

HOME CAGE ACTIVITY SYSTEM V1.0

Home Cage Activity System
Version HCA1.0



Enter LogOn ID

Enter Password

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Coulbourn, Inc.
Whitehall, PA
USA

Board Type: PCMCIA Board Number: 1

 *COULBOURN INSTRUMENTS*

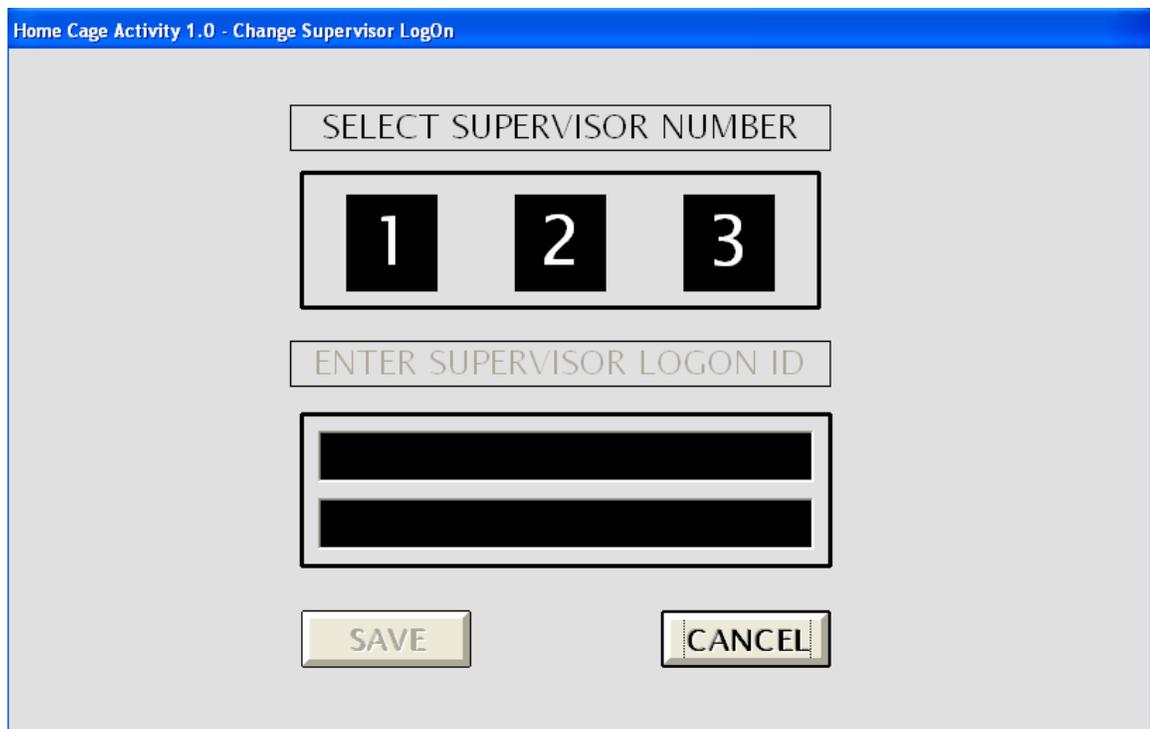
ADMINISTRATOR/SUPERVISOR USERS' GUIDE

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The software is loaded onto the system in two steps. Run the SETUP file from the distribution CD, and the SETUP file from the supplemental file distribution medium. The application will be stored as a subfolder of Program Files named HCA10. Start program execution by running HCA10 from the application folder. The first screen displayed is the one shown on the cover page of this document.

The first logon must be by the person assigned as the program Administrator. The Administrator's only function is to provide logon IDs for up to three Supervisors. To begin, the Administrator logs on with the ID provided on the last page of this document. *(Note: It is the Administrator's responsibility to remove this page and store it in a secure location so that is known only to the Administrator.)* Enter the same characters in both text boxes on the logon screen. All passwords and logon IDs are case sensitive. The next screen will appear after successful logon by the Administrator.



First click on one of the numbered boxes, then enter the logon ID for the selected Supervisor. The entries must be identical and must be 6 to 10 characters in length. Click on the SAVE control to confirm the logon ID. Program execution ends as each Supervisor logon ID is confirmed.

The first time a Supervisor logs on, the assigned logon ID is entered in the upper text box of the logon screen, and the default Supervisor password (SPRVSR) is entered as the password. The program will then display the screen on which the Supervisor selects his/her password. The password must be 6 to 10 characters in length and must contain at least one alphabetic character and one numeric character. Enter the password in both text

boxes on this screen and click OK to register the new password. The logon screen is shown again, and the Supervisor may now log on using the newly assigned password. (Note: A sun icon is displayed in the upper right corner of the main logon screen. If a Supervisor other than Supervisor 1 is logging on, double-click this icon. This action will display a screen on which the Supervisor may select his/her number and then proceed with the usual logon procedure.)

