

PLACE PREFERENCE DATA COLLECTION

SOF-700RA-4

MED-STATE NOTATION™ PROCEDURE

DOC-078

Rev. 1.8

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Med Associates Inc.
P.O. Box 319
St. Albans, Vermont 05478

Phone: 802.527.2343
Fax: 802.527.5095
www.med-associates.com

notes

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CHAPTER 1 | INTRODUCTION

Overview of the Procedures

If the Place Preference Test chamber is equipped with auto guillotine doors then Place Pref Auto Doors.mpc should be run. All lights will be on when the procedure is loaded so that the user may make any necessary adjustment or perform testing. When the start command is issued, all lights are turned off. Following the acclimation period, the auto guillotine doors are opened and the lights turned on. Doors are closed and lights turned off at the end of the session time.

If the Place Preference Test chamber is equipped with manual guillotine doors then Place Pref Man Doors.mpc or Place Pref Train 2 Animals.mpc should be run. Both programs use the computer's speaker to signal the end of the acclimation and test periods. The default duration for the audible alert is 5 seconds, however the duration of the audible alarm may be modified or the alarm may be turned off using the menu item "Shut Off Beep" under the Configure menu. If Place Pref Train 2 Animals is run, then one animal should be placed in the Black Zone and the other in the White Zone prior to starting the program.

Select a Place Preference procedure and the Load Wizard presents a detailed list of session parameters. From this window, the user may set the adaptation time, test time, and bin size. The default settings shown make the adaptation time 5 minutes, the session time 15 minutes, and the bin size 60 seconds.

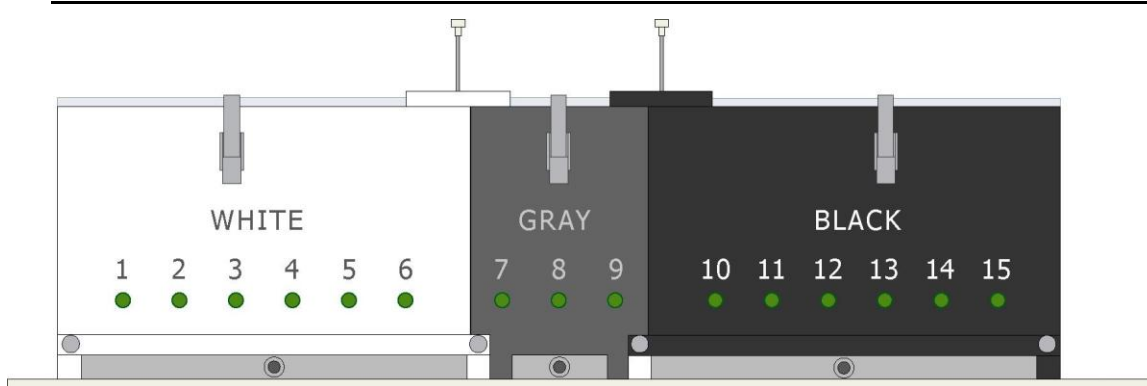
Definitions of Data Values

The Place Preference Data Collection procedures generate data files that contain values for Activity, Movement, Exploration, Entrance and Zone Time.

- Activity:** Any beam break within the current zone.
- Movement:** A change in the beam broken in the current zone.
- Exploration:** Breaking of the first beam in a zone.
- Entrance:** Breaking of any beam beyond the first in a zone.
- Zone Time:** The amount of time (in seconds) spent in the zone.

Figure 1.1 illustrates the three different zones as well as the beam numbers. Table 1.1 helps to explain Entrance, Exploration and Activity. The leftmost column contains all of the beams on the Place Preference chamber. The next three columns represent the three different zones in the Place Preference chamber. Wherever the animal is in the Place Preference Chamber, refer to the corresponding column.

Figure 1.1 – Place Preference Chamber Zones and Beam Numbers



For example, if the animal is in the white zone refer to the White column in Table 1.1. The table indicates that any movement within that zone (beams White1 – White6) is considered Activity. If the animal breaks the first beam in the gray zone (Gray7) it is counted as Exploration. If the animal breaks the second beam in the gray zone (Gray8) then it is considered an Entrance. Now that the animal has entered the gray zone, refer to the Gray column.

Table 1.1 - Reference Table

	Gray	White	Black
White1	Entrance	Activity	Entrance
White2	Entrance	Activity	Entrance
White3	Entrance	Activity	Entrance
White4	Entrance	Activity	Entrance
White5	Entrance	Activity	Entrance
White6	Exploration	Activity	Exploration
Gray7	Activity	Exploration	Entrance
Gray8	Activity	Entrance	Entrance
Gray9	Activity	Entrance	Exploration
Black10	Exploration	Exploration	Activity
Black11	Entrance	Entrance	Activity
Black12	Entrance	Entrance	Activity
Black13	Entrance	Entrance	Activity
Black14	Entrance	Entrance	Activity
Black15	Entrance	Entrance	Activity

Data File Arrays

The data file will have arrays B, G and W, which correspond to the Black, Gray and White zones. (Refer to Chapter 4, | Understanding the Data Files for a sample data file). The first row of each array contains the Totals for the entire session. Each row that follows is the data for each time bin, which is defined at the beginning of the experiment in the Named Variables.

CHAPTER 2 | HARDWARE

Hardware Guide

The hardware included with the Three Chamber Place Preference system will depend on whether it is equipped with automatic or manual guillotine doors, as well as the number of chambers in the system.

All Systems

Figure 2.1 - ENV-256C 16 Channel IR Controller



Figure 2.2 - 3-Chamber Place Preference Chamber with ENV-256C

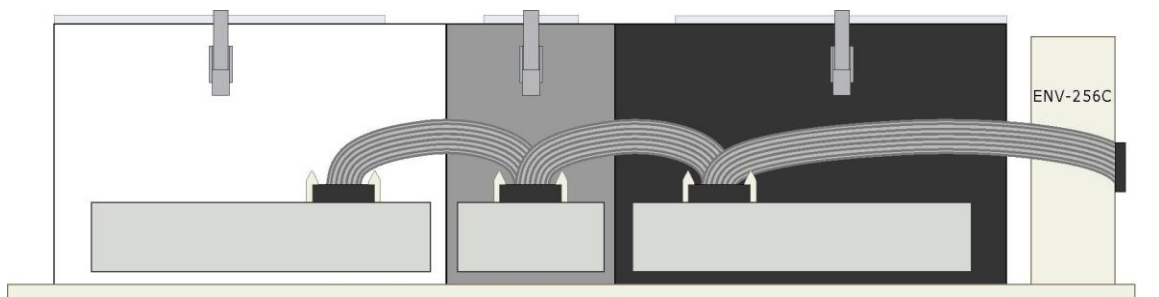


Figure 2.3 – ENV-226B Three Channel Light Controller

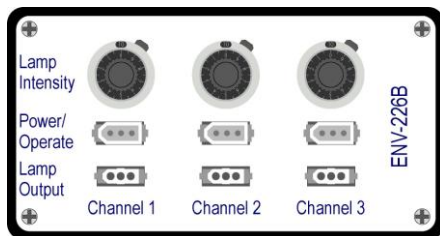
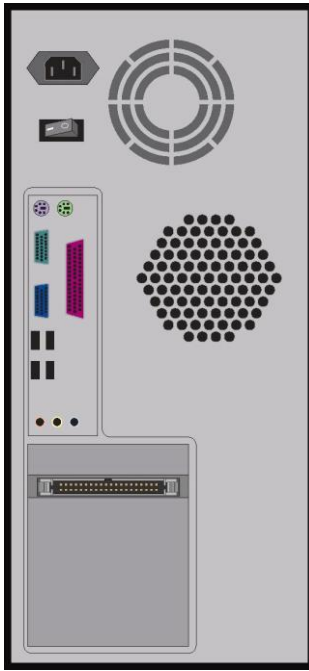


Figure 2.4 - Computer with DIG-704PCI Card



Systems with Automatic Guillotine Doors

Figure 2.5 - SG-6510D Cabinet with DIG-700F, DIG-721, DIG-709A and DIG-713A Cards

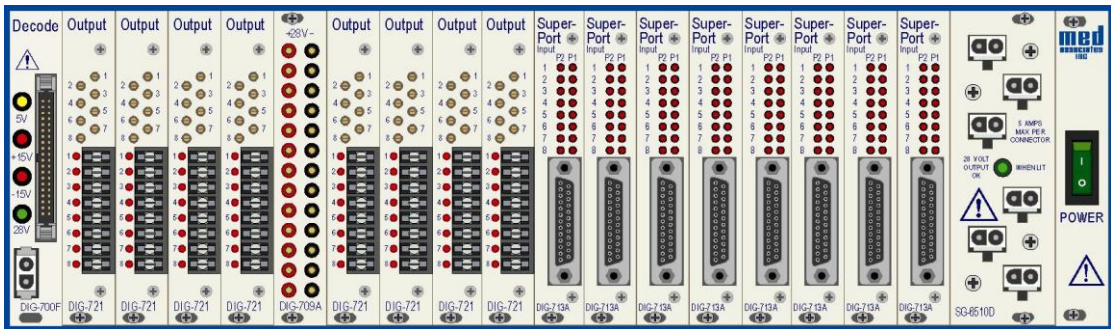
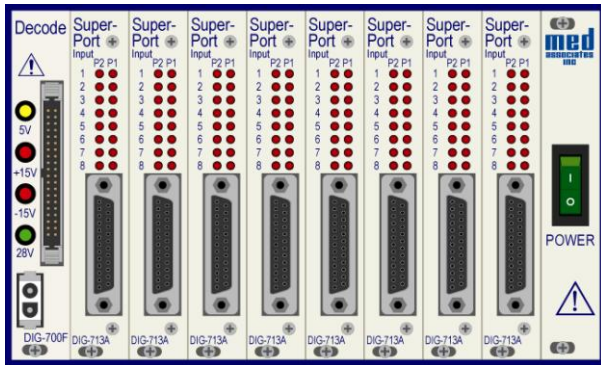


