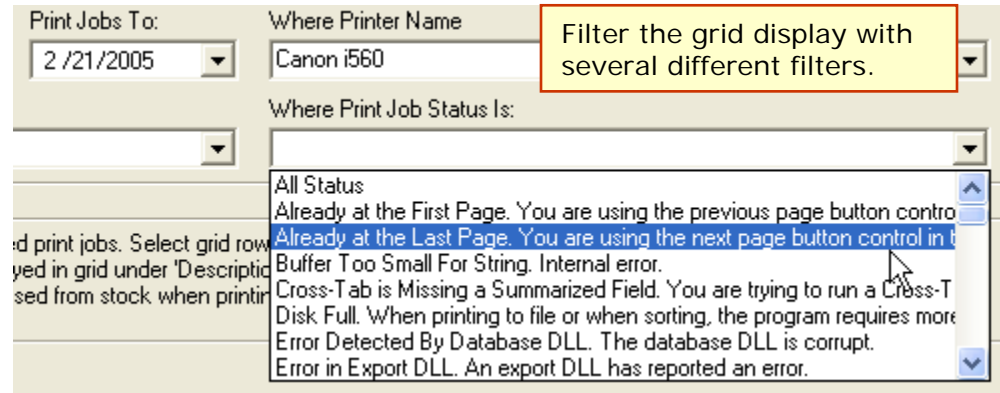
NOTE: Listed printer errors are sometimes dependent upon the printer driver in use. MaintSmart may not always be able to detect failed print jobs.

Filtering Print Job Log Records

You may filter the print job log data grid by using the filter drop-down boxes below the grid. For example: if you wanted to view all print job records where the logged on user at the time of printing was 'ADMIN'. To accomplish this you would select 'ADMIN' from the drop-down box labeled **Where User Name:** then press the **Inquire** button. This action retrieves the correct data set into the grid.

Printing Print Job Log Records


Left-click records in the grid that you want to print. Select **File>>Print>>Print Selected Print Job(s)** to print all selected print jobs. These print jobs print preview immediately each in their own print preview screen unless you check **Send To Printer**. Alternatively you can check the menu items **File>>Print>>Use MaintSmart Printer** and MaintSmart attempts to use the printer settings defined in each selected record.





MaintSmart Auto-Print/Email Scheduler - Using the Print Log (scheduled print jobs)

Using the Print Job Log

To access Print Job Log open the **Print Job Settings and Scheduler** screen . Select the menu items **View>> Print Job Log**.

Deleting Print Job Log Records

You may delete old or unwanted print job log records by using the filter drop-down boxes below the grid to obtain the grid data set you want to delete. For example: if you wanted to delete all print job records where the logged on user at the time of printing was 'ADMIN'. To accomplish this you would select 'ADMIN' from the drop-down box labeled **Where User Name:** then press the **Inquire** button. This action retrieves the correct data set into the grid. Next select the menu items **Options>>Delete Print Log Records**. This menu selection deletes all records currently visible in the data grid.


To delete print log records select unwanted print job log records then select the **Options>>Delete Print Log Records** menu item .





MaintSmart Auto-Print/Email Scheduler - Using the Metered Work Order Print Log

Using the Metered Work Order Print Job Log

To access the **Metered Work Orders Print Job Log** open the **Print Job Settings and Scheduler** screen . Select the menu items **View>> Metered Work Orders Print Job Log**.

The **Metered Work Orders Print Job Log** logs all metered work orders that have been called by MaintSmart to print through the auto-print function. This log is especially useful for detecting print jobs that failed to print and why they failed to print. Metered work order print jobs may be executed from this screen manually too by selecting the grid row containing the work order then pressing the **Print** button.

Filtering Work Orders Print Job Log Records

You may filter the metered work order print jobs by selecting the menu items: **View>>All Un-Printed Work Orders**. This displays just the work orders where to print job failed thus giving you an easy way to select reports to attempt to re-print.

Select work orders for printing or deletion by left-clicking the grid row containing the work order(s). Work orders that have a parts list display parts in the **Details** box.

For Printing

Print Jobs From: Print Jobs To:

Details:

Work Order: 115; Template ID: 1; Part ID: 50002; Unit Cost: 78.5; Part Desc.: Timkin Bearing; Template ID: 2; Quantity Needed: 2; Quantity Used: 2; Quantity Shortage:

Press the 'Print' Combine Print Jobs Into One Report Instance (recommended if all going to same printer) Select All Unprinted Work Orders

Work Order ID	Report	Print Setting	Send To Printer	Auto-Print	Print Job Activate	Last Print Date
112	Work Order (with parts list and details)	Bobs\WO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	02/21/2005 11:08:05 AM
113	Work Order (with parts list and details)	Bobs\WO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	02/21/2005 7:47:07 PM
114	Work Order (with parts list and details)	Bobs\WO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	02/21/2005 7:49:09 PM
115	Work Order (with parts list and details)	Bobs\WO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	02/21/2005 7:50:10 PM



MaintSmart Auto-Print/Email Scheduler - Using the Metered Work Order Print Log

Using the Metered Work Order Print Job Log

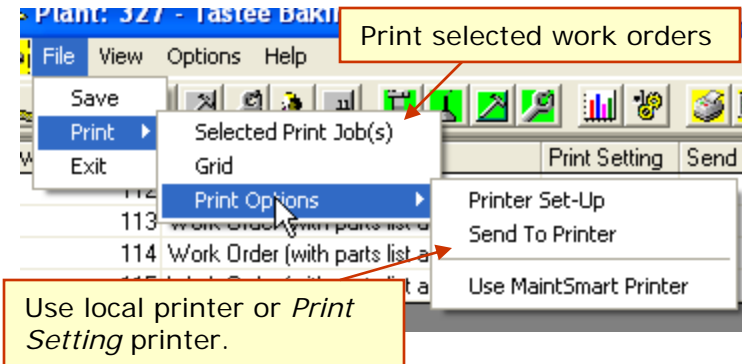
Printing Work Orders Print Job Log Records

Left-click records in the grid that you want to print. Select **File>>Print>>Print Selected Print Job(s)** to print all selected work orders. These work orders print preview immediately each in their own print preview screen unless you check **Send To Printer** or check **File>>Print>>Print Options>>Use MaintSmart Printer**. Checking the menu items **File>>Print>>Print Options>>Use MaintSmart Printer** cause MaintSmart to attempt to use the printer settings defined in each selected record, if any.

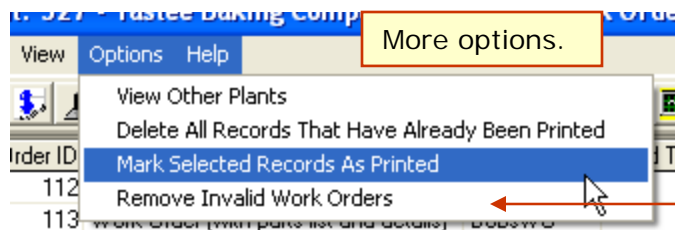
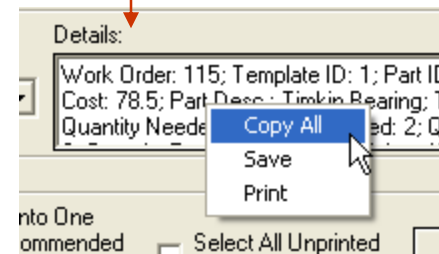
There are two ways to print preview work orders from this screen. Checking the checkbox labeled: **Combine Print Jobs Into One Report Instance** places all resulting work orders to display in one report instance.

Deleting Work Orders Print Job Log Records

You may delete old or unwanted print job log records by using the filter drop-down boxes below the grid to obtain the grid data set you want to delete. For example: if you wanted to delete all print job records where the logged on user at the time of printing was 'ADMIN'. To accomplish this you would select 'ADMIN' from the drop-down box labeled Where User Name: then press the **Inquire** button. This action retrieves the correct data set into the grid. Next select the menu items **Options>>Delete Print Log Records**. This menu selection deletes all records currently visible in the data grid.



You may copy, print or save the **Details** text. right-click the **Details** box to display the pop-up menu.



Delete work order print jobs in the case where the linked work order no longer exists..



MaintSmart Manual Printing - Using Manual Printing (print settings/screen defaults)

Activating Print Settings/Screen Defaults for Manual Printing

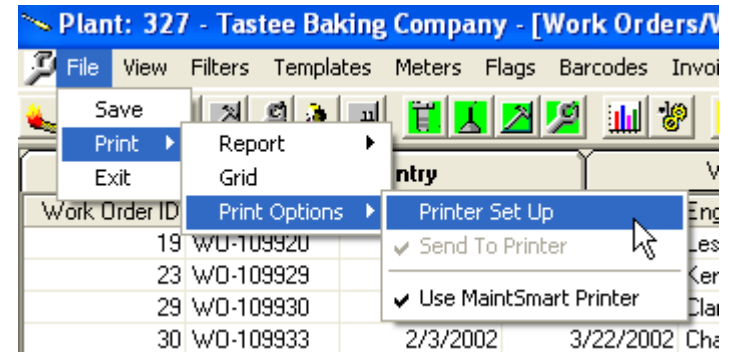
The following screens may have **Print Setting Screen Defaults** associated with them:

- Work Orders (data input)
- Purchasing and Parts Usage (data input)
- Equipment Failures (data input)
- Preventive Maintenance Updating (data input)
- Print Job Log
- Metered Work Orders Print Job Log

Activating the default print settings for a screen causes MaintSmart to use the print settings (if possible) listed in the **Print Setting**. These settings are determined by the logged on user and the screen that is currently open. To activate these settings check the menu item **File>>Print>>Print Options>>Use MaintSmart Printer**. When this menu item is checked the **Send To Printer** menu item is checked then disabled.

Alternatively you may want to simply use the default system printer for your print jobs from this screen. To use this option: uncheck **Use MaintSmart Printer**. Check the **Send To Printer** menu item if you want print jobs going directly to the printer instead of the print preview screen (default). The settings chosen from the **Print Options** menu are retained so next time you open this screen the settings are already set for you. You may also choose a printer from then **Print Set-Up** menu.

Note: It is important to note that whether or not the various **Print Options** are checked is dependent upon the workstation, not the user. This has implications in the case where User A has *default screen print settings* available in the database and then check the **Use MaintSmart Printer** menu item. If User B opens the same screen from the same workstation the **Use MaintSmart Printer** menu item is still set (since this is a computer setting not a user setting). If User B doesn't have default screen print settings available then MaintSmart looks for the default user (Example: 'Printer100'). If no default user is found then MaintSmart uses the default system printer.



Select the **Printer Set-Up** menu item to display the printer selection dialog screen.

When **Use MaintSmart Printer** is checked MaintSmart looks for a printer in the following order:

- The printer defined in print settings that is linked to the "workorders" screen default is used.
- Printer for the logged on user and the *default screen* ("AllOther") is used. This is a catch-all screen default.
- Printer defined in printer setting that uses the *default user* "Printer100" (example) is used. This user is created automatically by MaintSmart for use with the auto-print scanner only.
- Default system printer as defined in **Windows>>Control Panel>>Printers** is used.



MaintSmart Manual Printing - Important Considerations Regarding Print Settings/Defaults

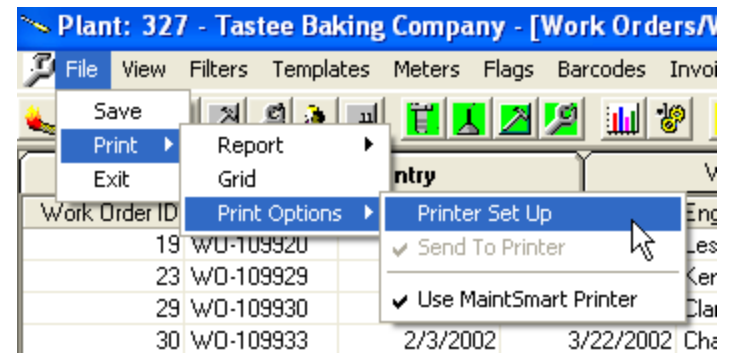
Important Considerations When Using Print Settings/Screen Defaults

- 1.) Printer Screen Defaults are available on selected screens. Checking the **Use MaintSmart Printer** menu item causes MaintSmart to attempt to locate screen defaults for this user/screen in the order listed on the right.
- 2.) All print settings are dependant upon the computer the print job is being issued from. This is because print settings created from a particular computer are linked to printer(s) connected to this computer.
For Example: Suppose Bob normally uses Workstation A. Bob creates print settings and screen defaults from Workstation A. These settings work fine as long as Bob uses them from Workstation A. However if Bob logs on to Workstation B and attempts to use his settings/defaults they are no longer available. This is because the same printer(s) configured on Workstation A may not even be available from Workstation B.
- 3.) You may select the printer of your choice from the **File>>Print>>Print Options>>Printer Set-Up** menu item.
- 4.) MaintSmart always defaults to a print preview screen when it cannot locate a printer or if **Send To Printer** is not checked.
- 5.) **Send To Printer** is automatically checked when **Use MaintSmart Printer** is checked with valid print settings available.
- 6.) Checkbox settings in the **Print Jobs** screen override checkbox settings in the **Print Settings** screen. You normally check the **Send To Printer** checkbox on the **Print Jobs** screen as leaving it unchecked cause the print preview screen to appear when a print job is executed. This can quickly clutter the screen with print preview screens.
- 7.) Screen printer defaults use a print setting. Screen defaults may be deleted without deleting the print setting.
- 8.) You may use the same print setting for all of your print jobs. There is no need to create a separate one for each screen (i.e. "workorders", "downtime", etc.).
- 9.) You could simply create one print settings linked to "AllOther" and use this setting for all print jobs and screen defaults.
- 10.) MaintSmart automatically creates a user called "Printer100" (example: if top-level entity is 100). This is the default printer user. Use the "Printer100" user and the "AllOther" screen default to create a generic print setting for this workstation.
- 11.) It is best to designate only one (1) workstation as the print job scanner.



When **Use MaintSmart Printer** is checked MaintSmart looks for a printer in the following order:

- The printer defined in print settings that is linked to the "workorders" screen default is used.
- Printer for the logged on user and the *default screen* ("AllOther") is used. This is a catch-all screen default.
- Printer defined in printer setting that uses the *default user* "Printer100" (example) is used. This user is created automatically by MaintSmart for use with the auto-print scanner only.
- Default system printer as defined in **Windows>>Control Panel>>Printers** is used.



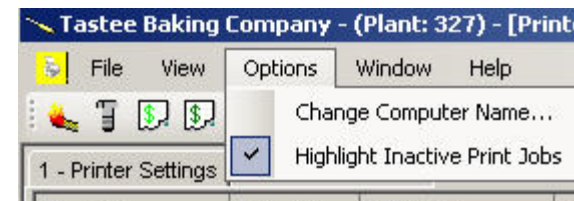


MaintSmart Printing - Options

Changing the Computer Name For Existing Print Settings


In some cases a MaintSmart user may need to access printers defined in Print Settings that are accessible from a different computer name than the computer name originally used when the print settings were first created. This situation may arise when a computer is replaced (and receives a new name) but the same printers are still available for example. In this case MaintSmart print settings and print jobs referenced to the old computer name would no longer be valid.

