

Installing and Operating the MCCB Computer Programs

Please read these instructions before attempting to install or use any of the four programs included on the two CDs in the MCCB test kit. Each program requires a separate installation, which is described below. These instructions are also available both as PDF files on the CDs and in Appendix D of the English version of the MCCB Manual.

System Requirements

- Windows processing system – Windows XP, Vista, 7, 8, or 10 (The MCCB programs are NOT compatible with Apple or other processing systems.) Check the MATRICS Assessment, Inc., Web site (www.matricsinc.org) for updates on compatibility as new versions of Windows are released.
- Adobe Reader (needed to read the PDF files containing these instructions on the CDs and to run the CPT-IP subprogram described below; a free version is available at <http://get.adobe.com/reader>)

Computer Settings

Dpi (dots per inch) Setting:

If, after installing the MCCB Computer Scoring Program as described below, the bottom portion of the screens is not visible, you may need to change the dpi setting on your computer. The dpi setting affects the size of images on the screen. The standard setting in the U.S. is 96 dpi, and this setting should be used to run the program. If your dpi setting is set to a value other than 96 (e.g., 120), it may need to be changed to 96.

Windows 7 Display Setting:

If you are installing the MCCB Computer Scoring Program on a computer running Windows 7, you may need to change the Display setting, which also affects the size of images on your screen. If the display size is set to *Medium – 125%*, the windows of the scoring program may not be sized to include all screen elements. Some options and navigation buttons may not be visible. Change the Display setting either to *Smaller – 100% (default)* or *Larger – 150%* to make sure all screen elements are visible.

Windows 10 Default PDF Reader and Non-Latin-Based Languages:

If you are using a computer running Windows 10, you may need to change your settings from Microsoft Edge, the default PDF reader new in Windows 10, to Adobe Reader before administering the CPT-IP in a language that uses characters that are not part of the Latin alphabet (see sections below on operating the CPT-IP program). Because Microsoft Edge does not execute JavaScript embedded in a PDF file, it will not work properly to open the PDF subprograms of the CPT-IP. This default setting can be changed a number of ways; one is described at www.cnet.com/how-to/how-to-select-default-programs-in-windows-10/.

Region and Language Setting Outside of the United States:

If you are using the MCCB Computer Scoring Program in a country outside of the U.S. that uses commas in place of decimal points, you will need to change the Region and Language setting on your computer to *English (United States)* before using the Import function (see sections below on the Import Function and Operating the MCCB Scoring Program). To change your computer settings, go to

the Control Panel on your computer and select the tab for language and region settings. Then select the tab that provides options for changing date, time, and number settings (the labels for these tabs differ slightly across Windows processing systems). Select *English (United States)*; then click *OK* at the bottom of the screen.

Installing the MCCB Computer Scoring Program

- Insert the CD containing the MCCB scoring program. If the menu with program installation choices does not appear automatically, click on *My Computer* and then the DVD/CD drive to display the files on the CD. Then click on *AutoRun_Install.exe* to start the menu. Note: If you have just completed installing the North American or International MSCEIT Branch 4 scoring programs, simply go back to the main menu.
- Click the menu item titled *Install MCCB Scoring Program*. The install wizard on your computer will indicate that your program files are loading.
- A window titled *Welcome to the InstallShield Wizard for MCCB* will appear.
- Click *Next*.
- A license agreement window will appear.
- After reading the agreement, click *I accept the terms in this license agreement*.
- Click *Next*.
- Enter Customer Information (user name and organization).
- Click *Next*.
- A window titled *Destination Folder* will appear.
- Click *Next*.
- A window titled *Ready to Install the Program* will appear.
- Click *Install* to begin installation. Please wait while the program installs; installation may take several minutes.
- A window titled *InstallShield Wizard Completed* will appear.
- Click *Finish* or go directly to the program by clicking the box beside *Launch MCCB* and then click *Finish*.
- An icon labeled *MCCB* will appear on your computer's desktop.
- Double click the icon to start the program.

Operating the MCCB Computer Scoring Program

This version of the MCCB Computer Scoring Program includes the following features to expand its functionality and increase data security:

1. Drop-down calendars for entering dates
2. Three options for calculating respondent age
3. Data import function
4. Option to obtain a neurocognitive composite score (without social cognition)
5. Allowance for missing data
6. Password protected export files and other security features
7. Scoring using norms from selected countries/regions outside of the United States

Each of these functions is explained below.

