EXHIBIT K – User Manual

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Perception Analyzer for Windows

WIRELESS SYSTEM USER GUIDE

MSInteractive
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Perception Analyzer for Windows
USER GUIDE

Section One: INTRODUCTION

I. What is the Perception Analyzer?

The Perception Analyzer is a computer system used to administer survey questions to a group of people. Data from multiple groups can then be aggregated, printed or exported to popular statistical-analysis software packages. It consists of hardware and software controlled by an ordinary Windows computer:

- During a Perception Analyzer question session, participants use **handheld dials** to select a number corresponding with their answer to each question.

- The dial transmits that number by radio to a **receiver "console"** connected to an ordinary Windows computer. The computer records the answers.

- **Two separate computer displays** may be used: One to show questions to participants ("Participant Display") and one to instantly show results to operators and observers in an easy to understand graphical form ("Results Display.")

- Questionnaire design, data collection, and data reporting are all controlled by the Windows **Perception Analyzer software**.

II. Getting Started With Your Analyzer System

These are the steps you must complete to try out your new PA system:

1. Install the Analyzer software on a Windows computer. This will install the **Launch** icon on your computer's desktop. Double clicking on Launch opens a screen that gives you the choice to start one of the four modules of the software.

2. Create and save a survey questionnaire (project) using the **Edit** software module.

3. Set up the dials and console interface for a data collection test by referring to the **Hardware Setup Utility** software module. Don't worry yet if the system is unable to recognize all of the dials --that won't be necessary to do a test and will be addressed in this manual in detail.

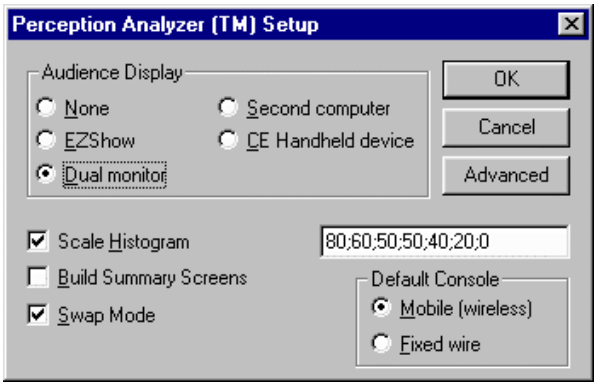
4. To collect answers using the dials, open **Collect** and select the project file you created with Edit. Use the **Report** software module to review graphs and tables of the collected responses.

THE SOFTWARE: INSTALLATION AND OVERVIEW

To install the software on a Windows computer:

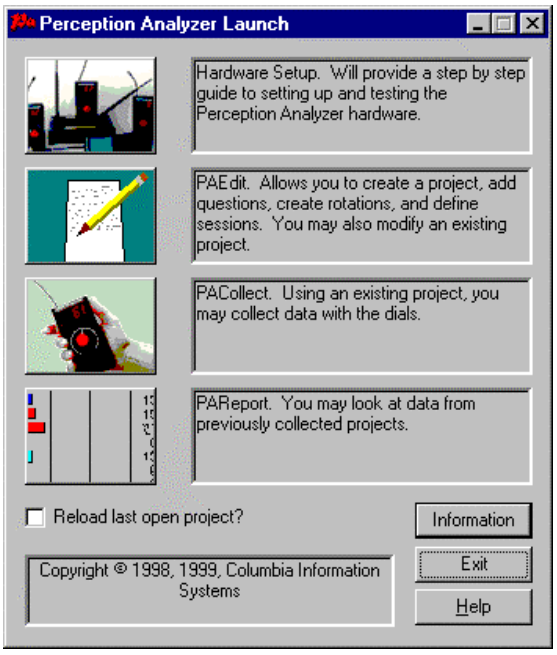
1. Start the computer and insert disk 1 into the floppy disk drive.

2. From the Windows **Start** menu, select **Run**. The Run dialog window will open. In the entry field, type A:\SETUP.EXE and click **OK**. The setup program will guide you through the installation process. Accept the default settings offered. When prompted, enter the installation code provided with your software. The Setup Screen will appear:



3. This screen gives the option to enable the participant display to show questions to participants during data collection. This is either via the main monitor port of the computer, or via an optional hardware device (a PC-card, or network connection to another PC or handheld PC) that provides a second monitor-output from the computer. Before data collection, consult with your Perception Analyzer sales associate for configuration instructions for the method you have chosen. If you will not be using secondary (participant) display, select None. Also, it is important to set the Default Console in the lower right of the screen: click the button for the **Wireless** console option.

The installation will place the **Launch** icon on your computer's desktop. To begin using the Analyzer software, double click on this icon. The following dialog will appear:



The Analyzer software package consists of three main programs that take you through the process of executing a research project:

Edit: the Question Editor. It's used to write the master questionnaire for the study and enter information about the number of sessions of participants to be questioned.

Collect: Data Collection. It controls the hardware in a survey session to display questions to participants, collect answers from the dials, and show graphical results to observers.

Report: It's used after the survey session(s) to aggregate, display and print the collected data. View graphical results, answer sheets, statistical frequencies, and cross-tabulations.

The Analyzer also has two supporting utility:

Hardware Setup: A self-guided tour of the proper setup of the Analyzer console, dials, and participant display.

Peer to Peer Wizard: A guide to setting up and testing Peer to Peer networking to allow remote data review live during data collection. (Optional)

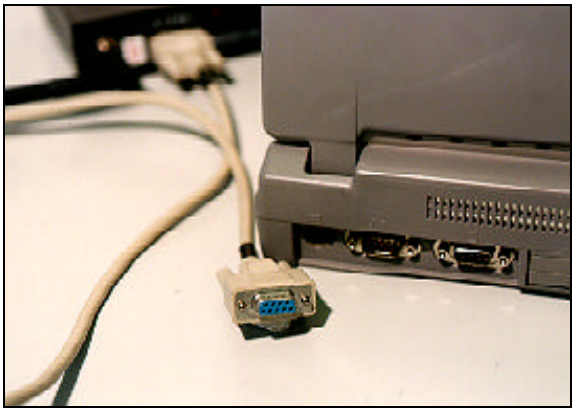
IDENTIFYING YOUR WIRELESS ANALYZER HARDWARE

Your new Analyzer system consists of the following hardware components packed in the gray system case:

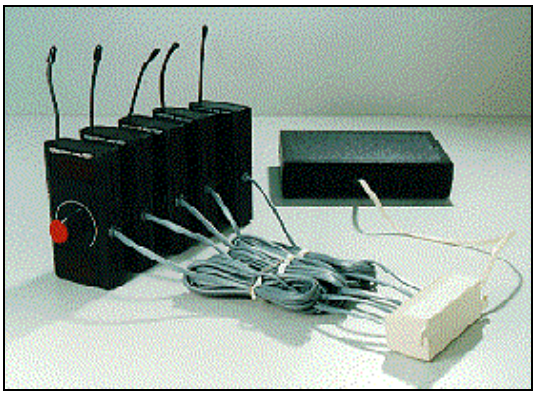
- Dials and Console. The console is packed in the dial case beneath the foam dial tray:

IMPORTANT: Be certain you are using the correct DC power supply (labeled “Console Power Supply”) for the console interface. Failure to use the correct power supply may DAMAGE the console interface. Damage of this kind is NOT warranted. If the power light does not come on when the power supply is attached, or smoke comes out of the console, unplug the power supply immediately and call technical support at (800) 769-0906 or 1-503-225-8418.

- Serial communication (9 pin) cable to connect the console to the computer:



- Wiring Harnesses (“Telco-Packs”) In the second case or accessory shipping carton, you will find plastic bags, each containing one wiring harness. If necessary, each wiring harness can be used to connect up to 5 dials to the console:



The following optional equipment may be included with your system:

- An audience-display PC-card. It’s used to provide a second computer monitor output from your computer to display questions to respondents

Participant-Display PC-card

- "DeltaScan" or "CorioScan scan converter and/or overlay device (not pictured). These optional devices allow less expensive video monitors to be substituted for computer data displays for displaying questions to participants and results to observers.

- In addition, PA systems are shipped with some or all of the following accessories: AC power strip, AC power extension cord, miscellaneous video plug and jack adapters, and video cables.

TECHNICAL SUPPORT AND INSTRUCTED TRAINING

The purchase of your Analyzer system includes a complimentary full support contract for the first 90 days. This includes:

- 24hr./7 day phone support. Call 1-800-769-0906 or 1-503-225-8418 from 8:30am to 5:30PM Pacific Time. Call MSInteractive to obtain the after-hours phone number.
- Hardware maintenance plan.
- Preferred equipment rental rates.

Contact Customer Service at (800) 769-0906 or 1-503-225-8418 for more information.

Formally instructed training is required by MSInteractive for the primary contact person, although extra charges apply. Please note that telephone support is intended to provide technical support for problems with equipment or software. This user guide is intended to provide comprehensive instruction in the operation of the system. MSInteractive provides several training options to fit your needs, such as training via telephone consultation.

SECTION ONE
Edit: The Question Editor - Beginning Topics

I. Getting Started

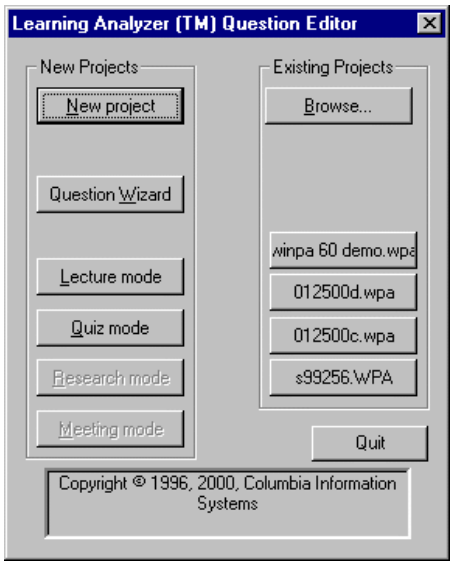
To start **Edit**, use the following steps:

1. Double click the **Launch** icon on the Windows desktop. When the Analyzer Launch dialog window opens, click the **Edit** icon

OR

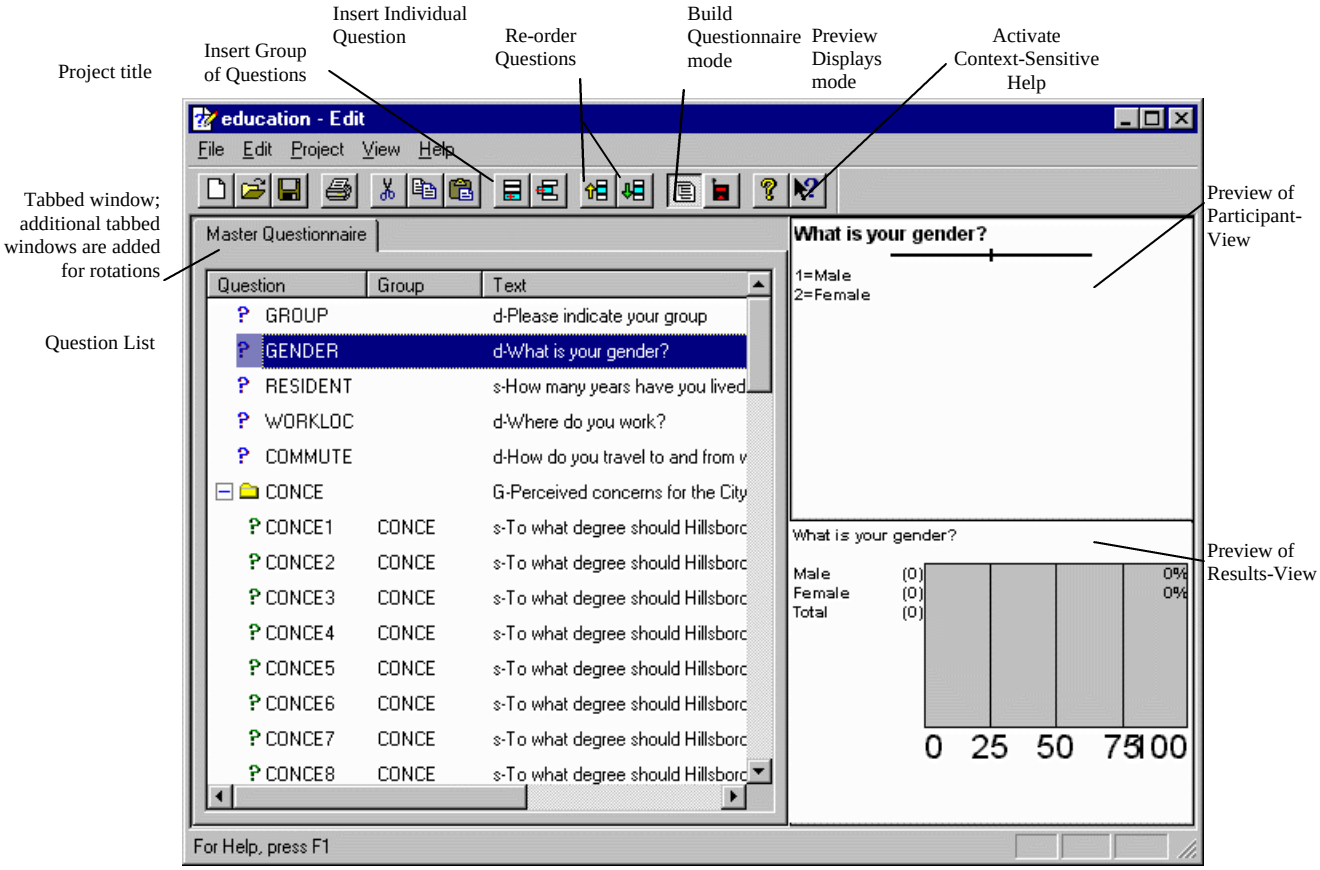
In the Windows taskbar, click on the **Start** button. select **Programs**, select **Learning** or **Perception Analyzer,** then select **Edit.**

The Edit opening dialog window will appear:



- Click the **New Project** button to create a blank new project.
- Click **Question Wizard** to create a new project starting with the Question Wizard.
- Click **Lecture Mode** to create a new project starting with the Lecture Wizard.
- Click **Quiz Mode** to create a new project starting with the Correct Answer Question Wizard.
- Click on one of the existing project buttons to open that project. Holding the cursor over the project file name will pop-up a box displaying the project's directory path.
- Click the **Browse** button to locate an existing project not shown.
- Research Mode is not currently supported. Meeting Mode is only supported in Collect.

