Notice

Hewlett-Packard to Agilent Technologies Transition

This documentation supports a product that previously shipped under the Hewlett-Packard company brand name. The brand name has now been changed to Agilent Technologies. The two products are functionally identical, only our name has changed. The document still includes references to Hewlett-Packard products, some of which have been transitioned to Agilent Technologies.

Printed in USA March 2000

By internet, phone, or fax, get assistance with all your test and measurement needs.

Table 1-1 Contacting Agilent

Online assistance: `www.agilent.com/find/assist`

United States
(tel) 1 800 452 4844

Latin America
(tel) (305) 269 7500
(fax) (305) 269 7599

Canada
(tel) 1 877 894 4414
(fax) (905) 282-6495

Europe
(tel) (+31) 20 547 2323
(fax) (+31) 20 547 2390

New Zealand
(tel) 0 800 738 378
(fax) (+64) 4 495 8950

Japan
(tel) (+81) 426 56 7832
(fax) (+81) 426 56 7840

Australia
(tel) 1 800 629 485
(fax) (+61) 3 9210 5947

Asia Call Center Numbers

Country	Phone Number	Fax Number
Singapore	1-800-375-8100	(65) 836-0252
Malaysia	1-800-828-848	1-800-801664
Philippines	(632) 8426802 1-800-16510170 (PLDT Subscriber Only)	(632) 8426809 1-800-16510288 (PLDT Subscriber Only)
Thailand	(088) 226-008 (outside Bangkok) (662) 661-3999 (within Bangkok)	(66) 1-661-3714
Hong Kong	800-930-871	(852) 2506 9233
Taiwan	0800-047-866	(886) 2 25456723
People's Republic of China	800-810-0189 (preferred) 10800-650-0021	10800-650-0121
India	1-600-11-2929	000-800-650-1101

User's Guide

HP CaLan 85921B
Cable TV Data Management Software
Revision 2.0

HP Part No: 85921-90014 **Supersedes: 85921-90011**
Printed in USA **May 1998**

Notice

The information contained in this document is subject to change without notice.

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Regulatory Information

The regulatory information is in the calibration guide for your analyzer.

1400 Fountaingrove Parkway, Santa Rosa, CA 95402-1799, USA

Warranty and License Agreement

Refer to the *HP Software Product License Agreement and Limited Warranty*, HP part number 9320-6060, shipped with this product for information about your warranty and license agreement.

Safety Symbols

The following safety symbols are used throughout this manual. Familiarize yourself with each of the symbols and its meaning before operating this instrument.

CAUTION! The *caution* sign denotes a hazard. It calls attention to a procedure which, if not correctly performed or adhered to, could result in damage to or destruction of the instrument or loss of data in the data module. Do not proceed beyond a *caution* sign until the indicated conditions are fully understood and met.

WARNING! The *warning* sign denotes a hazard. It calls attention to a procedure which, if not correctly performed or adhered to, could result in injury or loss of life. Do not proceed beyond a *warning* sign until the indicated conditions are fully understood and met.

The HP CaLan 85921B Cable TV Data Management Software

The HP CaLan 85921B Cable TV Data Management Software lets cable TV operators and contractors easily manage measurement results from the HP CaLan 8591C, HP 8590 E-series or L-series analyzers, as well as from the 2010B and the 3010 family of instruments. Cable TV operators can also use this software to manually enter data from non-HP test equipment, allowing them to compare data from all test instruments used in their system. Running on an IBM compatible PC, this software retrieves data from your HP CaLan 8591C, HP 8590 E-series or L-series analyzers, or 2010B/3010 cable TV analyzers into a PC database for making reports and archiving data. Data can also be graphed and analyzed with the software. Test plans can be created, stored and sent to an HP CaLan 8591C, HP 8590 E-series or L-series analyzers instrument. With the optional compliance report module, the software compares measurement results to FCC specifications and displays pass/fail messages for each test. Test data can also be saved as a text file, or in word processor or spreadsheet format.

Automation Saves You Time

The data management software automates the lengthy process of transferring measurement data from test equipment, analyzing the results, and compiling the reports. Automation not only saves time, but ensures the integrity of the measurement data transferred to the report.

A database allows you to store test results taken at different times, giving you the ability to access historical data. General report and graphical data analysis will assist with analyzing system performance. With this historical data, system performance can be monitored and troublesome areas can be identified in advance.

Product Features

The HP CaLan 85921B Cable TV Data Management Software has many features. Below is a brief summary of those features and a reference to finding more information about them in the manual.

HP CaLan 2010/3010 Data Retrieval and Programming

The HP CaLan 85921B Cable TV Data Management software supports data retrieval and programming for the HP CaLan 2010/3010 and the HP CaLan 8591C series of instruments. Channel plans, test plans, history file labels, dwell and sweep information can now be exchanged between a PC and these instruments. Take a look at Chapter 6 to find out how to communicate with the instruments.

User Interface

The software interface is easy to use. Software functions are accessible through buttons, as well as drop-down menus. Dialog boxes make using the software and easier. Also, a menu map is available in chapter 13 for easier navigation through the software.

Channel and Test Plans

Channel plans can be downloaded and retrieved between a PC and an HP CaLan 2010/3010. Test plans can be exchanged between a PC and an HP CaLan 8591C. These plans can be created and stored in a PC. Also, a PC can be used to distribute plans to different instruments. Chapters 4 and 5 explain how to create and modify plans.

Data Analysis

The HP CaLan 85921B software includes a data analysis section to view, sort, and select the test data. Also, reports can be generated from the selected data in the Data Analysis section. See Chapter 8 "Analyzing Data."

Graphical Presentation

The software provides graphical presentation of stored sweep, carrier level and spectrum scan data for the HP CaLan 2010/3010 series of instruments. A system of markers provide detailed information for better analysis of graphical data. Graphical reports can be batch printed or with comments and annotations. See the section on graphing data in Chapter 8.

Data Editing and Exporting

Test data can be edited throughout the software. This allows inspection and editing for validity prior to inserting the data into the data module. Data can be further edited once it is in the data module. Access to the Data Analysis editing feature can be turned off or controlled through the use of a password. Also, data can be exported to an Excel spreadsheet format or to an ASCII text file format. This will allow use of the data in

other programs. See the sections on editing and exporting data in Chapter 8.

Manual Data Entry

Data can be entered manually from other test equipment allowing comparison of results from all your system equipment. See the section titled “Entering Data From Other Instruments” at the end of Chapter 7.

Compliance Report Generation

Compliance report generation is available as an option for the HP CaLan 85921B Data Management Software. You can print the results of selected tests run at each specified location in the cable system. The report will list the actual test values and a pass/fail assessment for all the channels tested, as well as additional required information such as the date of the testing, the name and qualifications of the person who ran the test, temperature, and test location.

The final report is automatically generated in a format compliant with FCC regulations. All RF and video tests (except RF leakage) currently required by the FCC are included. See Chapter 10 for information on compliance reports.

New Features

The HP CaLan 85921B software offers new features not in the original version of the HP CaLan 85921B software.

Supports Windows NT 4.0

The software now operates under Windows NT 4.0, as well as the Windows 95 operating system.

Support for Dates Beyond the Year 2000

The new revision supports date formats for the years 2000 and beyond. This insures that the Cable TV Database Management Software will not become outdated in the next millennium.

Regional Settings

Support for all Windows international time and date settings are now incorporated into the software.

Data Modules

This new revision provides more control over your data. You can create new data modules and connect to different modules at will. Also, you can merge data from any previous or current revision of the software. This gives you the ability to group data into different data modules, as well as combine various data modules.

Additionally, you can store data modules in a directory separate from your main program directory, including on a network drive.

With these features you will have more control over organizing and using your data.

Archiving of Data

With the archive feature you will be able to save specific datasets to a new data module. Use this feature to backup or use along with the merge feature to create data modules with exactly the information you want in them.

New Deletion Capabilities

Entire datasets or individual test measurements can now be deleted. This will help you eliminate unneeded test results from your data modules.

Setup items not linked to data modules can now be deleted. Unused test points, testers, instruments and other setup items can be eliminated from your data modules to keep them lean.

After an archiving operation, the archived data can be deleted all at once.

Sorting of Data

New sorting capabilities have been added to Data Analysis, with all sort criteria being visible in the spreadsheet view.

Printing of Forms

Data from many forms found in the HP CaLan 85921B software can now be printed by pressing CTRL-P on the keyboard while in the form.

Support for Average Digital Power

Average Digital Power measurements taken with the newer 3010 instruments that can read ADP, are now one of the test measurements supported in the software. Viewing, editing and reporting on this information is as easy as the other test measurements.

Digital Power Incorporated into Carrier Level

Digital power levels are now incorporated into the carrier level data. New graphs for carrier level give the choice of graphing digital, analog or both types of carrier level data.

Repair and Compact

A utility for repairing and compacting your data modules is now available. Look for the Repair & Compact Database utility in the Start Menu group where your program icons are installed.

