

Virtual Stopwatch 2.0

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I. Disclaimer

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Good data processing procedure dictates that any program be thoroughly tested with non-critical data before relying on it. The user must assume the entire risk of using the program. ANY LIABILITY OF THE SELLER WILL BE LIMITED EXCLUSIVELY TO PRODUCT REPLACEMENT OR REFUND OF PURCHASE PRICE.

II. Program Overview

Virtual Stopwatch 2.0 is a multi-function clock/timer program for Windows '95, '98, or NT. The program functions in three basic modes:

Stopwatch:

Stopwatch mode allows you to time events to the second, 10th of a second, and 100th of a second. The basic controls allow you to start and stop the stopwatch, reset the display to zero, and pause update of the display while continuing to run (lap).

Countdown Timer:

The countdown timer functions like the stopwatch, with the exception that timer counts from a pre-programmed time to zero. Once zero is reached, the timer will execute a user-defined alarm, then reset itself to the countdown time.

Clock:

The clock does exactly what you would expect from a clock program, display the current time. You can also create user-defined alarms to occur at any time. While in clock mode, you can take advantage of the full featured time logging functionality.

The alarming functionality within the program is very flexible. You can create alarms that beep, play a WAV file, run a program, or do nothing at all. Alarms can be programmed to repeat at a given interval either a set number of times, or indefinitely.

The time logging feature allows you to easily log your time and create reports based on the log information. You can configure the program to prompt for notes when logging in, logging out, or both. The Log Report dialog allows you to view all the log entries and total selected log times, print reports, or export the log data. You can also edit, add, or delete individual log entries.

The digit display of the program can also be changed. External digit definition files contain bitmaps that are used by the program. These bitmap definitions can define the "font" of the display and the size of the digits.

III. Registering the Program

Unlike Stopwatch 1.0, Virtual Stopwatch 2.0 is not freeware. You must register the program to enable full usability. The unregistered version of the program will only run for five minutes. After that, all timer and clock functions in the program become disabled. You can re-run the program to continue using it, or register it.

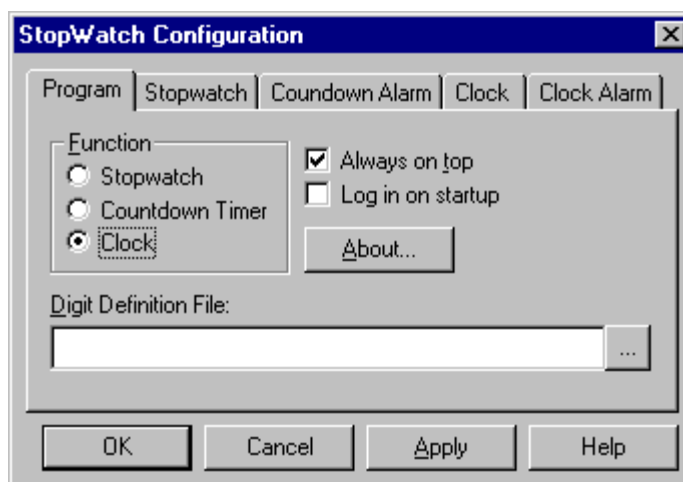
Registering the program is easy. Once you have paid the registration fee, you will receive a unique registration code. Simply enter it into the registration code box in the About dialog and press OK. You can access the about dialog by selecting About... from the System Menu (click on the little stopwatch in the title bar), or from the Program tab in the configuration dialog (double-click on the clock/stopwatch display).

Once registered, your registration is good for all future releases of the program.

See Contact and Ordering Information for more information on how and where to register the program.

IV. Configuring the Program

The first step in using Virtual Stopwatch 2.0 is to configure it to do what you want it to do. All the program configuration is done through the Configuration Dialog. This is a tab dialog that allows you to change every aspect of the program. You can access the dialog by selecting Configure... in the system menu, or by double-clicking on the digit display. The Configuration Dialog looks like this:



These are the configuration controls in the Program tab. The other tabs will be explained later in this document.