When Edit starts, take a moment to familiarize yourself with the Edit main menu and toolbar:



- In the toolbar, the first four buttons are shortcuts to standard Windows-type application options: **New, Open, Save,** and **Print.**

- **Cut, Copy, Paste** are for whole questions and folders of questions. NOTE: The Cut, Copy, and Paste menu commands in Edit do not work with text. To cut, copy, or paste text, select the text and use the Windows keyboard shortcuts:

  Ctrl + X to cut text **Ctrl + C** to copy text **Ctrl + V** to paste text

- Additional buttons are shortcuts to Edit pull-down menu options: **Add Group, Insert Item, Move Item Up, Move Item Down, Build Questionnaire View, Preview View, Help, Context Sensitive Help**. A pop-up context sensitive menu with commonly used commands is also available by clicking on the right-hand mouse button.

II. Writing the Questionnaire: General

All questions used in a questionnaire are entered into a main list, called the Master Questionnaire, displayed on the main screen of Edit.

To enter a question, select **Edit**, then select **Insert**, then select **Question/Response**; or click  in the toolbar. This command opens the **Insert New Question dialog window** allowing the user to enter the type of question, a name for the question, the question text, and the appropriate answer codes participants will set on their dials.

GENERAL QUESTION WRITING GUIDELINES

- There are three basic types of questions that can be asked: **Discrete-Choice**, **Intensity-Scale**, and **Moment-to-Moment**. When the question type is selected the Insert New Question dialog window will display data entry fields appropriate to the question type.

- Other statistical software packages may only allow eight character question (variable) names. Avoid using characters that may be incompatible with DOS versions of Analyzer software if you plan to convert. These include dash and underscore. Spaces are not allowed. If you plan to convert the data to SPSS, avoid leading numbers. If you copy questions, note that the new questions are automatically renamed by Edit to avoid duplicates.

- It is helpful to place demographic questions at the beginning of the questionnaire. This provides easy "warm-up" questions for participants and provides information for subsetting later data.

- Like other Windows-based applications, movement through the data-entry fields in the Insert New Question dialog window is generally done with the tab key (shift+tab to reverse), although the arrow and return keys are also necessary to get to certain fields.

- To make changes to questions you have already created, simply double-click on the question in the master questionnaire to reopen the question entry window. Question name, text, and responses may all be edited. Discrete questions may be changed to Intensity-Scale and vice-versa: right-click on the question in the Master Questionnaire and use the **Change Question Type** command.

SPELL-CHECKING

- A spell-checker checks questions for correct spelling after each question is entered. It is disabled when Edit is started. To enable, select **Enable/Disable Spell Checking** in the **Edit** drop-down menu.

- An alternative is to leave spell-checking disabled and check the spelling of the entire questionnaire after it is written. From the **Edit** drop-down menu, select **Spell Check Project**.

FIND/REPLACE

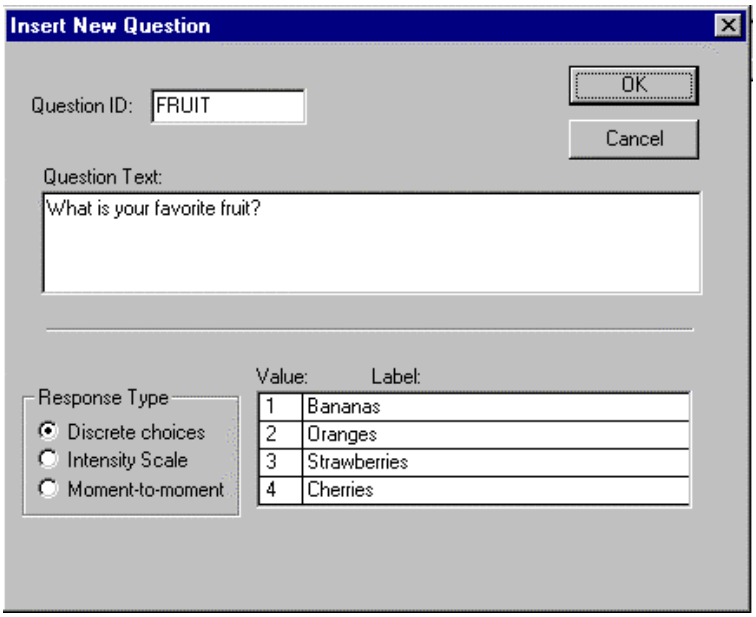
- Windows-type find and replace editing is available. In the Edit main menu, select **Edit**, then select **Find** or **Replace** to locate and/or edit text in question text, labels, and question names.

III. Discrete-Choice Questions

In the *Discrete-choice* question, the participant chooses one answer from a set of responses. For example, a participant could be asked to indicate their favorite fruit from a specific list of choices. The participant could be asked to set their dial to 1 if their answer is bananas, 2 if their answer is oranges, 3 if their answer is strawberries, and 4 if their answer is cherries.

Review the following exercise, which illustrates how to create such a question:

1. Click the  icon in the toolbar, or from the main menu select **Edit** then select **Insert**, then select **Question/Response** to open the Insert New Question dialog window:



2. Click the **Discrete Choices** radio button for **Response Type**.

3. In the **Question ID** field, enter an 8-letter (or less) question name: **FRUIT**

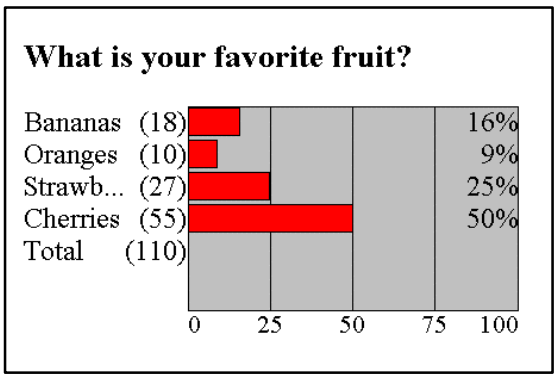
4. In the **Text** field, enter the question text: **What is your favorite fruit?**

5. Click in the **Value** field. A row of two empty fields will appear to enter the first choice/dial-value pair. In the value field, enter the number to dial: **1**. Tab to the label field and enter the first answer choice: **Bananas**. Arrow down to open more fields as necessary to add the additional responses/dial-values.

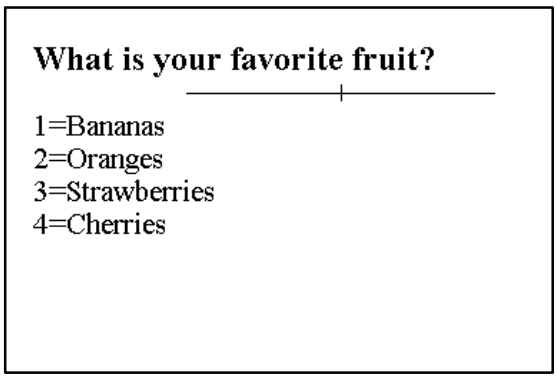
6. Click **OK** when finished. When returning to the main screen, note that the question is now listed on the "Master Questionnaire" tabbed window.

DISCRETE QUESTION DISPLAY

During the session, participants see the question text and available answers with corresponding dial numbers. When data is collected, observers see the data displayed as an easy-to-read bar graph indicating the number and percentage (frequency) of participants selecting each discrete category:



Results View



Participant View

General points about entering Discrete Questions:

- Wireless dials can display one of three ranges of numbers for any one question: 0-5, 0-10, or 0-100. Which range is displayed is determined by the highest dial value programmed for a response category. It is generally best to use the smallest range possible for discrete questions.

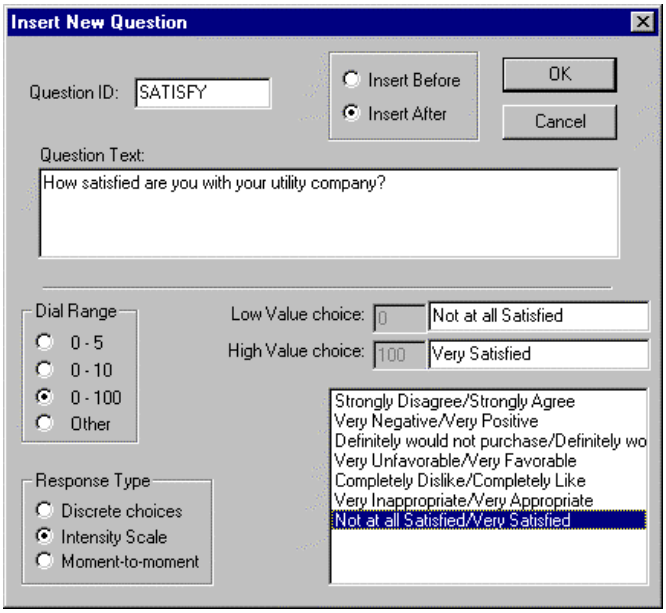
- When displaying the 0-100 range, the dials have an accuracy of plus or minus one. Response values should be designated no less than 3 numbers apart. Therefore, there is a practical limit of 33 different response categories for discrete questions (programmed at 0, 3, 6, 9, 12…99) using the 0-100 range. With the 0-100 range, it is good practice to select response values as far apart from each other as possible. If you choose to use a 0-100 range for a six category discrete question, program response values at 0, 20, 40, 60, 80, 100.

IV. Intensity-Scale Questions

The Intensity-Scale question measures a participant's opinion or preference on a subject by having them rate it on a numeric scale. For scale questions, it is necessary to set a numeric scale and designate opposing labels for each end of the scale. For example, a participant could be asked to indicate their satisfaction with their utility company on a scale of 0-100, where 0 is not at all satisfied and 100 is very satisfied.

Review the following exercise that illustrates how to create an Intensity-scale question:

1. Click the  icon in the toolbar, or from the main menu select **Edit**, then select **Insert**, then select **Question/Response** to open the Insert New Question dialog window:



2. Click the **Intensity Scale** radio button for **Response Type**.

3. In the **Question ID** field, enter an 8-letter (or less) question name: **SATISFY**.

4. In the **Text** field, enter the question: **How satisfied are you with your utility company?**

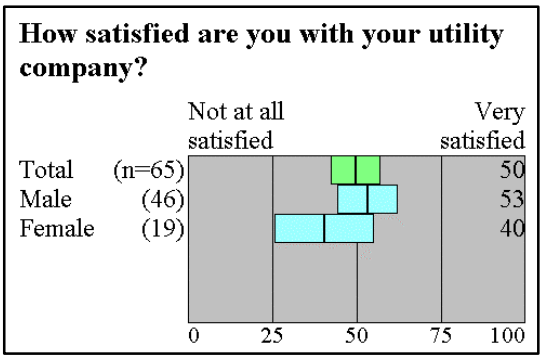
5. Click in the **Low value choice** field and enter the label: **Not at all satisfied**. Click in the **High value choice** field and enter the label: **Very satisfied**. Note that the label set will be saved in the label library in the lower right corner to be used in subsequent questions and projects. Double click on one of these label sets to quickly use it for the question.

6. Click the **Dial Range** radio button for one of the three available standard ranges: **0-5**, **0-10**, or **0-100**, or select **Other** to enter a non-standard range. Wireless dials can display one of three ranges of numbers for any one question: 0-5, 0-10, or 0-100. Which range is displayed is determined by the highest dial value programmed for a scale.

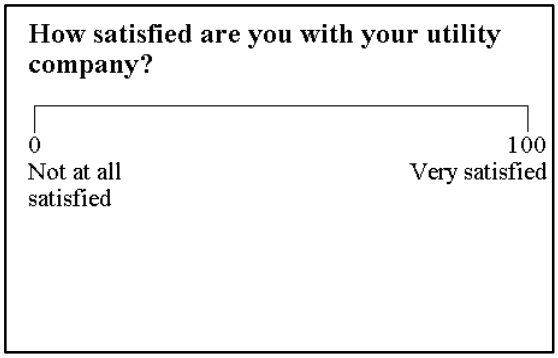
7. Click **OK** when finished. When returning to the main screen, note that the question is now listed on the "Master Questionnaire" tabbed window.

INTENSITY-SCALE QUESTION DISPLAY

During the response collection session, participants see the question text and a diagram of the scale with the numeric range and end labels. When responses are collected, operators see a graph showing the mean response as a solid black line with the mean value displayed on the right margin and a bar representing the 95% confidence interval. The example below also shows subsets for male and female participants:



Results View



Participant View

General points about entering Intensity-Scale Questions:

- Try to use the same scale throughout the questionnaire.
- Try to use the same ends of the scale throughout to represent positive and negative responses. For example, 0 should always be a negative response and 100 should always be a positive response.
- Intensity Scale type questions can also be structured as bi-polar questions. For example, participants could be asked to indicate their preferences for cats vs. dogs, with 0 labeled "strongly prefer cats" and 100 labeled "strongly prefer dogs." Dialing in the middle of the scale (50) would indicate no difference in preference.