1. Drop-Down Calendars

Drop-down calendars are provided when the MCCB Computer Scoring Program requires the entry of a date (e.g., study start date, birth date, test date). To access a drop-down calendar, click the list box to the right of the required date. The default calendar displays showing the present month and year with the present date circled in red. Click the year at the top of the calendar to display up and down arrows; click the up or down arrow to make the desired change to the year. To skip rapidly through the year options, such as when entering a birth date (e.g., 1960), click the down arrow and hold down the mouse button. Click the month shown on the default calendar to display a drop-down menu for the 12 calendar months. Click the desired month. For the date within the selected month, click the desired date. The drop-down calendar will stay open until a date is selected. The date can be changed later by clicking on the list box again, which will reopen the drop-down calendar. The format of the date appearing in the list box when the drop-down calendar closes will default to the format specified in your computer operating system.

2. Three Options for Respondent Age Calculation

The MCCB scoring program generates normative scores with age and gender correction as the default option. To meet users' needs for age corrected scores and allow for the protection of patient privacy during clinical trials and other research projects of various lengths, the program provides three options for calculating respondent age. On the Respondent Registry screen (accessed by clicking *Add New Respondent* in the program's main menu), you can enter the respondent's age in years, his or her birth date, or his or her birth month and year.

If you enter the respondent's age in years, the scoring program retains this age through repeated assessments, even if the respondent's birthday occurs during the study. Hence, although the respondent's age in years increases, the age used by the program to generate normative scores stays the same. Maintaining a fixed age for the respondent is often preferable for short-term studies of a year's duration or less.

If you enter the respondent's birth date, the scoring program automatically corrects the respondent's age in one tenth of a year increments (i.e., every 35 days) throughout the study. Hence, for each repeated assessment, the age used by the scoring program to generate normative scores is based on the respondent's corrected age at the time of each assessment. Correction of the respondent's age over the length of the study is important in longer-term studies of several years' duration.

If you enter the respondent's birth month and year, the scoring program assigns the respondent a birth date of the 15th day of the month you entered. The program then automatically calculates age changes in one tenth of a year increments but does so as if the respondent's exact birth date is the 15th day of the month and year entered. This option allows for age correction over the duration of longer-term studies, but lets you avoid entering the respondent's complete birth date, which is considered individually identifiable health information that is protected under the U.S. Health Insurance Portability and Accountability Act (HIPAA).

3. Import Function

The Import function allows you to import data from other files to transform a group of respondents' MCCB raw scores to *T*-scores and percentiles, instead of entering each respondent's data separately.

To import data from other files, click *Import* on the main menu of the MCCB scoring program. Note: Two separate files, a "patient registry" file and a "raw data" file, need to be created before using this function. The "patient registry" file contains demographic information on the respondents; the "raw data" file contains the group's MCCB raw scores. These created files must include the number of variables necessary to allow the calculation of transformed scores and must be saved in comma separated variable (CSV) format. The MCCB scoring program does not convert existing files into the necessary format. In Microsoft Excel 2003, 2007, 2010, and 2013 versions, the save option is listed as *CSV (comma delimited)* in the drop-down menu. Once these files are set up, raw data can be entered, saved, and imported into the MCCB scoring program for computation of *T*-scores and percentiles.

As noted in the Computer Settings section above, if you are using this program in a country outside of the U.S. that uses commas in place of decimal points in numeric notation, you will also need to change the Region and Language setting on your computer to *English (United States)* before importing your .csv files. This setting is necessary to ensure commas are not interpreted as decimal points.

Patient Registry File

The "patient registry" file includes all of the variables that appear on the Respondent Registry screen in the MCCB Computer Scoring Program when the data are entered manually. These variables are listed below. A pre-formatted Patient Registry Excel template can be accessed from the FAQ section of this Web site (www.matricsinc.org), or you can create a patient registry file by typing the variables into an Excel file as the column heads and then entering patients' demographic information. To import your patient registry file, click the *Import* button to the right of the list box labeled *Import Respondents* and import the file from the appropriate directory on your computer or flash drive. The program will generate an error message if the file was not saved in CSV format or if one or more variable names are missing. The filename must use alphanumeric characters with no spaces or other special characters (e.g., %, *, -, &). If you are using the default scoring option (i.e., *Age and Gender Corrected*) or the *No Correction* option, then only respondent ID, age, and gender need to be entered for each respondent for the scoring program to execute the transformation of raw scores to *T*-scores and percentiles. For the scoring option that corrects for age, gender, and education, the respondents' years of education (EDUyear) would also need to be entered. Entry of other information is optional.