Function:

Select the basic program function you want to use.

Always on top:

If this is checked, Virtual Stopwatch will always be visible on the screen, no matter which application is active.

Log in on startup:

If this is checked, you will be logged in whenever the program is started. If you previously exited the program without logging out, the log status will not change.

About...:

Display the About Dialog.

Digit Definition File:

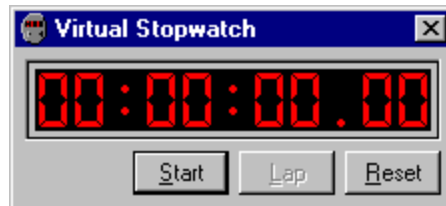
Select a Digit Definition File (*.DDF) to use add-on digit bitmaps. Leave it blank to use the internal default bitmaps. The program ships with two digit definition files. Either type in the pathname of the file, or browse for it by pressing the "..." button. See the section on Alternate Display Bitmaps for more information.

The Configuration Dialog also has the following buttons at the bottom that are used no matter which tab you are changing at the time:

- OK** Save the changes and exit the Configuration Dialog.
- Cancel** Exit the Configuration Dialog without saving the changes.
- Apply** Save and update the changes without exiting the Configuration Dialog.
- Help** Not implemented at this time.

V. Stopwatch Mode

When in Stopwatch mode, the program functions as a basic stopwatch. It should look something like this (depending on how you have the stopwatch configured):



See the section on Configuring the Stopwatch and Countdown Timer for more information on how to configure what you see. The basic functionality is explained by the use of the buttons:

- Start** Start the stopwatch. Once started the Start button will change to Stop.
- Stop** (While the stopwatch is running) Stop the stopwatch.
- Lap** Freeze the display without stopping the stopwatch from running
- Reset** Clear the display to zero.

VI. Countdown Mode

Countdown mode functions exactly like Stopwatch mode with the following exceptions:

1. Time starts from a pre-programmed time, then counts backward to zero.
2. The Reset button sets the time to the pre-programmed time.
3. When the time reaches zero, the countdown alarm is activated.

Once the countdown reaches zero, and the alarm is activated, the Reset button will change to Clear. This will only happen if you have configured the countdown alarm to repeat. If you press Clear while the alarm is repeating, it will turn off the alarm. You can configure an alarm to repeat a set number of times. Once the alarm is done repeating, it will clear itself.

After the alarm is done, cleared, or zero is reached with no alarm, the countdown timer will reset itself to the pre-programmed time.

For more information on configuring the countdown timer and the countdown alarm see the sections on Configuring the Stopwatch and Countdown Timer, and Countdown Timer Alarm.

VII. Clock Mode

Clock mode displays the current computer time. Please note that the accuracy of the clock is based on your computer's internal clock. If the time is incorrect, you can set it within your computer system settings. The clock display looks like this:



The buttons on the clock display perform the following functions:

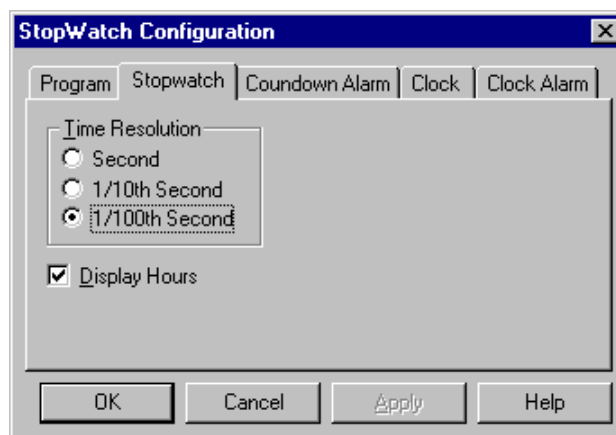
- Log In** Available while not currently logging, will start logging your time.
- Log Out** Available while logging, will stop logging and add a new record to the log file.
- Report** Brings up the Log Report Dialog, which allows you to view and manipulate your log times.
- Clear** Clears an alarm condition.