Welcome

Welcome to the HP CaLan 85921B Cable TV Data Management Software. The data management software allows you to manage your use of the HP CaLan 2010/3010 series and the HP CaLan 8591C instruments using your personal computer.

This manual has 13 chapters:

Chapter 1	provides an overview of the software environment.
Chapter 2	provides information about installing the software.
Chapter 3	provides information about getting started using the software and setting up the database.
Chapter 4	provides information about creating and modifying channel plans.
Chapter 5	provides information about creating a test plan for the HP CaLan 8591C.
Chapter 6	provides information about sending plans and data to, as well as returning test results from the instruments.
Chapter 7	provides information about reviewing and editing data before saving to the permanent data module.
Chapter 8	provides information about analyzing, editing and exporting data.
Chapter 9	provides information about changing and merging data modules.
Chapter 10	provides information about generating reports.
Chapter 11	provides information about program and file repair and maintenance.
Chapter 12	provides information about using the basic troubleshooting procedures.
Chapter 13	provides a menu map for navigating the software.

How to Use This Book

The following terms and conventions are used throughout this manual. Refer to the following table.

Manual Terms and Conventions

Term	Meaning
Bold type	Words or characters that you type. For example, if the manual says to type **10 dB**, you type the number **10** followed by a space and the letters **dB**.
Italic type	Placeholders for items you must supply, such as the names of documents and other items you create. For example, if the manual says to type *filename*, you might type **MYREPORT**.
KEYBOARD	To indicate a computer keyboard key.
`Screen Text`	To indicate text displayed on the spectrum analyzer.
Button	A program item which begins or initiates a program option through a software button.
Choose	To use a keystroke or the mouse to begin a program action.
Click	To press and release the left mouse button.
Cursor	Indicates what you are pointing to. The cursor moves as you move your mouse (or press TAB or an arrow key). The manual uses the term cursor to indicate movement between options in a dialog box. Usually, the cursor will appear as an arrow or an insertion point. Note that while the software is processing, an hourglass will appear in place of the arrow.
Double-click	To click the left mouse button twice in rapid succession.
Drag	To point to an item, press and hold down the left mouse button, then move the mouse. The selected item moves along with the mouse as long as you hold the button down. To release the item, release the left mouse button.
Group	A collection of related options in a dialog box.
Menu	A group of functions which activate program options. In general, menus contain related groups of functions or items.
Option	A setting in a dialog box.
Point	To move the mouse until the mouse pointer (an arrow or an insertion point) rests on the item of choice.
Program action	A function performed by the software.
Select	To mark an item using a keystroke or the mouse. Selecting an item does not initiate a program action. After selecting an item you choose a button which initiates a program action using the selected item. For example, you might select a date and then choose OK to delete that date.

Screen Shots

Where appropriate, pictures of the program screens, such as the one shown below, are displayed to illustrate program actions.

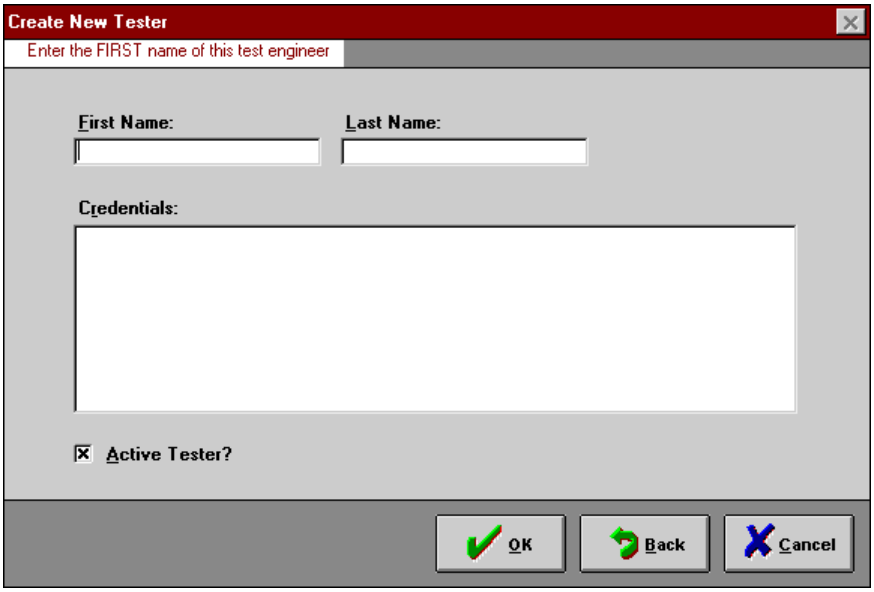

Table of Contents

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Working Within the Software Environment

The HP CaLan 85921B Cable TV Data Management Software is a programming tool to provide easy use of the HP CaLan 8591C and 2010/3010 cable TV analyzers for data management. It is primarily a report presentation aid and a data collection program.

Program Operations

The data management software works in a Windows environment and accepts both mouse and keyboard input. However, it is not recommended to use the software without a mouse.

Basic Keyboard Operations

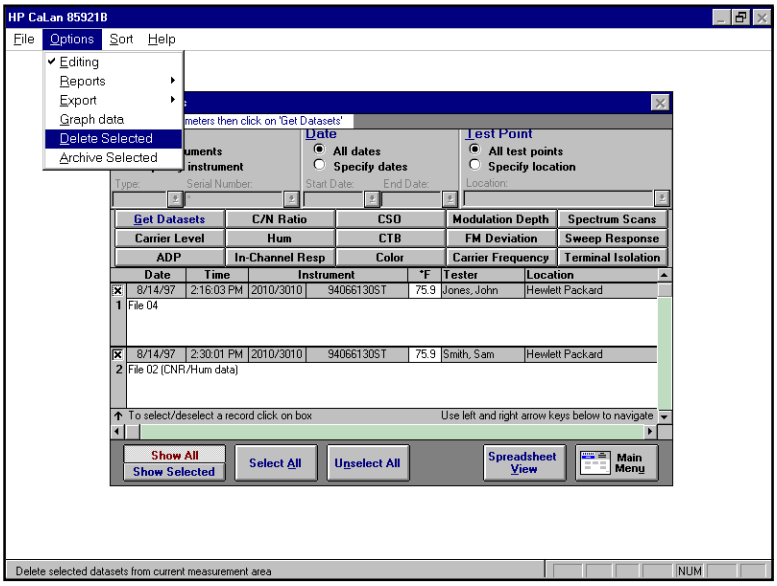
All key names are shown in small capital letters. For example, the Control key is shown as CTRL and the Escape key is shown as ESC. (The keys on your keyboard may not be labeled exactly as they are described in this manual.)

The following table indicates the basic keyboard commands used throughout the data management software.

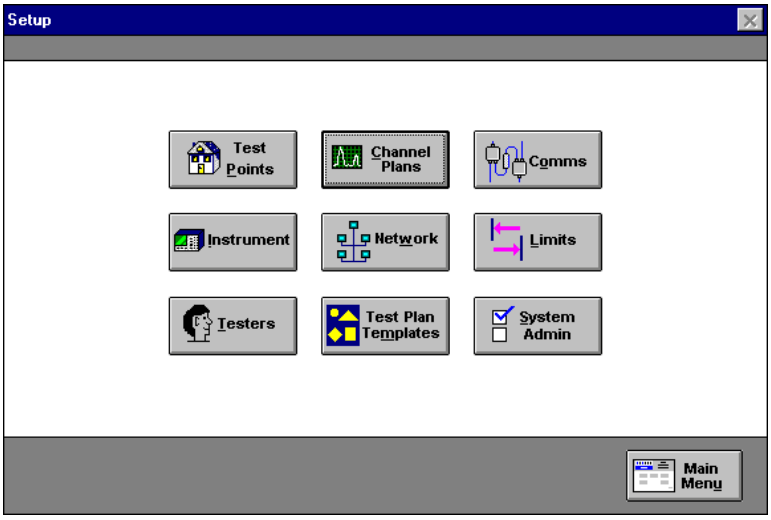
Keystroke	Function
KEY1+KEY2	A plus sign (+) between key names means you must press the keys at the same time. For example, "Press CTRL+C" means that you press CTRL and hold it down while you press C.
KEY1, KEY2	A comma (,) between key names means you must press the keys in sequence. For example, "Press ALT, F10" means that you press the ALT key and release it, and then press the F10 key and release it.
Arrow keys (↑,↓,→,←)	Moves between options in a group. Scrolls list boxes in the appropriate direction.
ESC key	Undoes changes to text in text boxes. In general, this keystroke automatically chooses Cancel.
F2	In text boxes, switches between editing mode (with the insertion point displayed) and navigation mode (the whole text box highlighted).
PAGE UP, PAGE DOWN	In list boxes, moves to the beginning or end of the list. In forms, moves up or down one page, or to the beginning or end of a record. In text boxes, moves up or down one line.
RETURN key and ENTER key	Selects or chooses options or buttons. This keystroke automatically chooses the active control or menu item.
SHIFT+ TAB	Moves backward through a group of options or buttons.
TAB key	Moves forward through a group of options or buttons.
Numeric keypad keys	If your keyboard has a numeric keypad, you can use it to type numbers. You must first press the NUM LOCK key.