Passwords are valid for 90 days only. Each time the Supervisor logs on, the time remaining for the current password will be shown and the Supervisor acknowledge receipt of this information. If a password is allowed to expire, intervention by the Administrator is required to reestablish the Supervisor's credentials. An account will also be locked if three successive unsuccessful logon attempts are made. If this occurs to a Supervisor's account, the Administrator will be required to reestablish the Supervisor's credentials.

The following screen shows the options available to the Supervisor.

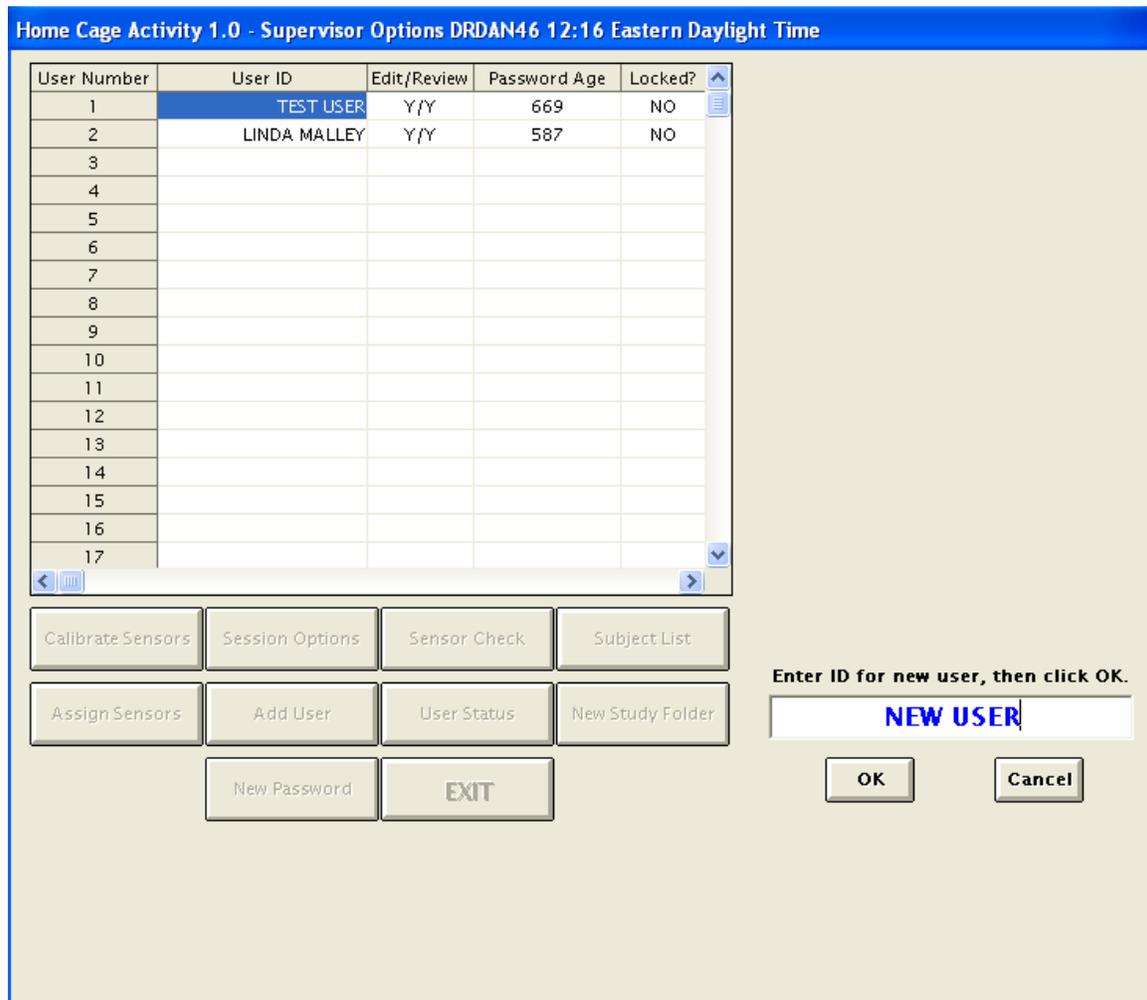
Home Cage Activity 1.0 - Supervisor Options DRDAN46 11:55 Eastern Daylight Time

User Number	User ID	Edit/Review	Password Age	Locked?
1	TEST USER	Y/Y	669	NO
2	LINDA MALLEY	Y/Y	587	NO
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				

The remainder of this document consists of illustrations of the functions of each of these options.