Figure 2.6 - SG-215D3 Connection Panel



Systems with Manual Guillotine Doors

Figure 2.7 - SG-6080D Cabinet with DIG-700F and DIG-713A Cards

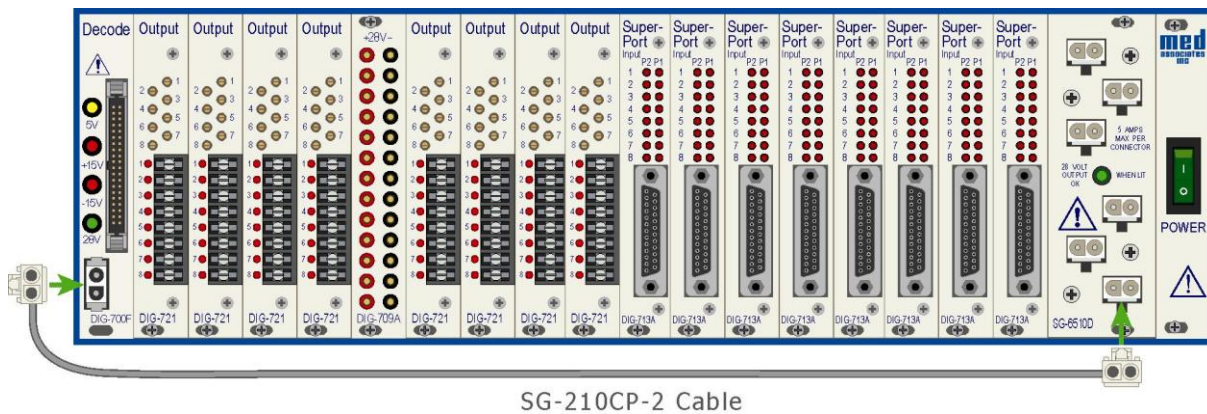


Wiring Instructions for System with Automatic Guillotine Doors

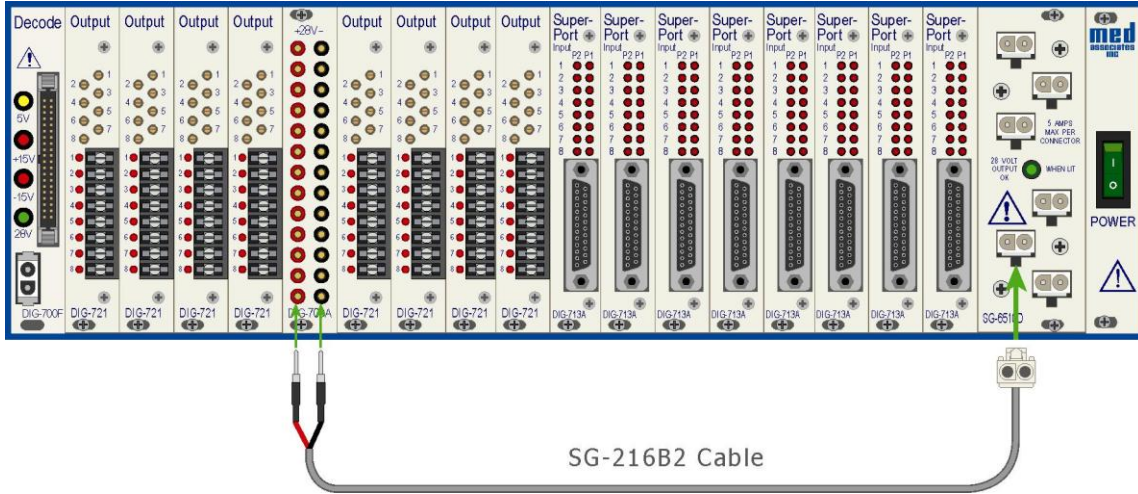
Some of the wiring for the 3 Chamber Place Preference system will be completed prior to shipping. Complete the remaining wiring by following these steps:

NOTE: Be sure that all hardware is unplugged prior to completing any wiring.

1. Using the SG-210CP-2 cable, connect the DIG-700F decoder card to the 28 VDC power card, as shown below.

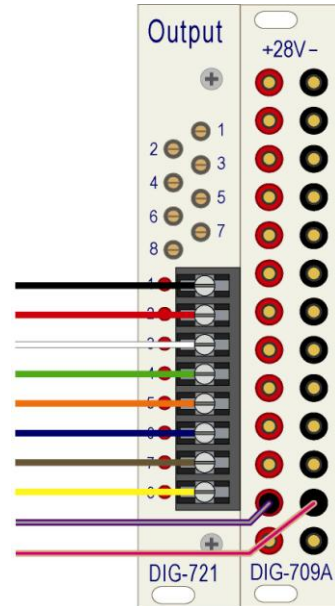


2. Using the SG-216B2 cable, connect the 28 VDC power card to the DIG-709A 28 VDC power distribution card, as shown below. (Red pin to red connector and black pin to black connector).

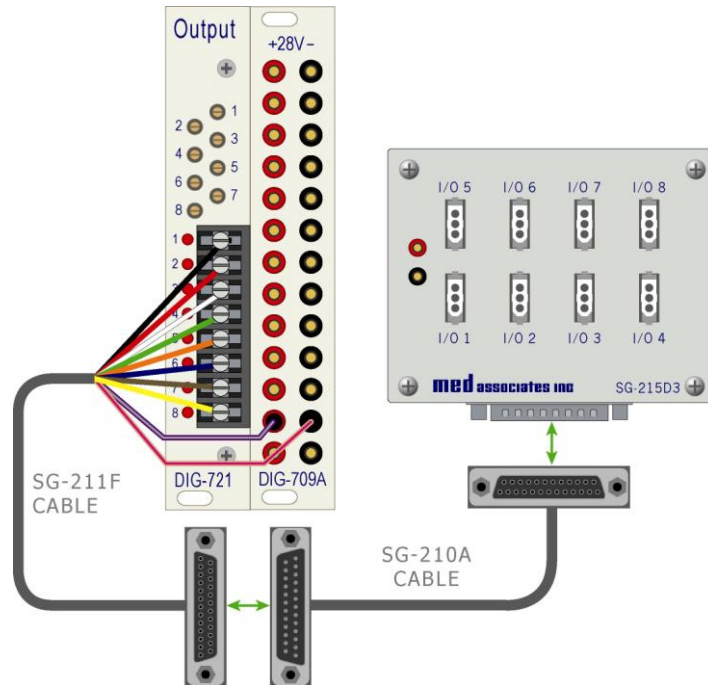


- Each SG-211F cable terminates at one end with a female 25-pin connector. The other end terminates with eight tinned wires and two .080 pin connectors. These cables are used to control and power the automatic guillotine doors. The tinned wires connect to the DIG-721 output cards and the .080 pin connectors connect to the DIG-709A 28 VDC power distribution card. The figure and table below illustrate the locations of each of these wires.

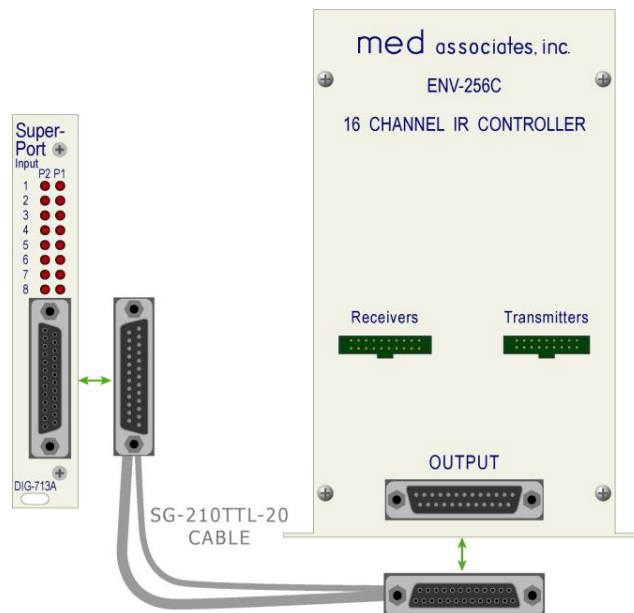
Wire Color	Card	Connector
Black	DIG-721 Output	1
Red		2
White		4
Green		8
Orange		16
Blue		32
Brown		64
Yellow	128	
Gray & Purple	DIG-709A Distribution	Red
Pink & Tan		Black



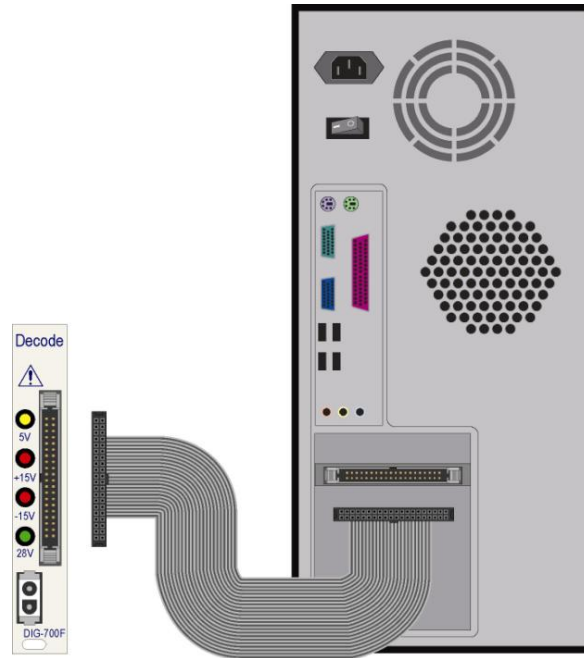
- Connect the other end of the SG-211F cable to the male end of an SG-210A cable.
- Connect the female end of the SG-210A cable to the SG-215D3 that corresponds to the DIG-721 card it is connected to. For example, connect the card addressed as 1 to Chamber 1.