Patient Registry variable names

1. Respondent ID
2. Start Date
3. Name
4. Birth Date
5. Age
6. Gender
7. Handedness
8. Race

9. EDUYear
10. Father EDU
11. Mother EDU

Raw Data File

The “raw data” file includes all variables that appear on the Data Entry screen in the MCCB Computer Scoring Program and are listed below. As with the Patient Registry template, a pre-formatted Raw Data Excel template can be accessed from the FAQ section of this Web site (www.matricsinc.org), or you can create a raw data file by typing the variable names as column heads in an Excel file and entering patients’ data. To import your raw data file, click the *Import* button to the right of the list box labeled *Import Raw Data* and import the file from the appropriate directory on your computer or flash drive. To obtain *T*-scores and percentiles for the seven neurocognitive domains and the overall composite, raw scores need to be entered for each of the ten MCCB tests. To obtain *T*-scores and percentiles for the six non-social domains and the neurocognitive composite (described below), raw scores need to be entered for nine of the MCCB tests. The variable names are listed below.

Raw Data variable names

1. Respondent ID
2. Test Date
3. Assessment#
4. Rater
5. TMT
6. BACS SC
7. HVLTR.1
8. HVLTR.2
9. HVLTR.3
10. WMS-III SS
11. LNS
12. NAB Mazes
13. BVMT-R.1
14. BVMT-R.2
15. BVMT-R.3
16. Fluency
17. MSCEIT ME
18. CPT-IP.1
19. CPT-IP.2
20. CPT-IP.3

After these files have been successfully imported, the raw scores, transformed scores, and the cognitive profiles for individual subjects can be viewed within the MCCB Computer Scoring Program by accessing them through the Data Tracking screen. The entire data set with demographics, raw scores, transformed scores, and percentiles can be saved as an export file in Excel format with the same options described in the preceding section also describing the Export function.

4. Obtaining a Neurocognitive Composite Score (without Social Cognition)

Two types of composite scores can be generated by the MCCB scoring program: an overall composite that is based on scores from each of the seven MCCB domains and a neurocognitive composite that is based on scores from the six non-social MCCB domains (excluding social cognition). The neurocognitive composite option is available by clicking *Report* on the Main Menu, which displays the Report screen. On the Report screen, the default composite score provided by the program is the Overall Composite. To generate neurocognitive composite scores, click the tab labeled *Neurocognitive Composite* located in the bottom right corner of the screen. The Neurocognitive Composite *T*-score (and percentile) will appear in the window above this tab along with the *T*-scores (and percentiles) for the six domains included in this composite.

5. Allowance for Missing Data

The MCCB scoring program allows for some missing data. To yield *T*-scores and percentiles on the seven cognitive domains and the Overall Composite or the six non-social domains and the Neurocognitive Composite, data are required on the tests representing each cognitive domain. Five domains are represented by a single test (attention/vigilance, verbal learning, visual learning, reasoning and problem solving, and social cognition); two are represented by more than one test (speed of processing and working memory). For domains represented by a single test, each test's data must be entered into the scoring program. For domains represented by more than a single test, the scoring program will still provide *T*-scores and percentiles at the domain level and the overall composite and neurocognitive composite if data are missing from one of the tests comprising that domain. Thus, for speed of processing, data are required for two of the three tests (TMT, BACS SC, Fluency); for working memory, data are required for one of the two tests (WMS-III SS, LNS).

6. User Privileges, Password Protection, Tracking Logs, and Exported Data Formats

This version of the MCCB scoring program provides two levels of user privileges: Administrator level and Tester level. The Administrator level has the higher level of privileges and should be limited to persons with the greatest responsibility for ensuring security of the data. A user at the Administrator level can add new users and save scored data in password protected files. Persons at the Tester level can only enter and score data.

To password protect saved data at the Administrator user level, click *Export* on the main menu, which displays the Export screen. In the *Encryption Option* field, click *Yes* to indicate password protection is needed. Enter a password and then re-enter the same password to make sure it is typed correctly. The file will be saved in the default folder location, *C:\MCCBexport*, unless otherwise specified. To open the file, enter the password when prompted.