You can set up the clock so that it chimes the hour and half hour. The hour display is selectable between 12 and 24 hour formats. See the section on Configuring the Clock for more information.

You can create alarms that beep, play a WAV file, or run a program at any time. Note that clock alarms and chimes ARE active regardless if you are in clock mode or not. See the section on Clock Alarms for more information on how to configure clock alarms.

VIII. Configuring the Stopwatch and Countdown Timer

The Stopwatch tab in the Configuration Dialog contains the settings used by the Stopwatch and Countdown Timer. It looks like this:



These are the settings in the Stopwatch tab.

Time Resolution:

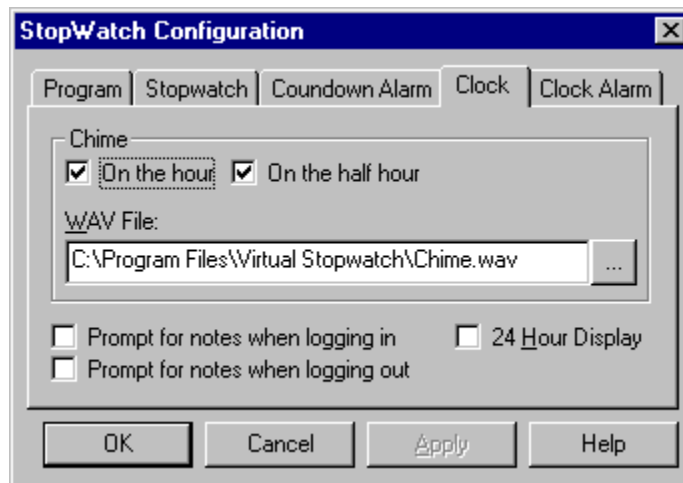
Set the resolution of the display to the Second (no decimal places), 1/10th Second (one decimal place), or 1/100th Second (two decimal places).

Display Hours:

Select whether the hours digits are visible.

IX. Configuring the Clock

The Clock tab in the Configuration Dialog contains the settings used by the clock. It looks like this:



These are the settings in the Clock tab.

Chime - On the hour:

Select this if you want an hourly chime. An hourly chime plays the WAV file for the hour count, on the hour. Example: At 3:00, it will play the WAV file 3 times in a row.

Chime - On the half hour:

Select this to play the WAV file once on the half hour (XX:30).

Chime - WAV File:

This is the WAV file that gets played. Either type in the path to the WAV file, or find it by pressing the "..." button.

Prompt for notes when logging in:

If this is selected you will be prompted to enter log notes whenever you log in.

Prompt for notes when logging out:

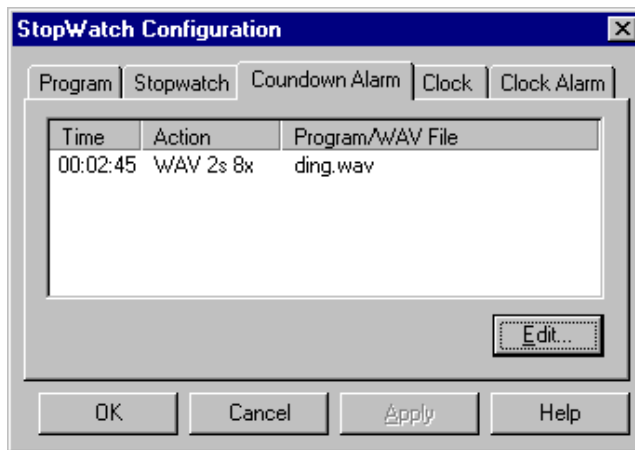
If this is selected you will be prompted to enter log notes whenever you log out.

24 Hour display:

Select this to display the hour in 24 hour format. Example: 8:24pm would be displayed as 20:24.