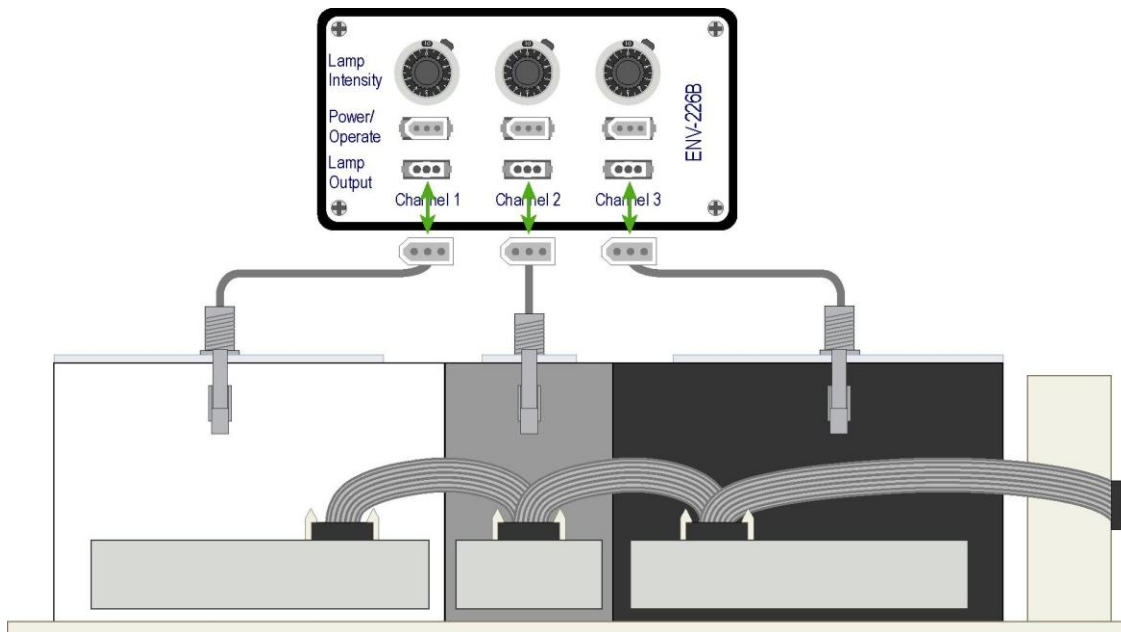
6. Repeat Steps 2 – 5 for each additional DIG-721 output card.
7. Using an SG-210TTL-20 cable, connect each DIG-713A input card to the corresponding ENV-256C IR controller. For example, connect the DIG-713A card addressed as 1 to the ENV-256C IR controller associated with Chamber 1.



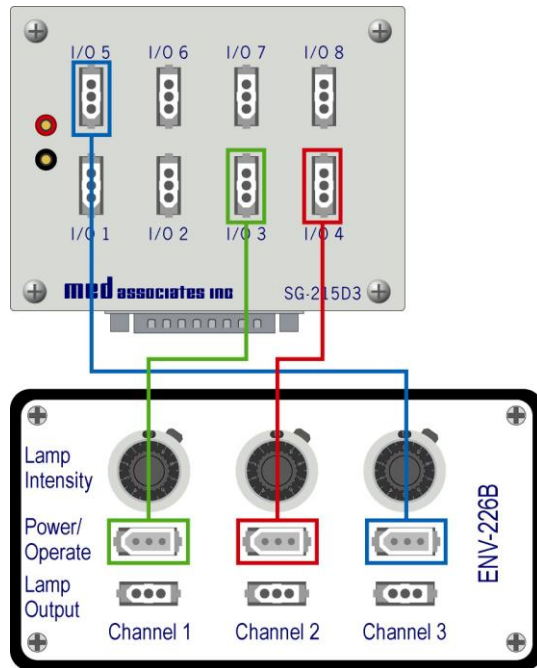
8. Using the DIG-700C ribbon cable, connect the DIG-700F decoder card to the DIG-704PCI card on the back of the computer.



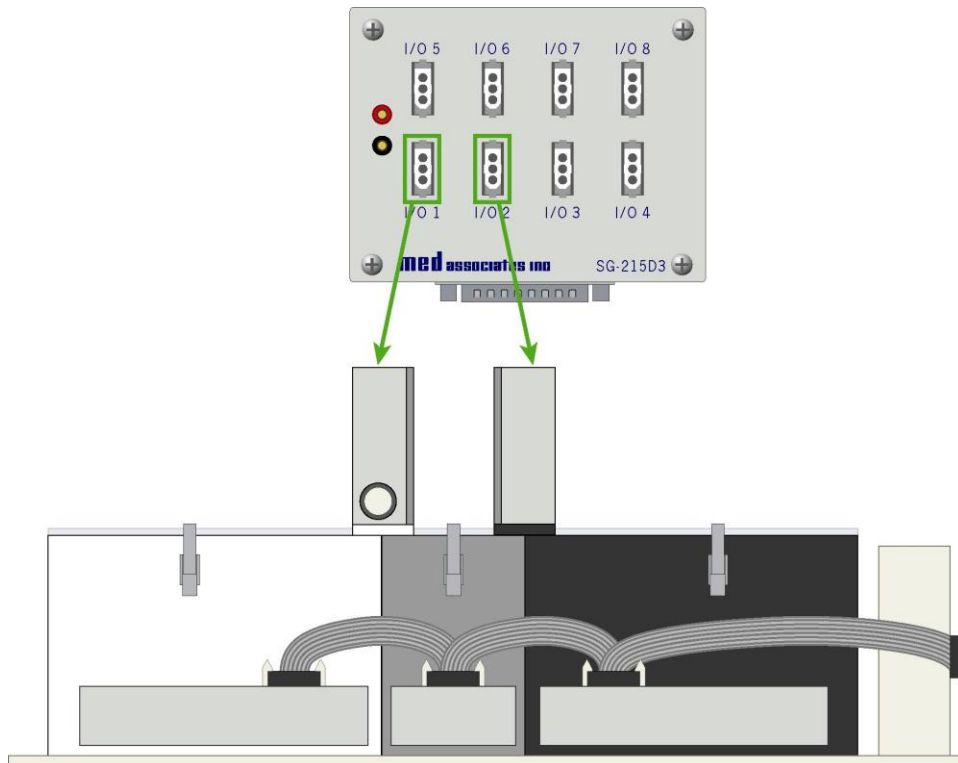
9. Connect the stimulus lights to the **Lamp Output** connectors on the ENV-226B. Connect the light in the white chamber to Channel 1, the light in the gray chamber to Channel 2 and the light in the black chamber to Channel 3, as shown below.



10. Using the included SG-216A cables, connect the **Power/Operate** connectors on the ENV-226B to the SG-215D3 **I/O** connectors 3 – 5, as shown below.



11. Connect the auto doors to the SG-215D3 I/O connectors, as shown below.



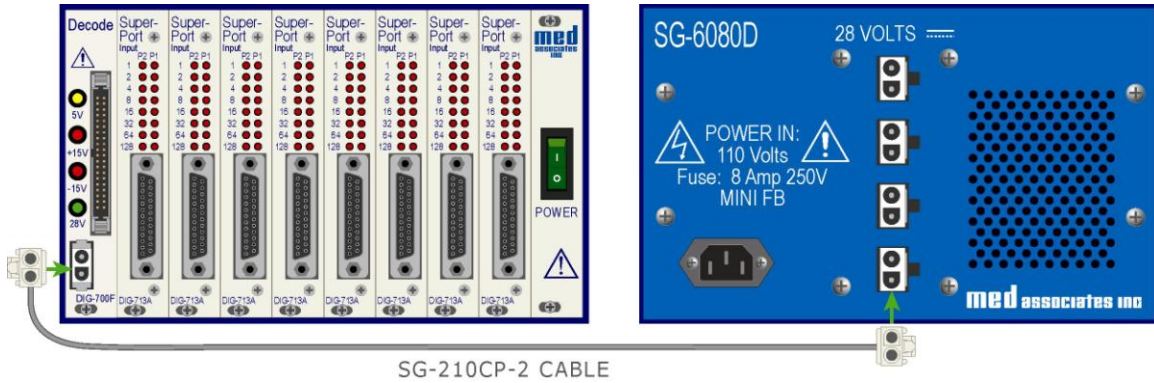
12. Apply power to the SG-6510D Interface Cabinet and the computer. The wiring for the system is now complete.

Wiring Instructions for System with Manual Guillotine Doors

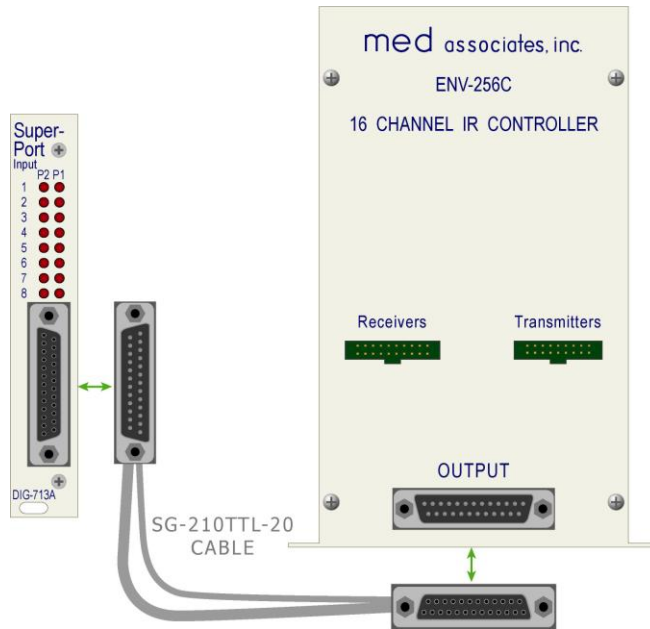
Some of the wiring for the 3 Chamber Place Preference system will be completed prior to shipping. Complete the remaining wiring by following these steps:

NOTE: Be sure that all hardware is unplugged prior to completing any wiring.