Another security feature added to the MCCB scoring program is the inclusion of a tracking log for any changes made to the dataset, which include changes to the Respondent Registry or changes to the MCCB raw scores entered for an administration. Before a user can make a change to data that has been entered, the program requires the user to enter a reason for making the change. The changes to the dataset and the reason for the change are saved in a tracking log. The changes are time-stamped and can be viewed at a later time to review the nature of the changes.

Exported data from individual cases can be aggregated and saved four ways: 1) demographics, raw scores, *T*-scores, and percentiles, 2) demographics, raw scores, and *T*-scores (minus percentiles), 3) tracking log for demographics, 4) tracking log for raw scores. On the Export screen, click the arrow in the *Export Items* list box to display these options. The data do not need to be saved as an export file after each use of the MCCB scoring program. The program will automatically compile the data in each of the four options within each specified study, which can then be exported at a later date for viewing.

7. Scoring the MCCB Using Norms from Countries/Regions Outside of the United States

The MCCB scoring program allows you to score data using norms for community samples from several different countries: English-U.S., Chinese-Mainland China, Russian, Spanish-Spain, Spanish-Central and South America, Japanese, Hindi, German, and Italian. From the Study Management screen, click the arrow next to the list box labeled *Language norms* located toward the bottom of the screen. Clicking this arrow will display a drop-down menu with the list of available norms. Select the desired language, and the program will score the data using those norms. CAUTION: Once you have selected a language, it is advised that you not change the selection of norms used for scoring an existing data set. The reason for not changing the norms selected is that this programming feature requires considerable processing time to rescore data already entered into the program.

Installing the North American MSCEIT Branch 4 Scoring Program

- Insert the CD containing the North American MSCEIT Branch 4 Scoring Program. If the menu with program installation choices does not appear automatically, click on *My Computer* and then the DVD/CD drive to display the files on the CD. Then click on *AutoRun_Install.exe* to start the menu. Note: If you have just completed installing the MCCB Computer Scoring Program or the International MSCEIT Branch 4 Scoring Program, simply go back to the main menu.
- Click the menu item titled *Install North American MSCEIT Branch 4 Scoring Program*.
- A window titled *Welcome to the InstallShield Wizard for MSCEIT Branch 4* will appear.
- Click *Next*.
- A window titled *Ready to Install the Program* will appear.
- Click *Install* to begin installation. Please wait while the program installs; installation may take several minutes.
- Click *Finish*.
- A green leaf icon labeled *MSCEIT Branch 4* will appear on your desktop.
- Double click the icon to start the program.

Operating the North American MSCEIT Branch 4 Program

When you enter a respondent's responses to the MSCEIT Branch 4 items into the North American scoring program, the program creates a Microsoft Excel .csv file that stores the resulting scored dataset. The .csv file contains a legend that tells you how to identify the raw and adjusted scores as well as the Branch 4 standard score using North American norms. The Branch 4 standard score, located in column BU of the .csv file, is based on a mean of 100 and a standard deviation of 15.

The default file location to which the .csv file is saved is *C:\MSCEITexport*. You can change this default file location by following these steps:

- After entering a respondent's item response selections on the MSCEIT data entry screen, click the tab labeled *Score* in the upper left corner.

- A new screen, titled *Score*, will open.
- Click the *Set file location* button, located in the bottom left corner of the screen. Another screen, titled *Save Scored Assessments*, will open.
- Create a new default file location by right clicking *Local disk (C:)*, from the computer's directory, and then selecting *New* and then *Folder*.
- Give the new folder a title (e.g., *NAMer MSCEIT Scored Assessments*), click *Enter*, and then click on the folder to open it.
- The newly created file folder will appear in the window at the top of the screen. The default file name for scored MSCEIT assessments (appearing in the window at the bottom of the screen) is *ScoredAssessments*. You can keep this file name or change it to a new one.
- Click *Save* to save the file location for scored assessments and re-open the screen labeled *Score*.
- Click the *OK* button.

The entered raw scores and transformed standard scores will be saved in the designated file. Once you have changed the file location, the new file folder will become the default for future scored assessments. To view the saved MSCEIT scored assessments file, close or minimize the MSCEIT scoring program and open the *ScoredAssessments* file from within the folder labeled *MSCEIT Scored Assessments*. You can access the folder by using Windows Explorer, which provides a listing of files and directories on the computer.