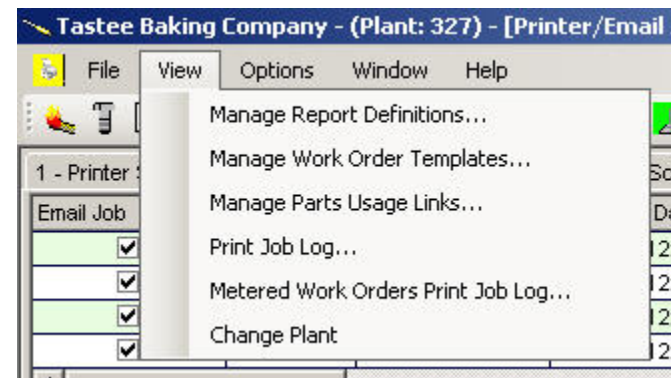
To avoid having to delete then recreate all of your print settings when you change computers you may choose the menu items **Options>>Change Computer Name...** Select the Computer Name that you want to convert to the new computer name. The new computer name is the name of the computer you are currently working from and is listed in the text of this input screen.



Highlight Inactive Print Jobs

If this menu item is checked MaintSmart colors the row(s) containing the inactive print jobs red. Print jobs may become inactive either by explicitly setting them to inactive status with the checkboxes on the Print Jobs screen or in some cases MaintSmart automatically sets them to inactive if a print error is encountered during print scanning and/or print job execution. If you have a print job that repeatedly sets itself to inactive then there is likely a print error occurring. See the print job log for an error description. Note: in some cases the print log does not capture an error even when an error occurs. This can be caused by the printer driver or the other unforeseen cause.

 Jump to other screen easily from the **View** menu.





Using the MaintSmart Print Scheduler - Examples

How Can You Benefit From the Auto-Print Scheduler? Here are some examples...

Example #1: Print Bob's weekly PMs to Bob's printer every Monday morning at 8:00 AM.

Example #2: Create a work order on the 28th of each month to change the light bulbs in the parking lot. Automatically use four light bulbs from inventory when this work order is created. Print this work order to the shop printer at 6:00 PM.

Example #3: Create an inventory order list that displays all items currently below minimum stock for the vendor: 'McMaster Carr'. Print this list to the inventory clerk's printer on the second (2nd) Tuesday of each month at 1:15 PM.

Example #4: List all equipment failures (and details about these failures) where the failure time was greater than or equal to 10 minutes and the equipment that failed was located in the 'Bread Prod.' department. Only list failures that occurred during the past two weeks. Print this report with a chart to the maintenance manager's and the plant manager's printer at 8:00 AM every Monday and at 10:00 AM on the last day of the month.

Example #5: (advanced) Use MaintSmart meters and work order templates to create the following print job: Create a meter unit definition called 'Cuts'. Create a meter called 'Blade Replace' that defines 10000 cuts as the meter threshold (i.e. when the current meter reading is 10000 greater than the last performed reading then the threshold is reached). Create a work order template called 'Cutoff Saw Blade Replacement' for changing the blade in the Cutoff Saw. Link the meter: 'Blade Replace' to the work order template. Next create an OPC meter link to the meter 'Blade Replace'. The OPC meter link is reading the data in an Allen Bradley SLC500 PLC that controls the cutoff saw. The address in the PLC is N7:0. This memory address increments one for each saw cut. MaintSmart checks the data at this memory address every one minute (through an OPC compliant network, 'RSLinx') and updates the meters table record with the current reading. When the **Current Reading** is 10000 greater than the **Last Performed** reading (in the meters table) MaintSmart automatically creates a work order and prints it to the production office printer so that production personnel can replace the blade (or call maintenance).



Using the MaintSmart Print Scheduler - Examples

Before You Start With These Examples:

These examples are for use with one of the MaintSmart sample databases. User names, printer names, report documents, etc. may be different from your data. Use different data if needed. Text is color-coded: **Green= take note.** **Red=important.**

Prerequisites:

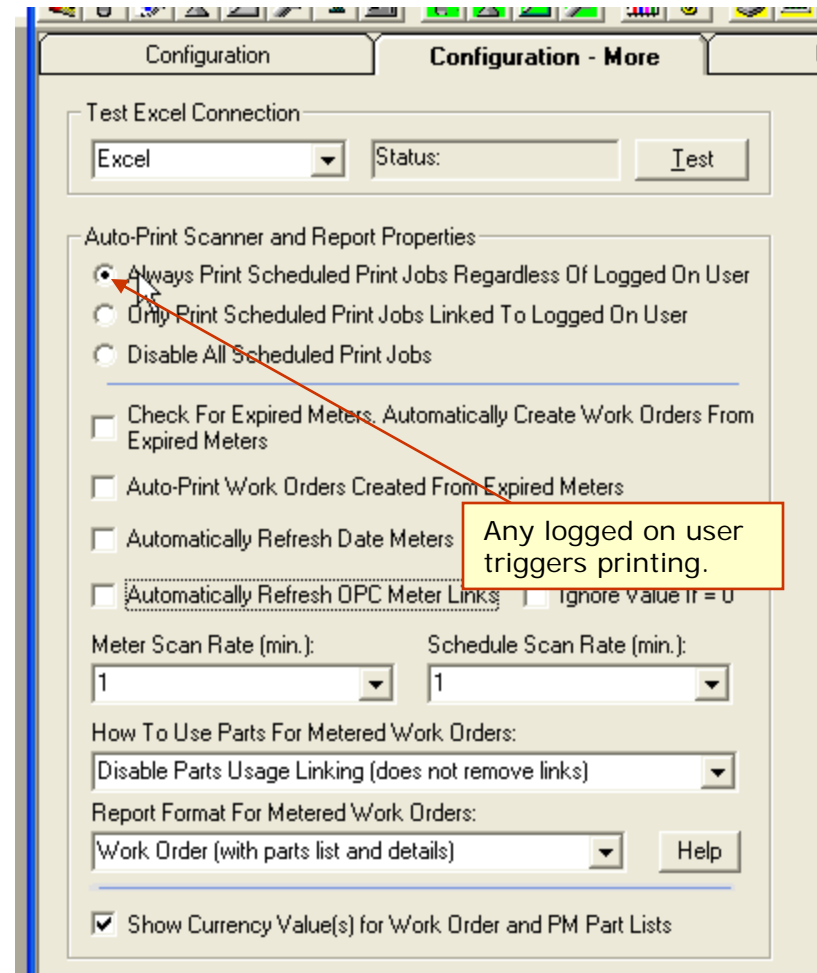
- At least one configurable printer. This could be an local printer, a network printer, fax drivers, Adobe Distiller or other device present in **Windows>>Control Panel>>Printers**.
- It's may be advantageous to read the **Automatic Printing and Job Creation With MaintSmart User Manual** first before trying these example but it's not necessary. Sometimes it's easier to learn by example.

Understand the Following:

MaintSmart creates a "catch-all" user name for the purpose of print setting screen defaults named: (example) "Printer100".

MaintSmart uses two distinct type of auto-printing:

- **Print Job** scheduling uses existing reports, provides a way for you to create filters on these reports then prints these reports based upon a calendar day/time or weekday(s)/time. New print date/times are created (recycled for the next time) automatically when the printing completes and a log of the print job is entered. This method *uses existing records* to create the defined report.
- **Auto-printing new work orders created from metered work order templates** actually *creates new work orders* then prints then if desired.



IMPORTANT: From **Program Configuration** screen, **Configuration - More** tab: be sure that you have the auto-print scanner setting(s) as depicted above if you want MaintSmart to activate the print jobs that you configure in this example.



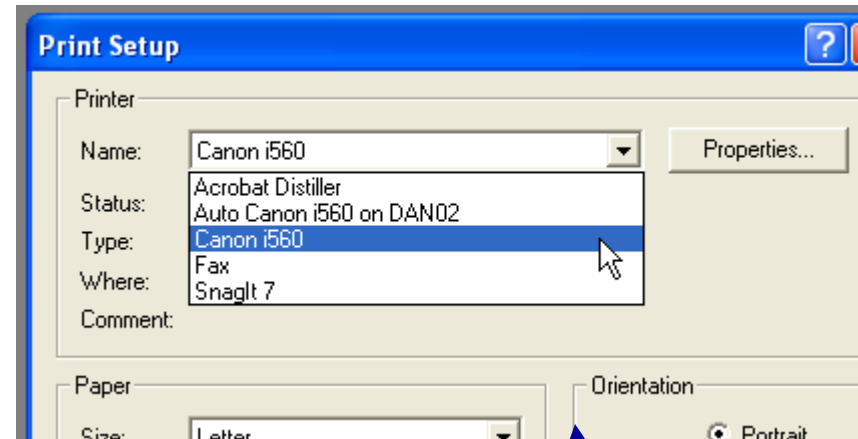
Using the MaintSmart Print Scheduler - Examples

Example #1: Print Bob's weekly PMs to Bob's printer every Monday morning at 8:00 AM.

Step 1/4: Create a new *print setting*. (BobsPrinterPMs)

Create New Print Setting Instructions Checklist:

- Open the **Print Settings and Scheduler** screen.
- Select the screen tab labeled **Print Settings**.
- Press the **New** button at lower right of screen.
- Enter print setting name.
- Press **Select Printer** button and select a printer. Press **Save**.



From **Print Settings** tab: select a printer (your selection will likely not match this example).





Using the MaintSmart Print Scheduler - Examples

Example #1: Print Bob's weekly PMs to Bob's printer every Monday morning at 8:00 AM.

Step 2/4: Create a new *print schedule*. (BobPMSchedule)

Print Schedules

Print Schedule Name (identifier):

Print On This Interval:

00:00

Start From This Date:

2 /15/2005

New Print Schedule...

Select New Print Schedule... then type in schedule name.

Print Schedule Name

Enter A Print Schedule Name (up to 50 chars.)

BoBsPrinterPMs

OK Cancel

Create New Print Schedule Instructions Checklist:

- Press the **New** button at lower right of screen.
- Enter print schedule name.
- Select interval .
- Select weekday or calendar day.
- Select clock time to print.
- Save the record.

Before pressing **Save** make sure you have the same entries depicted below

Print Schedules

Print Schedule Name (identifier):

Print On This Interval:

Print On This Day of the Week:

Print On This Day of the Month:

BobPMSchedule

Every

Monday

1

Print At This Time:

Start From This Date:

08:00

2 /15/2005

Next Scheduled Print Day/Time: *undefined*

Print Schedules

The print scheduler provides a way for you to create print schedules based upon a calendar day of the month/time or a weekday/time. Link these schedules to reports or work order templates to

New Delete Save



Using the MaintSmart Print Scheduler - Examples

Example #1: Print Bob's weekly PMs to Bob's printer every Monday morning at 8:00 AM.

Step 3/4: Create a new **print job**. (BobsMondayPMs)

Print Jobs
Print Job Name: [New Print Job...]
Use []
Select The Type of Report: [Existing/New Report Definition]
Select []

Select **New Print Job...** then type in print job name.

Create New Print Job Instructions Checklist:

- Press the **New** button at lower right of screen.
- Enter print job name 'BobsMondayPMs'.
- Select the print schedule to use
- Select the print settings to use.
- Select the **Type of Report** for this print job.
- **CONTINUED ON NEXT PAGE...**

Print Job Name (up to 50 chars.)
BobsMondayPMs
OK [] Car []

Confirm that the selections match the picture.

Print Jobs | Print Schedules | Printer Settings/Defaults

Print Jobs
Print Job Name: [BobsMondayPMs]
Use This Print Schedule: [BobPMsSchedule]
Use These Print Settings: [BoBsPrinterPMs]
Select The Type of Report: [Existing/New Report Definition]
Select/Create Report Definition To Print Report: [] [New]
Select the Filter Classification: []
Select Existing Grid Filter To Create Report From: []




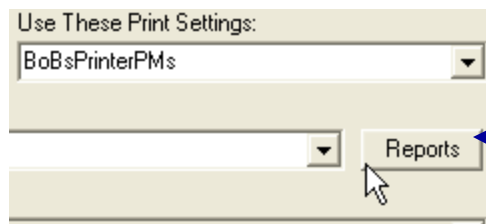
Using the MaintSmart Print Scheduler - Examples

Example #1: Print Bob's weekly PMs to Bob's printer every Monday morning at 8:00 AM.

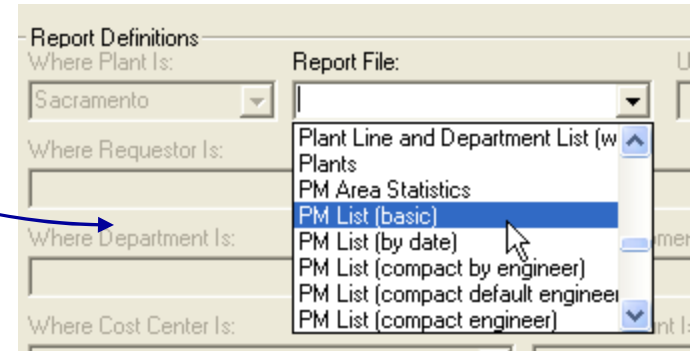
Step 3/4: Create a new *print job*. (BobsMondayPMs)

Create New Print Job Instructions Checklist:

- CONTINUED FROM PREVIOUS PAGE
- Press the labeled **Reports** next to the report drop-down box on the right side of screen.
- When the **Report Definitions** screen  opens press the button labeled **New** in the right lower corner of the screen.
- Select the report: PM List (basic) or another PM List report if desired from the **Report File** drop-down box.
- CONTINUED ON NEXT PAGE...



Press the labeled **Reports** to open the **Report Definitions** screen.





Using the MaintSmart Print Scheduler - Examples

Example #1: Print Bob's weekly PMs to Bob's printer every Monday morning at 8:00 AM.

Step 3/4: Create a new *print job*. (BobsMondayPMs)

Create New Print Job Instructions Checklist:

- CONTINUED FROM PREVIOUS PAGE
- Select the date field 'Due Date' from the **Use This Date Field** box.
- Set **Date From** to a date in the distant past (example: 1/17/2000). By doing so we'll capture all PMs that are due before "today's" date.
- Set the **Date To** box to a date that is one week from whatever "today's" date is. In the picture below the actual date was 2/16/2005 so we added one week (7 days) to this date and came up with the date: 2/23/2005 for the **Date To**.
- Check the **Use Relative Date** checkbox.

NOTE: This forces MaintSmart to always use the date range selected 'relative' to whatever "today's" date happens to be. 'Today's' date is defined as the date the print job is executed. This is a floating date range. By using a floating date range MaintSmart always reports on current data.

NOTE: If you only want "weekly's" then choose '7' from the **Interval** filter drop-down. Otherwise all PMs due 'this week' (i.e next 7 days from date report is printed) are used.

- Select filters from the various drop-down boxes as depicted below.
- Accept the default Report Name/Description or change to some other descriptive name (must be unique).
- CONTINUED ON NEXT PAGE...

MaintSmart can convert a date range to a *floating date range* by checking the **Use Relative Date** checkbox when the report is initially created. This only needs to be done once (initial creation of report). MaintSmart correctly handles the date range thereafter based upon actual print date.

The screenshot shows the 'Report Definitions' dialog box in the MaintSmart software. The 'Where Plant Is' dropdown is set to 'Sacramento'. The 'Report File' dropdown is set to 'PM List (basic)'. The 'Use This Date Field' dropdown is open, showing 'DateDue' selected. The 'Date From' is set to '1 /17/2000' and the 'Date To' is set to '2 /23/2005'. The 'Use Relative Date' checkbox is checked. The 'Where Requestor Is' dropdown is empty. The 'Where Engineer Is' dropdown is set to 'Bob Hackworth'. The 'Area/Location Is' dropdown is empty. The 'Where Plant Line Is' dropdown is empty.