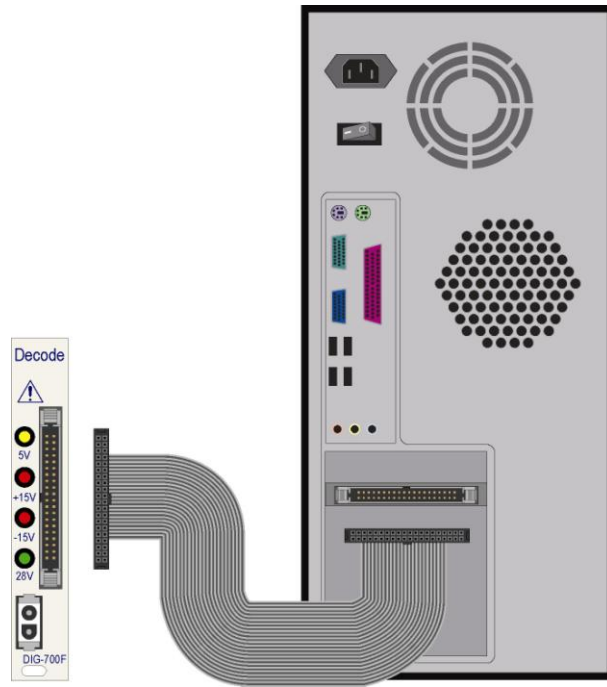
- Using the SG-210CP-2 cable, connect the DIG-700F decoder card to any 28 VDC power connector on the back of the SG-6080D cabinet, as shown below.



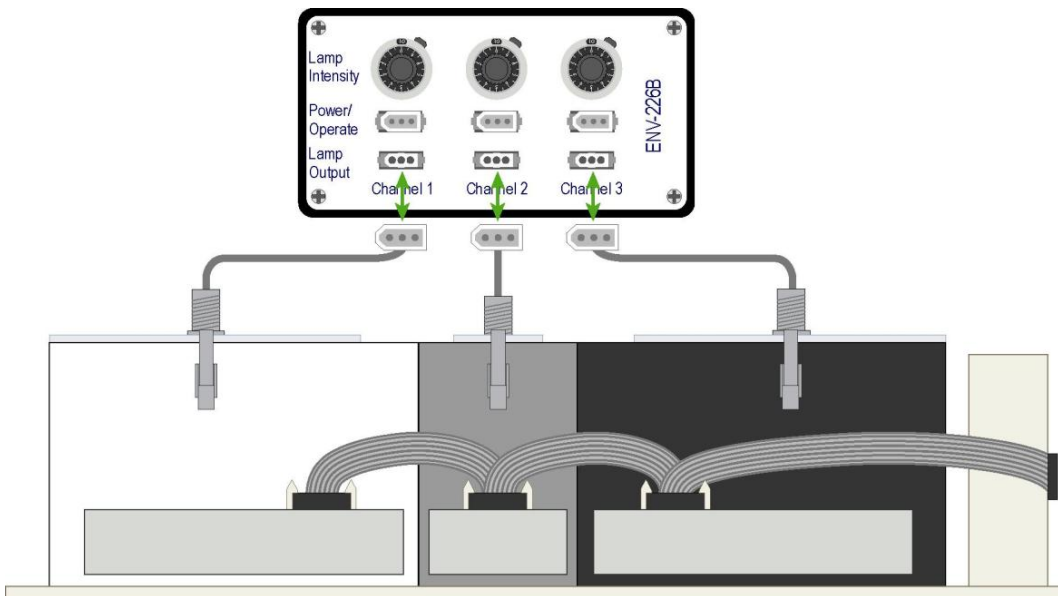
- Using an SG-210TTL-20 cable, connect each DIG-713A input card to the corresponding ENV-256C IR controller. For example, connect the DIG-713A card addressed as 1 to the ENV-256C IR controller associated with Chamber 1.



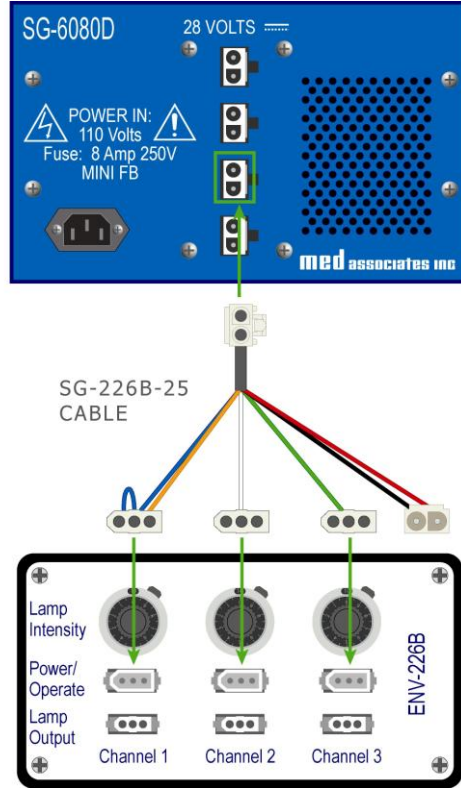
- Using the DIG-700C ribbon cable, connect the DIG-700F decoder card to the DIG-704PCI card on the back of the computer.



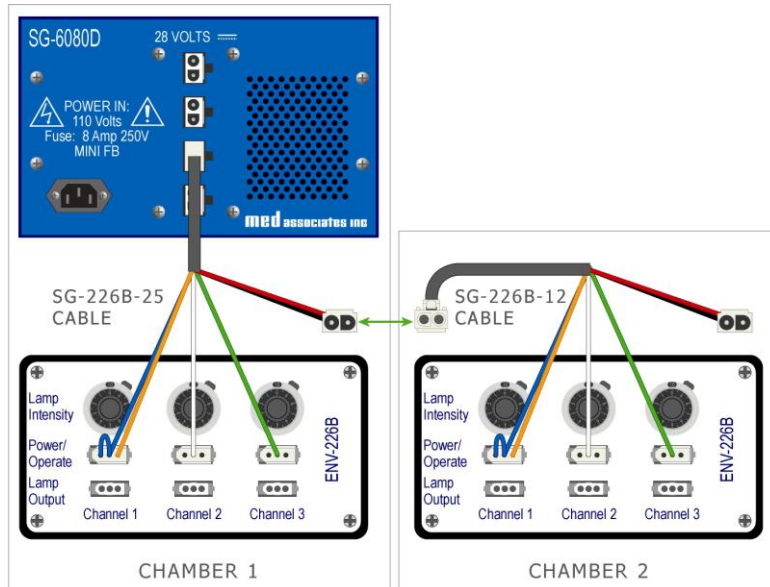
- Connect the stimulus lights to the **Lamp Output** connectors on the ENV-226B. Connect the light in the white chamber to Channel 1, the light in the gray chamber to Channel 2 and the light in the black chamber to Channel 3, as shown below. Repeat this step for each chamber.



- Using an SG-226B-25 cable, connect the **Power/Operate** connectors on the SG-226B associated with Chamber 1 to a 28 VDC power connector on the back of the SG-6080D cabinet.



- Daisy chain each additional ENV-226B using an SG-226B-12 cable, as shown below.



7. Apply power to the SG-6080D Interface Cabinet and the computer. The wiring for the system is now complete.

Hardware Test Procedure

Once the wiring is complete and power has been applied to the system, the hardware can be tested using the MED Test software application. If further information is necessary regarding the use of MED Test, please refer to the “MED Test User’s Manual”. If the system fails any portion of these tests, verify that the system is wired properly and run the test again. If the failure persists, it should be reported to MED Associates Technical Support.

Output Card / Lights / Auto Doors

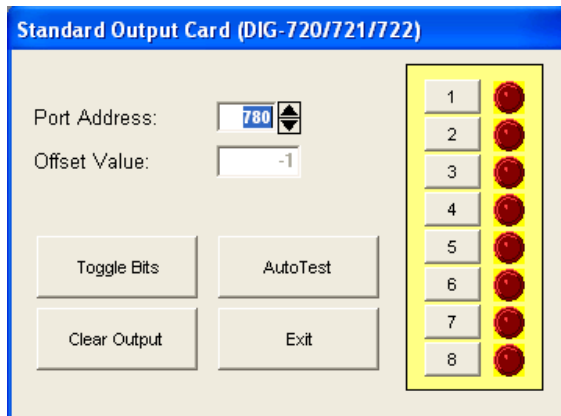
From the MED Test main screen, select **Standard Card | Output Card (DIG 720/721/722)**, and the screen shown below will appear.

If the system is equipped with Automatic Guillotine Doors, activating Output 1 should raise Door 1 and Output 2 should raise Door 2.

Activating Output 3 should turn on the stimulus light in the white chamber, Output 4 should turn on the stimulus light in the gray chamber and Output 5 should turn on the stimulus light in the black chamber. When Outputs 3 – 5 are activated, adjust each **Lamp Intensity** knob on the ENV-226B to verify that the light intensity can be adjusted.

Be sure to test each Output Card by incrementing the Port Address.