Menus

There are often two ways to start program functions. Many actions can be accessed through drop-down menu selections at the top of most windows. Also, most of the same functions can be accessed through the buttons found in most windows.



All of the menu selections on the Main menu lead to submenus that contain further options. For example, selecting **Setup** leads you to a Setup submenu that contains buttons to initiate the setup options.



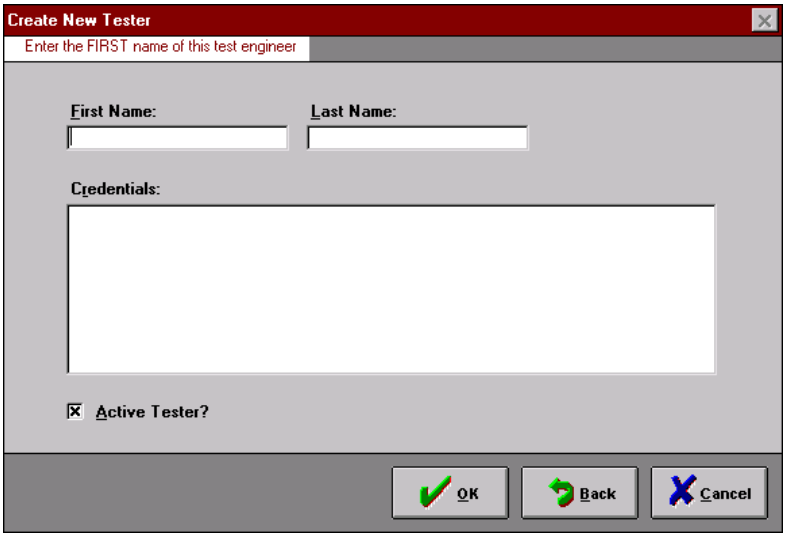
To choose a button from a menu:

Keyboard: User can directly activate a button with a hot-key (underlined letter on button) if available. In the above screen an ALT-W activates the Network button. Also, pressing TAB or SHIFT+TAB will move through the available buttons. When the desired button is highlighted (for example, a box appears around the button icon), choose it by pressing ENTER.

Mouse: Point the cursor at the desired button and click.

Dialog Boxes

The data management software frequently uses dialog boxes to request information before initiating a program action. For example, when you select **Setup** from the main menu, **Testers** from the Setup menu, and then **New** from the Tester Selection dialog box, the data management software opens the Create New Tester dialog box which requests information about a new test technician.



Most dialog boxes contain options, each one asking for different information. After you supply the necessary information, choose a command button to initiate the program action; for example, **OK**.

Moving dialog boxes (mouse users only)

Mouse users have the added capability of being able to move dialog boxes (and windows) around on the desktop. To move a dialog box or window, simply click on the title bar at the top of the dialog box or window, hold the left mouse button down, and "drag" the window to a new location. Release the left mouse button to "drop" the dialog box in its new location.

Moving within dialog boxes

Often you need to "move around" within a dialog box to make several selections or supply several pieces of information. The current option or button will appear highlighted using a bold outline, inverse video, or some other technique to make it stand out from the other options.

To move within a dialog box:

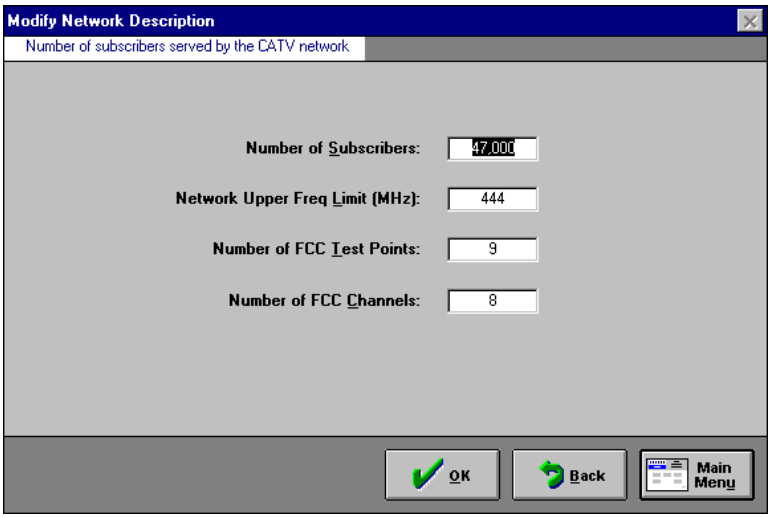
Keyboard: Press TAB, SHIFT+TAB, or F6 to move through the options and groups. Use ↑ and ↓ to move between options in a group. Also, you can directly activate a button with a hot-key (use ALT and the underlined letter on the button or menu) if available.

Mouse: Point the cursor at the desired button and click.

Command Buttons

Command buttons initiate an immediate program action. Selecting **OK** carries out the program action using the information currently entered into the dialog box. Selecting **Back** or **Main Menu** exits the dialog box without carrying out the command. Other command buttons open dialog boxes with additional options or initiate a related program action.

For example, in the Modify Network Description dialog box, **OK** changes the data-range limits to match the settings in the dialog box. **Back** and **Main Menu** close the dialog box without making any changes.



To choose a command button:

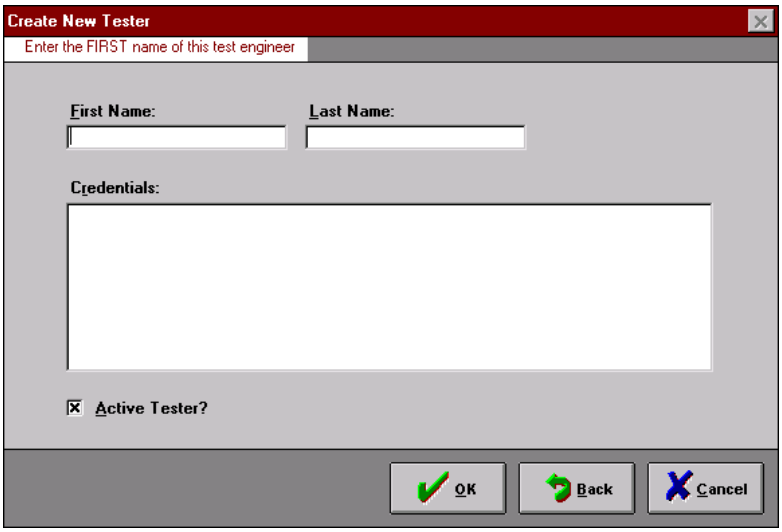
Keyboard: Press TAB or SHIFT+TAB to highlight the desired command button. Choose it by pressing ENTER. Also, you can directly activate a button with a hot-key (use Alt and the underlined letter on the button), if available.

Mouse: Point the cursor at the desired button and click.

Note: In general, pressing ENTER selects the highlighted option or button and pressing ESC selects **Main Menu**.

Text Boxes

A text box is a rectangle into which you type information. In the following example, the First Name, Last Name and Credentials fields are text boxes.



Keyboard: Press TAB or SHIFT+TAB to move through the options. Use ↑ and ↓ to move between options.

Mouse: Point the cursor at the desired text box and click.

To edit the text in a text box:

Keyboard: When a text box is selected, usually all of the text in the box will be highlighted (inverse video). You may press DELETE to erase the highlighted text or simply type the new text which will automatically replace the old text. You can also use BACKSPACE to delete text.

Mouse: When a text box is selected, an insertion point appears where the mouse pointer is clicked. You may click and drag the mouse to highlight (inverse video) all or part of the text to be changed. Then press DELETE to erase the highlighted text or simply type the new text which will automatically replace the old text.

You may not always want to erase all existing text when entering new text into a text box. In some cases you may wish to simply edit the text (for example, if you have misspelled something). The following procedure describes how to edit the text after a text box is selected.

1. Press either ← or → as necessary to position the insertion point to the left of the desired character.

   The highlighting disappears and the insertion point moves one character in the appropriate direction each time you press ← or →.

2. Press BACKSPACE to erase the character prior to the insertion point. Press DELETE to erase the character to the right of the insertion point.

   Pressing BACKSPACE again erases text moving right to left. Pressing DELETE again erases text moving left to right.

Note: If you want to edit the text, make sure all of the text in the text box is not selected (highlighted) or you will delete all the text.