ADDING A NEW USER

Selecting this option leads to the following display.



Enter the name of the new user, and then click OK. The name will be added to the list of user IDs.

The Supervisor controls the status of users. The User Status control provides access to the following screen.

Home Cage Activity 1.0 - Supervisor Options DRDAN46 12:16 Eastern Daylight Time

User Number	User ID	Edit/Review	Password Age	Locked?
1	TEST USER	Y/Y	669	NO
2	LINDA MALLEY	Y/Y	587	NO
3	NEW USER	N/N	0	NO
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				

Select an action, then enter the user number.

Lock/Unlock:  

Edit Yes/No:  

Rev Yes/No:  

Read Only: 

User Number:

OK DONE

Calibrate Sensors Session Options Sensor Check Subject List

Assign Sensors Add User User Status New Study Folder

New Password EXIT

The only relevant options at this time are the Lock/Unlock controls. If a user account has been locked due to an expired password or unsuccessful logon attempts, the Supervisor is able to unlock the account by entering the user number and the selecting the Unlock control. The Supervisor may also lock a user's account by entering the user number and then selecting the Lock control. Note that a user ID may not be removed from the system and denial of access is achieved only by locking the account.

ASSIGN SENSORS

Several steps must be taken by the Supervisor to prepare the system for data acquisition by a user. The assignment of sensors to specific cages is one of these steps. Selecting this control will lead to the display of the following screen.

Cage Number	Sensor Serial Number	Cage Number	Sensor Serial Number
1	<input type="text" value="900101"/>	9	<input type="text" value="900109"/>
2	<input type="text" value="900102"/>	10	<input type="text" value="900110"/>
3	<input type="text" value="900103"/>	11	<input type="text" value="900111"/>
4	<input type="text" value="900104"/>	12	<input type="text" value="900112"/>
5	<input type="text" value="900105"/>	13	<input type="text" value="900113"/>
6	<input type="text" value="900106"/>	14	<input type="text" value="900114"/>
7	<input type="text" value="900107"/>	15	<input type="text" value="900115"/>
8	<input type="text" value="900108"/>	16	<input type="text" value="900116"/>

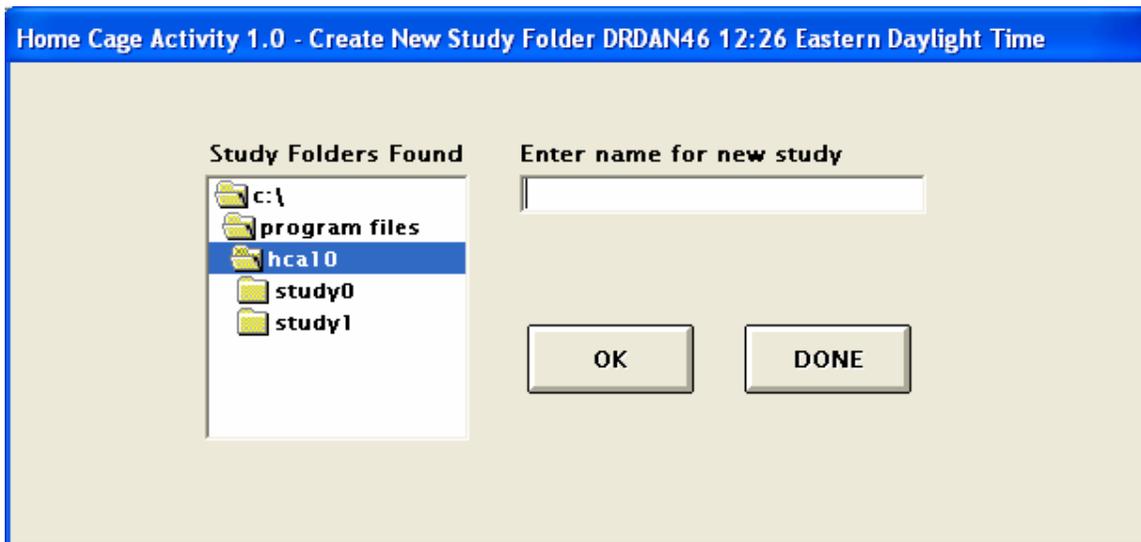
Write File

Cancel

If an assignment list is already available, the program will read from that list and show the current assignments. If changes are required, enter the serial number of the sensor in the appropriate text box. Click Write File to save the new data.

CREATE A STUDY FOLDER

To facilitate data analysis, separate folders are maintained for each study conducted with the system. Use the New Study Folder control to show the following screen.