Using the MaintSmart Print Scheduler - Examples

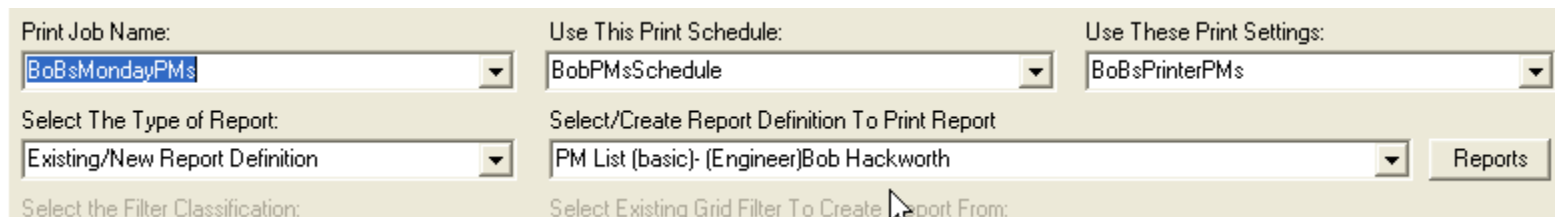
Example #1: Print Bob's weekly PMs to Bob's printer every Monday morning at 8:00 AM.

Step 3/4: Create a new *print job*. (BobsMondayPMs)

Create New Print Job Instructions Checklist:

- CONTINUED FROM PREVIOUS PAGE
- Press the **Save** button on the **Reports Definitions** screen  when you entered/selected the data values as depicted on the previous page.
- Close the **Reports Definitions** screen to return to the **Print Jobs** tab of the **Printer Settings and Scheduler** screen.
- When the print job screen reappears notice that the **Reports** button now says **Refresh**. Click this button to refresh the report definitions drop-down box with the new report definition you added.
- Select your new report definition from the drop-down box.
- CONTINUED ON NEXT PAGE...

Click the **Refresh** button on the **Print Job** screen to load the new report(s) into the drop-down box. Then select the new report definition from the drop-down box.



Print Job Name: BoBsMondayPMs

Use This Print Schedule: BobPMsSchedule

Use These Print Settings: BoBsPrinterPMs

Select The Type of Report: Existing/New Report Definition

Select/Create Report Definition To Print Report: PM List (basic)- (Engineer)Bob Hackworth

Select the Filter Classification: Select Existing Grid Filter To Create Report From:

Refresh

Reports



Using the MaintSmart Print Scheduler - Examples

Example #1: Print Bob's weekly PMs to Bob's printer every Monday morning at 8:00 AM.

Step 3/4: Create a new *print job*. (BobsMondayPMs)

Create New Print Job Instructions Checklist:

- CONTINUED FROM PREVIOUS PAGE
- Check all of the checkboxes at the bottom of the screen.
- Press the **Save** button to keep this new print job.
- [Go to the next page to see how to activate this print job](#) and begin creating accurate reports without any additional user input.

You have created a print setting, print schedule and a print job. Now configure the print job scanner.

The screenshot displays the 'Print Jobs' configuration window. It includes several dropdown menus and checkboxes. The 'Print Job Name' is set to 'BoBsMondayPMs', 'Use This Print Schedule' is 'BobPMsSchedule', and 'Use These Print Settings' is 'BoBsPrinterPMs'. The 'Select The Type of Report' is 'Existing/New Report Definition', and the 'Select/Create Report Definition To Print Report' is 'PM List (basic)- (Engineer)Bob Hackworth'. There are also checkboxes for 'Always Send This Print Job Directly To Printer', 'Automatically Print Scheduled Items (if applicable)', and 'Activate This Print Job', all of which are checked. At the bottom, there are buttons for 'New', 'Delete', 'Save', and 'Cancel'. A mouse cursor is pointing at the 'Save' button.




Using the MaintSmart Print Scheduler - Examples

Example #1: Print Bob's weekly PMs to Bob's printer every Monday morning at 8:00 AM.

Step 4/4: Configure the Auto-Print Scanner

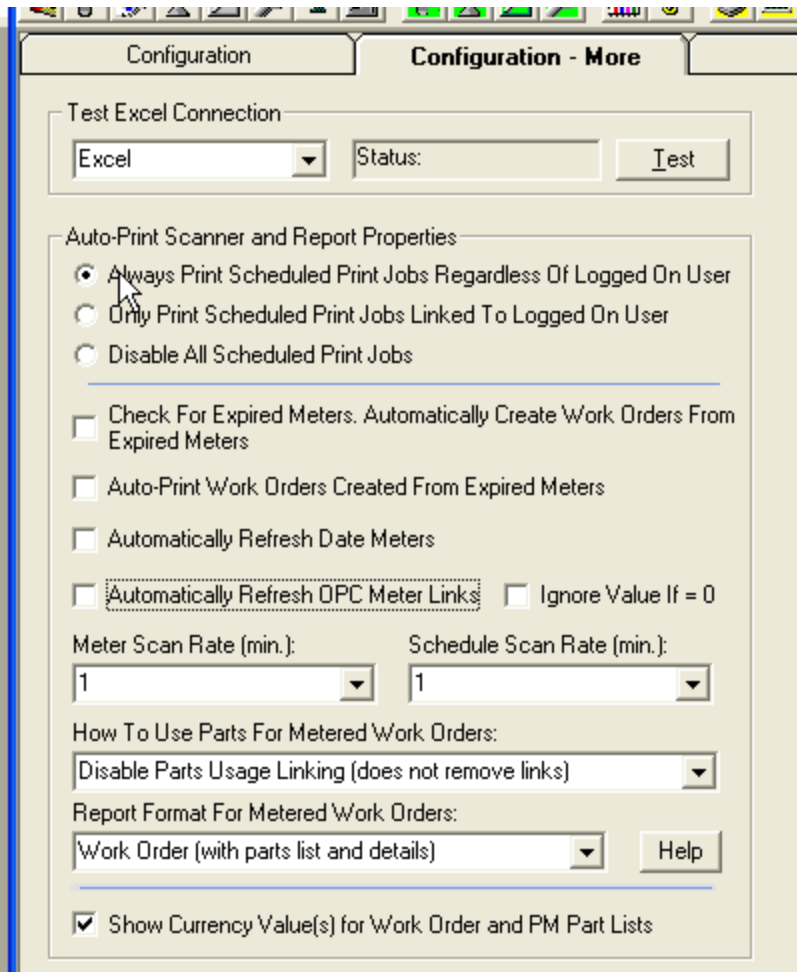
Configure the Auto-Print Scanner Instructions Checklist:

- Open the **Program Configuration** screen .
- Select the second screen tab labeled: **Configuration - More**.
- Select the option button (radio button) as depicted on the right.
- Leave the other items as depicted then close this screen.
- When this *scheduled print job* comes due the print scanner detects it then prints it. The print scanner then recycles the next print date automatically.

The print job scanner is configured for *scheduled print jobs*.

Later in these examples we'll create a *metered* work order. This work order is created automatically based upon a meter value. A meter value may be incremented manually or automatically.

Note: The option (not selected in this example): **Only Print Scheduled Print Jobs Linked To Logged On User** requires that the Printer Screen Defaults be configured and linked to the print settings used in the target print job. This provides a way to only execute print jobs linked to this user thereby limiting what is printed.






Using the MaintSmart Print Scheduler - Examples

Example #2: Create a work order on the 28th of each month to change the light bulbs in the parking lot. Automatically use four light bulbs from inventory when this work order is created. Print this work order to the shop printer at 6:00 PM.

Step 1/4: Create a work order template (boiler-plate) for this job.

Create a Work Order Template Instructions Checklist:

- Open the **Work Order** screen .
- Select a work order by left clicking the appropriate grid row (work order #112 has been included in sample database for this purpose) or choose another.
- **CONTINUED ON NEXT PAGE...**

Select the work order #112 (or another if you'd like).

110	110		2/1/2005		No Assignment - 327	Bread Oven/Cooler
111	111		2/16/2005	2/17/2005	No Assignment - 327	Bread Baggers/Wr.
112	112		2/17/2005		Bob Hackworth	Building - Exterior

ers/Work Requests




Using the MaintSmart Print Scheduler - Examples

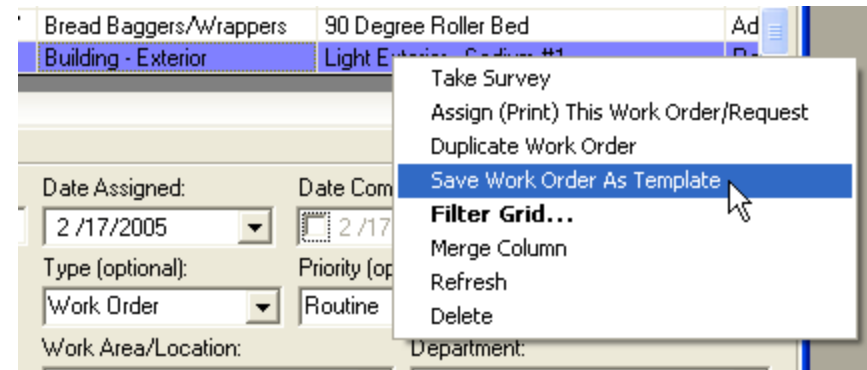
Example #2: Create a work order on the 28th of each month to change the light bulbs in the parking lot. Automatically use four light bulbs from inventory when this work order is created. Print this work order to the shop printer at 6:00 PM.

Step 1/4: Create a work order template (boiler-plate) for this job.

Create a Work Order Template Instructions Checklist:

- Right-click the selected work order then choose **Save Work Order As Template** from the pop-up menu. Keep the default name or enter your own name for the work order template.
- Close the work orders screen. Open the **Printer Settings and Scheduler** screen .

Right-click the selected work order then choose **Save Work Order As Template**. This work order template is going to be used with a print job. Work orders are created automatically from this template at the designated date/time.






Using the MaintSmart Print Scheduler - Examples

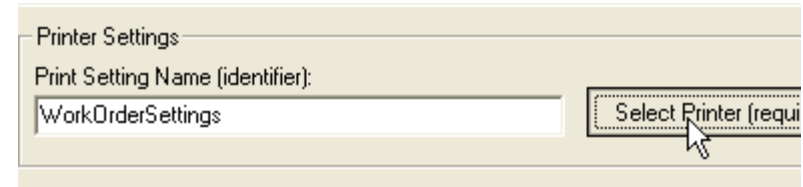
Example #2: Create a work order on the 28th of each month to change the light bulbs in the parking lot. Automatically use four light bulbs from inventory when this work order is created. Print this work order to the shop printer at 6:00 PM.

Step 2/4: Create Print Settings for Work Orders (or you could have used the previously created print settings).

Create a New Print Setting Instructions Checklist:

- When the **Printer Settings and Scheduler** screen.
- Select the screen tab labeled **Printer Settings** .
- Press the **New** button.
- Enter the Print Settings name: 'WorkOrderSettings'.
- Press the **Select Printer** button. Select an appropriate printer.
- Press **Save**.
- Proceed to next page take optional step below

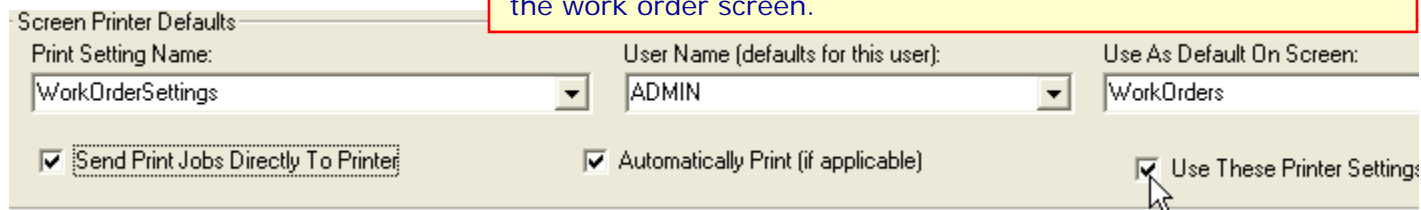
Select a printer appropriate to your system by clicking the **Select Printer** button.



Optional Step: Create Printer Screen Defaults

- Open the **Screen Defaults** tab. Press New.
- Select/check the items depicted below.
- Press the **Save** button.

Optional Step: Select/check the settings depicted below from the **Screen Defaults** tab. Save these screen defaults. These default printer setting may be used when printing manually from the work order screen.





Using the MaintSmart Print Scheduler - Examples

Example #2: Create a work order on the 28th of each month to change the light bulbs in the parking lot. Automatically use four light bulbs from inventory when this work order is created. Print this work order to the shop printer at 6:00 PM.

Step 3/4: Configure a new schedule for use with this print job.

Create a New Print Schedule Instructions Checklist:

- Click of the screen tab labeled: **Print Schedules**.
- Press the **New** button.
- Enter/select the entries as depicted below
- Press the **Save** button.

The screenshot shows a configuration form for a print schedule. The form is titled "Print Schedules" and contains the following fields:

Print Schedule Name (identifier):	Print On This Interval:	Print On This Day of the Week:	Print On This Day of the Month:
ChangeLightBulbs	On This Day of Month		28
Print At This Time:	Start From This Date:	Next Scheduled Print Day/Time: *undefined*	
6:00	2 /17/2005		

The time selector box may be incremented by selecting the hour or minute field then using the keyboard arrow keys (up/down).



Using the MaintSmart Print Scheduler - Examples

Example #2: Create a work order on the 28th of each month to change the light bulbs in the parking lot. Automatically use four light bulbs from inventory when this work order is created. Print this work order to the shop printer at 6:00 PM.

Step 4/4: Configure a new print job using a work order template.

Create a New Print Job Instructions Checklist:

- Click of the screen tab labeled: **Print Jobs**.
- Press the **New** button.
- Enter/select/check the entries as depicted below.
- Name this print job: "ChangeParkingLotLights"
- Press the **Save** button.

This print job executes the next time a "28th" of the month comes around at exactly 6:00 PM.

The screenshot shows the 'Print Jobs' configuration window. The 'Print Job Name' is set to 'ChangeParkingLotLights'. The 'Use This Print Schedule' is set to 'ChangeLightBulbs'. The 'Use These Print Settings' is set to 'WorkOrderSettings'. The 'Select The Type of Report' is set to 'Work Order From Work Order Template'. The 'Select Existing Work Order Template To Create Work Order From' is set to 'Light Exterior - Sodium #1-Replace light bulb'. The 'Use This Report File Format For This Print Job' is set to 'Work Order (with parts list and details)'. The 'Always Send This Print Job Directly To Printer', 'Automatically Print Scheduled Items (if applicable)', and 'Activate This Print Job' checkboxes are all checked. A mouse cursor is pointing at the 'Work Order (with parts list and details)' option in the dropdown menu.




Using the MaintSmart Print Scheduler - Examples

Example #3: Create an inventory order list that displays all items currently below minimum stock for the vendor: 'McMaster Carr'. Print this list to the inventory clerk's printer on the second (2nd) Tuesday of each month at 1:15 PM.

Step 1/4: Create a print setting for inventory reorder list.

Create a New Print Setting Instructions Checklist:

- Open the **Printer Settings and Scheduler** screen .
- When the **Printer Settings and Scheduler** screen opens select the screen tab labeled **Printer Settings**.
- Press the **New** button.
- Enter the setting name as depicted on the right and select a printer appropriate to your system by pressing the **Select Printer** button then selecting a printer from the printer dialog screen.
- Press the **Save** button.



It's fine to use the same printer setting/screen default for all of your printing. You may create one printer setting for your local printer (for example: "MyPrinter") and link this print setting to all print jobs.

Printer Settings

Print Setting Name (identifier):

InventoryClerkPrinter

Select Printer (required)



Using the MaintSmart Print Scheduler - Examples

Example #3: Create an inventory order list that displays all items currently below minimum stock for the vendor: 'McMaster Carr'. Print this list to the inventory clerk's printer on the second (2nd) Tuesday of each month at 1:15 PM.