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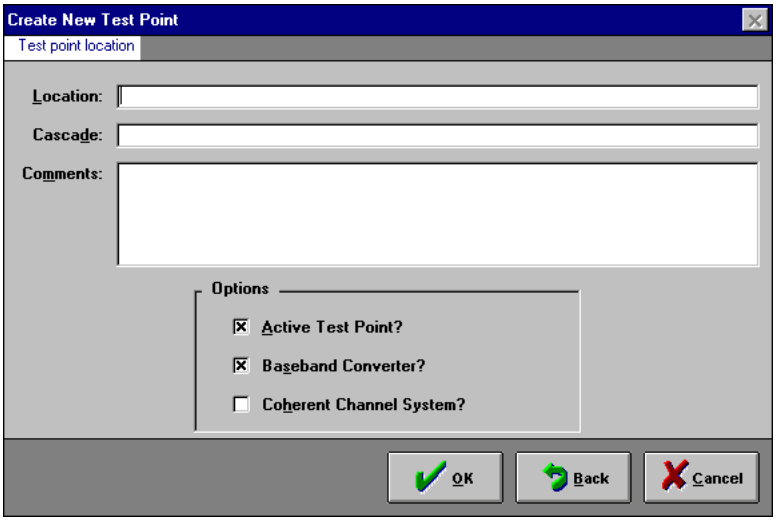
3. When finished erasing text, type the new text in its place.

   If necessary, press ← or → to position the insertion point.

Check Boxes

A check box offers an option which you may turn on or off. In a dialog box with more than one check box, you may turn as many of the check boxes on or off as is appropriate. When a check box is on, an **X** appears in the box. Otherwise the space in the box is empty. For example, in the Create New Test Point dialog box, Active Test Point, Baseband Converter, and Coherent Channel System are options which may be turned on or off.



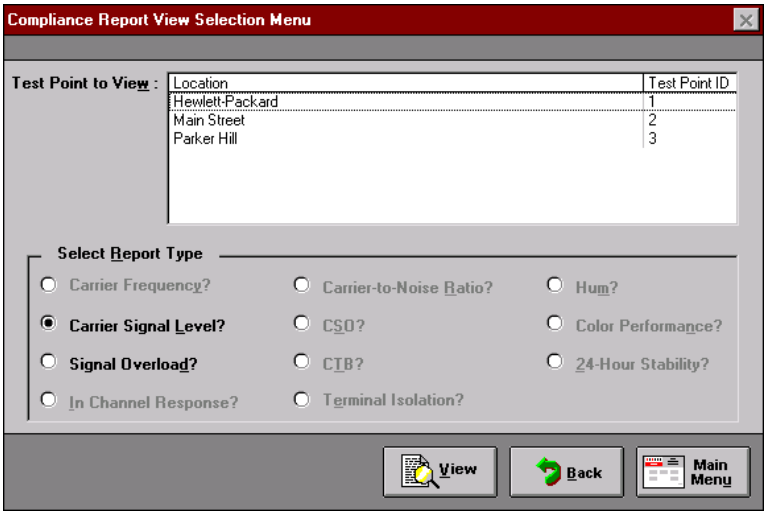
To select or clear check box options:

Keyboard: Press TAB or SHIFT+TAB to move to the check box you want to select or clear. Select or clear it by pressing SPACE BAR.

Mouse: Point the cursor at the desired check box and click the mouse to select or clear it.

Radio Buttons

A radio button offers an option which you may turn on or off. When a radio button is on, a • appears in the circle. Otherwise the space in the circle is empty. For example, in the FCC Report View Selection Menu any one of the reports can be selected. Radio button selections allow one selection only from the group.



To select or clear radio button options:

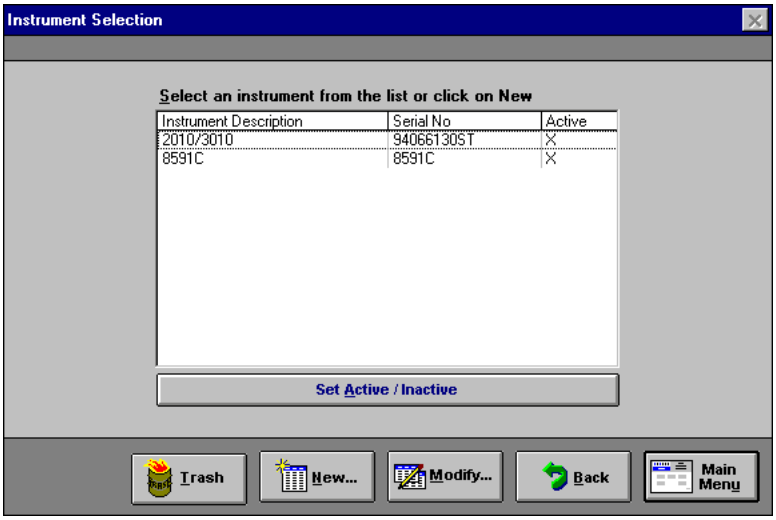
Keyboard: Press TAB or SHIFT+TAB to move to the radio button you want to select or clear. Select or clear it by pressing SPACE BAR.

Mouse: Point the cursor at the desired radio button and click the mouse to select or clear it.

Note: Occasionally items may be "grayed," that means the item is temporarily unavailable.

List Boxes

A list box shows a column of available choices for an option. If there are more choices than can fit in the list box, scroll bars appear to the right of the list. See “Scroll Bars” for more information.



To select an item from a list box:

Keyboard: Press TAB or SHIFT+TAB to move to the list box. Press ↑ or ↓ to select the desired option from the list. When you exit the dialog box, the highlighted option is saved as the selected option.

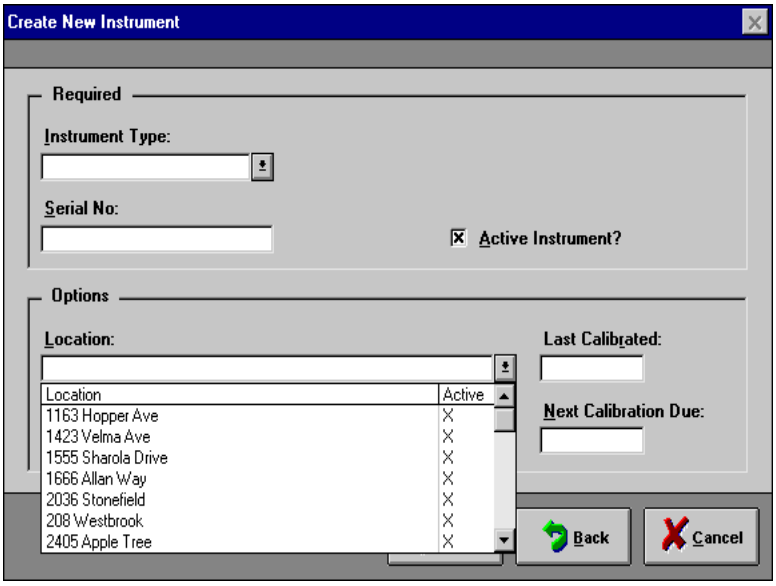
Mouse: Point the cursor at the desired option in the list and click the mouse to select it.

Note: Occasionally items may be “grayed,” that means the item is temporarily unavailable.

Drop-Down List Boxes

A drop-down list box appears initially as a text box with a down arrow in a box to the right. The arrow opens a list box containing the available options for that field. For more instructions on using list boxes, see "List Boxes."

For example, in the Create New Instrument dialog box, Instrument Type, Location, and Tester Name have drop-down list boxes from which you may select an entry. You may also make a text entry into the boxes, however, they must match an entry in the drop-down list. Some drop-down lists will allow a new text entry (an entry not in the list) as well.



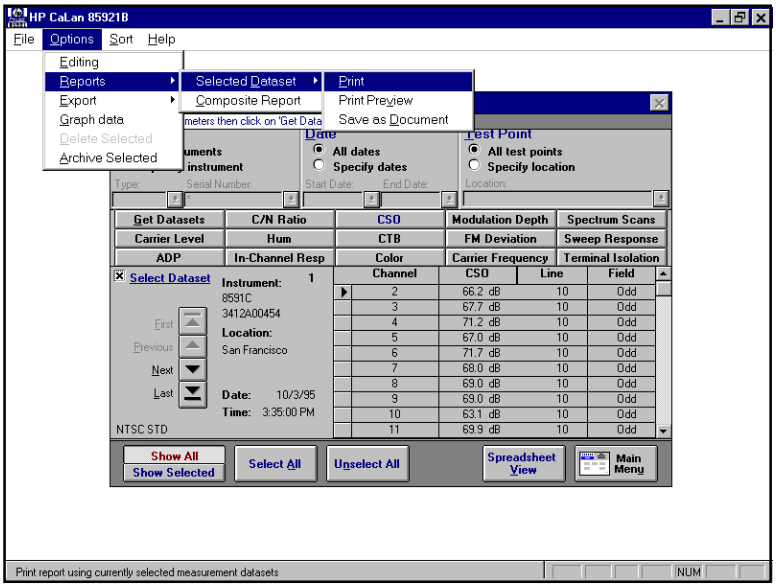
To select an item from a drop-down list box:

Keyboard: Press TAB or SHIFT+TAB to move to the desired drop-down list box. Press F4 to open the drop-down list box. Press ↓ or ↑ to highlight the desired item in the list. Press ENTER to select the item and close the drop-down list box.

Mouse: Point the cursor at the arrow next to the desired option and click the mouse to open the drop-down list box. Point the cursor at the desired entry in the list and double-click on it to select it and close the list box.