X. Countdown Timer Alarm

The Countdown Alarm tab in the Configuration Dialog contains the alarm settings used by the Countdown Timer. It looks like this:



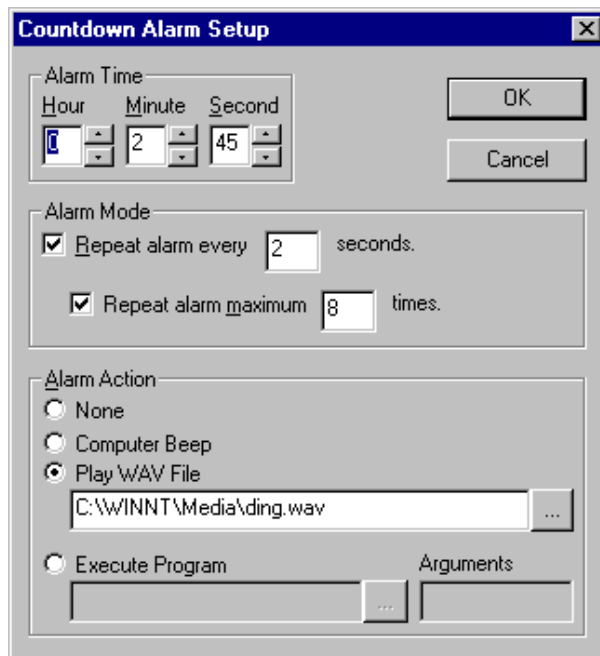
Note that the Countdown Timer can only have one alarm which can only be edited. You can edit the alarm by pressing the Edit button, or double-clicking on the alarm in the list.

The list shows the alarm Time, Action, and Program/WAV File. The Time is the value that the countdown alarm starts at. In this case it is 2 minutes, 45 seconds. Pressing Reset while in Countdown Timer mode will set the display to 2:45. The Action is what will happen when the Countdown Timer reaches zero. The valid actions are:

- None - Do nothing.
- Beep - Beep the computer.
- WAV - Play a WAV file.
- Prog - Run a program.

In this case the computer will play a WAV file. 2s indicates that it is a repeating alarm that will repeat every 2 seconds. 8x indicates that the alarm will occur 8 times then stop. The Program/WAV File column shows which program or WAV file will be run if applicable.

If you edit the alarm, you will access the Countdown Alarm Setup dialog.



This dialog allows you to configure the alarm. These are the settings:

Alarm Time:

Enter the Hours, Minutes, and Seconds to set the Countdown Timer time. You can use the arrow buttons to set the numbers, or just type them in.

Alarm Mode - Repeat Interval:

Select the Repeat alarm every n seconds, to create a repeating alarm. When the timer reaches zero, it will continuously repeat the defined alarm action. Enter the number of seconds you wish to wait between each repeat.

Alarm Mode - Repeat Count:

Select Repeat alarm maximum n times, to limit the number of times the alarm repeats. This is only selectable if you have made this a repeating alarm.

Alarm Action - None:

Do nothing when the Countdown Timer reaches zero.

Alarm Action - Computer Beep:

Beep the computer when the Countdown Timer reaches zero.

Alarm Action - Play WAV File:

Play a WAV file when the Countdown Timer reaches zero. Enter the path to the WAV file in the box, or browse for it by pressing the "... " button.

Alarm Action - Execute Program:

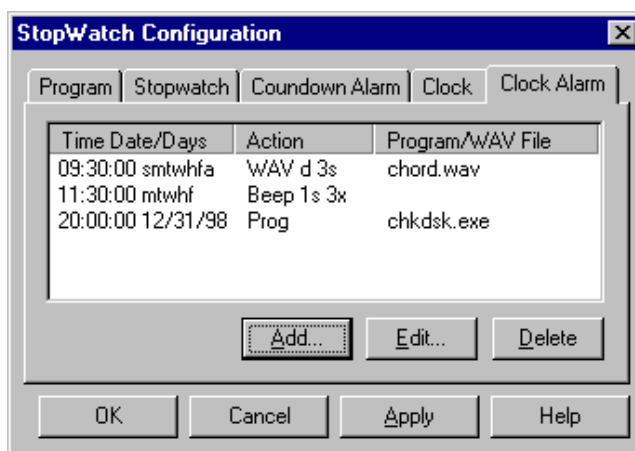
Run a program when the Countdown Timer reaches zero. Enter the path to the program in the box, or browse for it by pressing the "... " button. You can also enter program arguments.