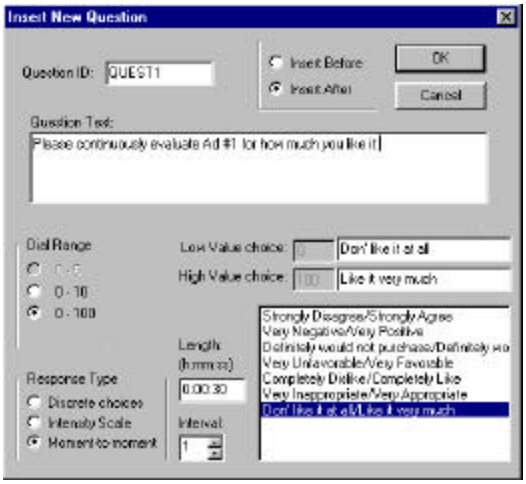
V. Moment-to-Moment Questions

The Moment-to-Moment question is a variation of the intensity-scale type question, and is used to continuously evaluate such time-based materials as lectures, television ads and programming, speeches, or legal arguments. As the participants view the material, they continuously evaluate it on an intensity scale. Each participant's dial setting is typically recorded once per second (very large groups of participants or evaluation material of lengthy duration may require a larger interval). For moment-to-moment questions, it is necessary to set a numeric scale, designate labels for each end of the scale, and set a duration in hours, minutes, and seconds.

For example, the participants could be asked to continuously rate a 30 second advertisement on a scale of 0-100, with 0 meaning "completely dislike the ad" and 100 meaning "like the ad very much."

Review the following exercise which illustrates how to create such a question:

1. Click the  icon in the toolbar, or from the main menu select **Edit**, then select **Insert**, then select **Question/Response** to open the Insert New Question dialog window:



2. Click the ***Moment-to-Moment*** radio button for **Response Type**.

3. In the **Question ID** field, enter an 8-letter (or less) question name: **QUEST1**

4. In the **Text** field, enter the question text: **Please continuously evaluate Ad #1 for how much you like it.**

5. Click in the **Low value choice** field and enter the label: **Don't like it at all**. Click in the **High value choice** field and enter the label: **Like it very much**.

6. Click the Dial Range radio button for one of the two available ranges: **0-10**, or **0-100**.

7. Leave the **Duration** field set to **0:00:30**. This means that responses will be recorded for no more than thirty seconds. Be certain the duration field is correctly formatted (h:mm:ss).

8. Leave the **Interval** field set to **1**. This means each participant's dial setting will be recorded once per second. Change if desired. For more than 128 participants, interval must be set to **2**.

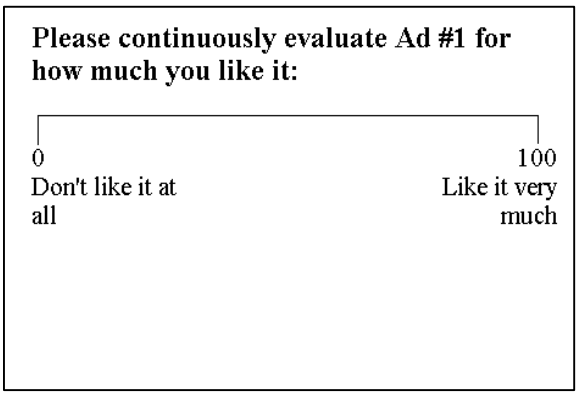
9. Click **OK** when finished. When returning to the main screen, note that the question is now listed on the "Master Questionnaire" tabbed window.

MOMENT-TO-MOMENT QUESTION DISPLAY

During the response collection session, participants see the question text and a diagram of the scale with the numeric range and end labels. When responses are collected, operators see a moving line graph showing a mean score of the participants at every interval (generally 1 second) during their exposure to the material. This graph can be superimposed over video for display to observers when using an optional superimposition (overlay) device and VCR. A legend box displays the "N" value (number of participants) in the total group, a mean score for the current second, and/or a cumulative mean score (all the readings up to and including the current second). The legend box can also display

these numbers for subset groups of participants, such as males and females. A histogram for the total group can be displayed on either side of the graph. A histogram for subset groups can be viewed by a left mouse click on the subset label in the legend box. Screen display options for Moment-to-Moment questions can be set with the **Preferences** menus in **Report.**

Results View



Participant View

General points about Moment-to-Moment questions:

- If you are unsure of the length of the material to be evaluated, the length should be set to a duration as long or longer than the maximum anticipated. During data collection, it is not possible to extend the period without recollecting responses for the question (starting the material over). However, it *is* possible to truncate the programmed duration after data has been collected.

- All display settings, such as placement of legend or histogram boxes, or selecting a subset of the total group, should be completed *before* data collection begins. Screen formatting settings can be done in **Report**. Subsets can be assigned in either **Edit** or **Collect**.

- Once the questionnaire has been advanced to another question, it is not possible to view the collected Moment-to-Moment response data during the session, as it is with other question types; the question can only be returned to for the purpose of recollecting data. Moment-to-Moment data can be "played back" later for review from **Report**.

SECTION THREE
Collect: Data Collection

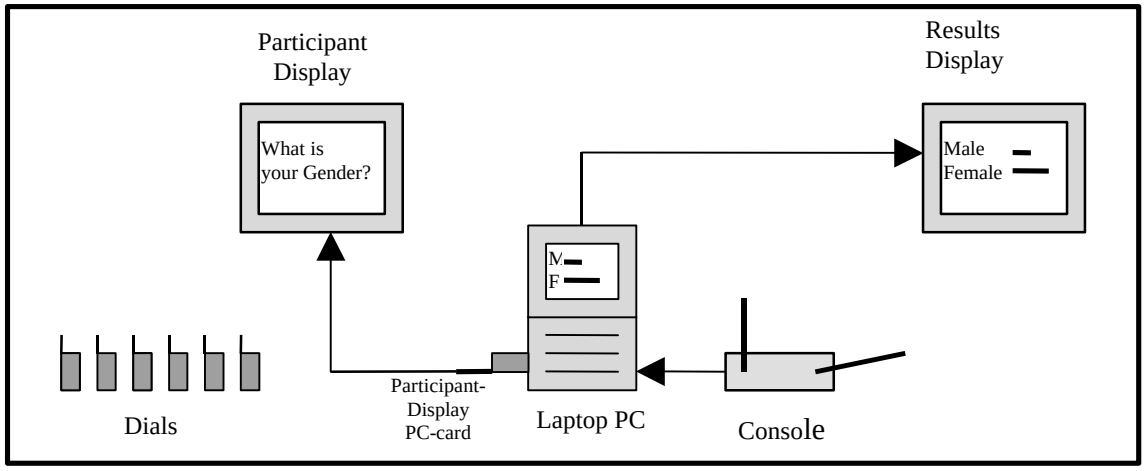
I. Overview

The session data collection process can be summarized as follows:

1. Set up PA hardware and associated display equipment.
2. Start Collect software; open the survey project file; configure and test dials.
3. Administer the survey.
4. Properly backup data after the session.

II. Hardware Setup

Begin preparation for the data collection session by setting up the hardware. The hardware consists of the following components:



COMPUTER

- Can be a desktop or laptop. Some question-display methods require PC-card slots.
- Must have Windows and the Analyzer software installed. The rear serial port on the computer must be set to operate on communication port 1 (COM 1). On most computers this is the default setting. A USB port can also be used with a USB to serial adapter (optional.)
- Select a suitable work area for the computer. A moderator can operate the laptop from the front of the room, or an assistant can operate the equipment from a side table or an adjacent observation room. It is best if the operator can communicate directly with the moderator in case of any miscues.

INTERFACE CONSOLE

It's the interface box that facilitates communication between the dials and the computer.

- From the Windows Start menu, click **Programs**, then Perception or Learning Analyzer, then **Setup** to open the Analyzer Setup dialog window. In the Default Console section at the lower right, click the **Mobile (wireless)** button.

- The console should be placed in a position, such as a head table, where there is an unobstructed line-of-sight to the dials for best transmission.

- The console should not be placed in contact with another electrical device.

- Positioning one antenna vertically and one horizontally optimizes performance.

- The console is attached to the computer's serial port with the 9-pin serial communications cable included with the system. A USB port may be used with a USB to serial adapter (optional.)

- The console is preset to recognize only a set number of dials. It is delivered set to recognize the number of dials purchased. See Console Assignment to change number of dials recognized.

DIALS

The hand-held devices on which participants will select their answers to survey questions.

- Each dial has an identification number electronically pre-assigned and saved in the dial's memory. All dials in a system are numbered sequentially from 1. These numbers are set before the system's delivery but can be changed if needed. The dials are delivered with their numbers printed on the back.

- Set out dials for participants on their chairs or place settings. For convenience in identifying and locating the dials, it is best to set them out in numeric order. It is also good practice to set out a few spares to test that they are working properly if extras or replacements become necessary. In case the dials need to be connected by wire, it is best to seat participants together in groups of five or multiples of five.

- Dials should be placed no closer than 1.5 feet (.5m) apart. Multiple wireless systems operating within 200' of each other will produce unsatisfactory results. In this situation, all dials must be connected to the interface console with telephone wires.

- Dials are turned on with the power switch on the right side. Working life of the 9-volt battery is nearly 30 hours. A single red "dot" in the lower right corner of the dial display indicates low power, meaning two hours remaining battery life (except when display reads "999," when the dot is meaningless). MSInteractive recommends changing batteries before a day's sessions if battery voltage output is less than 8.0 volts. Use a digital voltmeter to check. Power consumption is increased three times if dials are on without an accompanying console.

PARTICIPANT DISPLAY

The display monitor on which questions are shown to participants. It's connected to either the computer's rear VGA port or to a PC-card VGA monitor output available from MSInteractive.

The monitor signal can also be generated by a second computer or handheld PC connected via a network cable to the collection computer.

A less-expensive video monitor may be substituted for a data display by using a scan converter (available as an accessory from MSInteractive): Connect the VGA cable from the laptop PC-card VGA output to the scan converter and a video cable from the scan converter to the video monitor.

RESULTS DISPLAY

The display monitor on which results data and system controls are shown to the operator and/or moderators and observers. On a laptop computer this is the same screen seen on the LCD panel.

- A less-expensive video monitor may be substituted for a VGA data display by using a scan converter (available as an accessory from MSInteractive): Attach the 15-pin VGA cable from the computer to the scan converter and a video cable from the scan converter to the video monitor.

- If the rear VGA port on a laptop is used for results display, it may be necessary on some laptops to the use a keyboard command to turn on the rear VGA output. It may also be necessary to reboot if the display was not attached when the computer was powered up. If that fails, attach a VGA terminator to the VGA outlet and power up, then remove the terminator and attach the display.

POWER SUPPLIES

- Each electrical component uses a DC power converter.

- IMPORTANT: Be sure to use only the power supply labeled “Console Power Supply” for the console. Using an incorrect power supply could irreparably damage the console.

- To prevent damaging power surges, power supplies for the console and all other devices should be attached first to the device and only then connected to the wall outlet or power strip. Be certain to use the correct power supply with each component: connecting a different power supply to the console even for a moment will permanently damage the console.

UNITED STATES FEDERAL COMMUNICATIONS COMMISSION STATEMENTS

Hardware changes or modifications to the Analyzer interface console and/or dial not expressly approved by MSInteractive, LLC could void the user’s authority to operate the equipment.
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

III. Starting the Software: Session Dial-Configuration and Testing

After the hardware is set up, the next step in preparing for a session is to launch the software module used for data collection: **Collect**. Starting the software automatically initiates two things that must happen before questions can be asked and answers collected and displayed:

- The dials must be tested by going through **Console Diagnostics**.
- The dials must be assigned to participants by creating the **Session Dial-Configuration**.

To start the software, initiating Console Diagnostics and creation of the Session Dial-Configuration:

1. Turn on power to all hardware components, including dials. Initially, enough dials should be tested to accommodate the maximum number of participants expected, plus a few extras in the event dials need to be exchanged during the session.

2. On the Windows desktop, select **Launch.** When the Launch dialog window opens, select **Collect**. Collect will not run without a console properly attached. If the error **"Unable to open serial port…"** appears, check the following:

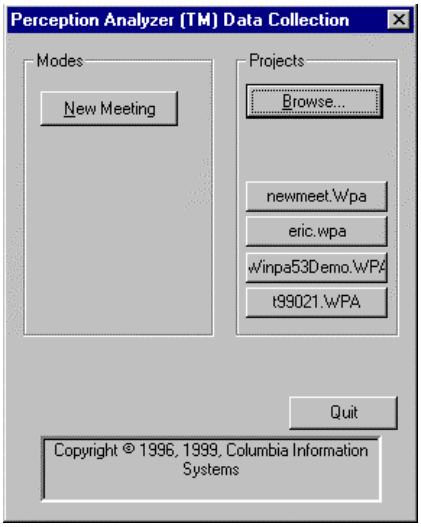
    - Double-clicking to open Collect can cause two versions of the program to start, freezing the console. If a console is not found, press the Ctrl+Alt+Delete keys together to bring up the Close Program dialog window. Review the list of open programs. If more than one copy of Collect is listed, it is necessary to select each copy and click the **End Task** button to shut the copy down. Reenter the Close Program dialog and repeat the process until all copies are closed, then re-launch Collect from the Launch screen.

    - Check serial cable connections and that COM port #1 is available. Sometimes a modem or infrared serial port may be using COM port #1. Those devices will need to be switched to another COM port or be disabled. The presence of a modem can fool the Collect program into thinking that a console is properly connected when one is not, and then allow the program to open. This is indicated if the program starts but a note appears indicating that the console is set to accept "-1 dials," or if operating frequency is reported as a multi-digit number. Make sure the modem is not connected to COM port #1 by checking its Properties.

    - If you previously have used the computer with MSInteractive's wired-only console, it may be necessary to manually switch the Collect program to recognize the wireless console. To do so, launch the Setup program by clicking on its shortcut icon in the Analyzer program group present in the Windows Start menu. In the lower-right corner of the Analyzer Setup dialog window, click the button for **Wireless** default console. Click OK when finished and re-start Collect.