Figure 2.8 - MED Test Standard Output Card Screen



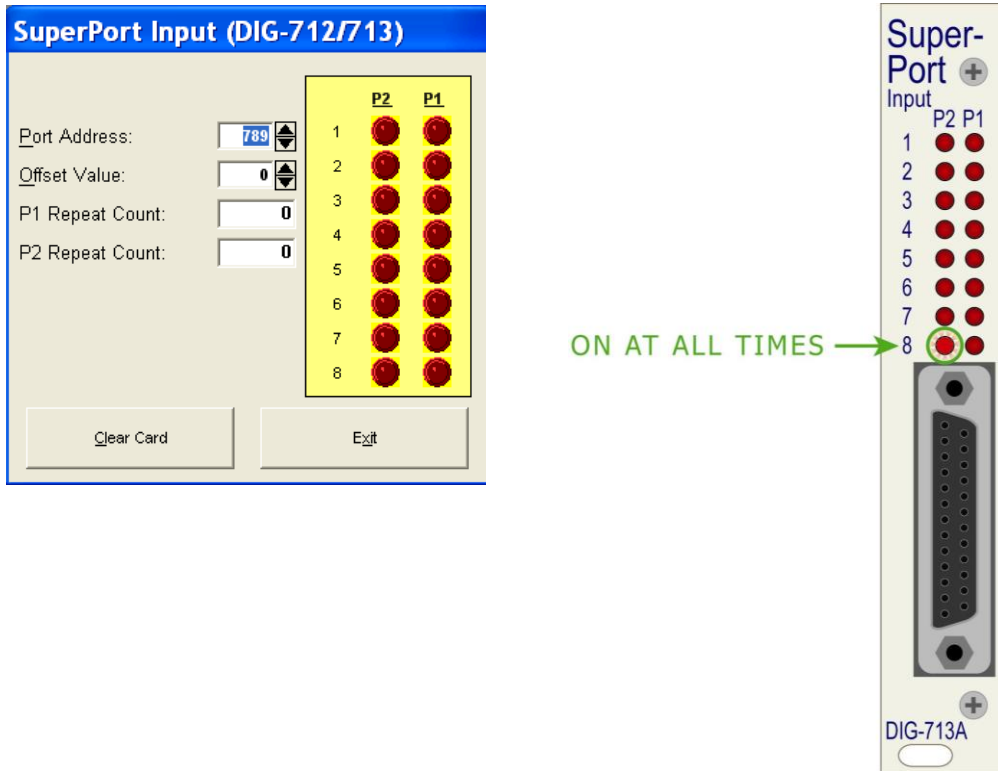
Input Card / IR Beams

From the MED Test main screen select **SuperPort | Input Card (DIG 712/713)**, and the screen shown below will appear.

Break each of the IR Beams and verify that the corresponding indicator lights up on the MED Test screen. When this is complete, click **Clear Card** and allow MED Test to run overnight. When testing is complete, there should not be any counts recorded on MED Test. Be sure to test each Input Card by incrementing the Port Address.

NOTE: The indicator lights on the MED Test screen and the LEDs on the DIG-713A card that correspond with P2 8 will remain on at all times, as there is not an IR Beam associated with this input.

Figure 2.9 – MED Test SuperPort Input Card Screen



CHAPTER 3 | SOFTWARE

Installation

Please refer to the **MED-PC User's Manual** for a complete guide to installing the MED-PC software, building a valid Hardware configuration with the Hardware Configuration utility, and opening and compiling a MSN procedure in the Trans-IV utility.

The MSN procedures utilized by MED-PC are found by the application in a folder on the PC's hard drive.

Using the MED-PC Load Wizard

MED-PC is designed to help the researcher run an experiment by guiding selection choices through its Experiment Loading Wizard. This section will describe how to initiate an experiment based upon the Place Pref Auto Doors.mpc procedure. The following steps that start this procedure will also apply to the Place Pref Manual Doors.mpc and Place Pref Train 2 Animals.mpc procedures.

Clicking either the MED-PC icon from the **Start | Programs** list or the desktop shortcut and the MED-PC Experiment Loading Wizard's Welcome screen, shown in Figure 3.1 will appear.

Figure 3.1 – The MED-PC Loading Wizard Welcome Screen



To avoid this load wizard, deselect the checkbox labeled “Run this experiment automatically when starting MED-PC.” Close this screen by clicking the **Close** button. Closing this screen immediately reveals the MED-PC Run-Time Screen shown in Figure 3.9.

If the choice to continue with the Loading Wizard is made, then select the **Next** button. The next screen seen is the Box Selection screen, as shown in Figure 3.2. It is in this screen that the

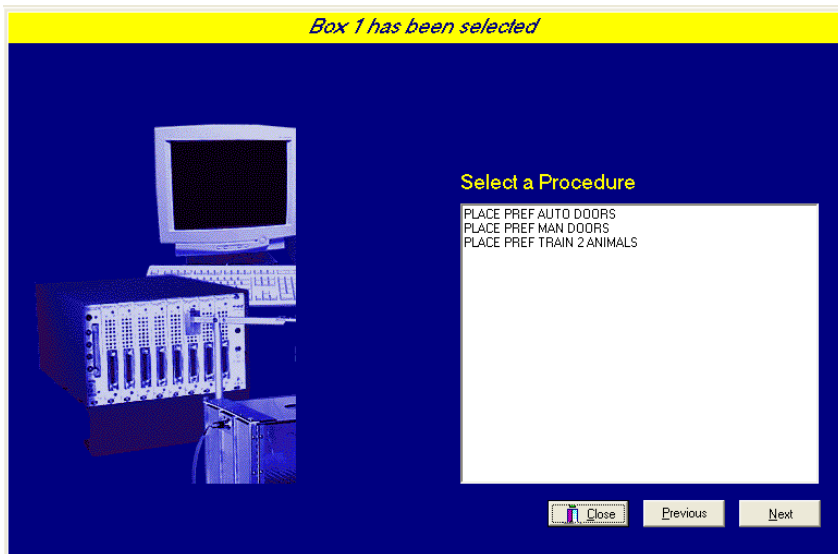
researcher chooses which boxes will be used in the experiment. Select the boxes that will run the experiment by clicking in the radio button next to the box number. The figure shows that the Hardware Configuration included only 1 box, which was selected.

Figure 3.2 - The Box Selection Screen



The next screen seen is the Select a Procedure screen, as seen in Figure 3.3. This is where the procedure to be run is made. The screen displays a list of all the currently compiled procedures. Simply select the procedure to be run, and then click **Next**.

Figure 3.3 – Select a Procedure Screen



The Enter Experiment Information Screen should display next, as shown in Figure 3.4. The purpose of this screen is to allow annotations to be added to the data file that is produced by MED-PC. These annotations will help identify the Subject, Experiment, and Experiment Group upon which data was collected. Comments can be added here as well, and the data file can be given a customized file name to help identify it from other data files. Enter the information desired, and hit **Next**.

Figure 3.4 - Enter Experiment Information Screen

Box 1 and PLACE PREF AUTO DOORS have been selected

Subject: Subject_1

Experiment: PlacePreference_1

Group: Group_1

Comments: Place Preference Data Collection

Optional Custom Filename: PP_Subject1_Group1

Close Previous Next

The next screen to appear is the Review Choices screen, as seen in Figure 3.5. This is a method of confirming that the information received from the Box/Procedure Selected is correct. If it is not correct, select **Previous**, and edit the data. If it is correct, select **Next**.

Figure 3.5 - Review Choices Screen

Review Choices

Review the data below.

Box: 1

Procedure: PLACE PREF AUTO DOORS

Subject: Subject_1

Experiment: PlacePreference_1

Group: Group_1

Comment: Place Preference Data Collection

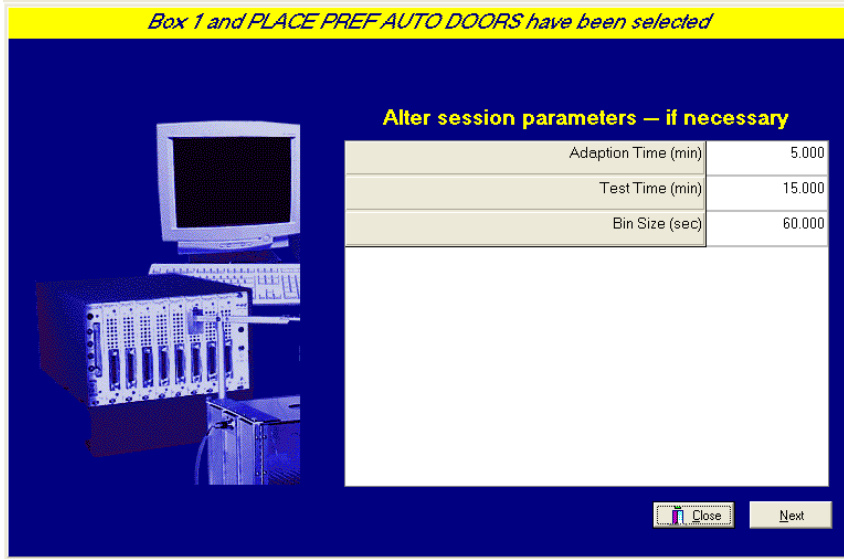
Filename: PP_Subject1_Group1

Click "Next" to finish loading the box or "Previous" to correct errors.

Close Previous Next

The Alter Session Parameters Screen, shown in Figure 3.6, is the next screen to appear, and is an important screen for the researcher. The Alter Session Parameters screen allows the researcher to alter the parameters by which a procedure executes. The Send Start Command Screen appears next. The options available on the screen vary depending upon how many boxes are described in the Hardware Configuration.