Step 2/4: Create a print schedule for inventory reorder list.

Create a New Print Schedule Instructions Checklist:

- Next open the **Print Schedules** tab and press the **New** button.
- Create a schedule ('ReorderListScdl') as depicted below and press **Save**.

Print Schedules		
Print Schedule Name (identifier):	Print On This Interval:	Print On This Day of th
ReorderListScdl	Second In Month	Tuesday
Print At This Time:	Start From This Date:	Next Scheduled Print I
01:15	2 /26/2005	



Using the MaintSmart Print Scheduler - Examples

Example #3: Create an inventory order list that displays all items currently below minimum stock for the vendor: 'McMaster Carr'. Print this list to the inventory clerk's printer on the second (2nd) Tuesday of each month at 1:15 PM.

Step 3/4: Create a print job for the reorder list.

Create a New Print Job Instructions Checklist:

- Open the screen tab labeled **Print Jobs**.
- Press the **New** button.
- Select 'New Print Job...' from the **Print Job Name** drop-down and enter a new print job name for this reorder list (picture 1.).
- Select the other items depicted below. Then press the **Reports** button to create the report definition for this print job.

Print Jobs

Print Job Name: 1 InventoryReOrderPrintJob

Use This Print Schedule: ReorderListScdl

Use These Print Settings: InventoryClerkPrinter

Select The Type of Report: Existing/New Report Definition

Select/Create Report Definition To Print Report: [Empty]

Reports



Using the MaintSmart Print Scheduler - Examples

Example #3: Create an inventory order list that displays all items currently below minimum stock for the vendor: 'McMaster Carr'. Print this list to the inventory clerk's printer on the second (2nd) Tuesday of each month at 1:15 PM.

Step 3/4: Create a report definition and print job for the reorder list.

Create a Report Definition Instructions Checklist:

- Select the items depicted below (from the **Reports** screen) in picture 2.
- Give this new report a name or use the default name. (Note: Report names must be unique) picture 3.
- Save this report then close the **Reports** screen to return to the Print Jobs screen.

Select a **Date From** in the distant past to capture all items that need to be reordered.

Report File: Use This Date Field: Date From: Date To: Use Relative Date

2

Type in a descriptive report name or use the default. Report names must be unique.

Report Name/Description

3

Edit or Delete A Report Definition Record



Using the MaintSmart Print Scheduler - Examples

Example #3: Create an inventory order list that displays all items currently below minimum stock for the vendor: 'McMaster Carr'. Print this list to the inventory clerk's printer on the second (2nd) Tuesday of each month at 1:15 PM.

Step 4/4: Create a print report definition and print job for the reorder list.

Create a New Print Setting Instructions Checklist:

- Press the **Refresh** button on the **Print Jobs** screen after successfully creating a new Report Definition.
- Select the report definition that you just created.
- Check all the checkboxes at the bottom of the **Print Jobs** screen as depicted below (picture 3).
- Press **Save**.

Select/Create Report Definition To Print Report

Inventory Re-Order List A

Reports

Bob's Work Orders

BobPM

Equipment Failures by Equipment- (Department)Bread Prod. (TimeDown)10

Inventory Re-Order List A

Order From:

4

Refresh

Always Send This Print Job Directly To Printer

Automatically Print Scheduled Items (if applicable)

Activate This Print Job




Using the MaintSmart Print Scheduler - Examples

Example #4: List all equipment failures (and details about these failures) where the failure time was greater than or equal to 10 minutes or more and the equipment that failed was located in the 'Bread Prod.'. Only list failures that occurred during the past two weeks. Print this report with a chart to the maintenance manager's and the plant manager's printer at 8:00 AM every Monday and at 10:00 AM on the last day of the month.

Step 1/5: Create two (2) print settings for this print job.

Create a New Print Setting Instructions Checklist:

- Open the **Printer Settings and Scheduler** screen  select the screen tab labeled **Printer Settings**.
- Create printer settings with the entries as depicted on the right (with an appropriate printer(s)). See picture 1 and picture 2.
- Open the **Screen Defaults** tab. Press **New**.
- Select/check the items depicted below.
- Press the **Save** button.

The image shows two screenshots of the 'Printer Settings' interface. The top screenshot shows a 'Print Setting Name (identifier):' field with the text 'PlantManagerPrinterSettings' and a 'Select Printer (re)' button. A yellow box with the number '1' is around the field. The bottom screenshot shows a 'Print Setting Name (identifier):' field with the text 'MaintenanceManagerPrinterSettings' and a 'Select Pr' button. A yellow box with the number '2' is around the field.

This example illustrates the use of two print settings and two different schedules. The resulting print job sends the same report to two different printers at two different date/times.




Using the MaintSmart Print Scheduler - Examples

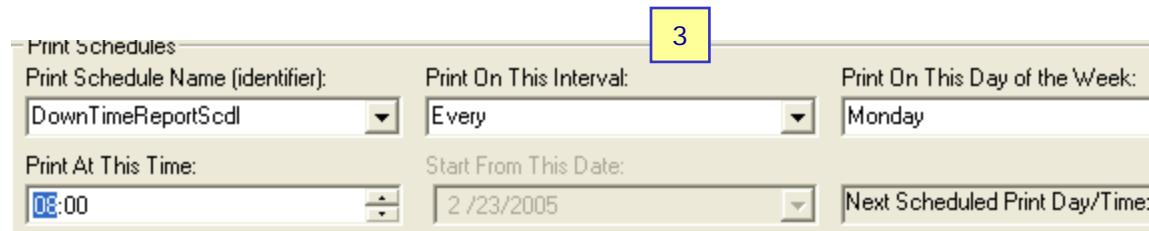
Example #4: List all equipment failures (and details about these failures) where the failure time was greater than or equal to 10 minutes or more and the equipment that failed was located in the 'Bread Prod.'. Only list failures that occurred during the past two weeks. Print this report with a chart to the maintenance manager's and the plant manager's printer at 8:00 AM every Monday and at 10:00 AM on the last day of the month.

Step 2/5: Create two (2) schedules for this print job.

Create a Two New Print Schedules Instructions Checklist:

- Select the screen tab labeled **Print Schedules**.
- Press the **New** button.
- Enter a new schedule as depicted below ("DownTimeReportScdl") (picture 3).
- Press the **Save** button.

 In this example you'll create a new schedule name and add a day/time definition to it. Next you'll use the same schedule name and add another day/time definition to the same schedule name. By doing so you now have a schedule that actually has two different date/times that it activates. You could add more date/time values too if needed.



Print Schedules

Print Schedule Name (identifier): DownTimeReportScdl

Print On This Interval: Every

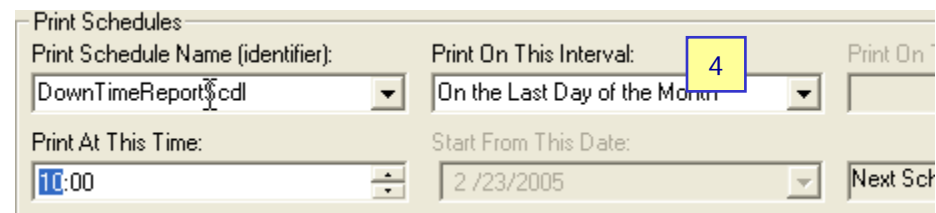
Print On This Day of the Week: Monday

Print At This Time: 08:00

Start From This Date: 2 /23/2005

Next Scheduled Print Day/Time:

- Press the **New** button again.
- Select the schedule you just created ("DownTimeReportScdl") (picture 4)
- Enter/select a different print interval/time while using the same **Print Schedule Name** ("DownTimeReportScdl").
- Press the **Save** button.



Print Schedules

Print Schedule Name (identifier): DownTimeReportScdl

Print On This Interval: On the Last Day of the Month

Print On This Day of the Week:

Print At This Time: 10:00

Start From This Date: 2 /23/2005

Next Scheduled Print Day/Time:



Using the MaintSmart Print Scheduler - Examples

Example #4: List all equipment failures (and details about these failures) where the failure time was greater than or equal to 10 minutes or more and the equipment that failed was located in the 'Bread Prod.'. Only list failures that occurred during the past two weeks. Print this report with a chart to the maintenance manager's and the plant manager's printer at 8:00 AM every Monday and at 10:00 AM on the last day of the month.

Step 3/5: Create a new print job.

Create a New Print Job Instructions Checklist:

- Select the screen tab labeled **Print Jobs**.
- Press the **New** button.
- Select the **Print Settings** and **Print Schedule** depicted below.
- Press the **Reports** button to create a new report definition.

Print Jobs

Print Job Name: DownTimePrintJob

Use This Print Schedule: DownTimeReportScdl


Use These Print Settings: PlantManagerPrinterSettings

Select The Type of Report: Existing/New Report Definition

Select/Create Report Definition To Print Report

Select Existing Grid Filter To Create Report From:

Reports

 Click the **Reports** button to open the **Reports Definition** screen. When you return from the **Reports Definition** screen after creating a new report this button will be labeled **Refresh**. Press it again to load the new report into the drop-down box.



Using the MaintSmart Print Scheduler - Examples

Example #4: List all equipment failures (and details about these failures) where the failure time was greater than or equal to 10 minutes or more and the equipment that failed was located in the 'Bread Prod.'. Only list failures that occurred during the past two weeks. Print this report with a chart to the maintenance manager's and the plant manager's printer at 8:00 AM every Monday and at 10:00 AM on the last day of the month.

Step 4/5: Create a new report definition to use with this print job.

Create a New Print Job Instructions Checklist:

- Press the **New** button.
- Select the **Report File**, date range, and check **Use Relative Date** as depicted below (picture 1).
- Select 'Bread Prod.' from the Department drop-down (picture 2).
- Select > 10 minutes for Time Down (picture 3).
- Type in a **Report Name/Description** or use the default.
- Press the **Save** button.
- Close this screen.
- Return to **Print Jobs**.

Create a report with multiple filters. When the report is selected the appropriate filter boxes become available.



Using the MaintSmart Print Scheduler - Examples

Example #4: List all equipment failures (and details about these failures) where the failure time was greater than or equal to 10 minutes or more and the equipment that failed was located in the 'Bread Prod.'. Only list failures that occurred during the past two weeks. Print this report with a chart to the maintenance manager's and the plant manager's printer at 8:00 AM every Monday and at 10:00 AM on the last day of the month.

Step 5/5: Finish this new print job.

Create a New Print Job Instructions Checklist:

- Continue with creation of this Print Job by pressing the **Refresh** button (picture 4) to load the new report created in step 4.
- Select (from the drop-down box) the new report you just created in the Reports Definition screen.
- Check the checkboxes as depicted below. This report goes to the Plant Manager.
- Press **Save**.

The screenshot shows the 'Print Jobs' configuration window. Key elements include:

- Print Job Name:** DownTimePrintJob
- Use This Print Schedule:** DownTimeReportScdl
- Use These Print Settings:** PlantManagerSettings
- Select The Type of Report:** Existing/New Report Definition
- Select/Create Report Definition To Print Report:** Equipment Failures by Equipment- (Department)Bread Prod. (TimeDown)10
- Select Existing Grid Filter To Create Report From:** (Empty)
- Select Existing Work Order Template To Create Work Order From:** (Empty)
- Use This Report File Format For This Print Job:** (Empty)
- Always Send Directly To Printer:**
- Refresh** button

 A yellow callout box with a lightbulb icon contains the text: "In this example you create one print job (to send report to 'Plant Manager' then create an identical print job as the first but this time designate the 'Maintenance Manager' as the recipient."

- Create the print job that is sent to the Maintenance Manager
- Press **New**.
- Enter selections as depicted above except this time use the 'MaintenanceMangerPrinterSettings'
- Press **Save**. This report goes to the Maintenance Manager.




Using the MaintSmart Print Scheduler - Examples

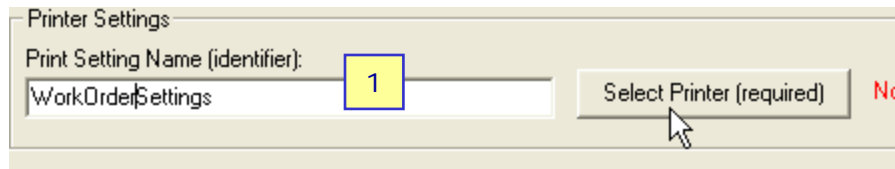
Example #5: (advanced) Use MaintSmart meters and work order templates to create the following print job: Create a meter unit definition called 'Cuts'. Create a meter called 'Blade Replace' that defines 10000 cuts as the meter threshold (i.e. when the current meter reading is 10000 greater than the last performed reading then the threshold is reached). Create a work order template called 'Cutoff Saw Blade Replacement' for changing the blade in the Cutoff Saw. Link the meter: 'Blade Replace' to the work order template. When the **Current Reading** is 10000 greater than the **Last Performed** reading (in the meters table) MaintSmart automatically creates a work order and prints it to the production office printer so that production personnel can replace the blade (or call maintenance).

Note: this example does not use the print job scheduler to create the print job (in this case a new work order). Instead the print scanner creates a new work order from a work order template when the work order template is linked to an expired meter.

Step 1/6: Create a New Print Setting.

Create a New Print Setting Instructions Checklist:

- Open the **Printer Settings and Scheduler** screen .
- Select the screen tab labeled **Printer Settings**.
- Press the **New** button.
- Enter the setting name as depicted below and select a printer appropriate to your system by pressing the **Select Printer** button then selecting a printer from the printer dialog screen (picture 1).
- Press the **Save** button.



Printer Settings

Print Setting Name (identifier): 1

Select Printer (required) No




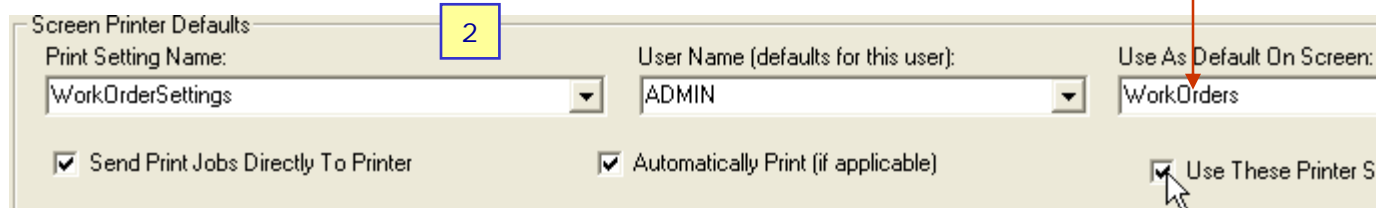
Using the MaintSmart Print Scheduler - Examples

Example #5:

Step 2/6: Link the New Print Setting To the 'WorkOrders' Screen Default.

- Select the screen tab labeled **Screen Defaults**.
- Press the **New** button.
- Enter the screen defaults as depicted below (picture 2).
- Press the **Save** button.

 For the purpose of the creating, then printing, metered work orders MaintSmart uses the 'WorkOrders' screen default settings. If this setting does not exist MaintSmart uses the default Windows system printer.



Screen Printer Defaults

Print Setting Name: 2 WorkOrderSettings

User Name (defaults for this user): ADMIN

Use As Default On Screen: WorkOrders

Send Print Jobs Directly To Printer

Automatically Print (if applicable)

Use These Printer S




Using the MaintSmart Print Scheduler - Examples

Example #5:

Step 3/6: Create a Work Order Template.