3. If at this time either the warning, "**Unable to connect to participant display card**" or "**A problem occurred in connecting with the WindowsCE device**" appears, it means that your Analyzer software is set to use either the EZ-Show PC-card or WindowsCE handheld PC methods of providing a VGA monitor output for participant question display, and that the set method is not properly configured. Re-launch Collect when corrections are made.

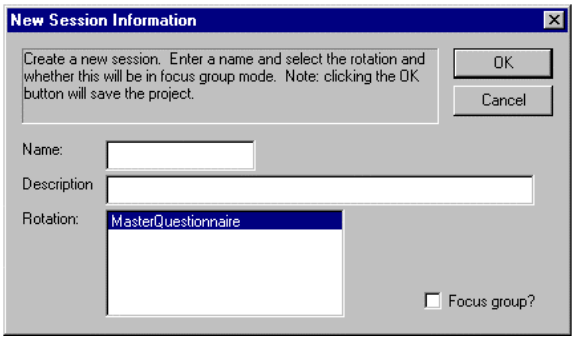
4. The Collect opening dialog will appear:



5. Select a recently used project from the list. Holding the mouse-pointer over the project title will show a pop-up window with the file's pathname. To locate a project not listed, use the **Browse** button to open the **Open Project** dialog window. Locate a project by browsing through the directories. Select the project, and then click **Open**. If a project has not been created in advance, select **Meeting Mode** (this option is only available with the academic version of the software).

6. The **Select Session** dialog window appears. Highlight the session name for which you would like to collect data and click **OK**. To create a new session, select **"Create a New Session"** and click **OK**.

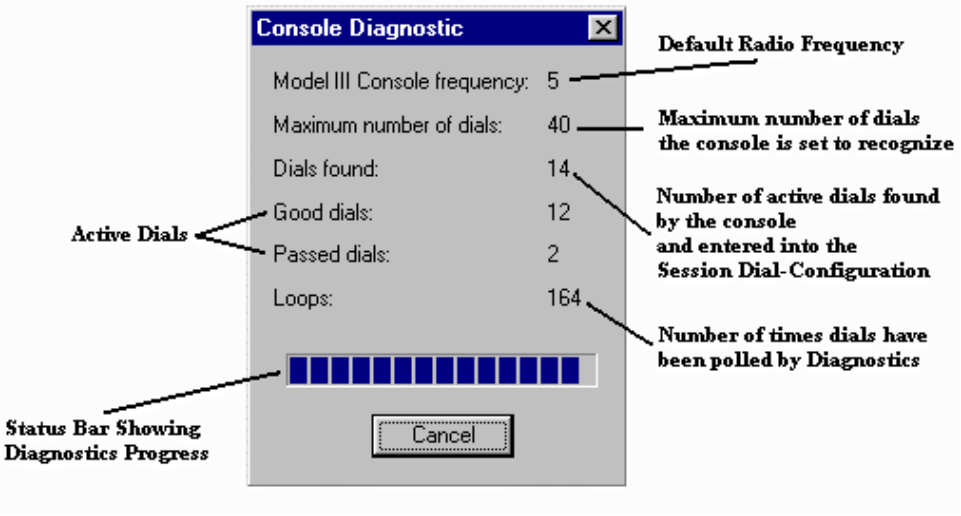
7. The Create a New Session dialog window will open:



8. Click the **Name** box and enter a session name. Click the **Description** box and enter a session description. Click on the desired **Rotation**. Click **OK** to continue. Click the Focus group check-box if you would like to preset the session to display data in Focus Group mode. Click **OK** to continue.

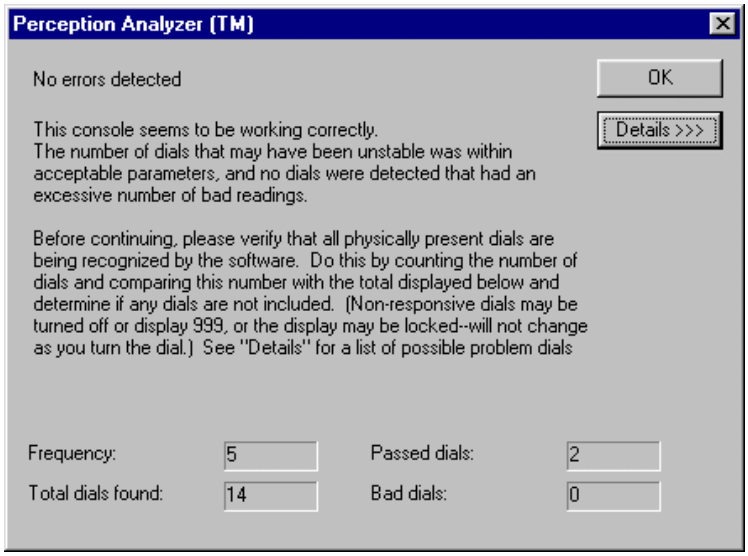
9. Selecting/creating the session initiates the **Console Diagnostic** and creation of the **Session Dial-Configuration**:

- **Console Diagnostic** identifies dials that are turned on ("active dials") and checks them for correct operation. Allow the diagnostic to complete (about one minute); if there is radio interference that could cause poor dial performance, the diagnostic will offer to search for a clearer transmission frequency. As the diagnostic routine progresses, information about dial performance is reported in the following graph:

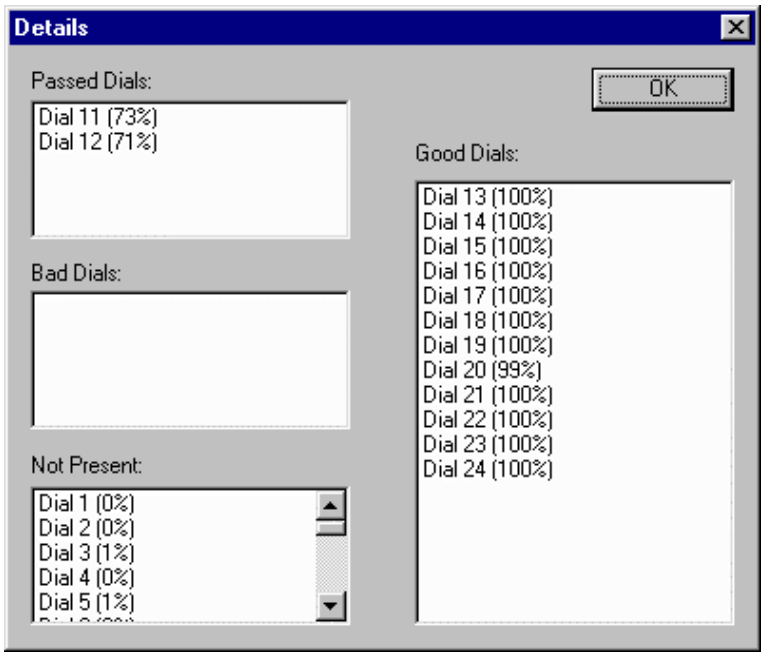


- **The Session Dial-Configuration** is where Collect keeps track of which dial is assigned to each participant. The Start-Up configuration routine automatically recognizes dials that are turned on by their distinct dial ID numbers and then designates a participant for each dial found. By default, participants are identified by their corresponding dial ID number. For example, a participant #1 is designated for dial 1; a participant #5 is designated for dial #5, etc. The Session Dial-Configuration for each session is saved in each session's data file.

10. When the Console Diagnostic routine is complete, the following report screen appears:



11. Check that the **Total dials found** matches the number of dials you set out. If not, click the **Details** button. The following report screen will appear:



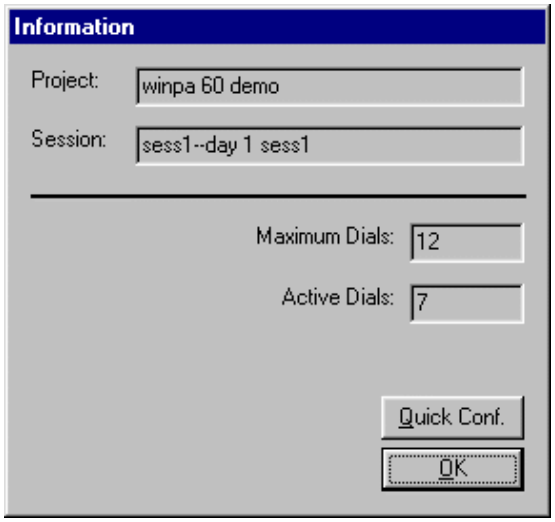
- Note any dials that were set out but appear in the missing dials section. These dials were not included in the Session Dial-Configuration. No data will be collected from them unless corrected and added to the Session Dial-Configuration manually using additional commands in Collect. Continue with these instructions to open Collect, then refer to the topic Session Dial Configuration using Dial Status and Quick Configuration on page 34.

- Also, note the presence of Bad (but recognized as active) dials: they are active and configured but are intermittently losing contact with the system. This could result in minor but bothersome data collection delays during the session. These dials may also need to be corrected or exchanged for others in the system.

12. Click **OK** to exit the start-up Console Diagnostic routine.

13. If any data has been collected previously in the session opened, the **Existing Data File** dialog window will open (otherwise go to step #14.) If test readings have been taken previously that are no longer needed, choose "**Create a new data file with all dials found**" and go to step#14. If you are restarting Collect to finish a session with a group of participants, choose "**Continue with the existing data file and dial configuration**" and go to step #15. For more information on this dialog, see page 40.

14. The Information dialog window will appear:

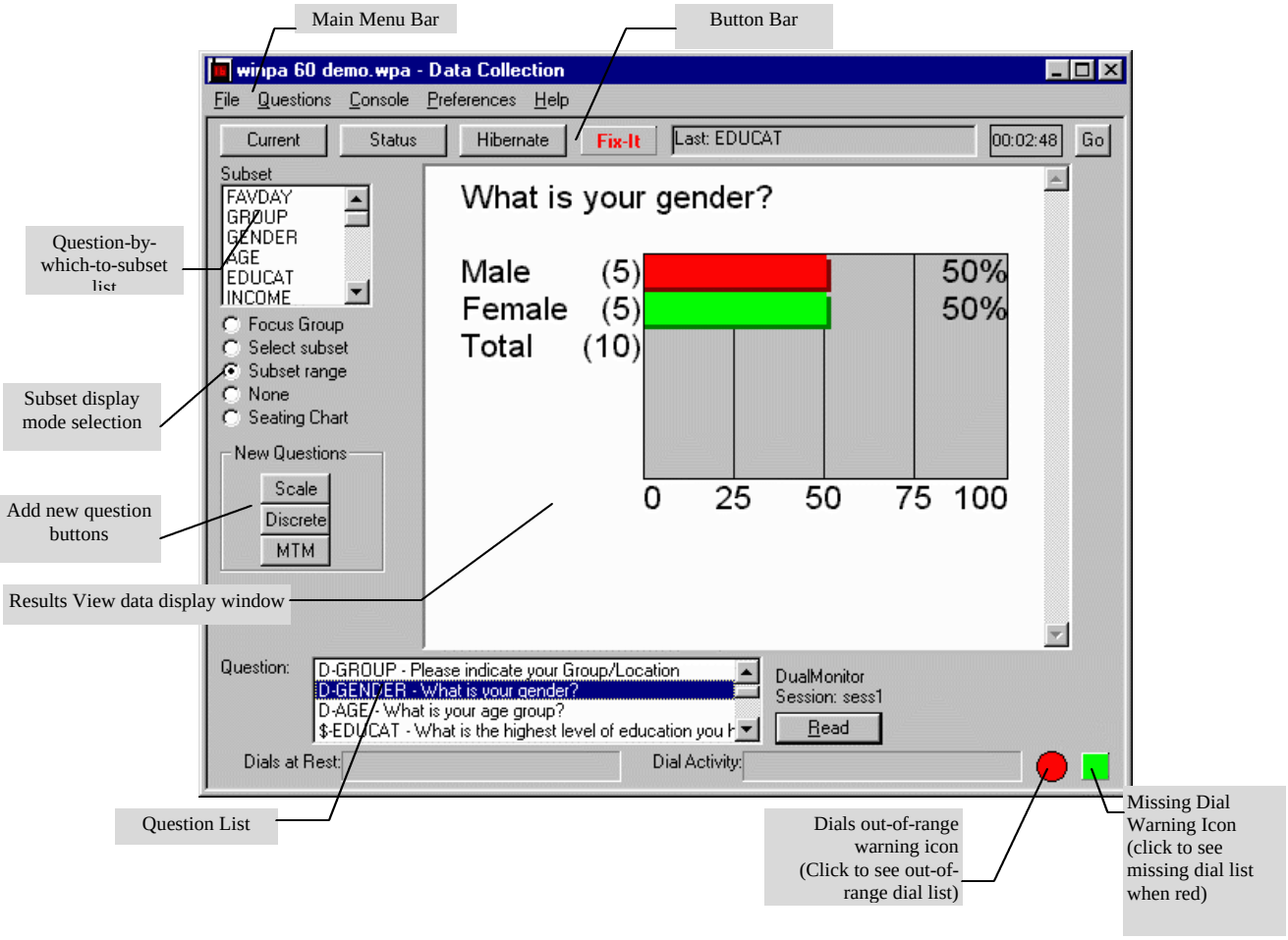


- The dialog confirms the project name, session, and the number of active dials found and configured for participants. If the number of active dials found and configured is correct, click OK and go to step #15. If not, click Quick Configure to proceed with dial troubleshooting and reconfiguration.

15. If you are using the Second Computer method of providing a VGA monitor output for participant question display, a dialog will appear asking if you want to connect to the second computer (otherwise skip to step 16.) Click yes to open the dialog to save the project to the second computer. Click No to skip (the second computer display can be initiated later from the main menu.)