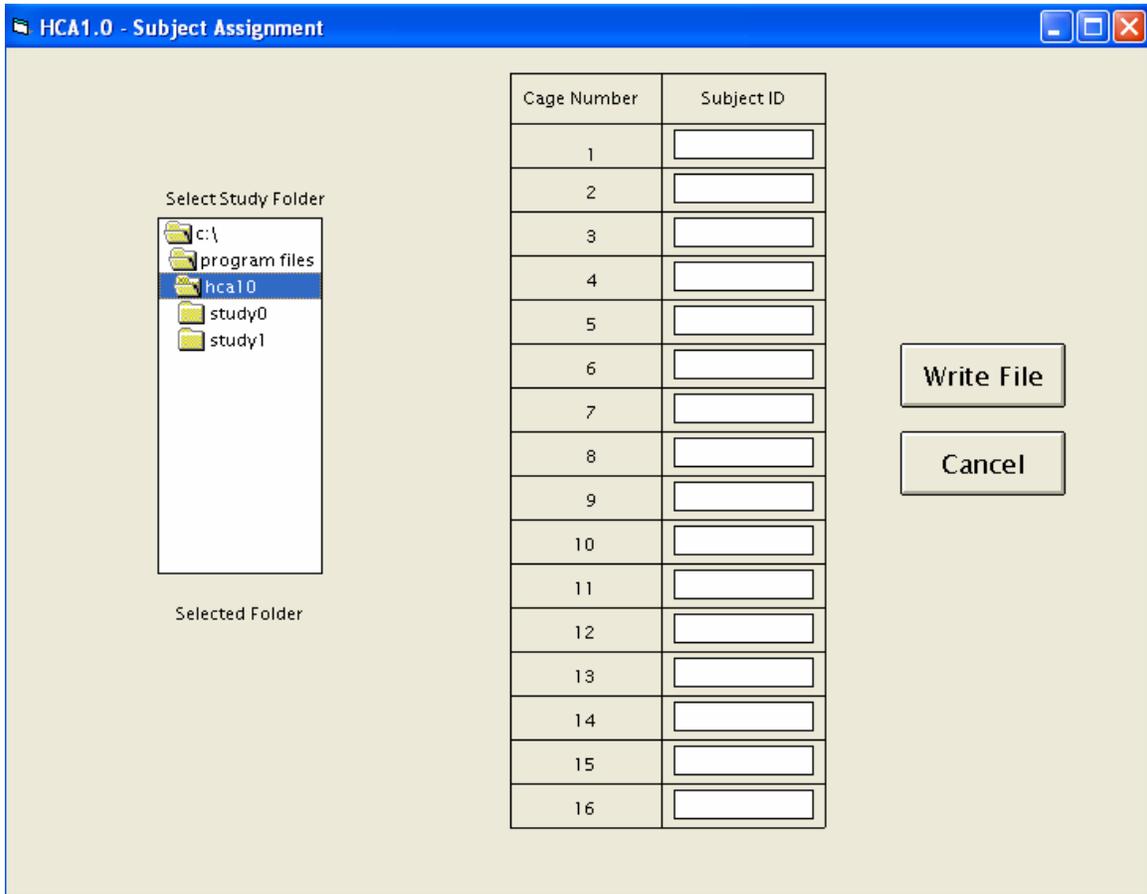


Study folders are subfolders of the HCA10 folder and the program will display the study folders previously created. Enter the name for the new study folder and then click OK to create the new folder.