Figure 3.6 - Alter Session Parameters Screen

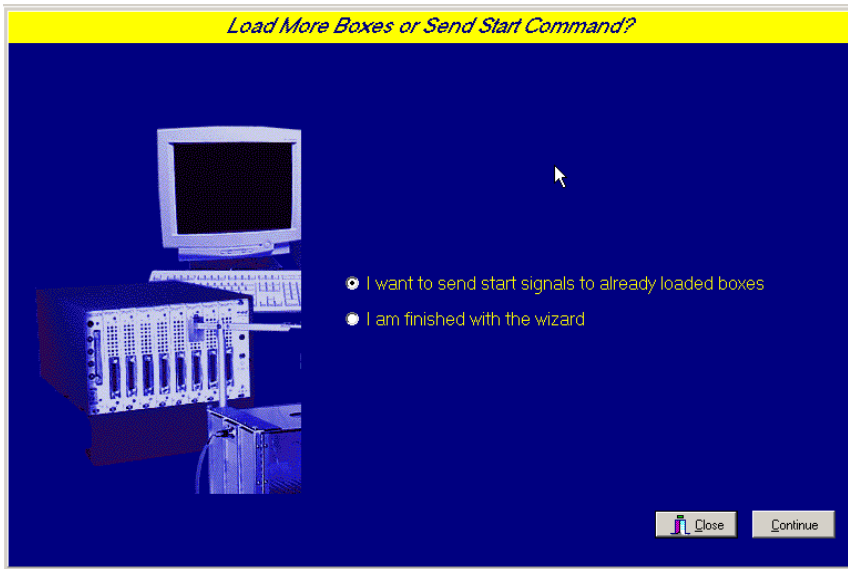


In this example only 1 box is described in the Hardware Configuration, so Figure 3.8 will appear next. If more than 1 box is in the Hardware Configuration, then Figure 3.7 will appear.

Figure 3.7 - Send Start Command Screen for Multiple Box Configuration

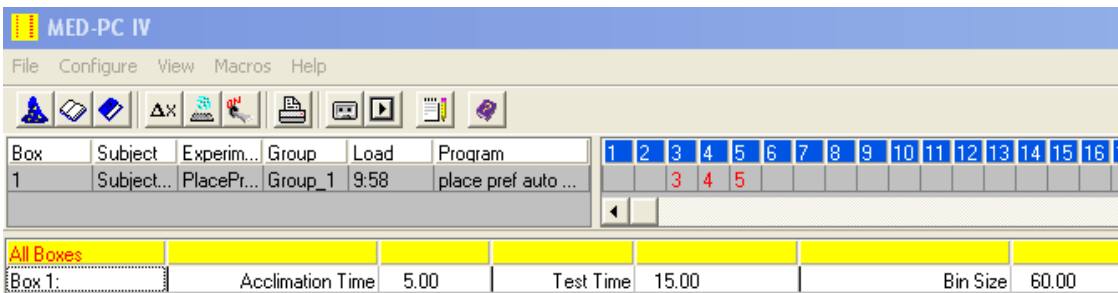


Figure 3.8 - Send Start Command Screen for Single Box Configuration



In both cases (Figure 3.7 and Figure 3.8), the screens are where the researcher decides to either load more boxes, send a start signal to boxes that are already loaded, or enter the MED-PC run-time environment without sending a start signal by selecting “I am finished with the wizard”. This option results in the screen shown in Figure 3.9.

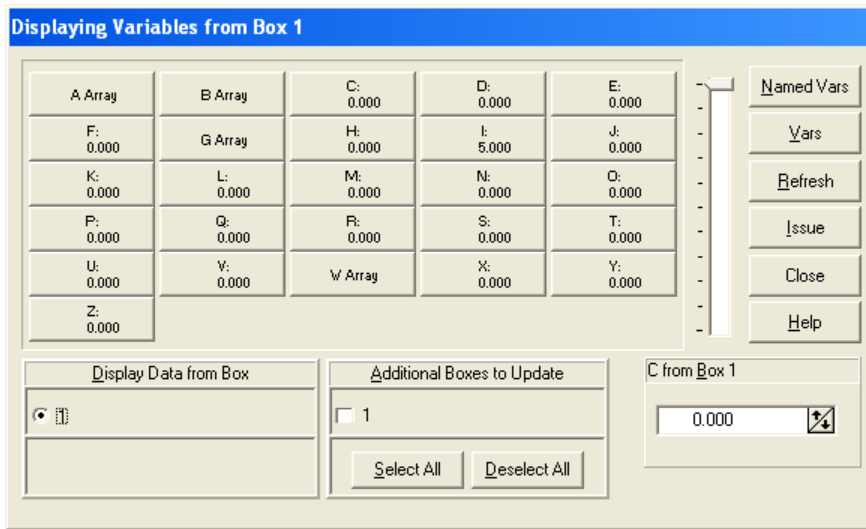
Figure 3.9 - The MED-PC Run Time Screen



Viewing/Changing Variable Values

Before a “start command” has been issued, any variable may be changed on the MED-PC run-time screen. Simply highlight the value to change, and then enter the new value. Once a session is in progress, change variables by selecting **Configure** on the main menu and select **Change Variables**, or click the 4th tool bar item to reveal the window in Figure 3.10. In the lower left hand corner of the Change Variables window, find the “Display Data from Box” display, and choose the chamber(s) to modify. By clicking additional boxes in the “Additional Boxes to Update” section, changes made to a single box are automatically loaded to all of the selected boxes.

Figure 3.10 - Changing Variables Screen



The value of any simple variable may be viewed from this screen (see Figure 3.11). Click an array on the table and each element in that array can be viewed. To change a value, simply highlight and replace the value in the lower right hand box or use the up/down arrows to increment by 1. Click the **Issue** button for the change to take effect. Click **Named Variables** to produce the display in Figure 3.12. Change variables here as needed.

Figure 3.11 - Displaying Array A from Box 1

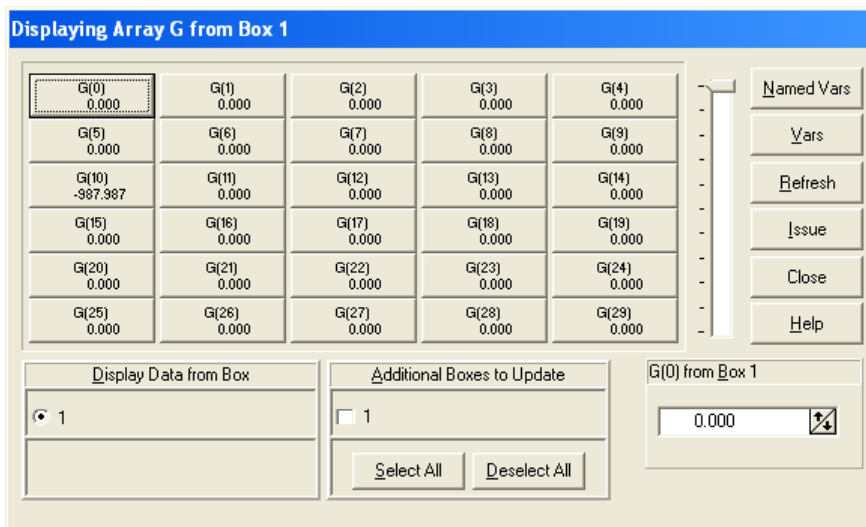
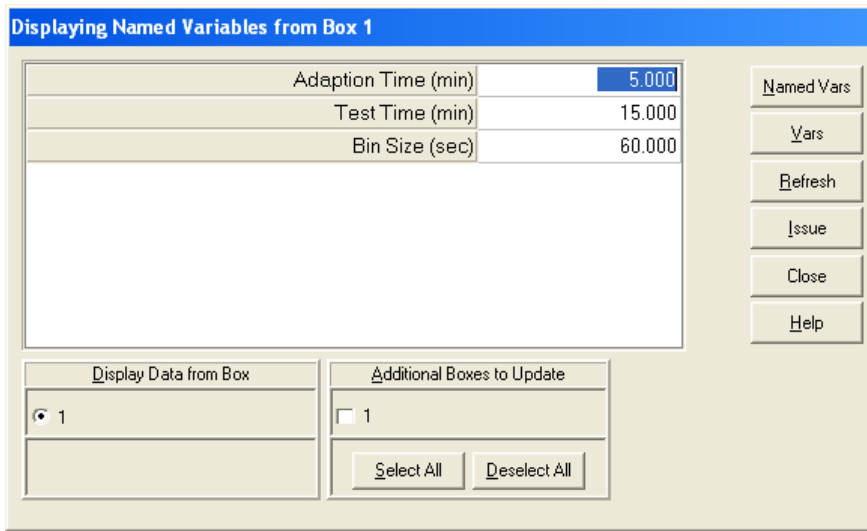


Figure 3.12 - Displaying Named Variables from Box 1



CHAPTER 4 | UNDERSTANDING THE DATA FILES

Data can be saved manually by selecting **FILE | SAVE DATA MANUALLY** or **FILE | SAVE DATA (FLUSH)**. The file name that is used to save the data in is dependent on the option that was chosen in the Hardware Configuration Utility and may also be dependent on the Subject, Experiment, and Group name provided in the MED-PC load wizard (Figure 3.4). Within each data file, the headings are created for each Subject, Experiment, Group, Box, etc., (see below). Data files may be opened with note pad, word pad, or any word processor or spreadsheet; however, be sure they are always saved “unformatted” in case a data extraction utility such as MED-PC to Excel might even be used. Data file formats are explained in detail in the MED-PC User’s Manual.

Sample Data File

The sample data file shown below is for Place Pref Man Doors.mpc.