16. If you are using the WindowsCE Handheld PC method of providing a VGA monitor output for participant question display, there will be a pause while the computer re-contacts the handheld PC to set it to accept participant display screens, then a dialog will appear confirming that the connection was made (otherwise skip to step 17.) If not successful, a dialog will appear with troubleshooting suggestions.

17. The main menu screen will now appear. After start-up, click on a question in the question list and select the Current button in the lower right to get a question to display. You must refer to the Manual Configuration topic (page 34) if all dials were not properly configured.



IV. Optimizing Wireless Reception

Whenever there are missing or poorly performing dials, check the following:

- A dial may "freeze." The dial sticks on one number while the dial is turned and contact with the console will be lost. To unfreeze, turn the dial power off and then on. If the system is on a frequency other than 5, the reset dial will need to be reinitiated to the new frequency. Do this by re-selecting Frequency #5, clicking OK, then selecting the new frequency and clicking OK. If the dial is connected with a wire, unplug the dial briefly then reconnect.

- Dials should be no closer to each other or the console than 1.5 feet (.5m).

- The console should be placed in a prominent position near and within line of sight of the participants.

- The console should not be placed in direct contact with another electrical device.

- Placing one antenna vertically and one horizontally optimizes performance.

- Mobile telephones or pagers on in close proximity to dials or console can cause interference.

- Batteries in dials should have at least 8volts of power at the beginning of the session. Poor dial performance can occur in marginal transmission environments before the low battery indicator lights at 6.5 volts.

- It may be found that some parts of a room a not conducive to good dial performance. Consider moving the participants slightly.

- A dial may have a bad dial ID. For example, dials may share the same number. Use Dial ID Mode to verify the ID numbers assigned to the dials:

    1. From the main drop-down menu, select **Console**, then select **Dial Status**. The Dial Status dialog window opens.

    2. In the Dial Status drop-down menu, select **Modes**, then select **ID Mode**. Dial ID numbers for each dial will show on each dial's numeric display.

    3. To return to normal display mode: from the Dial Status main menu, select **Modes**, then select **Normal Operating Mode**, then select a **Dial Range** (0-5, 0-10, 0-100).

    4. Dial ID mode is also useful for identifying ID numbers for dials whose labels have fallen off.

    5. If a dial has a bad ID, refer to pages 42 for instructions on setting IDs.

- The console may not be set to recognize the required number of dials. Check that the "Potential Dials" field in the Quick Configuration dialog window shows a number as high or higher than the highest number dial being used. If the console is not properly assigned, refer to the Console Assignment topic on page 41.

- Consider exchanging dials; radio interference may affect only dials with certain ID numbers. One poorly performing dial can cause interference in other otherwise good dials.

- Change the system operating frequency:

    1. From the main drop-down menu, select **Console**, then select **Dial Status**. The Dial Status dialog window opens.

    2. In the Dial Status drop-down menu, select **Dials**, then select **Frequency**. The Frequency dialog window will open.

    3. Select a frequency other than the default, #5. Frequency #1 is the best one to start with. After exiting the window, all dials will be communicating with the console on the new radio frequency. If a dial is turned on after the system frequency has been changed, the added dial will display “999” and need to be initialized to the new frequency. Do this by re-selecting Frequency #5, clicking OK, then selecting the new frequency and clicking OK.

If it is impossible to achieve satisfactory results in wireless mode, it will be necessary to connect the dials to the console using the telephone wires provided. Refer to the next section “Connecting the Dials by Wire.”

V. Connecting the Dials by Wire

If extensive external radio interference is suspected, connect the dials directly to the console with the provided telephony wires. Follow these procedures:

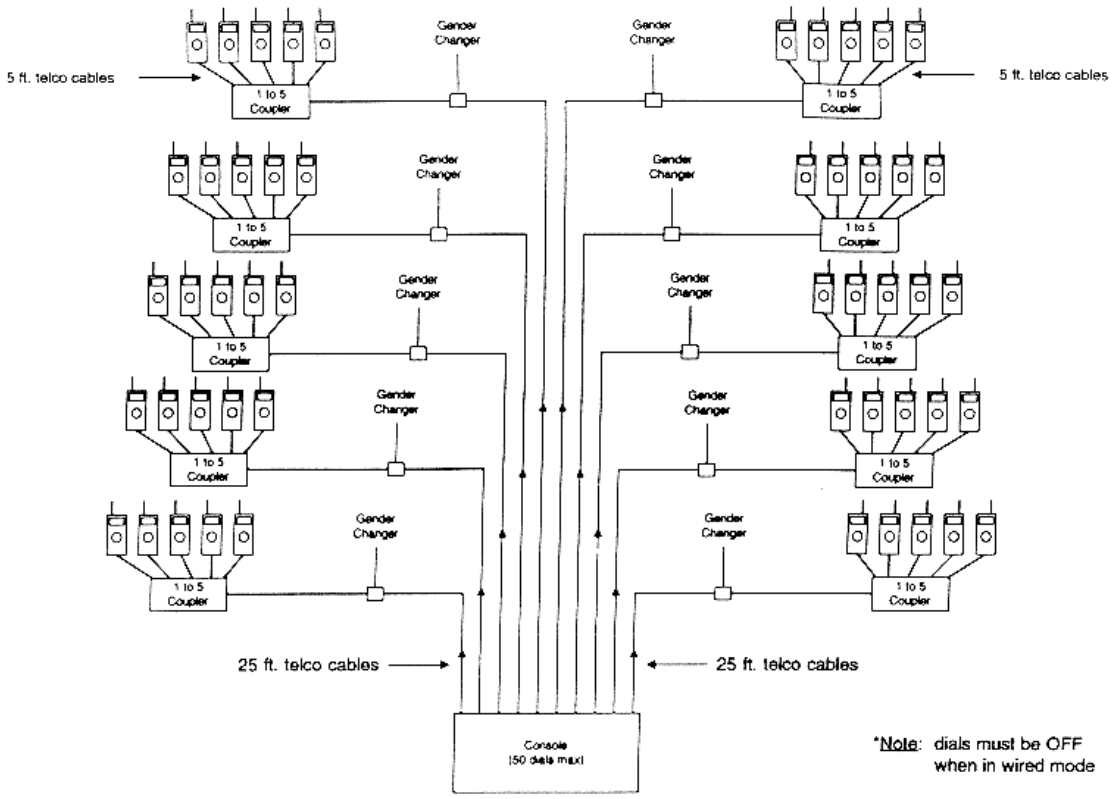
- Connect 5 dials to a five-way telco splitter, then connect the telco splitter (via extensions if necessary) to a telco jack on the console. Extensions to the splitters should be no longer than 50 feet, and lines from the splitter to the dial no longer than 10 feet. Because of the 5-way splitters, it is best if participants are seated in groups of five. See page 33 for a detailed wiring diagram.

- The console has ten telco jacks, allowing connection of 50 dials. Do not exceed 50 dials per console or 5 dials per jack.

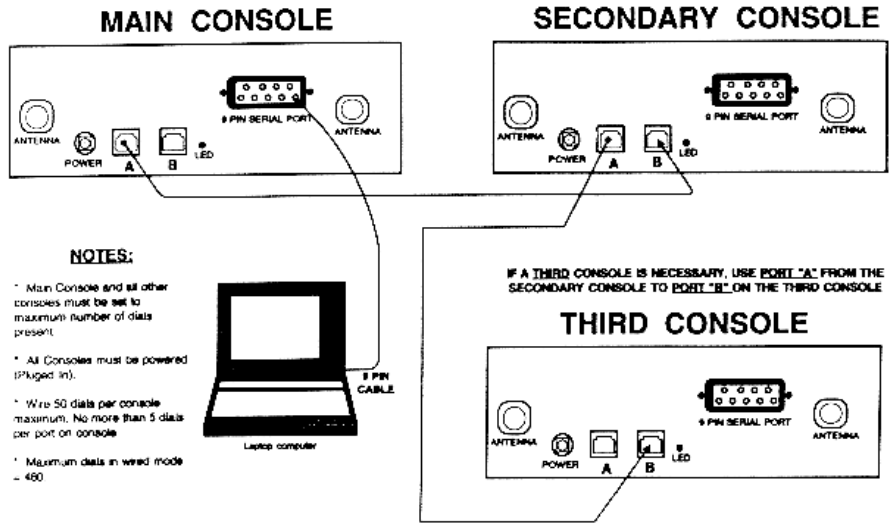
- Power switches on the dials MUST be turned OFF. The console, not dial batteries, provides power in wired mode.

- Consoles can be chained together with telco cables to operate systems larger than 50 dials. Each console must be powered with its own power supply. The in and out daisy-chaining telco jacks are located on the side of the console next to the serial port. The console connected directly to the computer via the serial cable must be set to recognize all dials in the system, not just the 50 that are directly connected to it. Refer to page 41 for information on setting the console.

PA Wired Configuration - 50 Dials



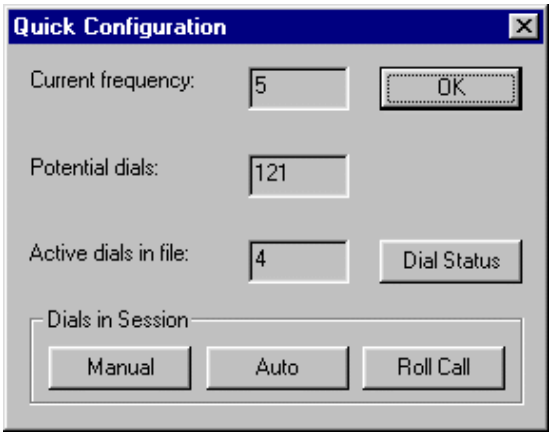
DAISY CHAIN 50 DIALS (OR MORE)



VI. Session Dial Configuration Using Dial Status and Quick Configuration

Dials that are missing or bad at start up should be located, corrected or replaced, and reconfigured manually. Refer to the "Optimizing Wireless Reception" section for troubleshooting tips (page 31.) After taking corrective action, use the following process to reconfigure from the main menu:

1. Open the **Quick Configuration** dialog window. During software startup, this window can be accessed from the [Configuration] Information dialog. Otherwise, open the window by selecting Quick Configuration in the Console drop down menu:



2. Click the **Auto** button. The system will identify active dials and update the session dial-configuration with the results. If there is preexisting data, click **Delete Data** to delete the current data and make the configuration buttons available.

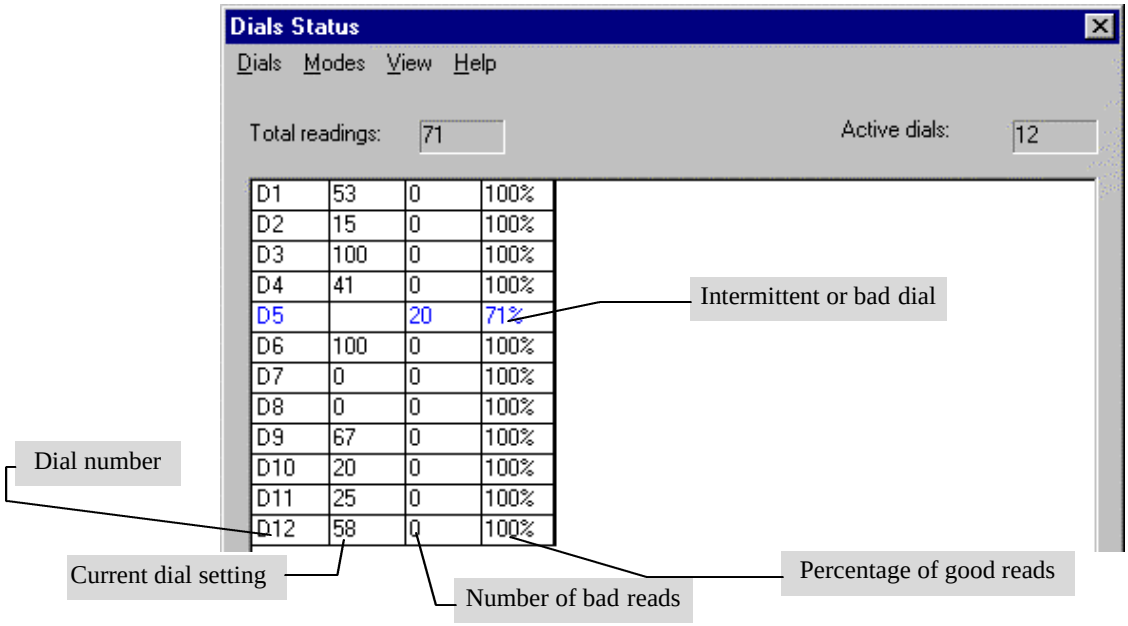
   - If the number of dials shown in Active Dials in File matches the number set out, the dials are ready for data collection. Click **OK** to exit this window and proceed with data collection (Roll-Call may be used when respondents arrive to identify the actual dials in use.)

     OR:

   - If not, additional troubleshooting is necessary: proceed to the next step:

3. Click the **Dial Status** button to open the Dial Status dialog window. Dial Status may also be opened by selecting **Dial Status** in the **Console** drop-down window.

4. The Dial Status dialog window will open:



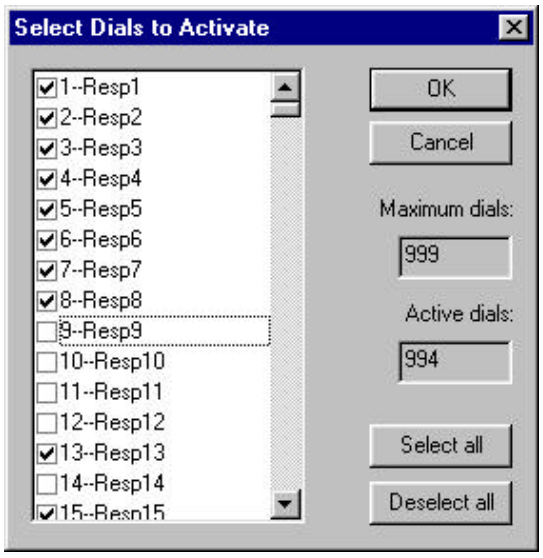
5. In the Dial Status dialog window's drop-down menu, select **View**, then select **View All**. The list of dials will now show all the dials that the console is set to recognize.