Create a Work Order Template Instructions Checklist:

- Open the **Work Order** screen .
- Select a work order by left clicking the appropriate grid row (work order #112 has been included in sample database for this purpose) or choose another.
- Right-click the selected work order then choose **Save Work Order As Template** from the pop-up menu. Keep the default name or enter your own name for the work order template.

Right-click the selected work order then choose **Save Work Order As Template**. This work order template is going to be used with a print job. Work orders are created automatically from this template when the linked meter expired (next step).

Select the work order #112 (or another if you'd like).

110	110	2/1/2005		No Assignment - 327	Bread Oven/Cooler
111	111	2/16/2005	2/17/2005	No Assignment - 327	Bread Baggers/Wr.
112	112	2/17/2005		Bob Hackworth	Building - Exterior

Name this work order template 'Replace Slicer Blade' or something else if you'd like. (sample manufacturing database shown) (picture 3).



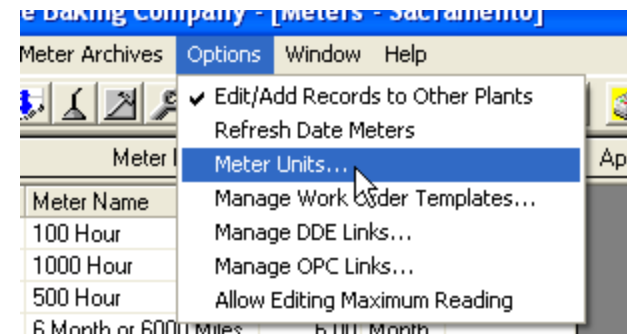
Using the MaintSmart Print Scheduler - Examples

Example #5:

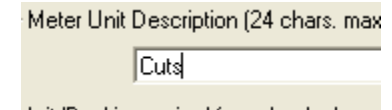
Step 3/6: Create a Meter Definition.

Create a Work Order Template Instructions Checklist:

- Open the **Meters** screen Select the **Configure Meters** tab.
- Select the menu items **Options > > Meter Units...**
- Enter the new meter unit definitions: 'Cuts' and Save this unit and close **Units** screen.
- Press the **New** button on the **Configure Meters** screen.
- Enter the meter name and definition as depicted below (picture 4).
- Press **Save**.



Create a new meter unit called 'Cuts'



Create a new meter named 'Blade Replace'




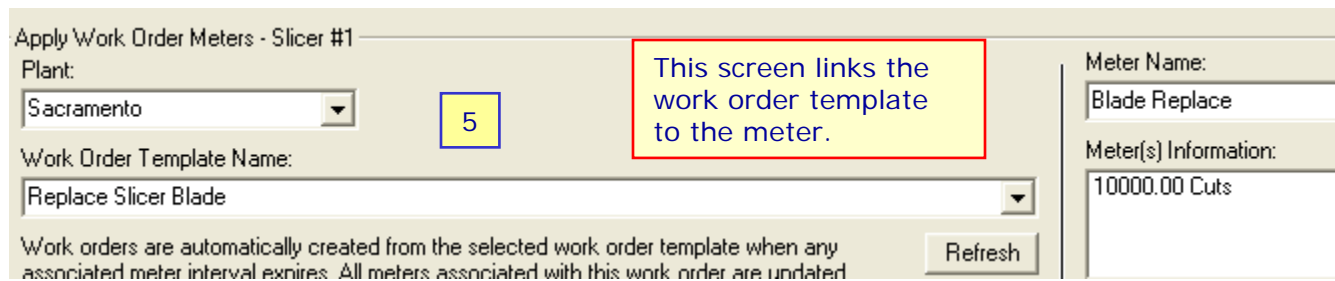
Using the MaintSmart Print Scheduler - Examples

Example #5:

Step 4/6: Link the Work Order Template To the Newly Created Meter.

Create a Work Order Template Instructions Checklist:

- Select the **Configure Meters** tab on the **Meters** screen .
- Press **New**. Select the work order template 'Replace Slicer Blade' from the **Work Order Template Name** drop-down box..
- Select the meter name: 'Blade Replace' from the **Meter Name** drop-down (picture 5).
- Press **Save**.



Apply Work Order Meters - Slicer #1

Plant:
Sacramento

Work Order Template Name:
Replace Slicer Blade

Meter Name:
Blade Replace

Meter(s) Information:
10000.00 Cuts

Work orders are automatically created from the selected work order template when any associated meter interval expires. All meters associated with this work order are updated.

Refresh

This screen links the work order template to the meter.




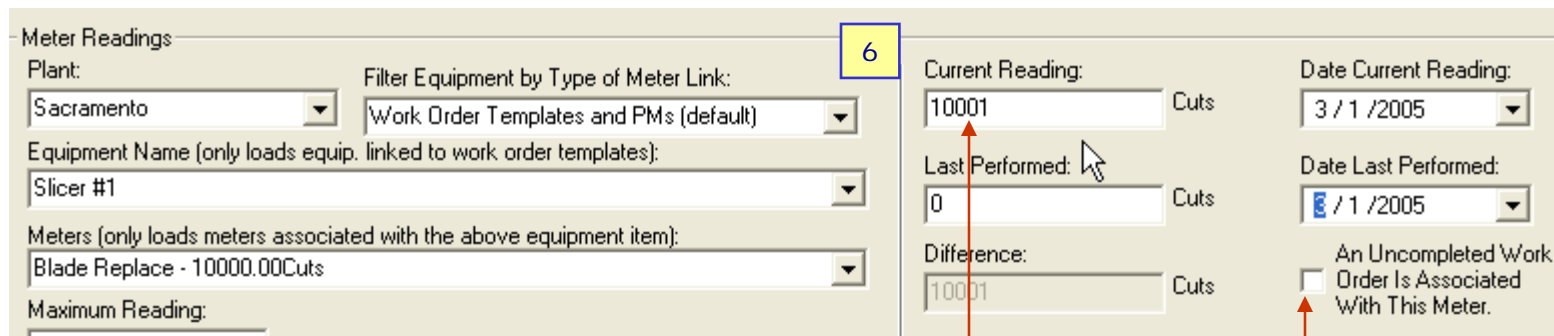
Using the MaintSmart Print Scheduler - Examples

Example #5:


Step 5/6: Enter an Initial Reading For This Meter.

Create a Work Order Template Instructions Checklist:

- Select the **Meter Readings** tab on the **Meters** screen 
- Press New. Select/type the entries depicted below (picture 6)
- Select the meter name: 'Blade Replace' from the **Meter Name** drop-down.
- Press **Apply**.



Enter a value greater than the amount needed to activate this meter and create a work order.

 When this is checked a work order is already in progress for this meter. Additional work orders are not created until this is unchecked again. Updating the meter-linked work order automatically un-checks this checkbox.



Using the MaintSmart Print Scheduler - Examples

Example #5:

Step 6/6: Enable MaintSmart's Auto-Print Scanner for Expired Meters.

Create a Work Order Template Instructions Checklist:

- Open the **Program Configuration** screen . Select the tab labeled **Configuration - More**.
- Make the same selections as shown in on the right (picture 7)
- Exit the **Program Configuration** screen and MaintSmart save the new settings. Now the print scanner is also scanning for expired meters.
- MaintSmart senses the expired meter created in the previous steps and creates a new work order from it. Next MaintSmart prints the work order to the printer specified in the linked print settings. MaintSmart marks this meter as being in progress so that duplicate work orders are not generated. When the resulting work order is marked completed from the Work Order screen MaintSmart prompts (depends on setting) for the new **Last Performed** and **Current Reading** for the **Meters** data. These values are enter automatically by MaintSmart and the meter "In Progress" checkbox is un-checked.

Once again this meter is ready for automatic work order creation and printing when the **Current Reading** exceeds the **Last Performed** by 10000 or more (in this example).

When this is checked a work order is created when a template - linked meter expires. This doesn't necessarily print the new work order though.

Select the work order format for metered work orders.



Using the MaintSmart Print Scheduler - Examples

Example #5:

Step 6/6: Enable MaintSmart's Auto-Print Scanner for Expired Meters.

Create a Work Order Template Instructions Checklist:

- Open the **Program Configuration** screen . Select the tab labeled **Configuration - More**.
- Make the same selections as shown in on the right (picture 7)
- Exit the **Program Configuration** screen and MaintSmart save the new settings. Now the print scanner is also scanning for expired meters.
- MaintSmart senses the expired meter created in the previous steps and creates a new work order from it. Next MaintSmart prints the work order to the printer specified in the linked print settings. MaintSmart marks this meter as being in progress so that duplicate work orders are not generated. When the resulting work order is marked completed from the Work Order screen MaintSmart prompts (depends on setting) for the new **Last Performed** and **Current Reading** for the **Meters** data. These values are enter automatically by MaintSmart and the meter "In Progress" checkbox is un-checked.

Once again this meter is ready for automatic work order creation and printing when the **Current Reading** exceeds the **Last Performed** by 10000 or more (in this example).

Auto-Print Scanner and Report Properties

Always Print Scheduled Print Jobs Regardless Of Logged On User
 Only Print Scheduled Print Jobs Linked To Logged On User
 Disable All Scheduled Print Jobs

Check For Expired Meters. Automatically Create Work Orders From Expired Meters
 Auto-Print Work Orders Created From Expired Meters 7
 Automatically Refresh Date Meters

Automatically Refresh OPC Meter Links Ignore Value If = 0

Meter Scan Rate (min.): Schedule Scan Rate (min.):

How To Use Parts For Metered Work Orders:

Report Format For Metered Work Orders:

When this is checked a work order is created when a template - linked meter expires. This doesn't necessarily print the new work order though.

Select the work order format for metered work orders.

•Personnel Work Scheduler

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Personnel Work Scheduler – Personnel Scheduling Overview

MaintSmart 5.0 introduces an enhanced personnel and work scheduling component that allows you to much more easily manage when your engineers work on specific tasks.

The term: 'Engineer' may be used interchangeably with the term: 'Technician' throughout this manual.

The Personnel Scheduler allows you to:

- Specify when engineers are working by:
 - Defining shifts
 - Assigning engineers to shifts
 - Specifying exceptions to shift work times for individual engineers
- Assign PMs and Work Orders to individual engineers and specify when the work is to be done.

Conventions in this portion of the manual

Date Format

In examples date s will be given using on the American standard date formats:

- January 17, 2014
- Jan 17, 2014
- 1/17/14 where the first number (1=January) is the month, the second number (17) is the day of the month, and the third number (14) is the 2-digit year
- 1/17/2014 where the first number (1=January) is the month, the second number (17) is the day of the month, and the third number (2014) is the 4-digit year

Time Format

Time will be given with either:

- 24 hour Time, e.g. 0730, 1300
- 12 hour with AM/PM, e.g. 7:30 AM, 1:00 PM (Note that 12:00 AM = 0000, and 12:00 PM = 1200)



Personnel Work Scheduler – Personnel Scheduling Overview

The basis for scheduling is the Shift

Shifts are defined for each plant in the company and are identified by name.

It is possible to declare a shift Inactive (or obsolete) in which case MaintSmart will remember its definition but no longer use it for scheduling.

Defining a Shift

To create a new shift it is necessary to specify:

- Shift Name
- Plant

Shift Segments

Because the working hours for a particular shift may change over time, shifts are defined for segments of time. A Shift Segment is a date range during which the pattern of work days and work hours are the same. Each shift is made up of one or more shift segments.

Example #1: Shift Segments

Suppose that from the time the company began in 1/1/2012 the Day Shift was always a 5-day work week that began at 6:00 AM on Monday-Friday. But the starting time for each day will be changed to 7:00 AM beginning in 2014. This is specified by defining two shift segments for the Day Shift as follows:

	Segment Start Date	Segment End Date
Shift Segment 1	1/1/2012	12/28/2013
Shift Segment 2	12/29/2014	12/31/2023



Defining Shift Segments

A **Shift Segment** is defined by specifying a recurring pattern of days worked and hours worked on each day.

A shift definition is composed of:

- A **Shift Name**
- A shift segment Start Date and End Date, that is a date range during which the shift definition is valid
- A cycle of days worked and hours worked on those days
- The number of days in the cycle during which the hours repeat
- A shift segment Start and End Date, that is a date range during which the shift definition is valid.
- A cycle of days worked and hours worked on those days. Is cycle is made up of:
 - A beginning date for the cycle of days
 - Number of days in the cycle.



Personnel Work Scheduler – Personnel Scheduling Overview

Example#2: Shift with a 7-day repeating cycle

Suppose that, beginning December 29, 2013, the Day Shift works each week from Monday through Friday from 7:00 AM to 11:00 AM and from 12:00 PM to 4:00 PM. As far as we know these Day Shift will have these hours forever.

To define the Day Shift we give it the Shift Name "Day Shift"

Assign the Shift Segment Start Date to be 12/29/2013 and the Shift Segment End Date to be some date in the future. At this time we do not expect the shift definition to change at some future date so we will assign a date far in the future to be the Shift Segment End Date, e.g. 12/31/2023. The Shift Segment End Date can be changed later, if necessary.

Pick a Cycle Start Date. In this example we can make the Cycle Start Date = 12/29/13. This is a Sunday.

Set the Number of days in the Cycle to be seven.

For each day in the cycle period specify the working hours as follows:

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	7:00 AM - 11:00 AM	7:00 AM - 11:00 AM	7:00 AM - 11:00 AM	7:00 AM - 11:00 AM	7:00 AM - 11:00 AM	
	12:00 PM - 4:00 PM	12:00 PM - 4:00 PM	12:00 PM - 4:00 PM	12:00 PM - 4:00 PM	12:00 PM - 4:00 PM	

This shift definition indicates that every seven days this pattern of work hours will be repeated. This is the common 5-day work week with Saturdays and Sundays off.



How to Choose the Cycle Start Date

The cycle start date is somewhat arbitrary. Its main purpose is to specify the day on which the repeating cycle of work days begins. Typically, if you are defining a shift schedule that is the same every week, then you will pick a Cycle Start Date on a Sunday.

Example #3: Non-7-Day Cycle

The cycle of work days may be something other than weekly. For example, suppose that the First Night Shift works three 12-hour days (Sunday, Monday, and Tuesday) and then has four days off, then they work four 12-hour days (Sunday, Monday, Tuesday, and Wednesday) and then have three days off. In this case the number of Cycle Days would be fourteen. The Cycle

If the Work Schedule for January 2014 was as follows (shaded indicates a work day), then the Cycle Start Date would be 1/5/2014 (first week is 3 work days and second week is 4 work days). It would also be valid to make the Cycle Start Date = 1/19/2014.

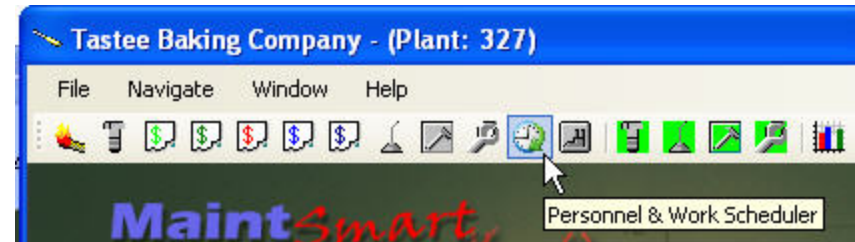
January 2014						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1



Personnel Work Scheduler – Working With Shifts

How to Use the Scheduler.

In MaintSmart click on the Scheduler toolbar button (it looks like a clock.)