File: C:\PROGRAM FILES\MED ASSOCIATES\MED-PC\DATA\!2008-01-30

```

Start Date: 01/30/08      -- Date that the program started
End Date: 01/30/08      -- Date that the program ended
Subject: Animal 1       -- Subject name
Experiment: Experiment 1 -- Experiment name
Group: Group 1          -- Group name
Box: 1                  -- Box in MED-PC that the program ran
Start Time: 9:35:33     -- Time that the program started
End Time: 10:43:06     -- Time that the program ended
MSN: Place Pref Man Doors -- Name of the program that created this file

      C: 1.00           -- Flag animal in maze when C = 1

D: 0.00                 -- Not Used
E: 900.00               -- Elapsed Session Time in seconds. Displayed as Decimal Minutes.
      F: 60.00         -- Elapsed Bin Time in seconds.

H: 0.00                 -- Not Used
      I: 75.00        -- Subscript for Data Time Bins.

J: 0.00                 -- Not Used
K: 0.00                 -- Not Used
L: 0.00                 -- Not Used
      M: 14.00        -- Movement Flag

N: 0.00                 -- Not Used
O: 0.00                 -- Not Used
P: 0.00                 -- Not Used
      Q: 14.00        -- Movement Flag

R: 0.00                 -- Not Used
S: 0.00                 -- Not Used
T: 0.00                 -- Not Used
U: 0.00                 -- Not Used
V: 0.00                 -- Not Used
X: 0.00                 -- Not Used
Y: 0.00                 -- Not Used
Z: 0.00                 -- Not Used

```

- Array A holds the times that the program will run for the Acclimation and Test.
- It also holds the size of the Bin in seconds. The Bin is used for closer examination of what the animal did during each minute.
- Defaults 5min, 15min, 60sec

Acclimation Test Bin
 A: Time Time Time
 0: 5.00 15.00 60.00

- Array B holds the experiment values for what the animal did in the Black Zone.
- The first five elements in the array are the total counts for the entire Test (default 15min).
- The next five elements are the counts that happened in the first Bin (default 60sec).

Exploration Entrance Zone Activity Movement
 B: Counts Counts Time Counts Counts
 0: 6.00 4.00 679.99 643.00 534.00

- 6 Explorations, 4 Entrances, $679.99/60 = 11.33\text{min}$, 643 Activities, 534 Movements - Totals for the entire 15min

5: 0.00 0.00 0.00 0.00 0.00

- Animal was not in the Black Zone during the 1st 60 sec period

10: 3.00 1.00 48.40 43.00 36.00

- 3 Explorations, 1 Entrance, $48.40/60 = 0.81\text{min}$, 43 Activities, 36 Movements - during the 2nd 60sec period

15: 0.00 0.00 32.01 27.00 22.00

- 0 Explorations, 0 Entrances, $32.01/60 = 0.53\text{min}$, 27 Activities, 22 Movements - during the 3rd 60sec period

20: 0.00 0.00 0.00 0.00 0.00

- Animal was not in the Black Zone during the 4th 60 sec period

25: 1.00 1.00 49.72 46.00 38.00

- 1 Exploration, 1 Entrance, $49.72/60 = 0.83\text{min}$, 46 Activities, 38 Movements - during the 5th 60sec period

30: 0.00 0.00 60.00 42.00 17.00

- 0 Explorations, 0 Entrances, $60/60 = 1\text{min}$, 42 Activities, 17 Movements - during the 6th 60sec period

35: 0.00 0.00 60.00 61.00 52.00
 40: 0.00 0.00 60.00 60.00 54.00
 45: 1.00 1.00 37.82 22.00 23.00
 50: 0.00 0.00 60.00 59.00 59.00
 55: 0.00 0.00 60.00 54.00 46.00
 60: 0.00 0.00 60.00 51.00 33.00
 65: 1.00 1.00 32.03 32.00 27.00
 70: 0.00 0.00 60.00 66.00 57.00
 75: 0.00 0.00 60.01 80.00 70.00

- Array G holds the experiment values for what the animal did in the Gray Zone.
- The first five elements in the array are the total counts for the entire Test (default 15min).
- The next five elements are the counts that happened in the first Bin (default 60sec).
- Movements are not recorded while the animal is in the Gray Zone.

	Exploration	Entrance	Zone	Activity	Movement	
G:	Counts	Counts	Time	Counts	Counts	
0:	13.00	6.00	107.13	74.00	0.00	- 13 Explorations, 6 Entrances, $107.13/60 = 1.79\text{min}$, 74 Activities, 0 Movements - Totals for the entire 15min
5:	3.00	1.00	16.80	15.00	0.00	- 3 Explorations, 1 Entrance, $16.80/60 = 0.28\text{min}$, 15 Activities, 0 Movements - during the 1st 60sec period
10:	0.00	0.00	11.60	8.00	0.00	- 0 Explorations, 0 Entrances, $11.60/60 = 0.19\text{min}$, 8 Activities, 0 Movements - during the 2nd 60sec period
15:	3.00	1.00	16.81	8.00	0.00	- 3 Explorations, 1 Entrance, $16.81/60 = 0.28\text{min}$, 8 Activities, 0 Movements - during the 3rd 60sec period
20:	1.00	1.00	10.71	8.00	0.00	- 1 Exploration, 1 Entrance, $10.71/60 = 0.18\text{min}$, 8 Activities, 0 Movements - during the 4th 60sec period
25:	0.00	0.00	10.28	5.00	0.00	- 0 Explorations, 0 Entrances, $10.28/60 = 0.17\text{min}$, 5 Activities, 0 Movements - during the 5th 60sec period
30:	0.00	0.00	0.00	0.00	0.00	- Animal was not in the Gray Zone during the 6th 60 sec period
35:	0.00	0.00	0.00	0.00	0.00	
40:	1.00	0.00	0.00	0.00	0.00	
45:	2.00	1.00	22.18	20.00	0.00	
50:	0.00	0.00	0.00	0.00	0.00	
55:	1.00	0.00	0.00	0.00	0.00	
60:	0.00	0.00	0.00	0.00	0.00	
65:	2.00	2.00	18.75	10.00	0.00	
70:	0.00	0.00	0.00	0.00	0.00	
75:	0.00	0.00	0.00	0.00	0.00	

- Array W holds the experiment values for what the animal did in the White Zone.
- The first five elements in the array are the total counts for the entire Test (default 15min).
- The next five elements are the counts that happened in the first Bin (default 60sec).

W:	Exploration Counts	Entrance Counts	Zone Time	Activity Counts	Movement Counts	
0:	4.00	3.00	112.88	103.00	77.00	- 4 Explorations, 3 Entrances, $112.88/60 = 1.88$ min, 103 Activities, 77 Movements - Totals for the entire 15min
5:	1.00	1.00	43.19	47.00	33.00	- 1 Exploration, 1 Entrance, $43.19/60 = 0.72$ min, 47 Activities, 33 Movements - during the 1st 60sec period
10:	0.00	0.00	0.00	0.00	0.00	- Animal was not in the White Zone during the 2nd 60 sec period
15:	2.00	1.00	11.18	9.00	6.00	- 2 Explorations, 1 Entrance, $11.18/60 = 0.19$ min, 9 Activities, 6 Movements - during the 3rd 60sec period
20:	0.00	0.00	49.29	40.00	31.00	- 0 Explorations, 0 Entrances, $49.29/60 = 0.82$ min, 40 Activities, 31 Movements - during the 4th 60sec period
25:	0.00	0.00	0.00	0.00	0.00	- Animal was not in the White Zone during the 5th 60 sec period
30:	0.00	0.00	0.00	0.00	0.00	- Animal was not in the White Zone during the 6th 60 sec period
35:	0.00	0.00	0.00	0.00	0.00	
40:	0.00	0.00	0.00	0.00	0.00	
45:	0.00	0.00	0.00	0.00	0.00	
50:	0.00	0.00	0.00	0.00	0.00	
55:	0.00	0.00	0.00	0.00	0.00	
60:	0.00	0.00	0.00	0.00	0.00	
65:	1.00	1.00	9.22	7.00	7.00	
70:	0.00	0.00	0.00	0.00	0.00	
75:	0.00	0.00	0.00	0.00	0.00	

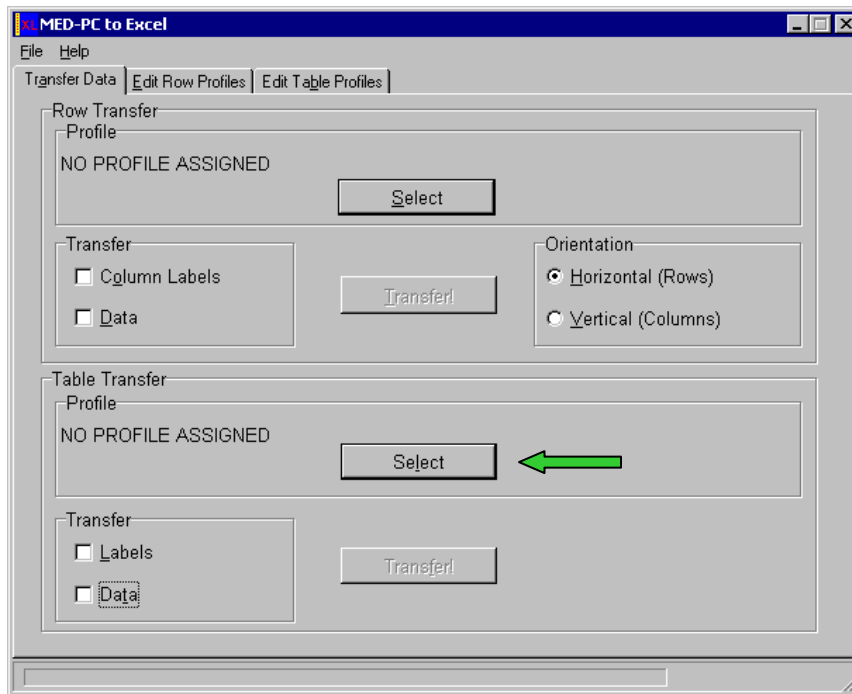
CHAPTER 5 | DATA ANALYSIS – USING MED-PC TO EXCEL

Using a Pre-Formatted Table Profile (.MTP file)

MED-PC to Excel (MPC2XL) is a program that helps to import data from MED-PC (the raw-data file format, previous section) to a spreadsheet program such as Microsoft Excel. MPC2XL needs to be installed separately from MED-PC. Please refer to the **User's Manual for MPC2XL** for installation instructions. Once MPC2XL is installed, open the data folder. The Place Preference .MTP files have been automatically transferred from the CD to this file. Follow the step-by-step instructions below for importing data.