Here is a practical example for running a program from the Countdown Timer:

You work in a lab where you repeatedly run a test for a period of time, then record the results from the test each time it is run. You could set the Countdown Timer time to the test time, disable alarm repeating, and set the action to Execute Program. Set the program to "notepad.exe" and the arguments to the data file, like "c:\lab\results.txt". When started, the Countdown Timer will countdown the test time, then run Notepad and bring up the results data file for you to record the test results.

XI. Clock Alarms

The Clock Alarm tab in the Configuration Dialog contains the alarm settings used by the clock. It looks like this:



Notice that you can create multiple clock alarms. You can add a new alarm by pressing Add. You can edit the selected alarm by pressing the Edit button, or double-clicking on the alarm in the list. You can delete an alarm by selecting it and pressing Delete.

IMPORTANT: Clock alarms and chimes are always processed regardless if you are in clock, stopwatch, or countdown timer mode. Also, there can only be one clock alarm pending at any given time. If an alarm is active while a new alarm is starting, the original alarm will be cleared and the new alarm started.

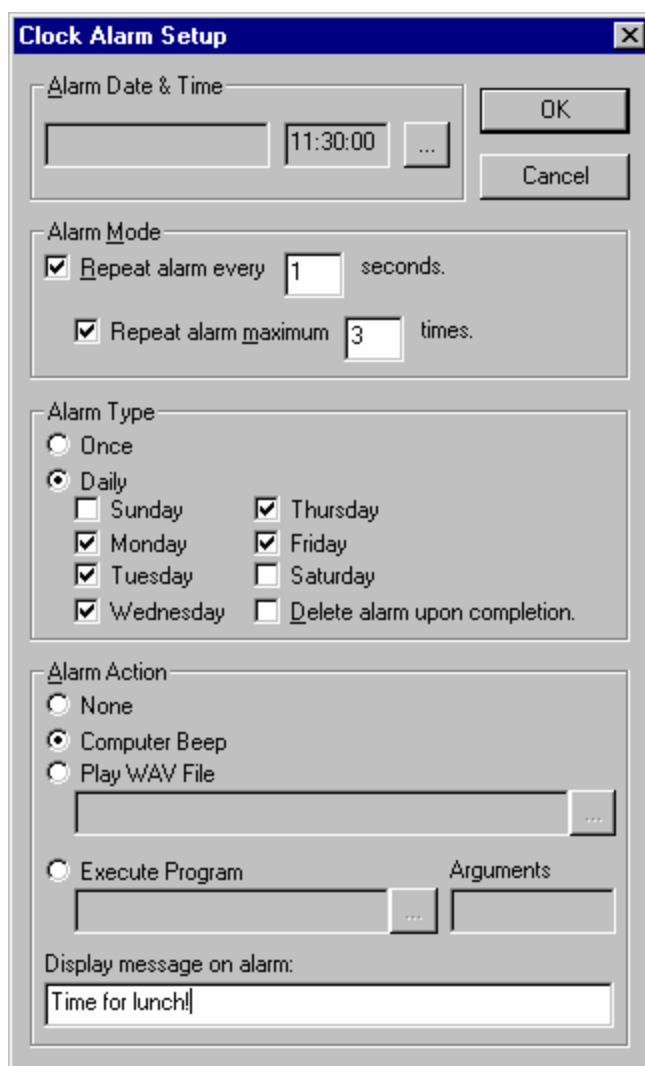
The list shows the alarm Time Date/Days, Action, and Program/WAV File.

The Time Days/Date column shows when the alarm will go off. In the first entry, the alarm will go off at 9:30am, any day of the week. The second alarm will go off at 11:30am on weekdays. The last alarm will go off at 8:00pm on December 31, 1998.

The Action column is the same as it is for Countdown Timer alarms. The only exception is the 'd' flag. This is shown in the first entry. The 'd' flag indicates that once this alarm is complete, in this case it will repeat until cleared, the alarm is deleted from the system.