CREATE A SUBJECT LIST

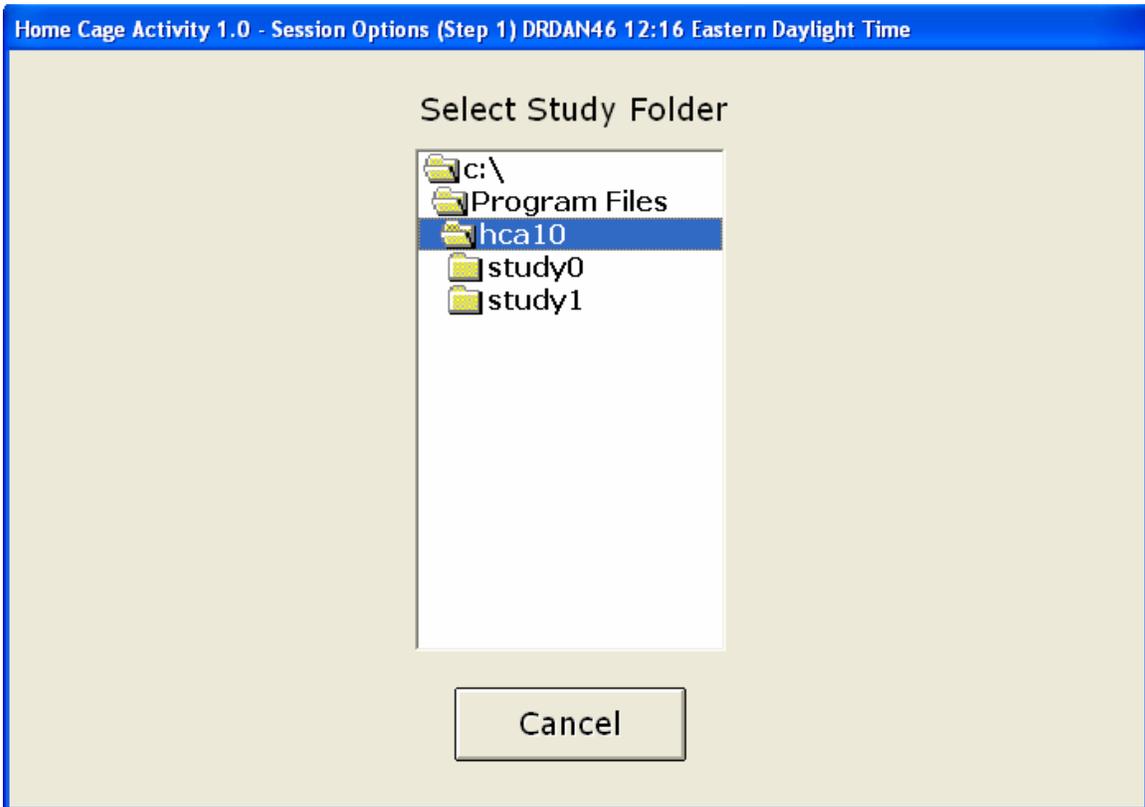
Each study folder must include a list assigning subjects to cages. The Supervisor creates this list and users verify that the subjects are correctly placed. The Subject List option leads to the display shown on the next page.

First select a study folder from the directory list box and then enter the subject IDs in the appropriate text boxes. Use the Write File control to record the subject list in the selected study folder.

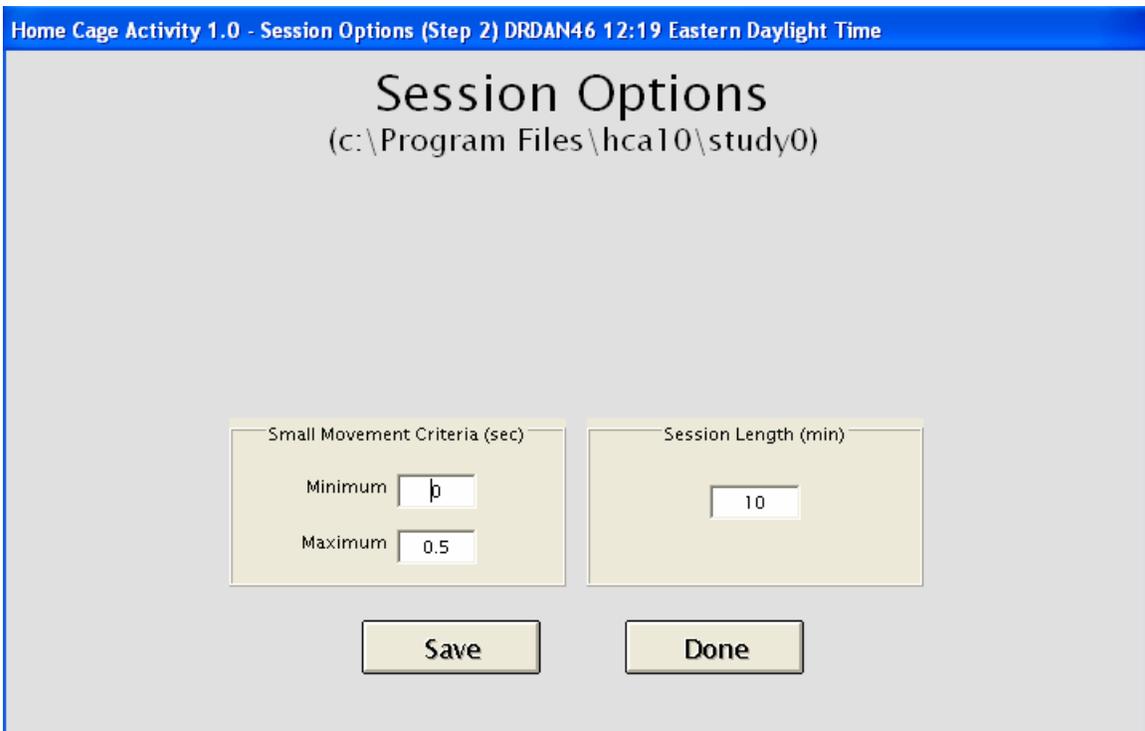


SPECIFYING SESSION PARAMETERS

The Session Options control is used to establish session parameters. As there may be different session definitions in each study folder, the first step is the selection of a study folder into which the session parameters will be written. The screen shown below is used to select the study folder.