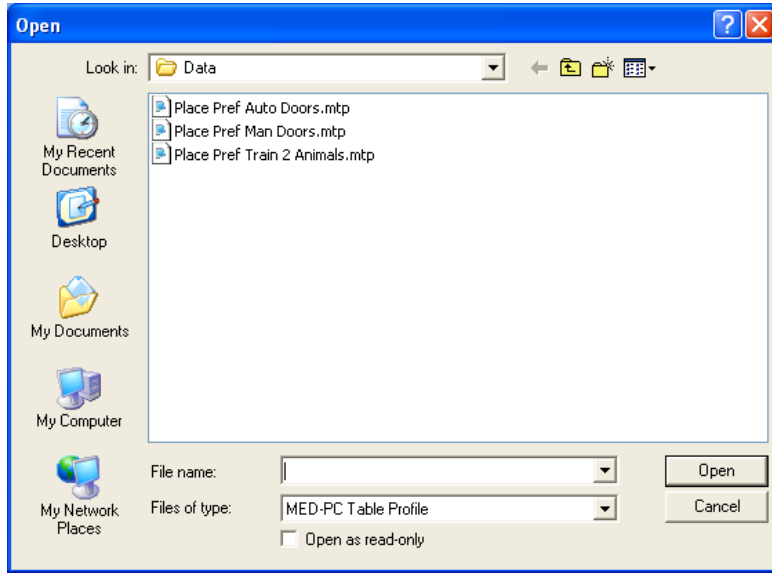
1. Open Microsoft Excel, and then minimize the window to gain access to the **MED-PC to Excel** icon on the desktop and double-click on the icon. The MED-PC to Excel display (see Figure 5.1) will appear. The uppermost file display should be titled **Transfer Data**, see the figure below. Under the **Table Transfer** window at the bottom of the screen, click on **Select**.

Figure 5.1 - Table Transfer



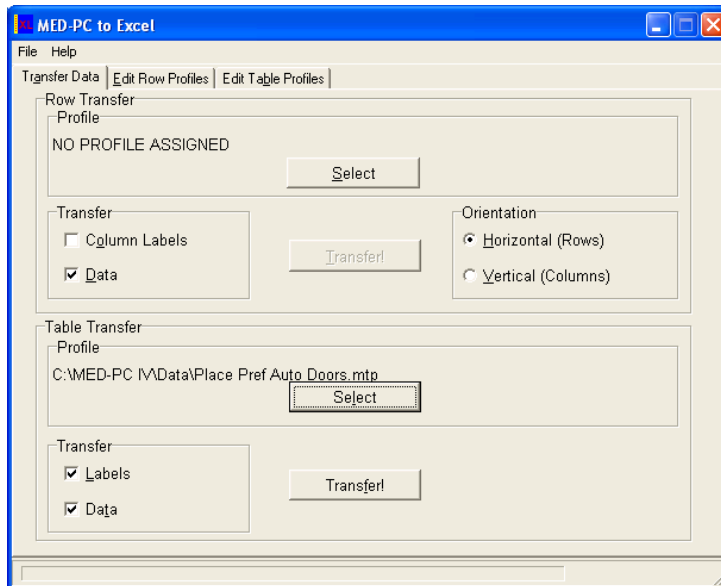
- Choose the .MTP file in the data folder that corresponds to the MED State Notation Procedure that was run and click **Open**. For this example Place Pref Auto Doors.mtp will be used.

Figure 5.2 - Select File to Open



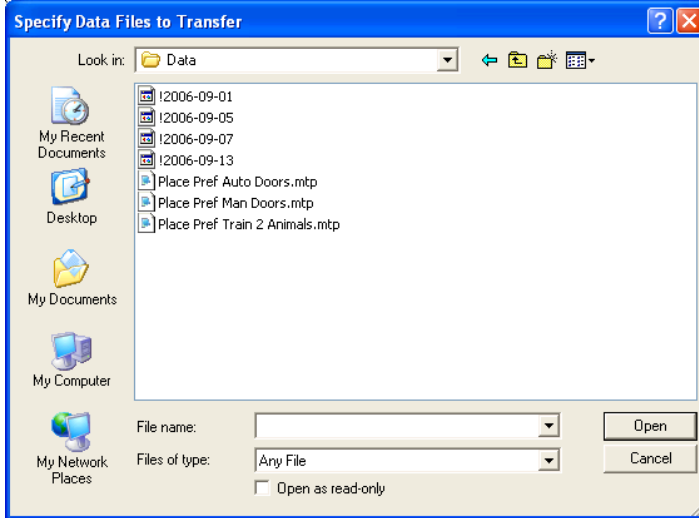
- Note that Place Pref Auto Doors.MTP is listed under the Table Transfer “Profile.” Select **Labels** and **Data**, because selecting these options will print data labels as well as import data. Click **Transfer!**

Figure 5.3 - Transfer Data



- Specify the raw data file to transfer. Raw data files are listed by date, and then click **Open**. This step performs the transfer, and now the data has been sent to Microsoft Excel.

Figure 5.4 - Specify Data Files to Transfer



- Expand the Microsoft Excel screen, and the data should appear in the following format:

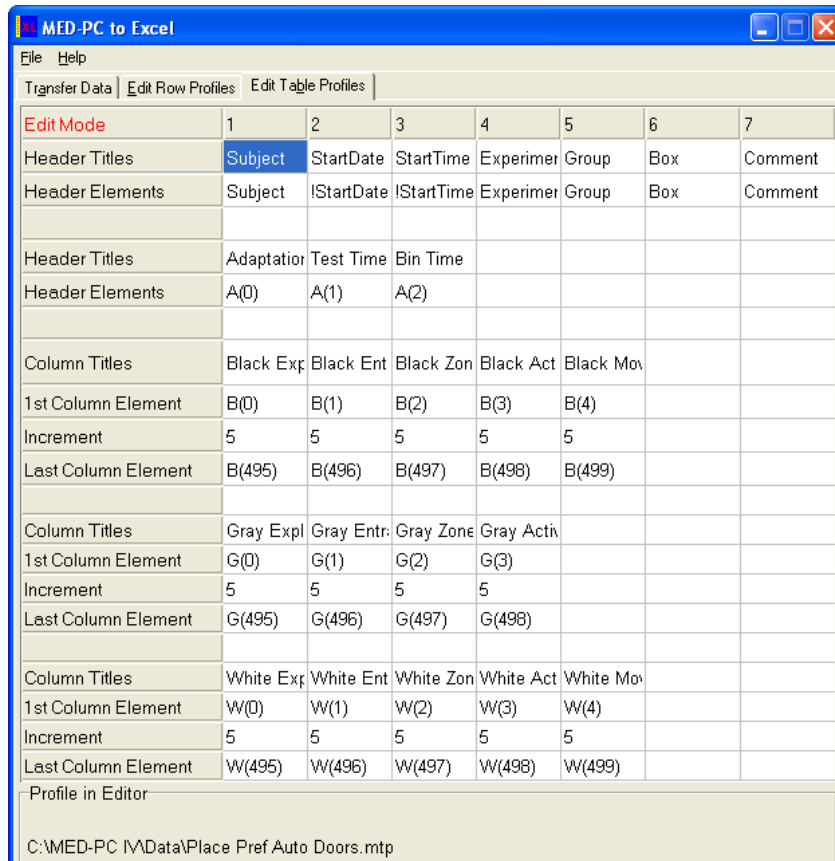
Figure 5.5 - Excel Spreadsheet

	A	B	C	D	E	F	G	H
1	Subject	StartDate	StartTime	Experiment	Group	Box	Comment	
2	Animal 1	6/7/2007	9:35:33	Experiment 1	Group 1	1		
3								
4	Adaptation Time	Test Time	Bin Size					
5	5	15	60					
6								
7	Black Exploration Counts	Black Entrance Counts	Black Zone Time	Black Activity Counts	Black Movement Counts			
8	6	4	679.99	643	534			
9	0	0	0	0	0			
10	3	1	48.4	43	36			
11	0	0	32.01	27	22			
12	0	0	0	0	0			
13	1	1	49.72	46	38			
14	0	0	60	42	17			
15	0	0	60	61	52			
16	0	0	60	60	54			
17	1	1	37.82	22	23			
18	0	0	60	59	59			
19	0	0	60	54	46			
20	0	0	60	51	33			
21	1	1	32.03	32	27			
22	0	0	60	66	57			
23	0	0	60.01	80	70			
24								
25	Gray Exploration Counts	Gray Entrance Counts	Gray Zone Time	Gray Activity Counts				
26	13	6	107.13	74				
27	3	1	16.8	15				

Editing the .MTP file

The .MTP file can be edited to customize the transfer process and display the data of most interest. See the **User’s Manual for MPC2XL** for explicit instructions about how to modify the MTP file using the “Edit Table Profiles” screen, see Figure 5.6. “Header Titles” are user defined, and can include any information that will help label the data listed below the title. “Header Elements” are the data points that will get transferred from the raw data file into Excel. The raw data file will list the elements that can be included in the .MTP file (e.g. A-Z).

Figure 5.6 - Edit Table Profiles



To edit either the Header Titles or Header Elements, click on the appropriate cell in the Edit Table Profiles window. Rows and columns can be added to the file. First, select the desired location, then right-click to add either the desired row or column. Use the right-click option titled **Paste an Identifier** to include subject or session identifying information. Note that when using the Paste an Identifier function, Header Titles and Header Elements are edited and pasted automatically.

To save the edited .MTP file, select **Save** and create a new filename in the data folder. To use this newly edited and saved .MTP file, verify that the file is selected in the **Table Transfer Profile** display (Figure 5.3), and then click **Transfer**.

Appendix A | Contact Information

Please contact MED Associates, Inc. for information regarding any of our products.

Visit our website at www.med-associates.com for contact information.

For technical questions, email support@med-associates.com.