Drop-Down Menus

Drop-down menus list commands. Choosing the command carries out the actions.



To select an item from a drop-down menu:

Keyboard:

1. Press ALT or F10 to select (highlight) the menu bar.
2. Press the ← or → key to select the menu you want.
3. Press ENTER to open the selected menu.
4. Press the ↓ or ↑ key to select the menu item you want.
5. Press enter to activate the menu item.

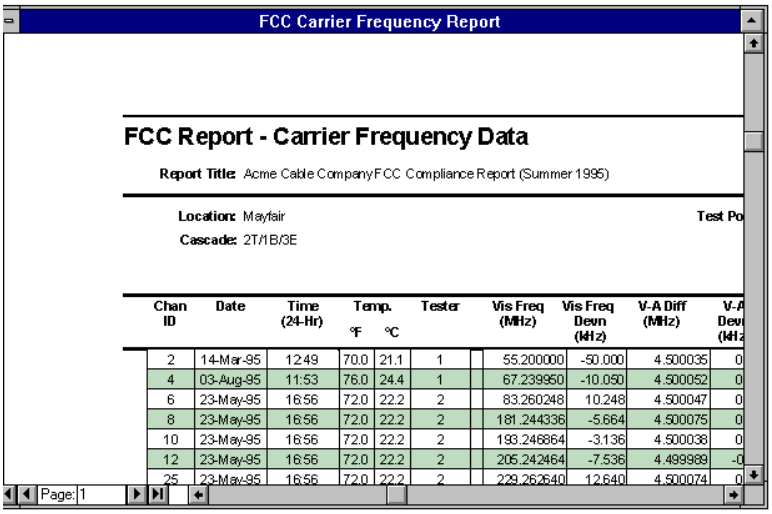
Mouse: Point the cursor to the name of the menu on the menu bar, and click the left mouse button. This opens the menu. Then point the cursor to the name of the submenu and click the left mouse button.

To choose an item from a selected menu:

Click the item, type the letter that is underlined in the item name, or use ↑ or ↓ keys until the item you want to select is highlighted, and then press ENTER.

Scroll Bars

List boxes and windows containing more items or information than may be displayed at one time, have scroll bars which you may use to view options or text “off-screen”.



To scroll through a list box with a scroll bar:

Keyboard: Press the direction key (↑, ↓, ←, or →) displayed on the scroll bar, that points in the direction you wish to scroll. You may press PAGE UP or PAGE DOWN to scroll up or down one window at a time. You may also press CTRL+HOME or CTRL+END to move to the beginning or end of the window.

Mouse:

To scroll one line, click one of the scroll arrows.

To scroll one window, click the scroll bar above or below the scroll box on vertical scroll bars, and to the left or right of the scroll box on horizontal scroll bars.

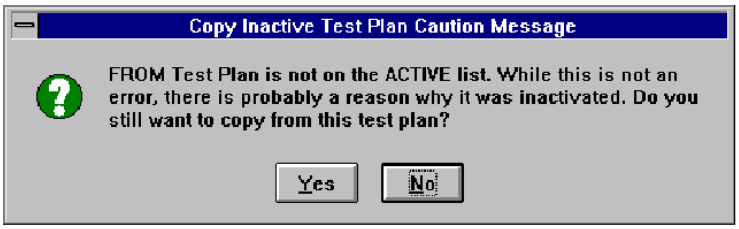
To scroll continuously, point to one of the scroll arrows and hold down the left mouse button.

To scroll to any location, drag the scroll box to the position of choice. The text which appears depends on the placement of the scroll box within the scroll bar. For example, if you drag the scroll box to the middle of the scroll bar, the text which is located halfway through the list or window will appear.

Message Boxes

Message boxes are used to provide you with information or precautionary messages.

For example, when trying to copy an inactive test plan, a message box will appear to verify that the selected test plan is the correct choice. You are also provided with the opportunity to proceed or cancel, in this case **Yes** or **No**.



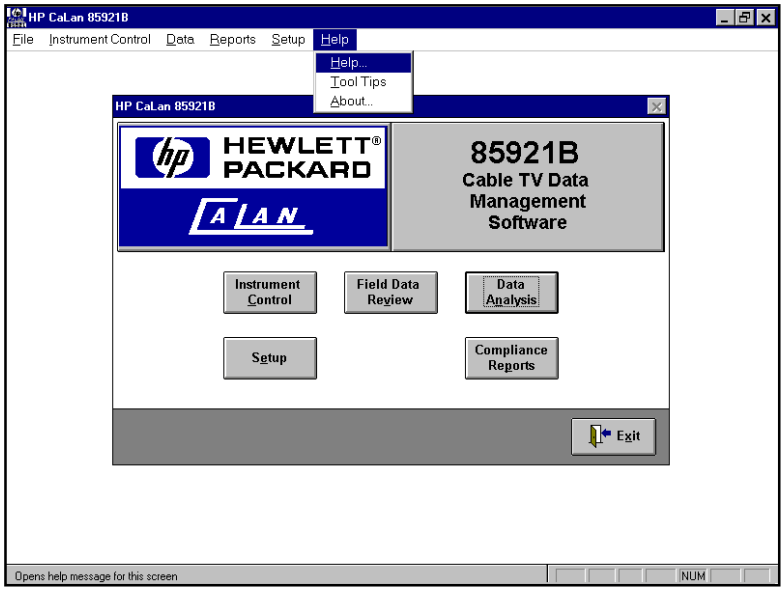
Help

There are two types of help available in the data management software program.

- On-Line Help
- Tool Tips

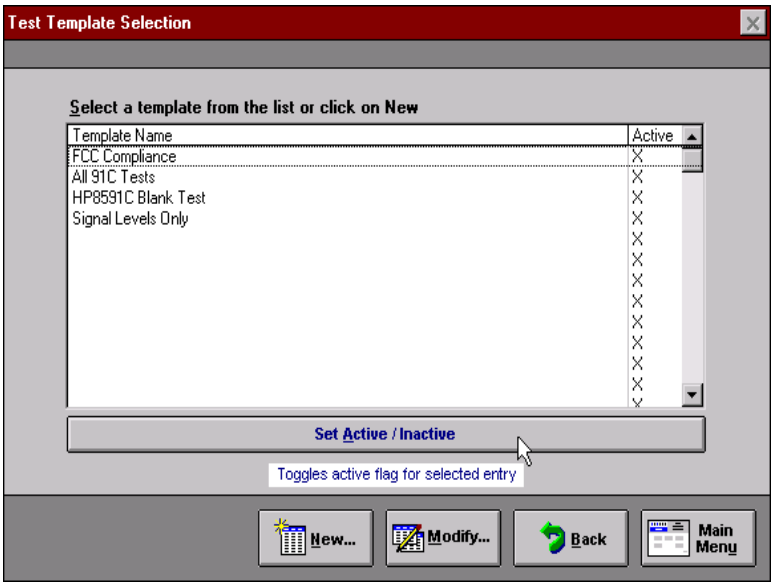
Using On-Line Help

On-line help screens, which explain how to use the menu or dialog box that is currently active on the desktop, are available in most places in the program. To view this content-sensitive on-line help, choose **Help** , then from the drop down menu **Help...** , or press F1 while a dialog box or form is displayed.

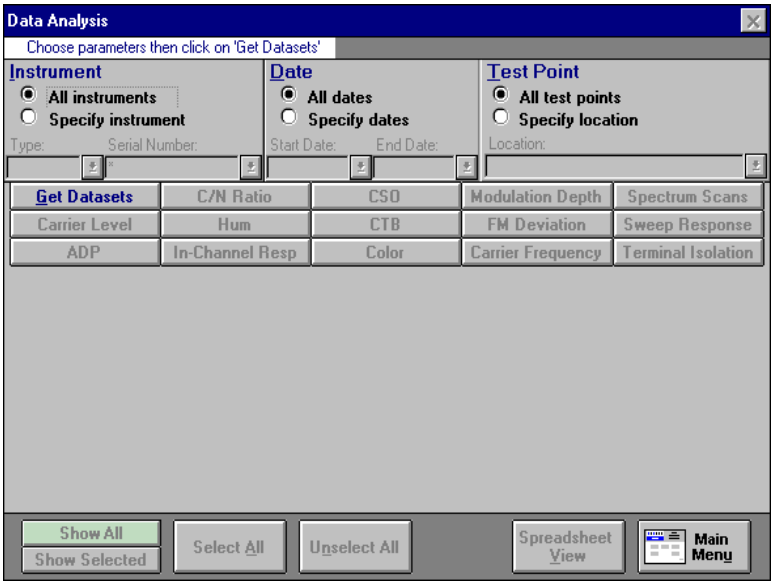


Using Tool Tips

Each button on a menu or dialog box has a one-line description available. Move the cursor to the button or field of interest to display this help description. This one-line help description is called Tool Tips and can be turned on or off for the session. To turn Tool Tips on or off for the session, go to Tool Tips under Help in the main drop-down menu. Also, Tool Tips can be turned on or off in **Setup**, **System Admin** and will remain at this setting after exiting and returning to the program.