Select the study folder by clicking on its name in the file list box. The system will then display the screen shown below.



Note that the name of the study folder selected in the previous step is displayed at the top of this screen.

The parameters to be specified are the criteria for small movements (minimum and maximum) and the session length in minutes (maximum session length is 1200 minutes). Large movements are defined as movements lasting longer than the maximum specified for small movements.

Data will be collected in 15-second blocks and, for each block, number of small and large movements will be written to an output file the name of which will be supplied by the user at run time. The temporal location of a movement is defined by the block in which the movement ends. A complete description of the data files is found in the User Guide, which is the companion document to this one.

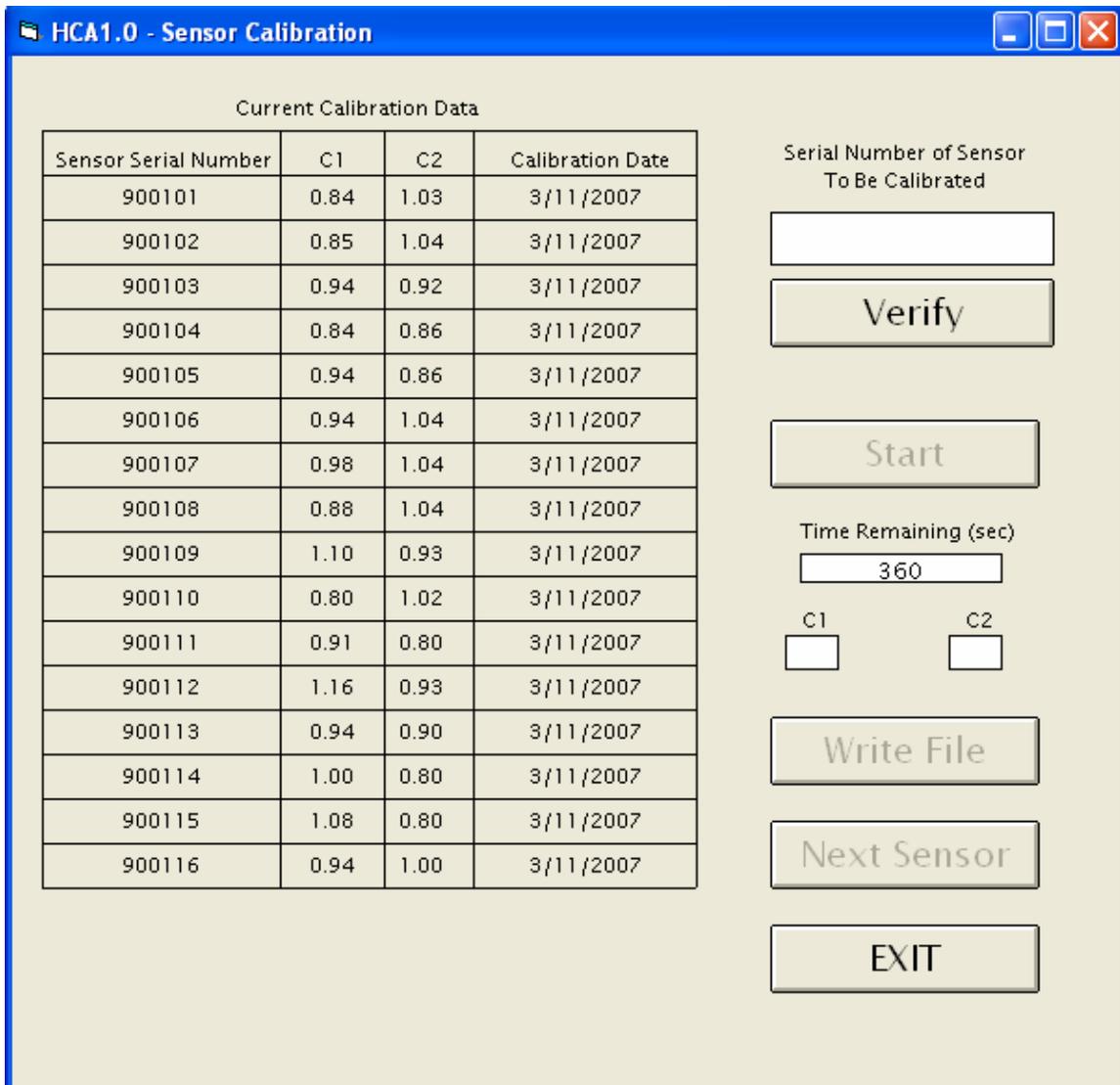
This completes the actions required of the Supervisor before data may be acquired. The following sections describe other procedures available to the Supervisor.