6. Dials that are missing or bad will show less than 50% good reception. Refer to the Optimizing Wireless Reception section to correct dial reception and performance problems. In the Dial Status dialog window's drop-down menu, select **Dials**, then select **Reset Count** to restart the count of test readings. Click **Exit** when finished.

7. If it is impossible to get enough dials with good reception, or if there are a considerable number of dials operating at 80% or below, it is necessary to connect the dials to the console with wires. Refer to the previous section "Connecting the Dials by Wire" for instruction.

8. Close the window. If Dials Status was opened from the Quick Configuration window the program will return to that window. In Quick Configuration, click Reconfigure again. Repeat process as necessary until enough dials are properly configured. When participants arrive, use Quick Configure again to create the final session dial-configuration to be used during the session. See the next topic.

9. Clicking the **Manual** button opens the **Select Dials to Activate** dialog window which allows manual activation on a dial-by-dial basis:



10. Click the checkbox for a dial to add/remove it from the configuration. Click OK when finished.

- IMPORTANT: To protect session data, the Reconfigure and Roll-Call buttons in Quick Configure are deactivated if any data has been collected for the session. If test data has been collected, it will be necessary to delete the test data using the Delete Data command in the Quick Configuration window. Refer to the next topic for details.

VII. Other Pre-Session Preparations

TESTING DATA COLLECTION

It is recommended that test data be collected after initial configuration of the dials and before participants arrive.

To collect test data:

1. Select a question in the question list in the lower left corner of the screen. Use the scroll bar or the up and down arrows to move between questions.

2. To collect answers from the dials for a question, click the **Read Dials** button in the lower part of the main screen. Verify that the correct number of dials is reading and that question data is displaying as intended.

3. Always delete the test data before the session begins. To do so, select **Console** in the Collect main drop-down menu, then select **Quick Configuration**. When the Quick Configuration dialog window opens, click the **Delete Data** button. The test data will be saved to a back-up file and a new empty data file created with the same dials configured.

HIBERNATION

While waiting for participants to arrive following initial dial configuration, it is advisable to *hibernate* the dials: remotely turn off the dials to save battery power. To do so, click **Hibernation** from the **Console** menu; click again to turn the dials back on. IMPORTANT: Do not exit the Collect application while the dials are hibernated.

FINAL CONFIGURATION AT SESSION TIME

Typically, fewer dials are needed than are initially configured. The extra dials will need to be removed from the Session Dial Configuration at the beginning of the session. This can be done with either the Auto (Reconfigure) function, the Manual function, or the Roll Call function available in the Quick Configuration window.

- **Auto (Reconfigure)** looks for active dials and creates a new session dial-configuration with all active dials found.

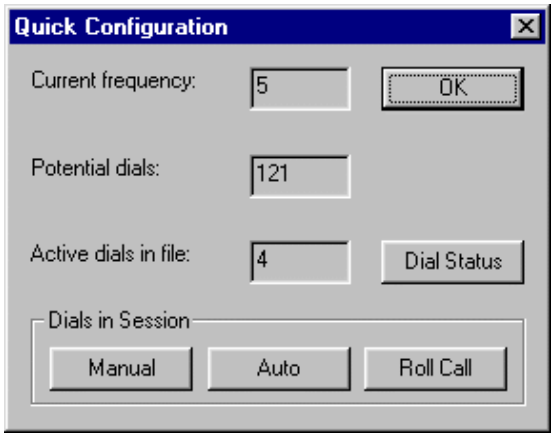
- **Manual**: Allows the user to select or deselect any numbered dial to include or omit from the Session Dial Configuration. Use this method if there is any difficulty with Auto Reconfigure identifying all of the intended dials.

- **Roll Call** is used to deactivate unused dials that are present randomly throughout a room with a large number of participants (e.g.50+) after they have been seated. When there is no data for the current session data file, a shortcut button to Roll Call will also be present on the main Collect screen next to the Read Dials button.

To protect the participant question data, Auto Reconfiguration and Roll Call will not function after any question data is collected. It may be necessary to use the Delete Data button first to delete any test data collected. Note also that the Quick Configuration command is deactivated if Seating Chart Mode is activated.

To use the Auto Reconfiguration function:

1. Turn off any un-used dials. From the main menu select **Console**, then select **Quick Configure** to open the Quick Configuration window:



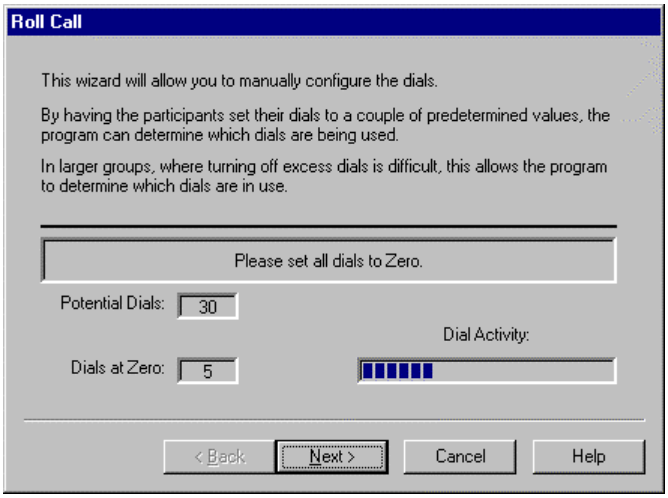
2. Click on **Auto**. The participants designated for the dials that were turned off will be removed from the Session Dial-Configuration. Verify that the number of dials noted in the Active Dials

field of the Quick Configuration dialog window is correct. If not correct click refer to the Manual Configuration topic on page 34 for troubleshooting and reconfiguration instructions.

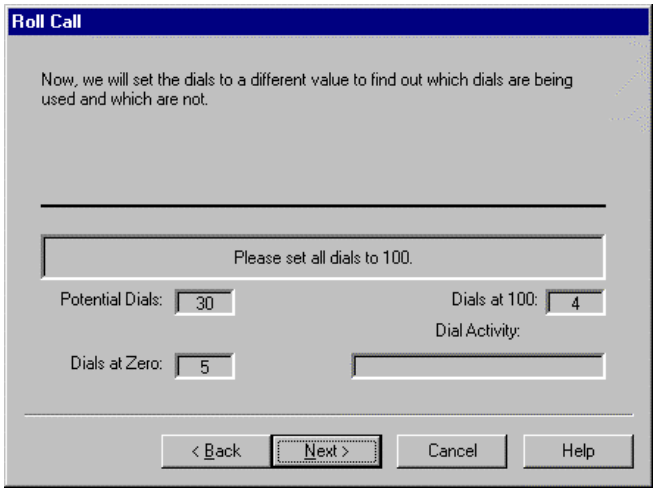
To use the Roll Call function:

1. Click on the **Roll-Call** button in the lower part of the main Collect screen next to the Read Dials button. This button will not appear if there is data in the file; Roll Call can also be accessed in **Quick Configuration**.

2. The first screen of the Roll Call configuration wizard opens:

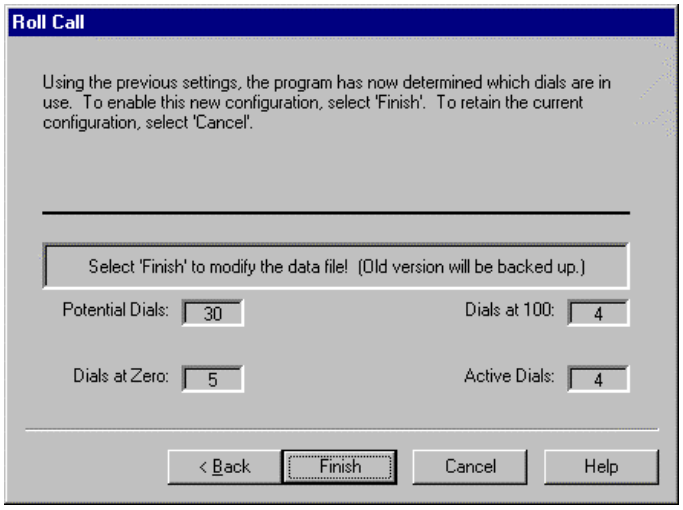


3. The Roll Call Wizard shows the potential number of dials the console can currently recognize, a continuously updating window showing the number of **Dials at Zero**, and a dial activity meter to indicate when participants are moving their dials. The moderator should instruct the participants to set their dials to zero. When dial activity stops, click **Next**. The second screen of the Roll Call Wizard will open:



4. The moderator should now instruct the participants to set their dials to 100. The **Dials at 100** field will continuously update. When dial activity stops, click **Next**.

5. The third and final screen of the Roll Call Wizard will open:

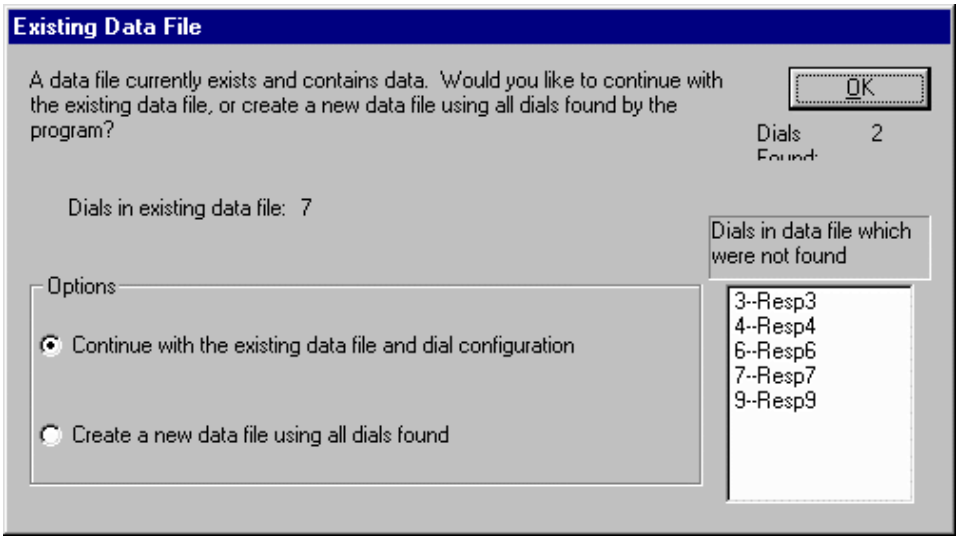


6. Review the **Active Dials** field to confirm that the number of active dials (dials that were set to both zero and 100) corresponds to the number of actual participants, if known. All of those dials will be added to the Session Dial-Configuration. Click **Finish**. If there was a preexisting Session Dial-Configuration, the program will prompt you to confirm any dial deletions or additions. The Quick Configuration window will then reappear with the new number of dials listed in the "Active dials in file" field. Click OK.

IMPORTANT: Any changes to configuration after data collection for a session begins should be made on a dial-by-dial basis using the Exchange Dial commands: DO NOT Reconfigure after beginning to collect data in the session.

RESTARTING COLLECT IN A PREVIOUSLY CONFIGURED SESSION

If you must exit the Collect software before data collection for a session is completed, simply reselect the same session file for data collection when re-opening Collect. After diagnostics is completed or cancelled, the Preexisting Data File window will open:



Collect will check for dials currently active. The window reports the number of dials configured in the session data file and offers the option to **Continue with the existing data file and dial configuration** or **Create a new data file** and dial configuration using all dials found.

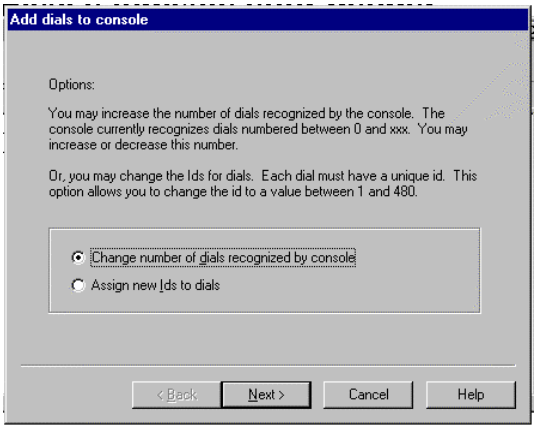
If the number of dials found to be currently active is different from the number or IDs of those in the session's data file, the number actually found is reported at the right-hand side of the screen and a list of those not found is presented. If continuing with the existing session data file, the dials in the list should be checked and corrected using Dial Status once the main Collect screen is opened.

VIII. Console and Dial Assignment

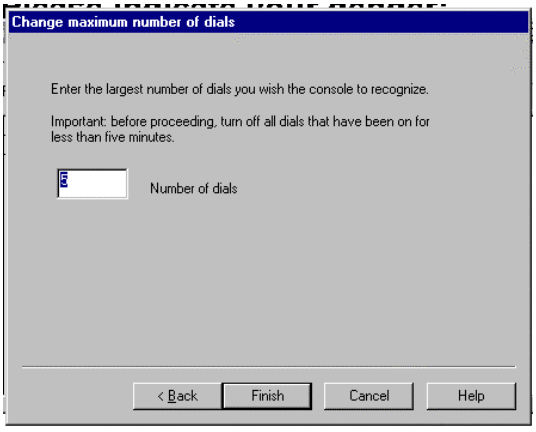
CONSOLE ASSIGNMENT

The console will only recognize the number of dials it has been programmed to accept. By default, the highest dial ID number assigned establishes the maximum number of dials recognized. To add dials above this range without assigning new ID numbers, the user must change the maximum number of dials recognized by the console.