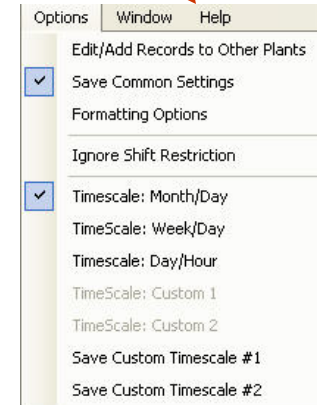
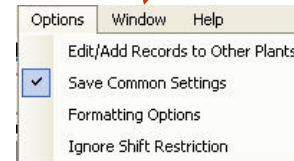
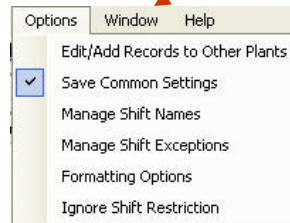
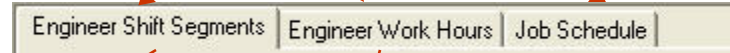


1: Create a Shift Segment

2: Assign an Engineer to a Shift.

3: Schedule work tasks for an Engineer.

When the Scheduler opens there are three tabs at the top arranged in the typical order in which you will use them when you are working with **an existing Shift**.



The **Options menu** will change depending on the tab selected.

The Options menu contains options that allow you to customize the way you use the Scheduler and manage some components of your schedules.



Personnel Work Scheduler – Creating and Editing Shifts

Creating a New Shift

When the first tab (Engineer Shift Segments) is selected you can use the Options menu to create a new Shift.

Click on the Manage Shift Names menu item to create a new Shift.

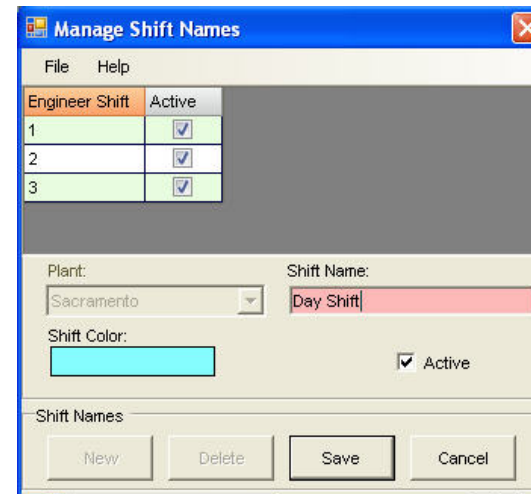
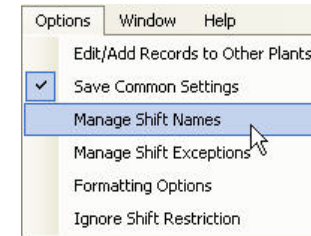
You can also use this menu item to edit an existing Shift.

Press **New** to begin creating a new Shift.

Enter a **Shift Name**.

Make sure the **Active** box is checked. Inactive Shifts are not available for scheduling.

Press **Save** to save the new Shift





Personnel Work Scheduler – Creating Shift Segments

Creating a New Shift Segment

When the first tab (Engineer Shift Segments) is selected you can create and edit Shift Segments.

Click on the Manage Shift Names menu item to create a new Shift.

You can also use this menu item to edit an existing Shift.

Press **New** to begin creating a new Shift Segment.

Select the **Shift Name** of the Shift for which you want to create a Shift Segment.

Enter the **From and To Dates** for the Shift Segment. Note that Shift Segments Begin at 0000 on the From Date and end at 2359 on the To Date.

Select the **Cycle Start Date**.

Enter the **Days in Cycle**. Shift Segments that have the same schedule every week should have Days in Cycle = 7.

The new Shift Segment may be saved now by pressing **Save** or you may enter the Shift Periods in the Schedule portion of the screen.

The screenshot shows a web-based form for creating a new shift segment. The form is titled "Plant:" and "Shift Name:". The "Plant:" dropdown menu is set to "Sacramento". The "Shift Name:" dropdown menu is empty. Below these are three input fields: "From Date:" set to "1/10/2014", "Cycle Start Date:" set to "1/10/2014", and "Days in Cycle:" set to "7". At the bottom of the form are four buttons: "New", "Delete", "Save", and "Cancel".

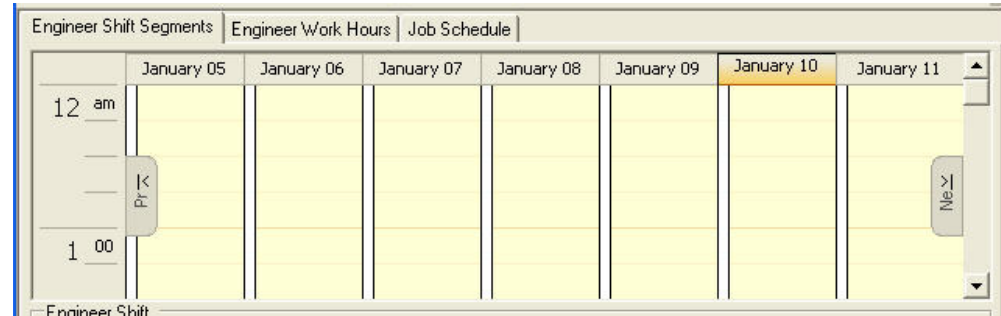


Personnel Work Scheduler – Entering Shift Periods for a Shift Segment

Working with Shift Periods

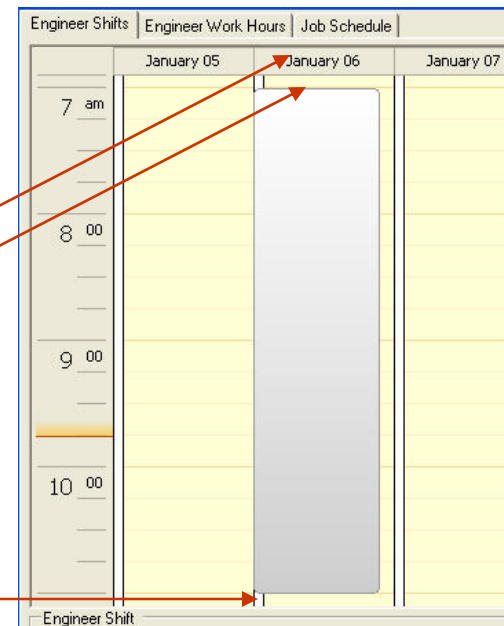
The start and End times of Shift Periods are entered and displayed using the scheduler on the scheduler portion on the Engineer Shift Segment tab. The scheduler is very similar to the scheduler found in Microsoft Outlook®.

After entering the Cycle Start Date and Days in Cycle information for the Shift Segment the scheduler should display the dates in the cycle.



In the scheduler, right-click on the date and time for which you want the new period to begin. The Edit/Delete Shift Period dialog will appear. The period information has the **Date** and **Start Time** on which you right-clicked. The default **End Time** is calculated base on the default duration of four hours. Change any of the Shift Period information you wish and press **Save**. The new Shift Period will now be displayed in the scheduler.

Note that all times in MaintSmart Scheduling may be entered to the nearest minute.



Edit/Delete Shift Period

Date: 1/ 6/2014

Start time: 7:00 AM

End time: 11:00 AM

Duration: 04:00

Save Delete



Personnel Work Scheduler – Entering Shift Periods for a Shift Segment

Editing Existing Shift Periods

Right-click on an existing Shift Period in the scheduler to edit or delete it.

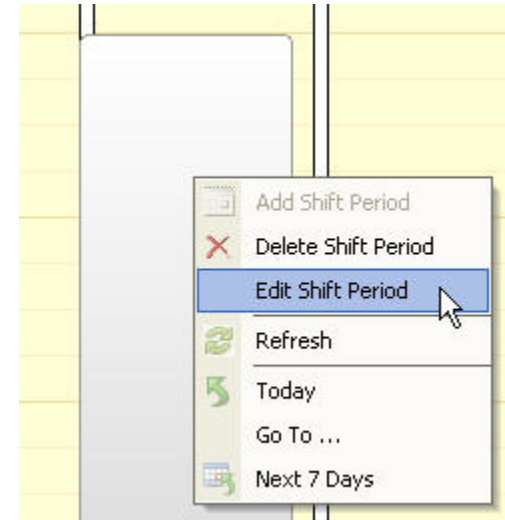
If you select **Edit Shift Period** Edit/Delete Shift Period dialog will appear and allow you to change values for the Shift Period.

If you select **Delete Shift Period** the Shift Period will be permanently deleted.

Restrictions on Creating and Editing Shift Periods

If you attempt to edit the information for a shift period in any way that will cause it to **overlap** another shift period for the same shift segment it will not be possible to save the Shift Period.

A single Shift Period always **starts and ends on the same day**. If you need to enter a Shift Period that starts on one day and ends on the next, then you must enter two consecutive Shift Periods—one that ends at midnight and the next that begins at midnight.



Changing or deleting Shift Periods will not have any effect on existing Job Schedules.



Personnel Work Scheduler – Entering Shift Exceptions

Shift Exceptions

Inevitably there are times when exceptional circumstances make it necessary to short periods of time to either work at times when other than the normal shift schedule or to not work during normal shift working hours.

Examples are:

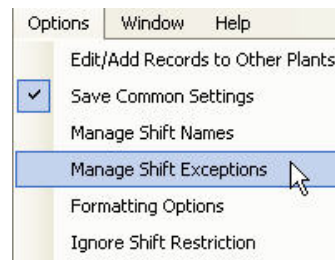
- Planned overtime to meet urgent project deadlines
- Closing the plant for a holiday.

Shift Exceptions allow you to specify periods of time during which work for a shift will either be suspended or added outside of the normal shift schedule.

Note that Shift Exceptions apply to the entire shift, not individual engineers. There also Engineer Work Hour Exceptions which will be covered later.

To enter a Shift Exception

- Select the **Engineer Shift Segment** tab.
- Click on the **Options** menu.
- Click on **Manage Shift Exceptions.**



Working: Engineers on this shift will be working during the entire time of this exception.

Non-Working: Engineers on this shift will NOT be working during the entire time of this exception.

The **Manage Shift Exceptions dialog** opens

- Select the Shift
- Enter the Start and End times of the exception.
- Specify whether the Exception is for **Working** Time or **Non-Working** Time
- You may optionally enter a short description—possibly the reason for the exception.
- Press **Save** to save the Shift Exception.

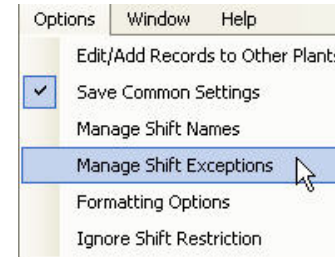
 A screenshot of the 'Schedule Exceptions' dialog box. It features a dropdown for 'Engineer Shift' (highlighted in pink), two radio buttons for 'Working' and 'Non-Working' (with 'Non-Working' selected), and two sets of date and time dropdowns for 'From' and 'To' (both set to 1/10/2014 09:09). There is a 'Description:' text field. At the bottom, there are four buttons: 'New', 'Delete', 'Save', and 'Cancel'. Red arrows point from the text boxes above to the 'Working' radio button and the 'Non-Working' radio button.



Personnel Work Scheduler – Editing Shift Exceptions Exceptions

To Edit Existing Shift Exceptions

- Select the **Engineer Shift Segment tab**.
- Click on the **Options** menu.
- Click on **Manage Shift Exceptions**.



The **Manage Shift Exceptions dialog** opens

- A list of all Shift Exceptions is shown at the top of the dialog box.
- Click on the exception you wish to edit.
- The information for that exception will be shown in the lower part of the dialog.
- Make the changes you want and press **Save**.

Engineer Shift	Start	End	Working	Description
Day Shift	2014-03-17 00:00:00Z	2014-03-17 11:59:00Z	<input type="checkbox"/>	Founder's Day plant shutdown
Day Shift	2015-03-17 00:00:00Z	2015-03-17 11:59:00Z	<input type="checkbox"/>	Founder's Day plant shutdown
Day Shift	2016-03-17 00:00:00Z	2016-03-17 11:59:00Z	<input type="checkbox"/>	Founder's Day plant shutdown

Hint: Exceptions may also be deleted from this dialog box.

The form shows the following fields and controls:

- Exception: Day Shift (dropdown menu)
- Working: Working
- Non-Working: Non-Working
- From: 3/17/2014 12:00 AM (dropdown)
- To: 3/17/2014 11:59 AM (dropdown)
- Description: Founder's Day plant shutdown (text field)
- Buttons: New, Delete, Save, Cancel



Changing or deleting Shift Exceptions will not have any effect on existing Job Schedules.



Personnel Work Scheduler – Engineer Work Hours

Assigning Engineers to Shifts

In MaintSmart Shifts are useful because they define the schedule of days and hours worked by Engineers. After the Shifts have been defined for a plant it is necessary to assign Engineers to the Shifts. The second tab of the MaintSmart Scheduling page is **Engineer Work Hours**. It is where you can select engineers and assign them to Shifts.



- Select the Engineer and Shift from the drop-down boxes.
- Enter the date range for which the Engineer is assigned to the selected shift.
- Press the Save button.

Plant: Sacramento
Engineer: [Blue bar]
From Date: 1/10/2014
To Date: 1/10/2014
Shift Name: [Pink bar]
Buttons: New, Delete, Save, Cancel



Personnel Work Scheduler – Engineer Work Hour Exceptions

Engineer Work Hour Exceptions

Inevitably there are times when individual Engineers will not work the exact days or hours of the Shift to which they are assigned.

Examples are:

- Planned vacation.
- Two Engineers swapping work days
- Planned medical leave

Engineer Work Hour Exceptions allow you to specify periods of time during which individual Engineers' work hours will differ from the hours of the normal shift schedules to which they are assigned.

Note that a given Engineer Work Hour Exception only applies to a single Engineer.

Note also that in any conflict between Shift Exceptions and Engineer Work Hour Exceptions, the Engineer Work Hour Exceptions takes precedence.



Personnel Work Scheduler – Entering Engineer Work Hour Exceptions

To enter Engineer Work Hour Exceptions

- Select the **Engineer Work Hours** tab.
- Click on the **Options** menu.
- Click on **Manage Engineer Work Hour Exceptions**



The **Manage Engineer Work Hour Exceptions** dialog opens

- Select the Engineer
- Enter the Start and End times of the exception.
- Specify whether the Exception is for **Working** Time or **Non-Working** Time
- You may optionally enter a short description—possibly the reason for the exception.
- Press **Save** to save the Engineer Work Hour Exception.

Non-Working: This Engineer will NOT be working during the entire time of this exception.

Working: This Engineer will be working during the entire time of this exception.



Personnel Work Scheduler – Editing Engineer Work Hour Exceptions

To Edit Existing Engineer Work Hour Exceptions

- Select the **Engineer Work Hours** tab.
- Click on the **Options** menu.
- Click on **Manage Engineer Work Hour Exceptions**



The **Manage Engineer Work Hour Exceptions** dialog opens

- A list of all Engineer Work Hour Exceptions is shown at the top of the dialog box.
- Click on the exception you wish to edit.
- The information for that exception will be shown in the lower part of the dialog.
- Make the changes you want and press **Save**.

A screenshot of the 'Manage Engineer Work Hour Exceptions' dialog box. It features a table with the following data:

Engineer	Start	End	Working	Description
Charlie Huston	2014-03-08 07:00:00Z	2014-03-08 15:00:00Z	<input checked="" type="checkbox"/>	Saturday special project.
Charlie Huston	2014-06-08 00:00:00Z	2014-06-14 23:59:00Z	<input type="checkbox"/>	Charlie's summer vacation

Hint: Exceptions may also be deleted from this dialog box.