Some of the dialog boxes have instructions available which appear in the form header. These instructions provide information for using that dialog box or a particular field.



Form Navigation Keys

You can use the following keys to navigate through the forms within the program.

To navigate between sections of a form

Press:	To:
F6	Cycle forward through the header, detail section, and footer of a form.
SHIFT+F6	Cycle back through the footer, detail section, and header of a form.

To navigate in forms with more than one page

Press:	To:
PAGE DOWN	Move down one page. At end of record, moves to top of next record.
PAGE UP	Move up one page. At top of record, moves to top of previous record.

To go to a specific record

Press:	To:
F5	Move to the record number box; then type the number of the record you want to go to and press Enter.

To switch between modes

Press:	To:
F2	Switch between editing mode (with insertion point displayed) and navigation mode.

To navigate between fields and records (in navigation mode)

Press:	To:
TAB, RIGHT ARROW, or ENTER	Move to the next field.
CTRL+TAB	Exit the subform and move to the next field in the master form; if not in a subform, move to the next field.
SHIFT+TAB	Move to the previous field.
CTRL+SHIFT+TAB	Exit the subform and move to the previous field in the master form; if not in a subform, move to the previous field.
CTRL+SHIFT+HOME	Move to the first field in the master form.
END	Move to the last field in the current record.
CTRL+END	Move to the last field in the last record.
HOME	Move to the first field in the current record.
CTRL+HOME	Move to the first field in the first record.
CTRL+PAGE DOWN	Move to the current field in the next record.
CTRL+PAGE UP	Move to the current field in the previous record.

To navigate in a combo box or list box

Press:	To:
F4 or ALT+DOWN ARROW	Open a combo box or list box.
DOWN ARROW	Move down one line.
PAGE DOWN	Move down one set of values.
UP ARROW	Move up one line.
PAGE UP	Move up one set of values.
TAB	To exit the box.

To navigate in a text box

Press:	To:
DOWN ARROW	Move down one line.
UP ARROW	Move up one line.
END	Move to the end of the current line.
CTRL+END	Move to the end of the last line.
HOME	Move to the beginning of the current line.
CTRL+HOME	Move to the beginning of the first line.

2

Installing the Software

This chapter provides information about installing the HP CaLan 85921B software on your computer.

Before You Begin

Be sure to read about and perform the following steps before you install your software.

1. **Perform an initial inspection.**
2. **Read the license agreement and warranty information.**
3. **Complete the customer registration card.**
4. **Understand standard PC and Windows operations.**
5. **Review the hardware and software requirements.**
6. **Install the security key.**

1. Perform an initial inspection

Inspect the shipping container for damage. If the shipping container or packing material is damaged, keep it until you have verified that the contents are complete.

The following list describes the contents of this package. If the contents are incomplete, notify the nearest Hewlett-Packard office.

- HP CaLan 85921B Cable TV Data Management Software User's Guide
- CABLE TELEVISION
  Proof of Performance
  By Jeffrey L. Thomas
  ISBN 0-13-30682-8 (30638-1) *
- Cables (C2932A and 24542U) *
- Cable Instruction Card *
- Training Video
- Customer Registration Card
- Program Disks
- Security Key (See caution below) *
- Software Warranty and License Agreement

* Not included in the HP CaLan 85921A to HP CaLan 85921B upgrade kit. See grayed section on page 2-4 for details on cables.

CAUTION! The security key is required to operate this software. This key is not available separately. The purchase of a complete cable TV data management software package is required if this key is lost or damaged, except as provided by the warranty.

Note: If you ordered the upgrade from HP CaLan 85921**A** to HP CaLan 85921**B,** use your original security key.

If the shipping container is damaged or the packing material shows signs of stress, notify the carrier. Keep the shipping materials for the carrier's inspection. The HP sales and service office will arrange for replacement without waiting for a claim settlement.

2. Read the license agreement and warranty information

The license agreement is located in the booklet *Hewlett-Packard Software Warranty and License Agreement*. You automatically consent to this agreement when you install the software. If for any reason you find this agreement unacceptable, please contact Hewlett-Packard for a full refund *before* you install the software.

3. Complete the customer registration card

Please complete the customer registration card included with the software. Mail the card immediately. Keep the top portion for your records. Registration entitles you to technical support and ensures that you receive information about software updates and enhancements.

4. Understand standard PC and Windows operations

This manual explains how to use the software product. It is assumed that you are familiar with the basic operation of your computer. If the computer is new to you or you are unfamiliar with such terms as “control-menu box” and “double-clicking,” or “basic file handling and printing procedures,” please read the owner’s manual for your computer and your *Microsoft Windows User’s Guide* before using this software.

Chapter 1 of this manual describes the basic operations most commonly used with this software.

5. Review the hardware and software requirements

Please note that the software disks do not contain MS-DOS or MS-Windows software; they are not bootable disks. To operate the software, you need the following:

- A personal computer (PC) running Windows NT or Windows 95 using an 80486 DX (66 MHz) or better processor.
- 16 MB (24 MB recommended) or more of memory (RAM).
- One floppy drive that reads 3.5" high-density (1.44 MB) diskettes.
- Hard disk with 30 MB or more of available space, 50 MB is recommended. Actual amount of hard disk space used by the program depends on the amount of data collected.
- Cable (select the one appropriate for your analyzer and computer serial-port type). Refer to the following table for the correct HP part number:

Computer	Instrument	Interface	HP Cable number
9 pin	3010	25 pin	24542M
9 pin	2010B/3010B/R/H	9 pin	C2932A ‡
9 pin	8591C	25 pin	24542G
9 pin	8591C*	9 pin	24542U
25 pin	3010	25 pin	13242M
25 pin	2010B/3010B/R/H	9 pin	24542M
25 pin	8591C	25 pin	13242G
25 pin	8591C*	9 pin	24542G

Grayed selections are cables included with non-upgrade purchase.

* Serial number prefixes 3523A and 3525U and above.

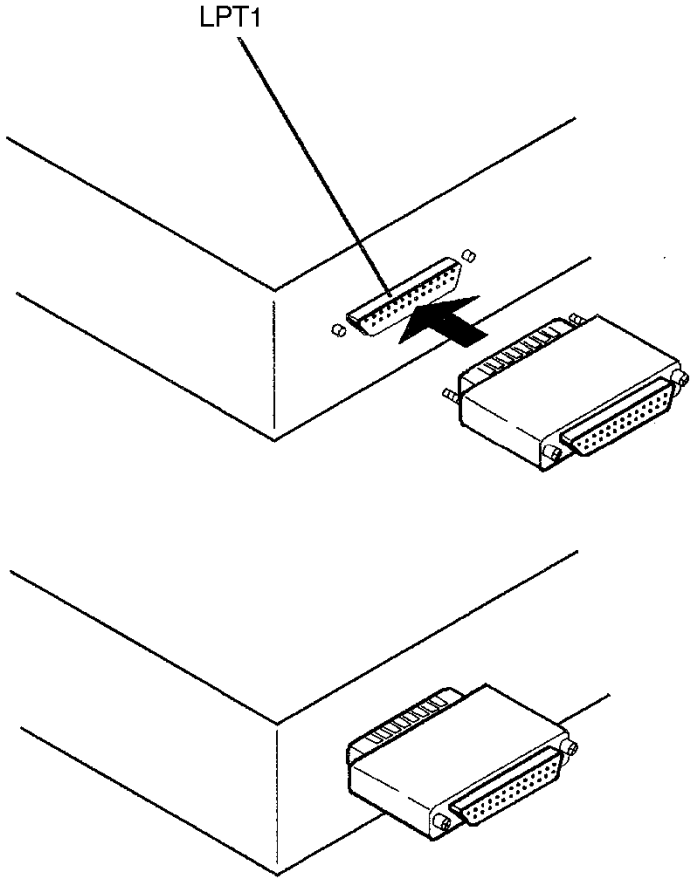
‡ Also known as HP part number 8120-6188.

- SVGA monitor (480 x 600 resolution) or better.
- HP CaLan 8591C cable TV analyzer or
  HP 8590 E- and L-Series analyzer, with the cable TV measurements downloadable program (DLP) installed (version A.01.04 or later) is required. Refer to "Verifying DLP Versions" later in this chapter to determine which DLP is installed in your analyzer.
  or
  HP CaLan 3010 version 1.5.2 or later or HP CaLan 2010B, 3010B/H/R version 3.12 or later.
- Any Windows supported printer, plus the appropriate printer driver software.

Note: The software will also install 11 megabytes of files to your Windows directory. If the Windows directory is on a different drive, you will also need 11 megabytes of disk space on that drive.

6. Install the security key

A security key is included with your software package. The proper operation of this software requires the installation of this security key on parallel port 1 (LPT1) of your computer. Before installing the software you must install the security key. Refer to the following illustration for proper security key installation.



pg21a

Note: After the security key is installed, if you had a printer connected to LPT1, reconnect your printer to the other end of the security key.