To change number of dials recognized by console:



1. Open a project in PACollect.
2. From the main drop down menu, click **Console**, then click **Dial Status**.
3. When the Dial Status dialog window opens, click **Dials** in the drop-down menu, then click **Console Assignment**.
4. When the Add Dials to Console dialog window opens, click the **Change the number of dials recognized by console** radio button.
5. Click Next >

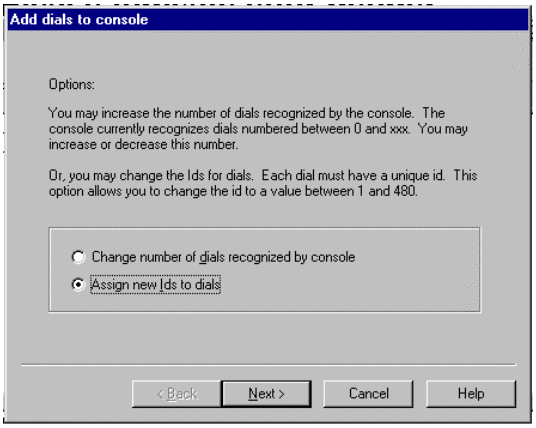


6. The Change Maximum number of dials dialog window opens. Enter the maximum number number of dials you want to collect data. The console will not report data from dials with ID numbers above this number.
7. Click Finish. Before the session begins, use Quick Configuration to configure the appropriate number of respondents.

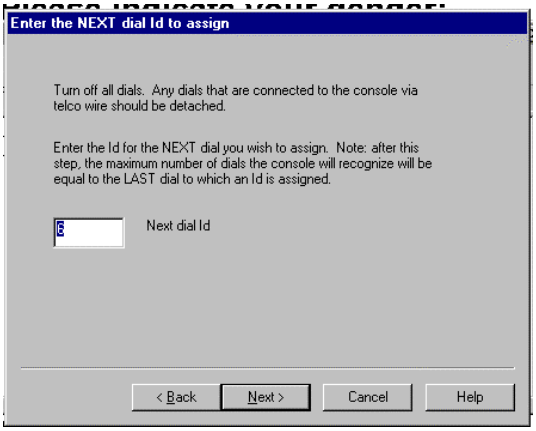
- After clicking Finish a warning may appear stating, "Console is not assigned correctly, console is now set to "x" dials." As long as the number of dials is correct, the console assignment is correct.
- Performing a console assignment includes an automatic reconfiguration of the Session Dial-Configuration. After clicking Finish you will receive a warning that if you lowered the number of dials the console is set to recognize that all configured dials above that number will be removed from the session data configuration. The previous version of the data file is backed-up.
- Assign new dial ID's will reset the number of dials recognized by the console also.

ASSIGN NEW ID'S TO DIALS

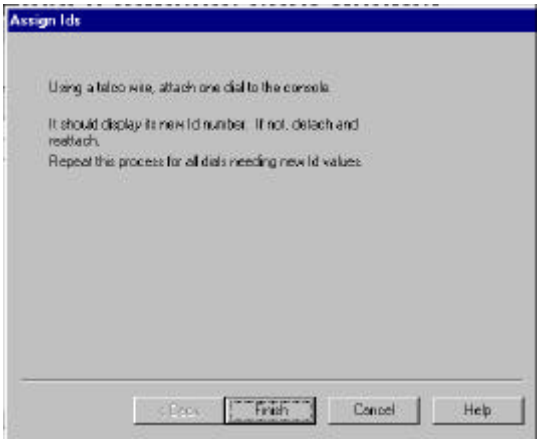
To assign new IDs to dials:



1. Open a project in PACollect.
2. From the main drop down menu, click **Console**, then click **Dial Status**.
3. When the Dial Status dialog window opens, click **Dials** in the drop-down menu, then click **Console Assignment**.
4. When the Add Dials to Console dialog window opens, click the **Assign new IDs to dials** radio button.
5. Click Next >



6. Turn dials off that you wish to renumber and detach any wired dials. DO NOT turn on any dials during this process because they will have their IDs changed (even though they are not attached by telco wire).
7. Enter the dial ID of the next dial to be assigned.
8. Click Next >



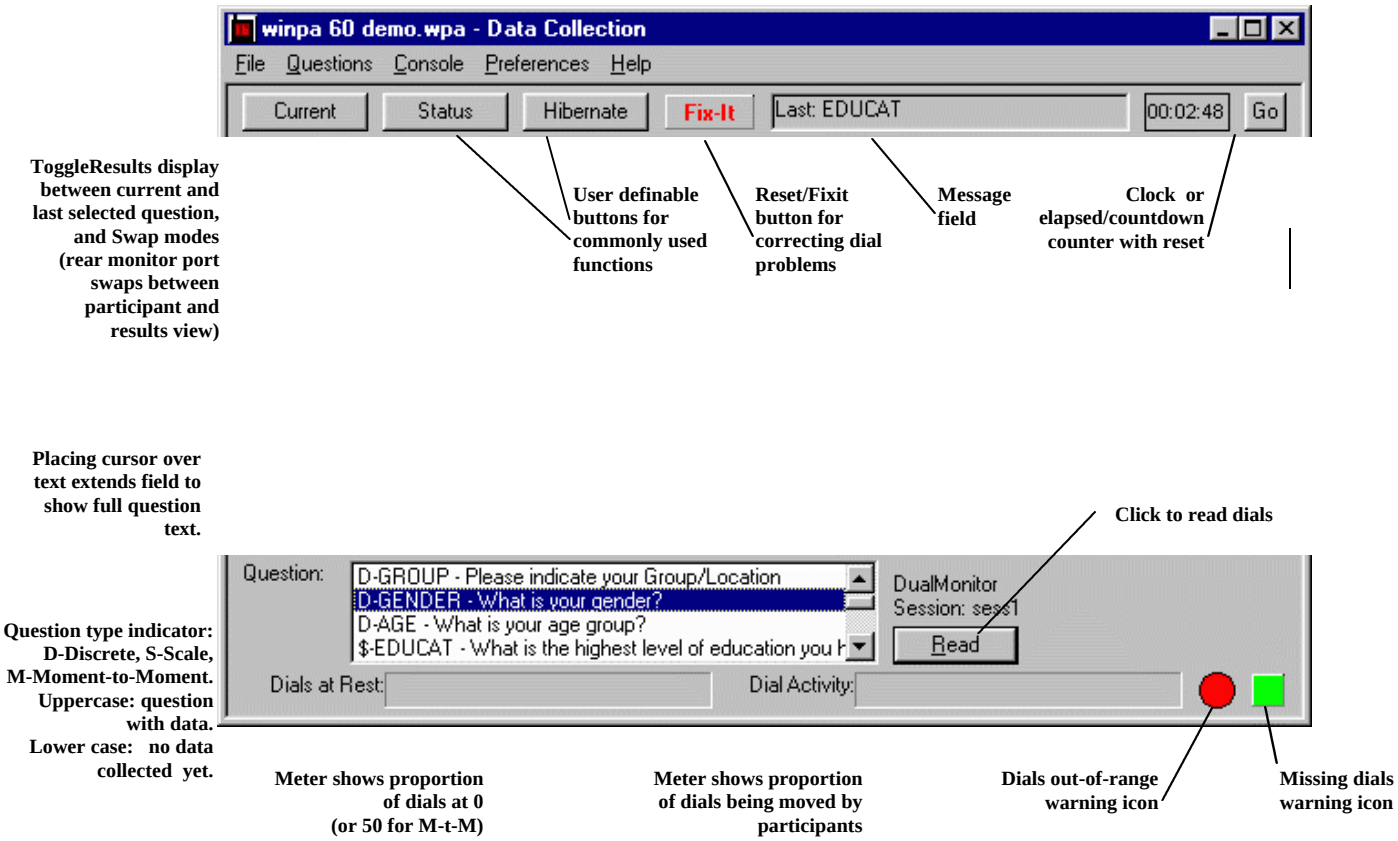
9. Attach a telco cable to one of the 10 telco ports on the front of the console, then insert the other end of the telco cable into the telco jack of the first dial to be numbered.
10. The dial will display the newly assigned ID number. Remove the telco cable.
11. Briefly attach the telco cable to the next dial to be numbered. Repeat this process with each dial until all dials are numbered.
12. Click Finish when all intended dials are numbered.

NOTE:
This will change the maximum number of dials recognized by the console. The last ID number assigned becomes the maximum number of dials the console is set to recognize. Reset if necessary.

IX. Running a Session

SELECTING QUESTIONS AND READING THE DIALS

At the bottom of the main Collect screen is a status bar with the question list. The mouse or up/down arrow keys are used to select the question to ask from the list:



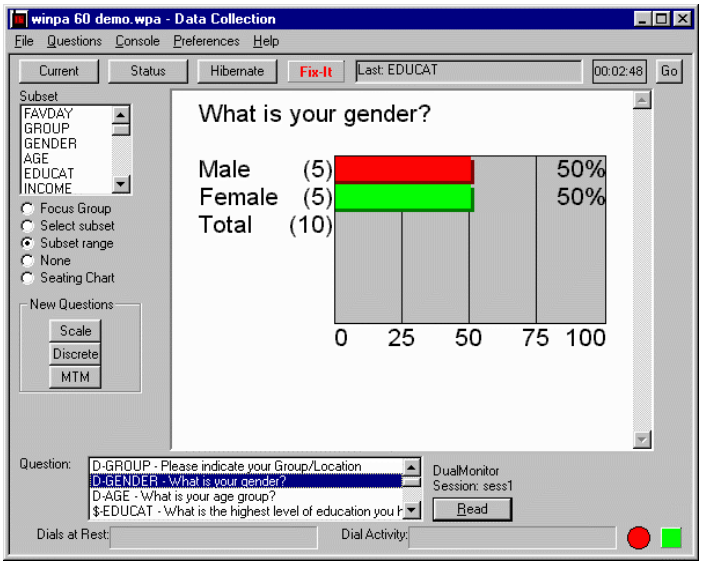
To collect responses from the dials:

1. Click to highlight a question in the list. Highlighted questions will appear on the participant display monitor and may be read to participants. Initially the data collection (results view) window remains blank until data is collected. (When set to Last Read)

2. Instruct the participants to dial the number corresponding to their answer. They should leave the dial set to their answer until they are instructed to answer the next question.

3. Click the **Read** button, or press **F4** or **Alt+R** to collect data for the highlighted question.

4. Results appear graphically in the results view window:



- Click Read Dials again to retake a read if necessary.

- Move through the question list using the up/down arrow keys or the question list scroll bar. Pressing **F3** brings up the **Goto Question** dialog window.

- Using the mouse, questions may be selected out of order or skipped. If you return to a question for which data has been collected, you will be prompted to confirm if retaking the read.

- Data is saved immediately after each read to the session's data file.

IDENTIFYING AND SOLVING DIAL PROBLEMS IN SESSION

There are several problems that can occur with dials during a session:

- A dial may fail to switch to a new number display range when a new question is selected. If the Button Bar as the top of the screen is activated, click the **Reset** button. This will resend the command to set the dials to display the scale for the current question. If the Reset button is not available, return to the previous question briefly (do not recollect response data) and then come back to the new question. This reinitializes the dials to the new range.

- A dial may "freeze" during a session: the number displayed on the dial cannot be changed and data will not be recorded from the dial. To correct, simply turn the dial off and then back on to reset it. If connected by wire, unplug and re-plug the dial.

- A dial may be failing or performing poorly if after taking a read the number of responses does not agree with the known number of participants.

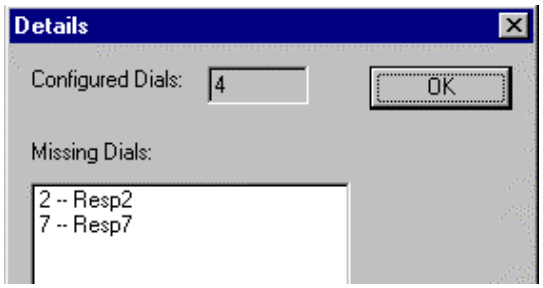
When dials don't return reads, the first thing to do is take additional reads from the dials; the problem may be a temporary anomaly. Next, click the **Fixit** button that appears in place of the Reset button in the Button Bar. The Fixit button will attempt to unfreeze frozen dials, reset dials to operate on the user-

designated transmission frequency, reset dials to the correct scale, and automatically retest the dials. If Fixit is unable to fix the problem dial it will automatically open the Exchange Dial window to facilitate exchanging the problem dial for a spare.

If the missing responses continue, use the following procedure to identify problem dials during a session:

- Missing dials will be flagged by the Missing Dials warning icon. The icon is activated along with the other Dial Activity meters. It appears at the lower right of the Collect screen:

- If there are no missing reads, the icon will be green. If there is a missing read, the icon will turn red. Holding the mouse pointer over the icon will pop-up a text box listing the dial that is missing. If there is more than one dial missing, clicking on the icon will bring up a full list of the missing dials:



- Check and correct any dial problems. Refer to the Optimizing Wireless Reception section for troubleshooting information (see pages 30-31.)

- If Dial Activity is not being used, or for more detailed information on dial performance, check the dials in the Dial Status window:

    1. In the main Collect drop-down menu, select **Console**, then select **Dial Status**. The Dial Status window will open (picture page 35.)

    2. In the Dial Status window's drop-down menu, select **View**, then select **View Participants.** The list will show only dials assigned to participants. Intermittent or failed dials will show up in the list as those that have not returned 100% of their reads. Check and correct any dial problems. Refer to the Optimizing Wireless Reception section for troubleshooting information (pages 30-31).