A screenshot of the 'Exception' details form within the dialog box. It contains the following fields and controls:

- Exception:** A dropdown menu showing 'Charlie Huston'.
- Working:** A radio button that is unselected.
- Non-Working:** A radio button that is selected.
- From:** A date and time selector showing '6/ 8/2014 12:00 AM'.
- To:** A date and time selector showing '6/14/2014 11:59 PM'.
- Description:** A text input field containing 'Charlie's summer vacation'.
- Buttons:** 'New', 'Delete', 'Save', and 'Cancel' buttons are located at the bottom of the form.



Changing or deleting Engineer work Hour Exceptions will not have any effect on existing Job Schedules.



Personnel Work Scheduler – Job Schedules

Job Schedules

The purpose of scheduling Shifts and Engineers is to make it possible to schedule Jobs.

A job is the work described in a Work Order or Preventative Maintenance Task.

A Job is assigned to one or more Engineers to be done during a specific period of time.

The fact that an Engineer is assigned to a shift makes it possible to show what hours the Engineer will be working so the Job can be assigned to an Engineer at an appropriate time.

The Job Schedules tab in the MaintSmart© Scheduler is where you will assign Work Orders and Preventative Maintenance Tasks to Engineers to be done at a particular time.

Summary

A Job Schedule is composed of:

1. A Work Order or PM Task
2. An Engineer
3. A time period

How Job Schedules are Saved

When you click the Save Button on the Job Schedule screen, all of the individual jobs are saved as:

- Engineer
- Task (PM or Work Order)
- Start Time
- End Time
- Duration

Remember : No Job Schedule changes are saved until you click the Save Button.

No other information you see on the screen is saved. The formatting, Task Mode, and task ordering options are only in effect while you are viewing the schedule.

This means you can use all the functionality available in the Scheduler to schedule tasks and then save the basic schedule information.



Personnel Work Scheduler – Entering Job Schedules

Entering Job Schedules

Job Schedules are entered on the **Job Schedules tab** of the MaintSmart© Scheduler.

This tab has three sub-tabs:

1. The **Display Schedule tab** allows you to choose the Engineer and time period with which you want to work.
2. The **PMs tab** allows you to pick Preventative Maintenance Tasks to assign and schedule.
3. The **Active Work Orders tab** allows you to pick Work Orders to assign and schedule.

The screenshot shows a software window with three tabs: 'Display Schedule', 'PMs', and 'Active Work Orders'. The 'Display Schedule' tab is active. It contains a 'Display Filters' section with the following fields:

- Plant: Sacramento
- Engineer: Charlie Huston
- From Date/Time: 1/22/2012
- To Date/Time: 2/22/2013

At the bottom right of the window, there are two buttons: 'Display' and 'Save'.



Personnel Work Scheduler – Entering Job Schedules

Entering Job Schedules

Job Schedules are entered for one Engineer at a time.

The first step in scheduling a job is to select the Engineer.

The next step is to specify a time period by From and To Dates.

After you select the Engineer and Time Period **Press Display**.

The Job Schedule will be shown using:

- A Task List and
- A Gantt Chart.

Display Schedule | PMS | Active Work Orders

Display Filters

Plant: Sacramento

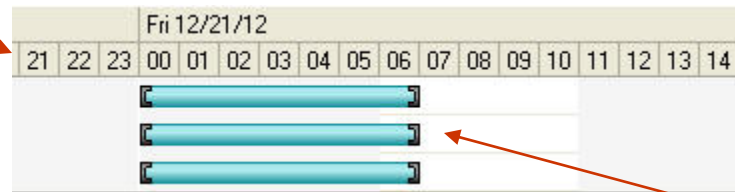
Engineer: Charlie Huston

From Date/Time: 1/22/2012

To Date/Time: 2/22/2013

Display Save

	Task Mode	PM or WO	Duration	Start	Finish
1	Manual	PM: 90 Degree Roller Bed #13 - Check...		1 12/21/2012...	12/24/2012 8:00...
2	Manual	PM: 90 Degree Roller Bed #13 - Lubricate...		1 12/21/2012...	12/24/2012 8:00...
3	Manual	PM: 90 Degree Roller Bed #13 - Clean...		1 12/21/2012...	12/24/2012 8:00...



Hint: The Job Schedule Gantt Chart in MaintSmart© is very similar to the Gantt Chart in Microsoft Project.

Gantt Charts use bars under a timeline to show when Tasks are scheduled.



Personnel Work Scheduler – Job Schedules—Scheduling PMs

Scheduling a PM Job

After selecting an Engineer and a Time Period and pressing the Display button on the Display Schedule tab you can switch to the **PMS tab** to schedule PM jobs.

Fill in any filter information you want to use and **Press the Load PMS button**.

The PMS that meet the filter criteria will be list to the left of the filter information.

Load PMS - 45 Records Found

Work Area/Location: Department: Bread Packaging

Equipment

From Start Date: 1/22/2012 To End Date: 2/22/2013

Due By or Late

Load PMS Schedule PMS Save

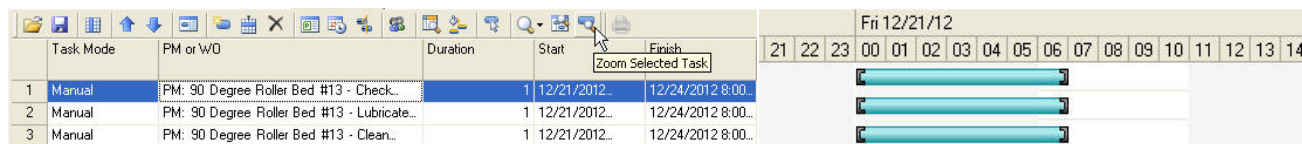


Filters allow you to more easily find the PMS you want and also speed up loading the PM list.

Put a **checkmark** next to each PM in the list that you want to schedule and then **Press the Schedule PMS button**.

Equipment	Task
<input checked="" type="checkbox"/> 90 Degree Roller Bed #13	Check Blower Oil Level
<input type="checkbox"/> 90 Degree Roller Bed #13	Check Blower Oil Level
<input checked="" type="checkbox"/> 90 Degree Roller Bed #13	Lubricate and Clean Pump(s)
<input type="checkbox"/> 90 Degree Roller Bed #13	Clean Electrical Panel(s)
<input checked="" type="checkbox"/> 90 Degree Roller Bed #13	Clean Pump Suction Strainer
<input type="checkbox"/> 90 Degree Roller Bed #13	Clean/Inspect Electrical Components

The selected PMS will be copied into the Gantt Chart.





Personnel Work Scheduler – Job Schedules—Scheduling Work Orders

Scheduling a Work Order Job

After selecting an Engineer and a Time Period and pressing the Display button on the Display Schedule tab you can switch to the **Active Work Orders** tab to schedule Work Order jobs.

Fill in any filter information you want to use and **Press the Load PMs** button.

The PMs that meet the filter criteria will be list to the left of the filter information.

3 Records Found

Work Area/Location: Department:

Equipment

From Date Assigned: To Date Assigned:

Due By or Late



Filters allow you to more easily find the Work Orders you want and also speed up loading the Work Order list.

Put a **checkmark** next to each PM in the list that you want to schedule and then **Press the Schedule WOs** button.

Work Order ID	Equipment	Task	Date Assigned	Engineer
<input checked="" type="checkbox"/> 283	90 Degree Roller Bed	Adjust chain tension.	2/21/2012 11:4...	No Assignment ...
<input checked="" type="checkbox"/> 284	90 Degree Roller Bed	Align Pressure Rolls	2/21/2012 12:0...	No Assignment ...
<input checked="" type="checkbox"/> 296	90 Degree Roller Bed	Adjust chain tension.	3/2/2012 10:54...	No Assignment ...

The selected Work Orders will be copied into the Gantt Chart.

10	Manual	WO: 283:90 Degree Roller Bed - Adjust chain tension.	0.1667	2/21/2012 11:45 AM	2/21/2012 11:55 AM	
11	Manual	WO: 284:90 Degree Roller Bed - Align Pressure Rolls	1	2/21/2012 12:04 PM	2/21/2012 2:00 PM	
12	Manual	WO: 296:90 Degree Roller Bed - Adjust chain tension.	1	3/2/2012 10:54 AM	3/5/2012 7:54 AM	

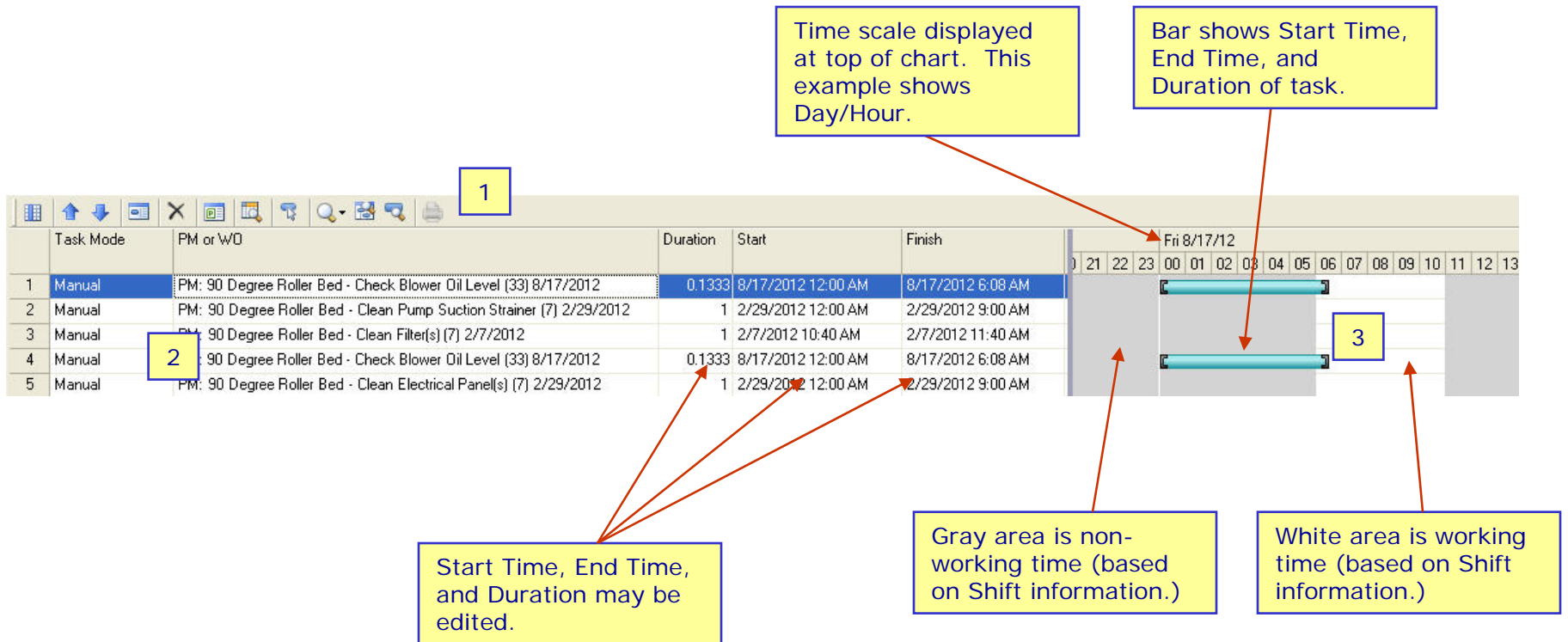


Personnel Work Scheduler – Job Schedules—Gantt Chart Details

About The Job Scheduler Gantt Chart

The primary parts of the Job Scheduler Gantt Chart are:

1. Toolbar – Toolbar buttons perform various formatting and scheduling functions.
2. Task List – Lists all of the scheduled tasks and allows task schedule editing.
3. Graphical Task Display – Displays all of the scheduled tasks in a graphical format and allows task schedule editing.



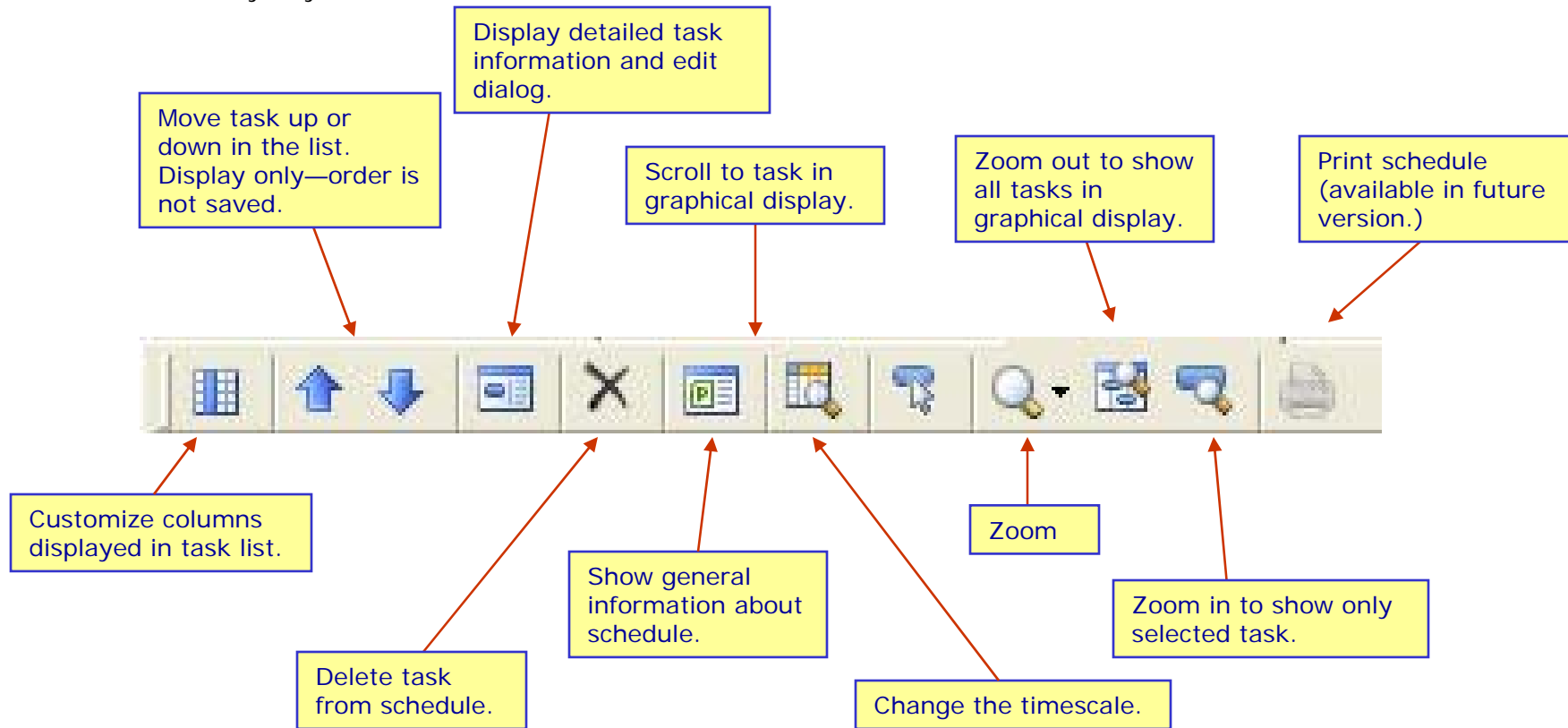


Personnel Work Scheduler – Job Schedules—Gantt Chart Details

About The Job Scheduler Gantt Chart Toolbar

The buttons on the toolbar allow you change the way you view the Job Schedule.

Only the Delete Button affects the actual Job Schedule. All other buttons only affect the view and will not change your Job Schedule in any way.