Installing the International MSCEIT Branch 4 Scoring Program

- Insert the CD containing the International MSCEIT Branch 4 Scoring Program. If the menu with program installation choices does not appear automatically, click on *My Computer* and then the DVD/CD drive to display the files on the CD. Then click on *AutoRun_Install.exe* to start the menu. Note: If you have just completed installing the North American Branch 4 Scoring Program or the MCCB Computer Scoring Program, simply go back to the main menu.
- Click the menu item titled *Install International MSCEIT Branch 4 Scoring Program*.
- A window titled *Welcome to the InstallShield Wizard for INTL-MSCEIT* will appear.
- Click *Next*.
- A window titled *Ready to Install the Program* will appear.
- Click *Install* to begin installation. Please wait while the program installs; installation may take several minutes.
- Click *Finish* or go directly to the program by clicking the box beside *Launch INTL-MSCEIT* and then click *Finish*.
- A blue mountain icon labeled *International MSCEIT* will appear on the desktop.
- Double click the icon to start the program.

Operating the International MSCEIT Branch 4 Program

- The International MSCEIT program is password protected and requires a username and password to gain access to it. The default settings are username=user and password=password. To protect the program from unwanted access, it is highly recommended that you change these default settings immediately after installation (see Chapter 6 of the MCCB Manual for instructions).
- This program also requires you to select a study name before entering a respondent's responses. Selecting a study name prompts the program to save all of the scored cases in the file location

designated for that particular study. Other studies can be added and data saved to those particular study and file locations.

- After you enter a respondent's responses, click *Calculate* to receive the Branch 4 standard score using international norms. This standard score is based on a mean of 100 and a standard deviation of 15.
- Data are saved via the export function. After one or more cases have been scored, these data can be saved using the export function. The default file location is *C:\Int\MSCEITexport*. This file can also be password protected for added security. As with the North American MSCEIT scoring program, the location of the folder for saving scored International MSCEIT data can be changed using the procedures described in that section above.

Installing the CPT-IP Program

- Insert the CD labeled *CPT-IP MATRICS International Version 2*. If the menu with program installation choices does not appear automatically, click on *My Computer* and then the DVD/CD drive to display the files on the CD. Then click on *AutoRun_Install.exe* to start the menu.
- Click the menu item titled *Install CPT-IP*.
- The install wizard on your computer will indicate that your program files are loading.
- A window titled *Welcome to the InstallShield Wizard for CPT-IP* will then appear.
- Click *Next*.
- A license agreement window will appear.
- After reading the agreement, click *I accept the terms in this license agreement*.
- Click *Next*.
- Enter Customer Information (user name and organization).
- Click *Next*.
- A window titled *Destination Folder* will appear.
- Click *Next*.
- A window titled *Ready to Install the Program* will appear.
- Click *Install* to begin the installation. Please wait while the program installs; installation may take several minutes.
- A window titled *InstallShield Wizard Completed* will appear.
- Click *Finish*.
- A *Start CPT-IP* icon will appear on your computer's desktop.
- Double click the icon to begin running the CPT-IP program.

Operating the CPT-IP Program

The CPT-IP program allows onscreen instructions for respondents to be presented in a number of different languages so a respondent can view them in his or her native language before beginning the practice trials and formal test administration. For languages that use the Latin alphabet (e.g., Dutch, English, German), the instructions for respondents appear on the computer screen as part of the main CPT-IP program. For languages that use characters that are not part of the Latin alphabet (e.g., Chinese, Hebrew, Russian), a subprogram is needed to display the instructions. The use of this subprogram results in a slightly different sequence for accessing the instructions and initiating administration of the CPT-IP program.

Languages using the Latin Alphabet

To select the language in which you would like the onscreen instructions to be presented, click the arrow located to the right of the list box on the *Start CPT-IP* screen. (The *Start CPT-IP* screen appears when you double click the *Start CPT-IP* icon.) Click the desired language from the drop-down menu and then click *Run*. The CPT-IP logon screen will appear. Complete the login procedure (described in detail in Chapter 5 of the MCCB Manual) and click *Browse* on the screen titled *Experiment Information*. In the IPFiles directory on the screen titled *Open*, select the Test Save File (*.sav) that corresponds to your desired language (e.g., MATRICS-English.sav) and complete the remaining fields on the *Experiment Information* screen, including the test administration (session) number. The instructions for respondents will then display in the desired language. Files of the type *Test Save Files (*.sav)* should be the default. If your computer calls up files of a different type, click the arrow to the right of the *Files of type* list box to select *Test Save Files (*.sav)*.