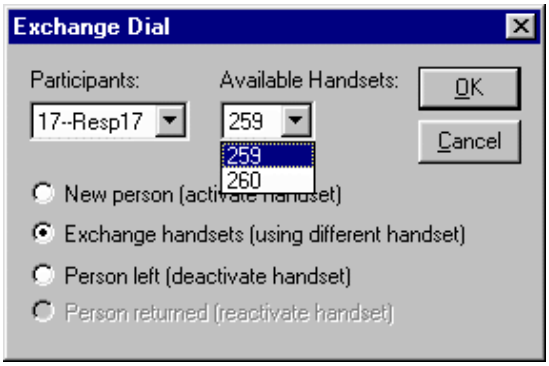
If the dial problem cannot be solved, exchange the dial using the Exchange Dial command (see next topic).

- IMPORTANT: Never reconfigure the dials after data collection for a session has begun. Changes to Session Dial-Configuration after a session has begun should be made on a dial-by-dial basis using the Exchange Dial dialog window (next subtopic below.)

EXCHANGING DIALS IN SESSION

A participant can easily be switched to another dial in the system:

1. In the Collect main drop-down menu, select **Console,** then click **Exchange Dial**. The Exchange Dial dialog window opens:



2. Click the **Exchange handsets** button. In the **Participants** drop-down list, select the participant that needs a new dial and turn off their non-functional dial.

3. In the **Available Handsets** field, select a new dial from the list to assign to the participant. Turn on that new dial and click **OK**. The participant is now ready to continue.

4. If the replacement dial is added after the system frequency has been changed to something other than 5, the replacement dial will need to be initialized to the new frequency. Do this automatically by clicking the Reset button in the button bar, or manually in Dial Status by changing the system frequency to 5, then changing back to the alternative frequency. Refer to the Optimizing Wireless Reception section (pages 30-31) for detailed instructions on changing system operating frequency.

5. When the replacement dial is added, it will default to the 0-100 range. If the current question to be collected is other than 0-100, click the Reset button in the button bar, or briefly go back to the previous question, then return to the current question to get the replacement dial set to the proper range.

NOTE: While the participant's *dial* ID has changed, his/her *participant* ID stays the same.

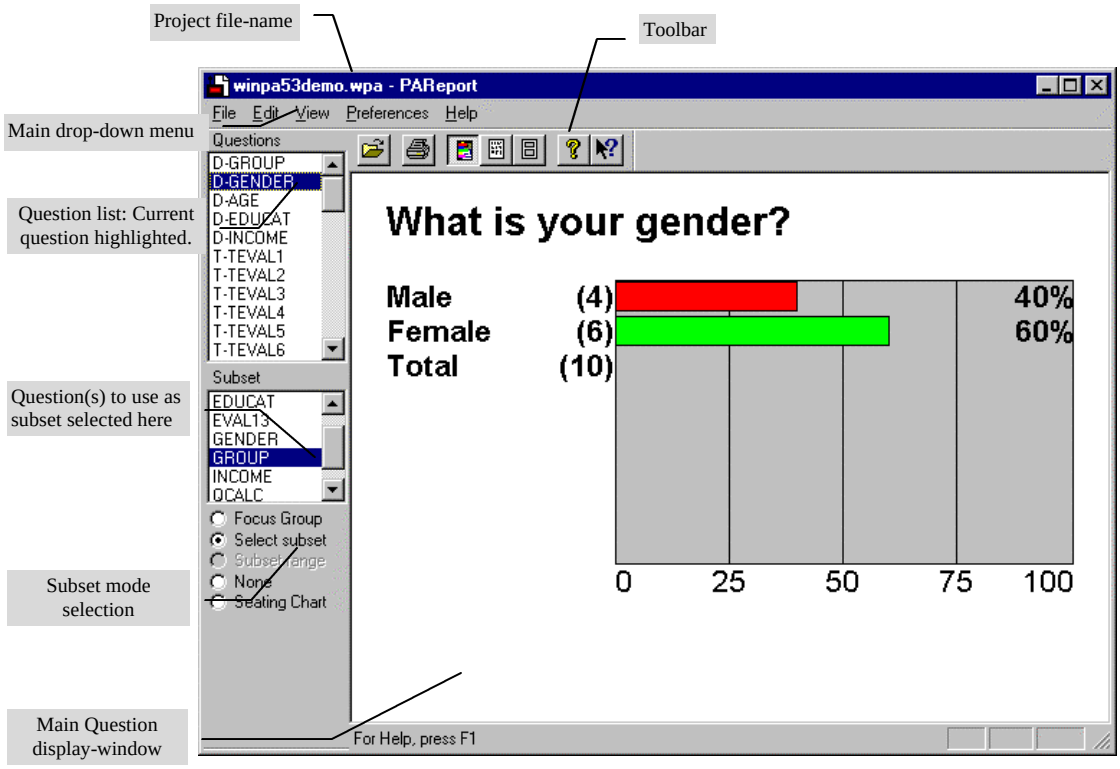
SECTION FOUR:
PAReport – Results Viewing

Report: Getting Started

After data is collected, Report is used to view, print, and export aggregated data for all sessions in a project. To open a project in Report for viewing, printing, or exporting data:

1. In the Windows taskbar, click on the **Start** button. Select **Programs**, select **Learning or Perception Analyzer™,** then select **Report**. The Report main screen will open.

2. In the Report main drop-down menu, select **File**, then select **Open**. The Open dialog box will appear. Select a project from the list, browsing through the directories if necessary, then click **Open**. The project will open with the first question in the master questionnaire displayed graphically with data aggregated from all sessions:



3. Data is displayed for one question at a time. To display data for a question, select the question in the Question List to the left of the main display window. Questions are listed in the order of the Master Questionnaire. Once the Question List is active, you can advance through questions with the keyboard's up/down arrow keys.

IMPORTANT INFORMATION ABOUT THE “SAVE AS” COMMAND

Modifications made to the display of data in Report are saved automatically or are only active while the current project is open in Report. Therefore, there is no Save command in the File menu. The Save As command should ONLY be used to re-save the project as an Analyzer project if the intention is to create a *new* Analyzer project. *Report will merge participants from all sessions into one single session when saving as an Analyzer project.*

Modifying Question Data Display

Data display can be switched instantly between three formats:

 **Graphical Display** provides a visual display of results for quick interpretation. This is the default view shown when Report opens.

- Use the Preferences menus to modify the graphic characteristics of the display.
- Select **View**, then **Start Reading** to “play-back” the Moment-to-Moment question data scrolling line-graph. Pressing Alt+R or the F4 key will also start data playback.

 **Quick Frequencies Display** offers a simple analysis that includes mean, median, standard deviation, standard error, confidence intervals and other statistics.

 **Crosstab Display** compares how different subgroups respond to a question using numerical tables. Select one or more questions from the subset list to crosstab by the currently selected question.

 **Participant Display** mode shows the questions without data as the participants would see them. This facilitates a second computer to provide participant display.

To change display format:

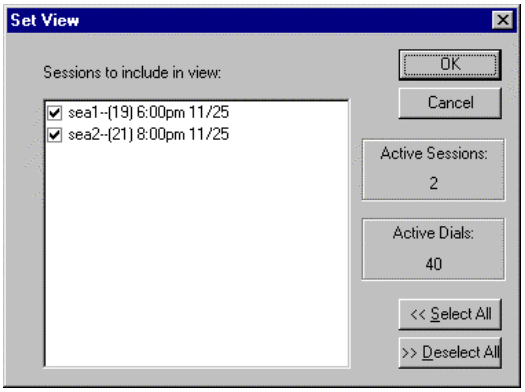
1. In the Report main drop down menu, select **View**, then select either Graphical, Quick Frequencies, Crosstab, or Participant Display mode.
2. Alternately, change the display mode by selecting the Graphical, Quick Frequencies, or Crosstab icons in the Toolbar.

AGGREGATING DATA

Data from multiple sessions is aggregated by default. To control which sessions are included in the aggregation:

1. In the Report main drop-down menu, select **Edit**, then select **Views**.

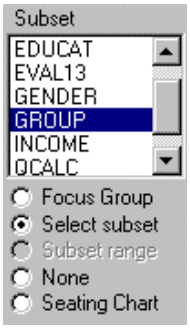
2. The Set View dialog window opens:



3. All of the sessions in the project will appear in the list with each session's file name and number of configured participants. Select or deselect the checkboxes to include or remove each session from the data display.

VIEWING SUBSETS

Make selections in the Subset window in the lower-left corner of the screen to show subsets for questions:



1. Click the **Select Subset** radio button, then select one or more questions from the Subset questions list. Only Discrete and Calculated questions are listed (in alphabetical order).

2. Click **Subset Range** to display subsets using the ranges preprogrammed in Edit.

3. Click **Focus Group** to display responses for all individual participants.

4. Click **None** to remove subset display.

5. Click **Seating Chart** to View an existing Seating Chart or make a new one. In Report, seating charts can only be used with single-session projects.

- Subsets display on the same screen for Intensity-Scale and Moment-to-Moment questions. Use the F7/F8 keys to toggle through subset categories for all other question types. Subsets are not shown in Quick Frequencies display mode.

III. Printing

- Questions may be printed from all three display modes (Graphical, Quick Frequencies, and Crosstab). Printing will occur in the currently selected display mode. Questions print one-per-page.

- Data for all sessions selected in Set View will be shown in the printouts.

- Select questions to print from the question list. To select a series of adjacent groups or questions, click to highlight the first item in the sequence, hold down the Shift key, then click the last item in the sequence: all items between the two selected items will be highlighted. To select multiple non-sequential items, hold down the Ctrl key and click each item to be included.

- To change the printer setup, select **File** from the main menu, then select **Print Setup**. It may be found that Landscape page orientation will show more information than Portrait page orientation. Right-click and select Global Preferences to adjust font sizes if necessary.

- The font size may not print as it appears on the display. It may be necessary to increase the font size above what will fit on the screen. Use Print Preview to view how the questions will print. To preview the printing, select **File** from the main menu, then select **Print Preview**.

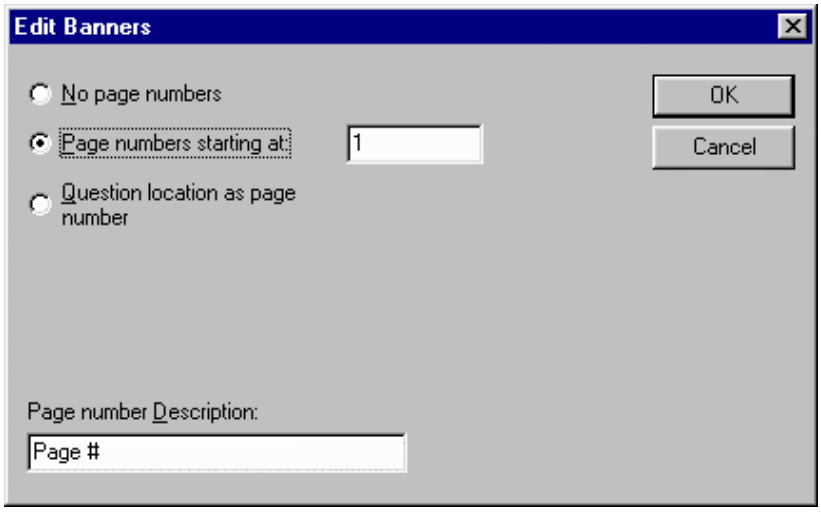
CREATING AND PRINTING CROSS-TABULATED TABLES

To create and print cross-tabulated tables:

1. Use Edit to create calculated questions for custom banner points, if desired

2. Open the project in Report and Click **View** then **Crosstab** display.

3. In the Report drop-down menu, select **Edit**, then select **Banners**. The Edit Banners window opens:



4. Click a checkbox for a page numbering option. In the **Page Number Description** field, enter text to precede each page number. Click OK when finished.

5. Select banner points by clicking the **Select Subset** button, then select one or more questions by which to cross-tabulate the results by selecting them in the Subset question list. To select a series of adjacent questions, click to highlight the first question in the sequence, hold down the shift key, then click the last question in the sequence; all questions between the two selections will be highlighted. To select non-sequential questions, hold down the Ctrl key and click each question to be included. The banner points will appear left to right in the order in which they are selected.

6. Select question tables to print from the Questions list. Click on a single question to select it. To select a series of adjacent questions, click to highlight the first question in the sequence, hold down the shift key, then click the last question in the sequence; all questions between the two selections will be highlighted. To select non-sequential questions, hold down the Ctrl key and click each question to be included.

7. In the Report drop-down menu, select **File**, then select **Print**. Verify that printer settings are set correctly and click **OK**.

VIEWING AND PRINTING MOMENT-TO-MOMENT GRAPHS

Printing Moment-to-Moment graphs requires that the graphs be drawn to the screen, copied to the Windows clipboard using the Print Screen command, and pasted into an application like Microsoft Word or Microsoft PowerPoint that can print graphics.

To print Moment-to-Moment Question Graphs:

1. Select the Moment-to-Moment question to be printed in the question list.

2. Select any **subsets** you want to have displayed on the graph.

3. Set the ***Moment-to-Moment Preferences*** so that the graph will draw with the information, layout, fonts, and color needed. Also, set the width of the graph, in seconds, to be the *entire* duration of the Moment-to-Moment data.

4. From the **View** drop-down menu, select **Full Screen** and **Show Question List,** or use the keyboard commands (Ctrl-F, Ctrl-L) to enlarge the Moment-to-Moment graph to fill the screen. (Full screen mode can be exited by repeating the keyboard commands or by using the **Escape** key).

5. Use the **Start Reading** control (**F4 or Alt-R**) to playback and draw the data graph on the screen.

    - Press **Alt + R** or **F4** to start the graph playback. Press **Alt-R** or **F4** again to pause the playback.
    - Press **Alt + A** to toggle the playback speed between real-time and high speed.

6. When the data is drawn, use the computer keyboard's **Print Screen** command to copy the graph to the Windows clipboard. Open a program like Microsoft Word or PowerPoint and paste the graph into a document. Annotate and print as needed.