The Program/WAV File column is the same as it is for Countdown Timer alarms.

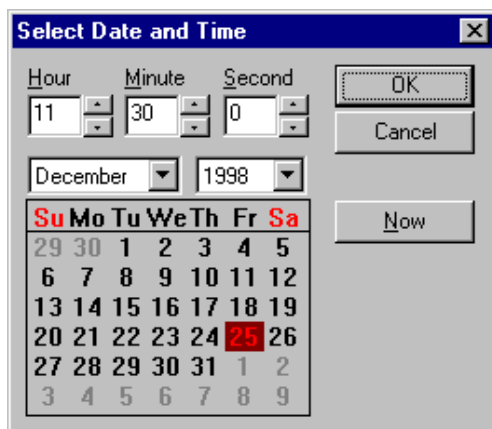
If you add an alarm or edit an existing alarm, you will access the Clock Alarm Setup dialog.



This dialog allows you to configure the alarm. These are the settings:

Alarm Time:

The first box shows the date. The date will only be visible for Once alarms. It is not applicable for Daily alarms. The second box is the time, in 24 hour format. Press the "..." button to change these fields. The Select Date and Time dialog (shown below) will allow you to select an alarm time.



Alarm Mode:

Same as in the Countdown Timer alarms.

Alarm Type:

There are two types of alarm. Once alarms occur on a given date at a given time. When the alarm is finished (either run out, or cleared), the alarm is deleted from the system. Daily alarms will go off the same time every day that is selected (Sunday through Saturday). If you select Delete Alarm Upon Completion, the alarm will be deleted from the system once it is finished.

Alarm Action:

Same as in the Countdown Timer alarms.

Display message on alarm:

If you enter any text in this box, a message box will display the text upon alarm. The message box appears regardless of any other actions you have defined for this alarm.

XII. Time Logging

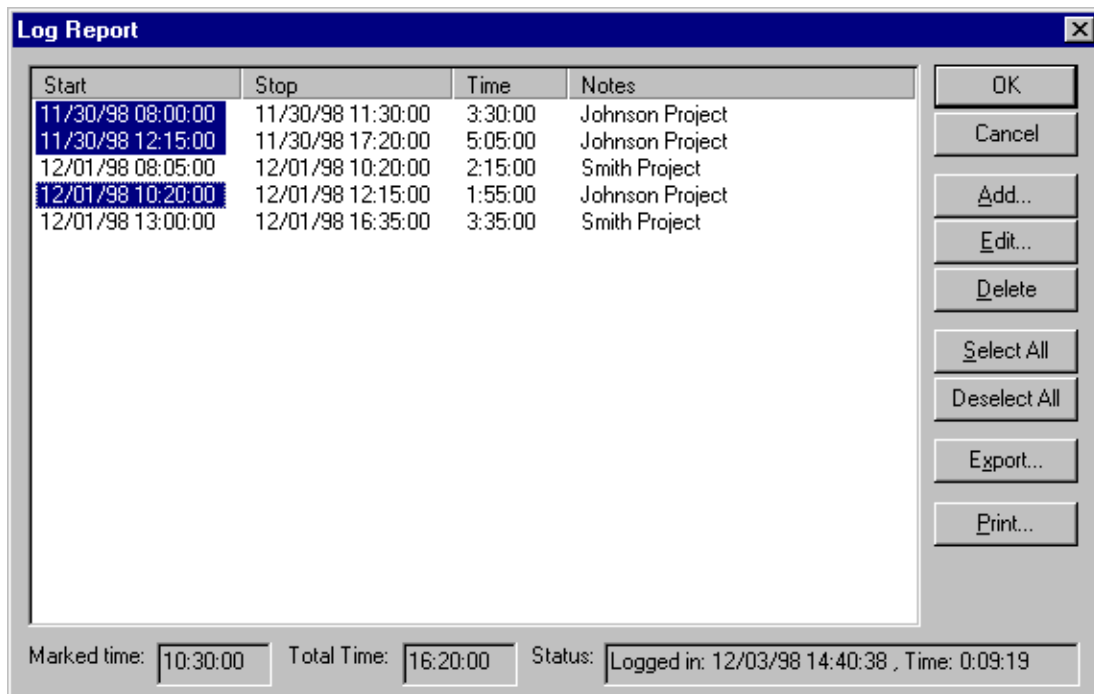
Virtual Stopwatch 2.0 supports advanced time logging functions. You must be in clock mode to log in or out while the program is running. When you log in, the program saves a copy of the current system time. When you log out, the program gets a copy of the new system time, and creates a log record with both times. Logging is not affected by switching to stopwatch or countdown timer mode.