Read the onscreen instructions aloud to the respondent, who should be seated about two feet from the computer screen, with the mouse comfortably in reach beside the keyboard. Progress through the instruction screens by pressing any key except Enter. When you reach the screen with the prompt *Would you like a practice block?*, you have completed the instructions for respondents. Press *y* on the keyboard for *yes* and then press any key except Enter to begin the practice block. Note: The prompt *Would you like a practice block?* appears in English for all languages. Upon satisfactory completion of the practice block, begin administration of the test according to the instructions provided in Chapter 5.

Languages using characters that are not part of the Latin Alphabet

To select the language in which you would like the onscreen instructions to be presented, click the arrow located to the right of the list box on the *Start CPT-IP* screen. (The *Start CPT-IP* screen appears when you double click the *Start CPT-IP* icon.) Click the desired language from the drop-down menu and then click *Run*. The CPT-IP subprogram will open, and a prompt stating, *"This document is trying to put Acrobat in full screen mode, which takes over your screen..."* will appear. Click *Yes* to allow the onscreen instructions to appear in full screen mode, which is the desired view. (To bypass this screen in the future, click the box beside the text *Remember my choice for this document*.) The instructions for respondents will display in the desired language.

Read the onscreen instructions aloud to the respondent, who should be seated about two feet from the computer screen, with the mouse comfortably in reach beside the keyboard. Progress through the instruction screens by pressing the Enter key, Page Down key, or space bar. When you reach the last screen of the instructions, which says (in the selected language), *Now we're going to try a few. The numbers will flash very fast on the screen. Remember, click (press and release) the left mouse button only when you see TWO numbers in a row that are exactly the same*, press the Escape key to exit full screen mode and then click the "X" in the upper right corner of the subprogram. The subprogram will close, and the *Start CPT-IP* screen will reappear with a button labeled *Go to main CPT-IP program*. Click the button. The CPT-IP logon screen will appear.

Complete the login procedure (described in detail in Chapter 5 of the MCCB Manual) and click *Browse* on the screen titled *Experiment Information*. In the IPFiles directory on the screen titled *Open*, select the Test Save File (*.sav) that corresponds to the language in which you have just viewed the instructions for respondents (e.g., MATRICS-Chinese-Traditional.sav) and complete the remaining fields on the *Experiment Information* screen, including the test administration (session) number. A screen will

appear that contains only the prompt *Press any key to continue*. Press a key and a screen with the prompt *Would you like a practice block?* appears. Press *y* on the keyboard for *yes* and then press any key except *Enter* to begin the practice block. Upon satisfactory completion of the practice block, begin administration of the test according to the instructions provided in Chapter 5.

Using the CPT-IP Program in Clinical Trials

Requiring individual administrators/testers to have unique log-on IDs and passwords is often desirable during clinical trials for security purposes. When the CPT-IP program is installed on a computer using Windows Vista or newer versions of Windows, individuals who have only “user privileges” (i.e., individuals who administer the CPT-IP to patients but are not directly responsible for quality control) cannot change or update program files. If an individual with only user privileges tries to change or update program files, a warning message appears. The central administrator at a particular site can add or change testers who will be given user privileges by following these instructions:

- In the CPT-IP directory, right click the *MCPTAdm.exe* icon and select *Run as Administrator*. A screen asking if you want the following program from an unknown publisher to make changes to your computer may appear. Click *yes*. The *New CPT Administration* window will appear.
- Click *Login* and enter the default user ID and password for administrator privileges (user ID=Admin1000; password=password). Click *Users* to add new testers, remove existing ones, and create specific log-on IDs and passwords for each user.

For best results, disconnect from the Internet while administering the CPT-IP. If you are connected to the Web and an automatic download occurs during testing, the download could disrupt the timing of the stimulus on the computer screen and the respondent’s response time that is recorded by the program.

NOTE: Although these programs have been tested on Windows operating systems from XP through Windows 10, it is possible that unforeseen problems in their installation or operation may occur. Please contact us via e-mail at matrixassessment@gmail.com with questions.