CAUTION! It is possible to install the security key on a 25-pin RS-232 serial port, but the key will not operate on that port, and damage to the key or your computer could result. Be sure that the key is installed on the *parallel port* of your computer.

Verifying DLP Versions

HP CaLan 8591C

The HP CaLan 85921B Cable TV Data Management Software requires the HP CaLan 8591C cable TV analyzer to have version A.01.04 or later of the DLP installed. Perform the following procedure to verify which DLP version is installed in your analyzer.

1. On the HP CaLan 8591C cable TV analyzer press MODE, CABLE TV ANALYZER, then CHANNEL MEAS. Information about the DLP will be displayed in the lower part of the display.
2. Verify that the DLP version is A.01.04 or later.
   - If the DLP version installed in your analyzer *is* A.01.04 or later, continue with the software installation.
   - If the version installed in your analyzer is *not* A.01.04 or later, immediately call us at 1-800-452-4844 or contact your nearest HP sales and service center for a DLP upgrade. Refer to chapter 12 for more information about contacting the Hewlett-Packard Company.

HP CaLan 2010/3010

The HP CaLan 85921B Cable TV Data Management software requires the HP CaLan 3010A cable TV analyzer to have version 1.5.2 or later. Communications with the instrument are much faster with versions higher than 1.5.2 installed. The 2010B/3010B/H/R series should have version 3.0 or later installed. To verify the version, turn the instrument on. After the calibration cycle completes, the version will be displayed.

Installing the Program

The software diskettes contain a setup utility that installs the HP CaLan 85921B Cable TV Data Management Software program. Installation will take approximately 10 minutes.

1. Start your computer and run Windows.

Note: If you want to convert a previous version of your data to the new HP CaLan 85921B software, the installation software will first look for a copy of the data module. If one is not found, the software will look for a version 1.0, and then an A version of the software. If desired the installation program will then convert the 85921 version A or 85921B version 1 data module for you. For more information see "Previous Version Found" page 2-9.

CAUTION: If you want to keep any old data contained in a data module, **DO NOT** reinstall over your old data module file without making a copy first.

2. Make sure there are no programs or TSRs running in background.
3. Insert **Disk 1** into the floppy drive.
4. **Windows 95 and NT 4.0 users**: Click on **Start**, **Settings** and **Control Panel**. Click on the **Add/Remove Programs** icon. Then click on the **Install** button and follow the instructions.

Note: Some laptops with external disk drives will take longer to install.

The HP CaLan 85921B installation screen will be displayed.

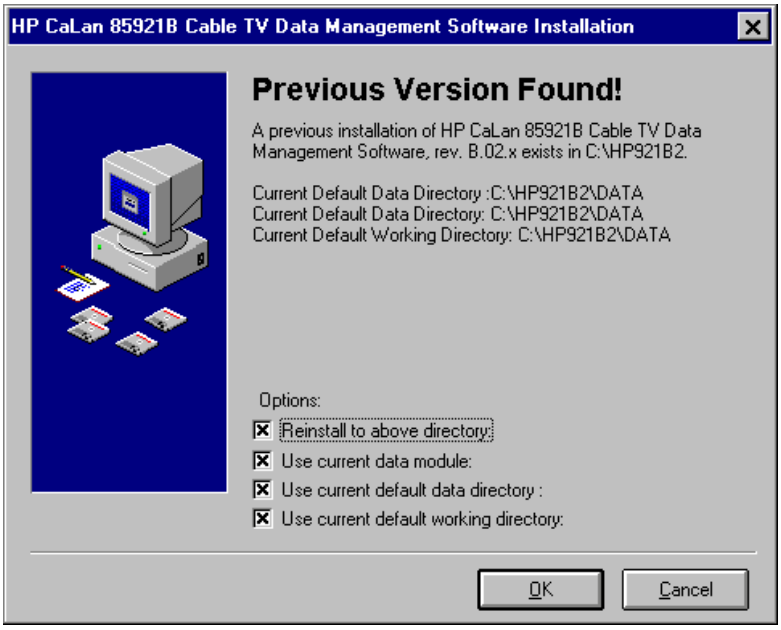
5. To proceed with the installation, click on the **OK** button. To stop the installation, click on **Cancel**.

The software will now begin the installation process. It will look for previous versions of the data module and offer to merge them into the new data module. The install software will first search for a version B2 data module to convert. If you are reinstalling and have a previous version of the B2 software data module on your hard drive, go to the section “Previous Version Found” page 2-9.

If a previous version is not found, the software will search for a B1 version and then an older HP CaLan 85921A data module. If you have an older data module or you are installing for the first time, go to “Previous Version Found” page 2-9.

Previous Version Found

If you have a copy of the HP CaLan 85921B software already installed, the installation program will notify you with the following dialog box.



The HP CaLan 85921B software will give you installation options. You can choose whether or not to install the software to the previous directory for the data module, data directory, or working directory. You also have the option to use the current version data module or use a new, blank data module. Deselecting any of the directory options will cause the software to prompt you for a new directory selection.

Note: If the previous data module is not in the chosen working directory it will be copied into the new working directory.

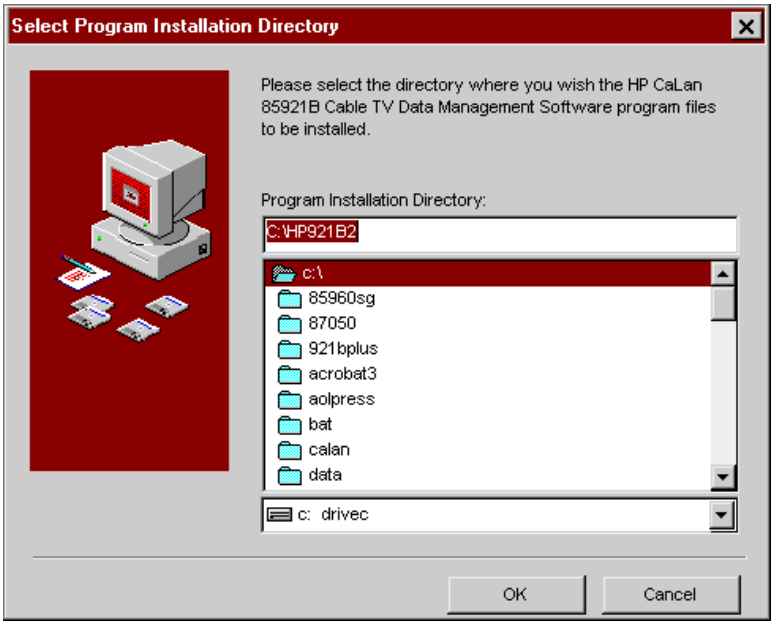
Note: Choosing to not "Use current data module" will overwrite the old data. To prevent data loss, the install program will create a backup file of your old data (B2_DATA.BAK) in order to help secure your data.

If you choose to install to the default directory, go to "Installing the Software" page 2-14.

If you choose to deselect any of the options, you will be presented with one or all of the choices on pages 2-10 to 2-14.

Selecting Installation Directories

If a previous version of the software is not found on your hard drive or you choose not to use a previous directory, the following dialog box will be displayed.

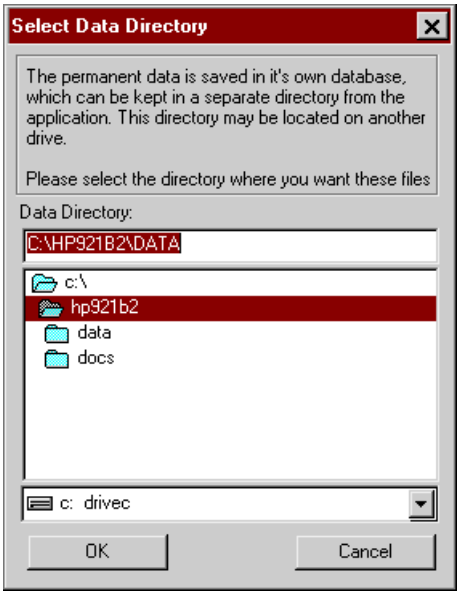


Verify that the default destination directory (C:\HP921B2) is the directory you want to use for the installation.

We recommend that you use the default directory name and location. By using the default directory now, you will not have to remember where to install future versions of the software.

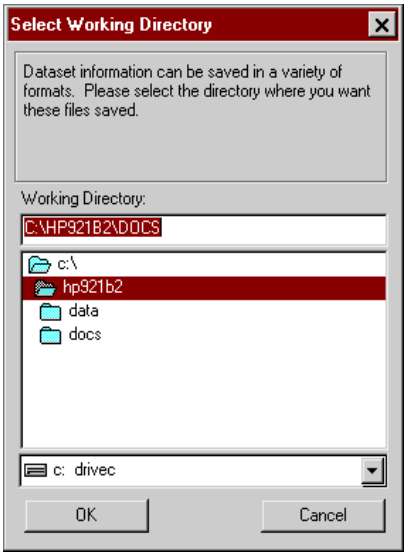
If the default is acceptable, click **OK**. If you want to change the destination directory, use the Windows interface to select the new destination directory, and click **OK**. Click on **Cancel** to quit the installation.