You can set up the program to automatically log you in when the program is started. This is useful for when you add the program to your Startup folder, to be run when the computer is started. See the section on Configuring the Program.

If you exit the program while logged in, you will be asked if you want to log out before closing the program. If you answer Yes, you will be logged out and a new log record will be created. If you answer No, the log on time is saved and the next time you run the program, it will remember that you are still logged in.

You also have the option of adding notes to each log event. The program can be configured to prompt for notes when logging in, logging out, both, or none. See Configuring the Clock for information on setting this up.

To work with the log data, press the Report button when in clock mode. The Log Report dialog appears:





The list shows all the log events in the system. The start date and time, end date and time, elapsed time, and log notes are shown. You can mark items in the list by clicking on their Start column entry. Multiple selections are made by holding down the CTRL key while selecting entries. Notice that all the Johnson Project entries have been marked. The total time spent on the Johnson Project is shown in the Marked time box at the bottom of the dialog (10 hours, 30 minutes). The total time is shown in the Total Time box. If you are currently logged in, your log in date and time, and elapsed time are shown in the Status box. The buttons perform the following functions:

- OK** Save any changes and close the dialog.
- Cancel** Close the dialog without saving any changes.
- Add...** Manually add a new log entry to the list.
- Edit...** Edit the first marked log entry.
- Delete** Delete all marked log entries.
- Select All** Mark all log entries.
- Deselect All** Un-mark all log entries.
- Export** Export the log data to a text file. If no entries are marked, all entries are exported, otherwise the marked entries are exported. If you select an existing file to export to, the entries are added to the end of the file.
- Print** Print a log report. You have the option of printing all entries, or just the marked entries. You can also enter a title for the report.

XIII. Alternate Display Bitmaps

Virtual Stopwatch 2.0 has the ability to use digit bitmaps from external Digit Definition Files created by Spring Creek Software. These files have the extension *.DDF. The bitmaps can be any size (within reason), and use any fonts or colors for the digits. The program ships with two Digit Definition Files in addition to the digits that are internal to the program. Examples of all three are shown below:

- 
Internal
Default internal digit bitmap.
- 
LED2-18x31.DDF
LED digits with shadowed "off" segments.



LCD-18x31.DDF

LCD digits.

See the section on Configuring the Program for information on how to change the digit bitmaps that you are using.

Other Digit Definition Files will be available on the Spring Creek Software web site as add-ons for this program. If you require custom digit bitmaps to be created, contact Spring Creek Software.

XIV. Contact and Ordering Information

If you find any problems with the program, need a custom Digit Definition File, or have any other questions or comments, please write us at:

scsc@execpc.com

Also, you can check our web site for updates to the program, additional Digit Definition Files, etc. Remember, once you register, your registration is good for all future releases of the program. Or web site is:

<http://www.execpc.com/~scsc/>

To order the registration code, send a check or money order for \$15.00US to:

Spring Creek Software
S63 W14845 College Avenue
Muskego, WI 53150
USA

If you wish to order by credit card, please visit the QWERKS web site at:

<http://www.qwerks.com>

XV. Version Changes

<u>Date</u>	<u>Version</u>	<u>Changes</u>
12-14-98	2.00	Initial Release
12-21-98	2.01	Changed external digit bitmap DLL's to .DDF files. Forced alarms and logs to be saved in program directory.