CALIBRATE SENSORS

The system is supplied with calibration constants for each sensor written to a file in the application folder. This file is loaded when the software is installed. Calibration constants are provided in order to compensate for sensitivity differences among units. A calibration routine is included with the software system so that the user may perform calibrations if necessary.

The sensors are calibrated using the calibrator supplied with the system following the following protocol. Turn on the calibrator heaters with the switch on the front panel. With the cover closed, leave the unit on for at least 10 minutes before starting a calibration run. The sensor to be calibrated must be connected as SENSOR 1 in PORT 1 of the Sensor Interface and Sensor Controller respectively. Open the cover and mount the sensor to be calibrated on the bracket. Start the calibrator's motor with the switch on the rear panel.

The screen shown below is displayed when the Calibrate Sensors control is selected.



The system displays current calibration constants for each sensor. Enter the serial number of the sensor to be calibrated in the text box and click the Verify control. The system checks the list of serial numbers to find a match to the entered serial number. Click the Start control to begin the calibration run. Each run lasts six minutes, and the on-screen display shows the remaining time in seconds. When the run is complete, the two constants will be shown. Click the Write File control to update the calibration data file. Use the Next Sensor control if additional sensors are to be calibrated. The motor should be turned off when sensors are being mounted or dismounted from the bracket in the interest of safety. It is, however, critical that the motor be running when calibration data are being acquired since the sensors report only changes in the detected infrared emissions (i.e., movement of the heat source).

CHECKING SENSORS

Use the Sensor Check control to display the screen shown below.

Home Cage Activity 1.0 - Sensor Test

2 ●●●●●●●●	4 ●●●●●●●●	6 ●●●●●●●●	8 ●●●●●●●●
1 ●●●●●●●●	3 ●●●●●●●●	5 ●●●●●●●●	7 ●●●●●●●●

SMALL		LARGE		SMALL		LARGE		SMALL		LARGE		SMALL		LARGE									
1	<input type="text"/>	<input type="text"/>	9	<input type="text"/>	<input type="text"/>	17	<input type="text"/>	<input type="text"/>	25	<input type="text"/>	<input type="text"/>	33	<input type="text"/>	<input type="text"/>	41	<input type="text"/>	<input type="text"/>	49	<input type="text"/>	<input type="text"/>	57	<input type="text"/>	<input type="text"/>
2	<input type="text"/>	<input type="text"/>	10	<input type="text"/>	<input type="text"/>	18	<input type="text"/>	<input type="text"/>	26	<input type="text"/>	<input type="text"/>	34	<input type="text"/>	<input type="text"/>	42	<input type="text"/>	<input type="text"/>	50	<input type="text"/>	<input type="text"/>	58	<input type="text"/>	<input type="text"/>
3	<input type="text"/>	<input type="text"/>	11	<input type="text"/>	<input type="text"/>	19	<input type="text"/>	<input type="text"/>	27	<input type="text"/>	<input type="text"/>	35	<input type="text"/>	<input type="text"/>	43	<input type="text"/>	<input type="text"/>	51	<input type="text"/>	<input type="text"/>	59	<input type="text"/>	<input type="text"/>
4	<input type="text"/>	<input type="text"/>	12	<input type="text"/>	<input type="text"/>	20	<input type="text"/>	<input type="text"/>	28	<input type="text"/>	<input type="text"/>	36	<input type="text"/>	<input type="text"/>	44	<input type="text"/>	<input type="text"/>	52	<input type="text"/>	<input type="text"/>	60	<input type="text"/>	<input type="text"/>
5	<input type="text"/>	<input type="text"/>	13	<input type="text"/>	<input type="text"/>	21	<input type="text"/>	<input type="text"/>	29	<input type="text"/>	<input type="text"/>	37	<input type="text"/>	<input type="text"/>	45	<input type="text"/>	<input type="text"/>	53	<input type="text"/>	<input type="text"/>	61	<input type="text"/>	<input type="text"/>
6	<input type="text"/>	<input type="text"/>	14	<input type="text"/>	<input type="text"/>	22	<input type="text"/>	<input type="text"/>	30	<input type="text"/>	<input type="text"/>	38	<input type="text"/>	<input type="text"/>	46	<input type="text"/>	<input type="text"/>	54	<input type="text"/>	<input type="text"/>	62	<input type="text"/>	<input type="text"/>
7	<input type="text"/>	<input type="text"/>	15	<input type="text"/>	<input type="text"/>	23	<input type="text"/>	<input type="text"/>	31	<input type="text"/>	<input type="text"/>	39	<input type="text"/>	<input type="text"/>	47	<input type="text"/>	<input type="text"/>	55	<input type="text"/>	<input type="text"/>	63	<input type="text"/>	<input type="text"/>
8	<input type="text"/>	<input type="text"/>	16	<input type="text"/>	<input type="text"/>	24	<input type="text"/>	<input type="text"/>	32	<input type="text"/>	<input type="text"/>	40	<input type="text"/>	<input type="text"/>	48	<input type="text"/>	<input type="text"/>	56	<input type="text"/>	<input type="text"/>	64	<input type="text"/>	<input type="text"/>