Personnel Work Scheduler – Job Schedules—Editing in the Task List

Editing Tasks in the Gantt Chart Task List

It is possible to edit the Task Start, Finish and Duration by double-clicking on the field in the Gantt Chart task list.

	Task Mode	PM or 'WD	Duration	Start	Finish
1	Manual	PM: 90 Degree Roller Bed #13 - Check...	1	12/21/2012...	12/24/2012 8:00...
2	Manual	PM: 90 Degree Roller Bed #13 - Lubricate...		1 12/21/2012...	12/24/2012 8:00...
3	Manual	PM: 90 Degree Roller Bed #13 - Clean...		1 12/21/2012...	12/24/2012 8:00...

What is Task Mode?

There are two task modes:

In **Manual Mode** you set the Start and Finish Times and Duration and that's all there is to it.

In **Automatic Mode** an internal scheduler within the Gantt Chart control takes over the scheduling of your tasks in the same way that Microsoft Project does. This mode should only be used if you are an experienced Microsoft Project user and fully understand it (and want its functionality.) The explanation of the automatic scheduling logic is beyond the scope of this manual—this mode selection feature is only included in the MaintSmart Scheduler as a convenience to those who fully understand its use.

Even if you use Automatic Mode on a task, the next time it is loaded in the scheduler it will be back in Manual Mode.

It is highly recommended that **ONLY Manual Mode** be used in the MaintSmart Scheduler



Keep in mind that no schedule changes are saved until you click the Save button. If you make a mistake you can Cancel and start over. All Job Schedules that you saved previously will still be there. If you save your work often, you will be less likely to lose work due to mistakes.



Personnel Work Scheduler – Job Schedules—Editing in the Graphical Display

Editing Tasks in the Gantt Chart Graphical Display #1

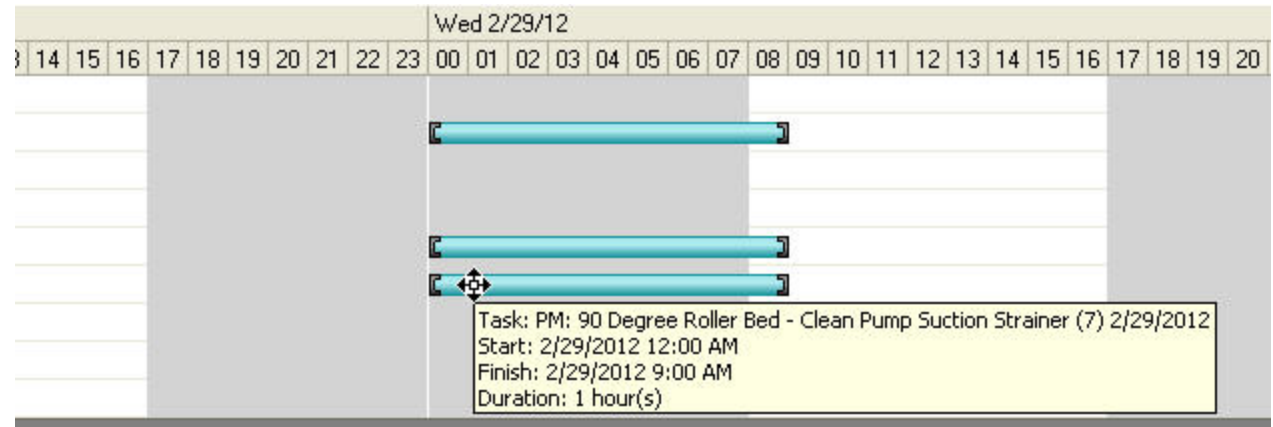
When you hover the mouse cursor over a task bar the cursor changes its appearance and detailed task information is displayed in a pop-up box.

There are two operations you can perform on a task bar with the cursor:

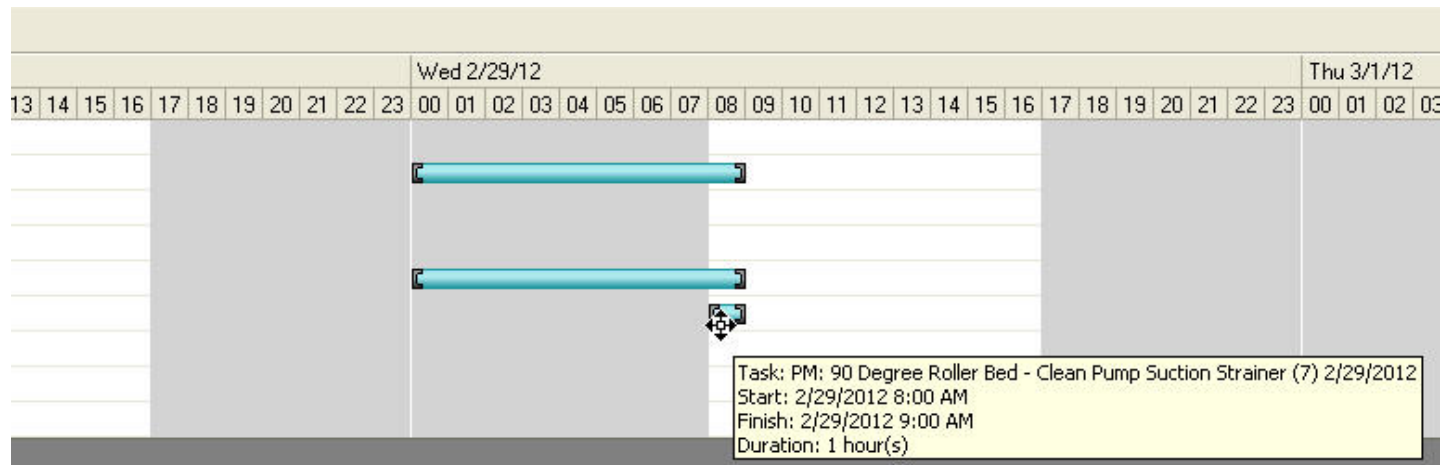
(1) Move the Start Time

When the cursor with four arrows appears, you can drag the Start Time of the task to start at a different time.

In this example we will move the start time (12:00 AM) to the beginning of the shift's working time (8:00 A.M.).



Notice that the duration does not change, but after the change the full task bar lies within the shift working time (white area.)





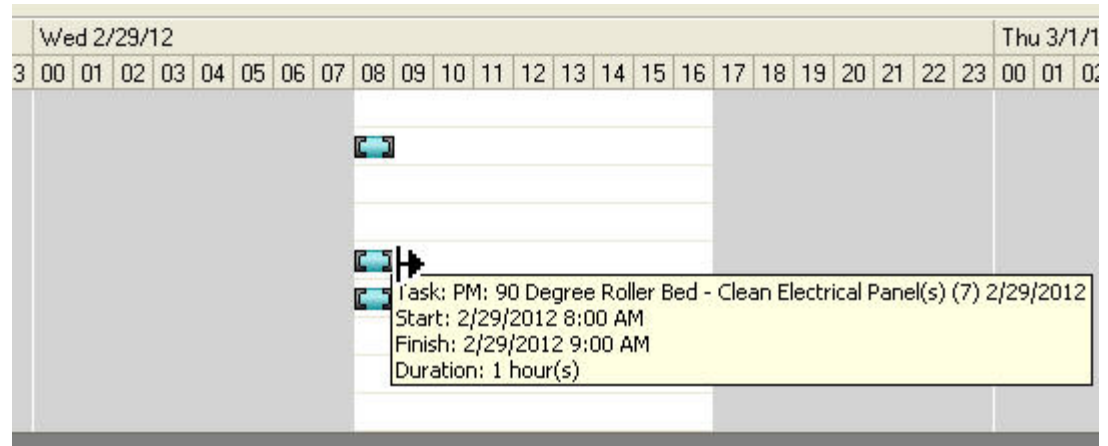
Personnel Work Scheduler – Job Schedules—Editing in the Graphical Display

Editing Tasks in the Gantt Chart Graphical Display #2

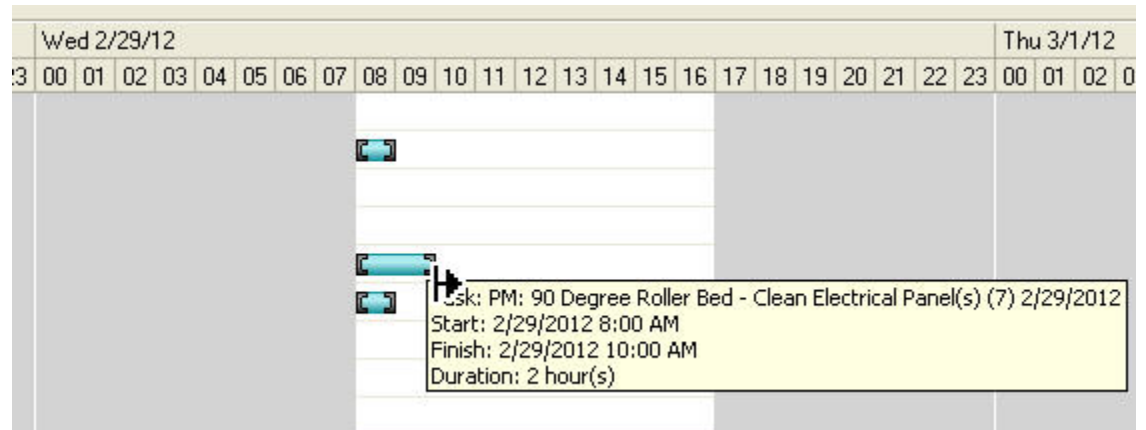
(2) Change the Duration

When the cursor is hovered over the right side of the task bar it changes its appearance to have one arrow. With this cursor you can drag the end of the task bar to change the duration..

In this example we will change the duration from 1 hour to 2 hours.



Now the task begins at 8:00 AM (as before), but it ends at 10:00.



Since these three tasks are all scheduled at the same time for the same Engineer, you would probably want to move them so they start one after the other.



Personnel Work Scheduler – Job Schedules—Controlling the Gantt Chart Timescale

Controlling the Gantt Chart Timescale – Built In Timescales

The Gantt Chart Timescale can contain one, two, or three levels where each level is made up of a different time unit. By default there are two levels. After installing MaintSmart the higher level will be Days and the lower level will be Hours. The user can control the timescale in Job Schedule Gantt Chart.

Using the Options Menu

There are three preprogrammed Timescales incorporated into the MaintSmart Job Scheduler:

- Month/Day
- Week/Day
- Day/Hour

A check will appear next to the currently selected timescale (if any.)

Month/Day

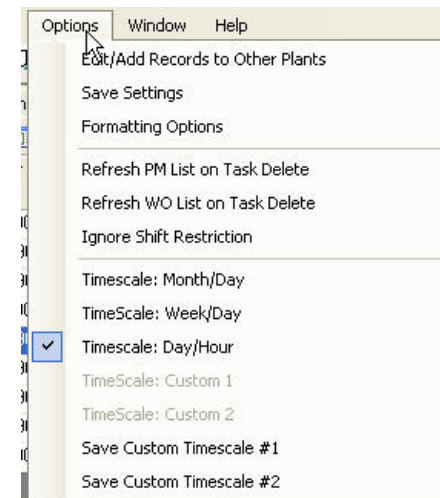
February, 2012																												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29

Week/Day

Sun 2/5/12							Sun 2/12/12						
5	6	7	8	9	10	11	12	13	14	15	16	17	18

Day/Hour

Wed 2/22/12																							
00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23






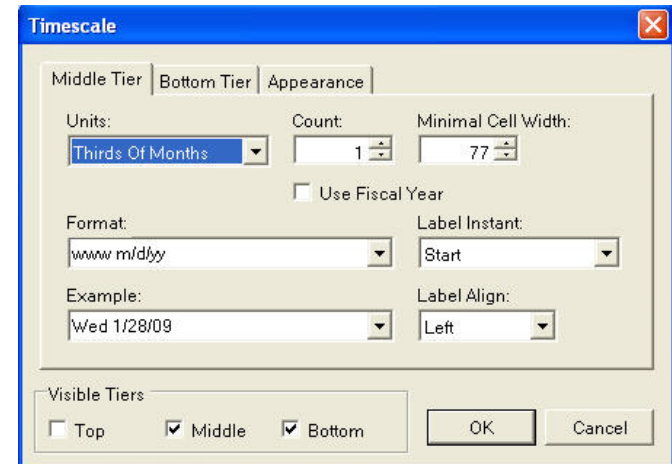
Personnel Work Scheduler – Job Schedules—Controlling the Gantt Chart Timescale

Controlling the Gantt Chart Timescale – Custom Timescales

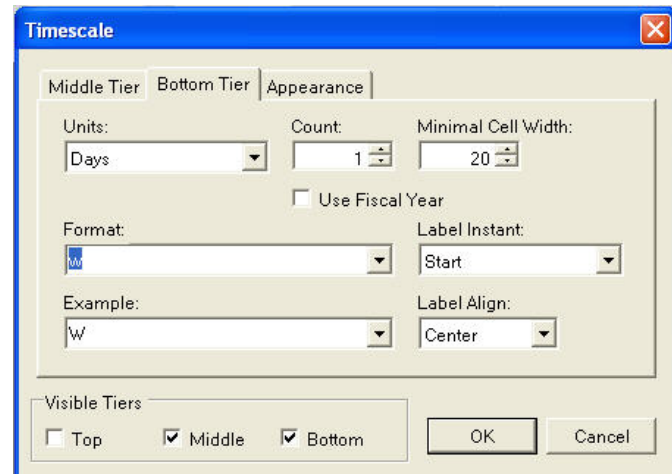
Using the Timescale toolbar button, it is possible to configure and format your own custom timescales.

MaintSmart will allow you to save up to two custom timescales so they will be easy for you to reuse.

- Click on the Timescale Toolbar Button 
- In the Timescale dialog choose the units you want for the different levels. You can also choose how to format the date and time for each level.
- Click on the Options menu
- Click on one of the Save Custom Timescale menu items.
- In the future one of the Custom Timescale menu items will be available.



The screenshot shows the 'Timescale' dialog box with the 'Middle Tier' tab selected. The 'Units' dropdown is set to 'Thirds Of Months', 'Count' is 1, and 'Minimal Cell Width' is 77. The 'Format' dropdown is 'www m/d/yy', 'Label Instant' is 'Start', 'Example' is 'Wed 1/28/09', and 'Label Align' is 'Left'. The 'Visible Tiers' section has 'Middle' and 'Bottom' checked. 'Use Fiscal Year' is unchecked. 'OK' and 'Cancel' buttons are at the bottom right.




The screenshot shows the 'Timescale' dialog box with the 'Bottom Tier' tab selected. The 'Units' dropdown is set to 'Days', 'Count' is 1, and 'Minimal Cell Width' is 20. The 'Format' dropdown is 'w', 'Label Instant' is 'Start', 'Example' is 'w', and 'Label Align' is 'Center'. The 'Visible Tiers' section has 'Middle' and 'Bottom' checked. 'Use Fiscal Year' is unchecked. 'OK' and 'Cancel' buttons are at the bottom right.



Personnel Work Scheduler – Job Schedules—Controlling the Gantt Chart Timescale

Controlling the Gantt Chart Timescale – Custom Timescale Example

- Click on the Timescale Toolbar Button 
- The Top Tier is left invisible so there will be two levels.
- We choose “Thirds of a Month” as the Middle Tier Timescale.
 - The format will be the day and date
- We choose “Days” as the Bottom Tier Timescale.
 - The format will be the one-character day abbreviation.
- Click OK and the timescale in the Gantt Chart is changed:

Wed 2/1/12					Sat 2/11/12					Tue 2/21/12																		
W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W

Now we can save this Custom Timescale for future use.

It is now available on the Options menu.