"Small" lower limit (msec): "Large" lower limit (msec):

Sample Time (sec):

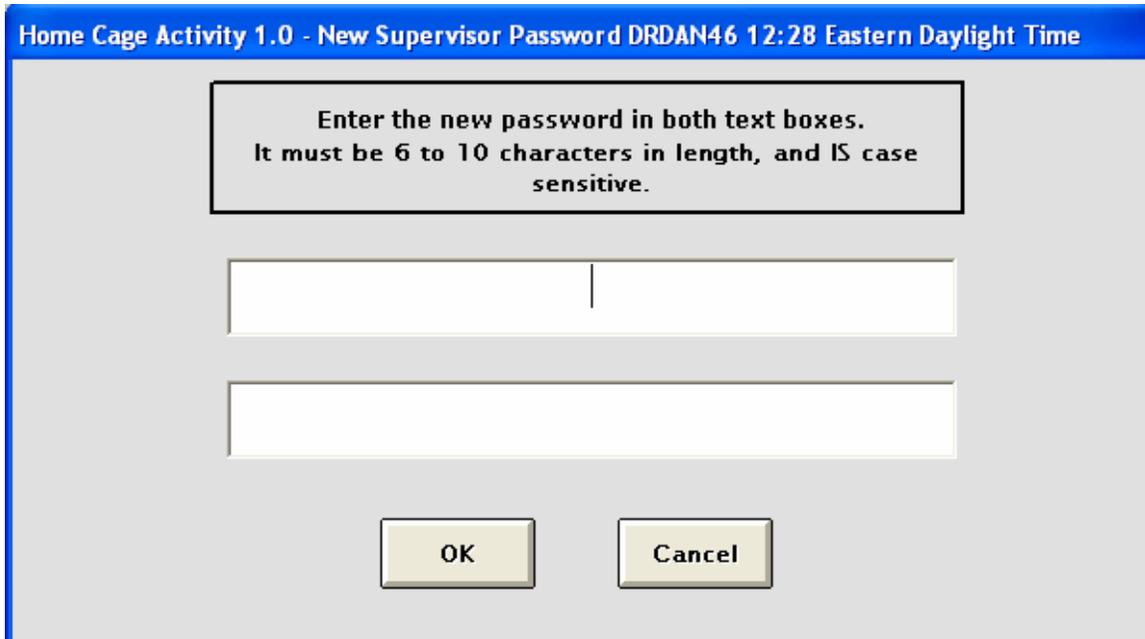
Output file name (root portion only):

If the default parameters shown are not appropriate, make the required changes in the text boxes for small movement criteria and sample time. If the data are to be saved to a file, enter the output file name (root portion only; the program will append the extension *txt* to the supplied file name) in the appropriate text box. Click the START control to begin sampling. As each sensor detects movement, the black "indicators" will change to red. Total movements in each category will be displayed as data are collected, and remaining sample time will count down to 0 on the screen. The STOP control can be used to interrupt sampling during data acquisition. Sampling may be reinitiated by clicking on the START control. If the same output file name is used for multiple data acquisition events, previous data will be overwritten.

CHANGING SUPERVISOR PASSWORD

Each time a Supervisor logs on, the system displays the time remaining before the current password expires. If the password is allowed to expire, the Administrator will need to reestablish the Supervisor's rights.

To change the Supervisor's password, use the New Password control. The system will display the screen below.



Home Cage Activity 1.0 - New Supervisor Password DRDAN46 12:28 Eastern Daylight Time

Enter the new password in both text boxes.
It must be 6 to 10 characters in length, and IS case sensitive.

OK Cancel

The new password must be 6 to 10 characters in length and must contain at least one alphabetic character and at least one numeric character.

TERMINATING PROGRAM EXECUTION

The program will display the logon screen if the EXIT control is selected. If the EXIT control on the logon screen is selected, the program requires password verification in order to exit normally.

ADMINISTRATOR PASSWORD

TEST10

**REMOVE THIS PAGE AND
STORE IN A SECURE LOCATION!**