Next the dialog box to choose a directory for storing data module files will be displayed.



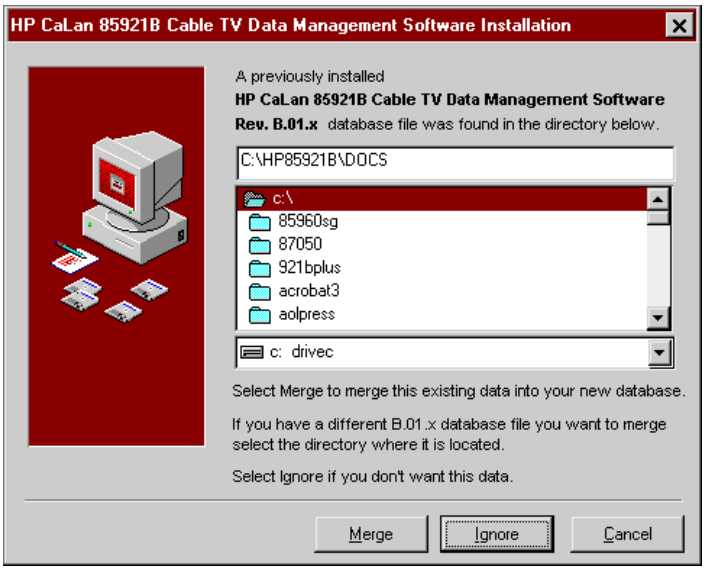
If the default is acceptable, click **OK**. If you want to change the data directory, use the Windows interface to select the new data directory, and click **OK**. Click on **Cancel** to quit the installation.

When the next dialog box appears, verify that the default destination directory (C:\HP921B2\DOCS) is the directory where you want to save dataset documents, spreadsheets and so forth.



If the default is acceptable, click **OK**. If you want to change the dataset directory, use the Windows interface to select the new dataset directory, and click **OK**. Click on **Cancel** to quit the installation.

Selecting **OK** will cause the following dialog box to be displayed.



The installation software will search for earlier versions of the data modules on the hard drive. If an earlier version is found, you will be given the opportunity to merge with the new version you are installing.

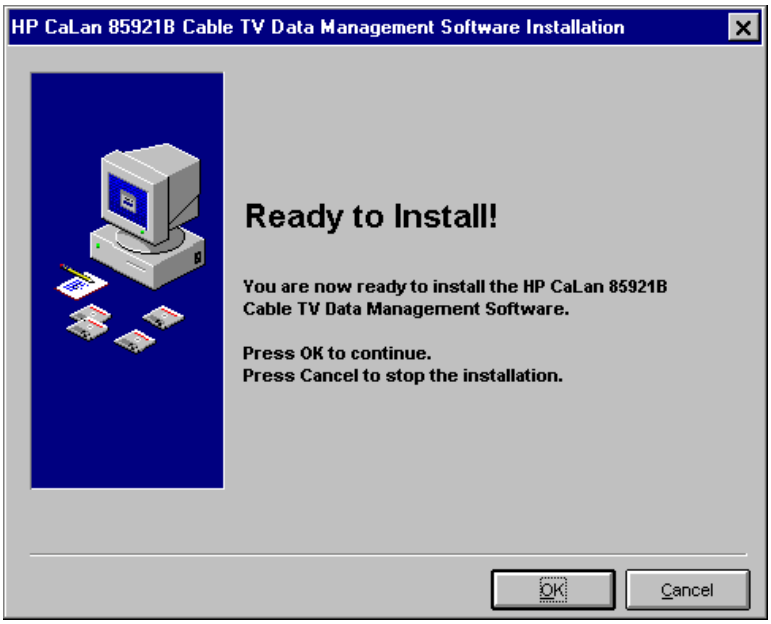
If the installation software has found the earlier version of the data module you want to merge with, click **Merge**. If you want to choose a different data module use the interface to select the data module, then click **Merge**.

Clicking on **Ignore** will skip the merge process and install the software with the default, empty data module.

Click on **Cancel** to abort the installation.

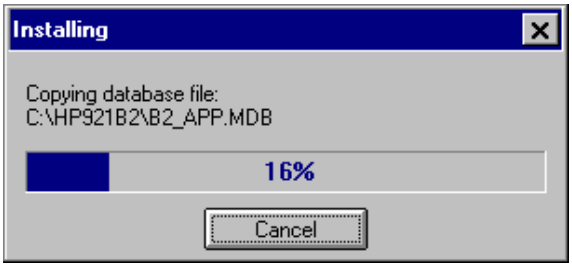
Installing the Software

After your selection, the Ready to Install dialog box is displayed.



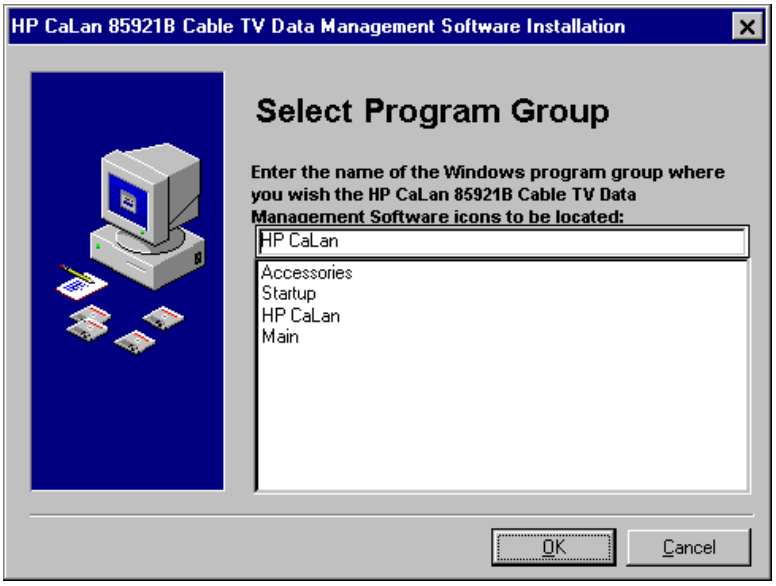
Click on **OK** to proceed with the installation.

Selecting **OK** displays the Installing progress box.



As the installation proceeds, you will be prompted to insert the remaining disks. Follow the instructions that appear on the screen.

After installing the files the Select Program Group dialog box is displayed.



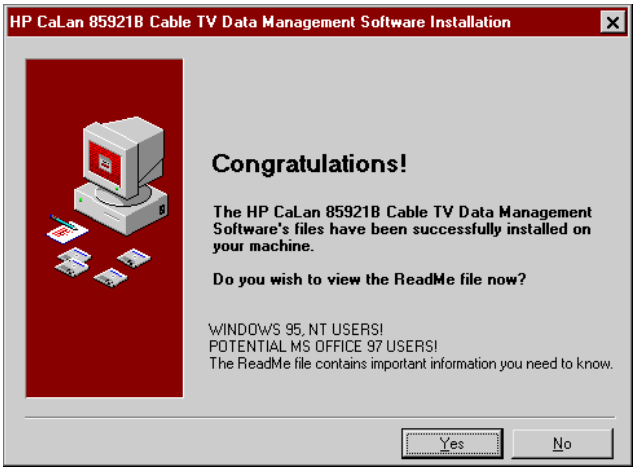
The program icons will be installed into the selected program group. The program icons are used to start the HP CaLan 85921B software as well as the other software programs that are installed with the HP CaLan 85921B software.

Select which program group you want the program icons installed into and click **OK**.

We recommend that you use the default program group. By using the default program group now, you will not have to remember where to install future versions of the software and avoid duplication of program groups.

Note: If earlier in the installation process, a previous version was found and you chose to install the data from the previous version, you will be given merge options. Follow the instruction in chapter 9 for merging data modules.

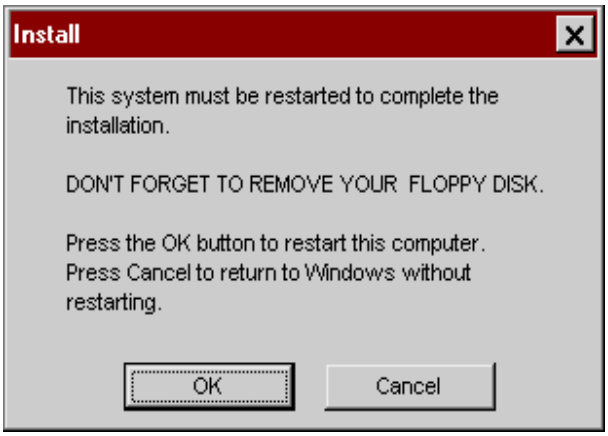
After the selection of the program group, the merging of any data, and the installation of the software is complete, the following dialog box is displayed.



If you would like to read the latest information on the software, click on **Yes**. The software will display the readme.txt file.

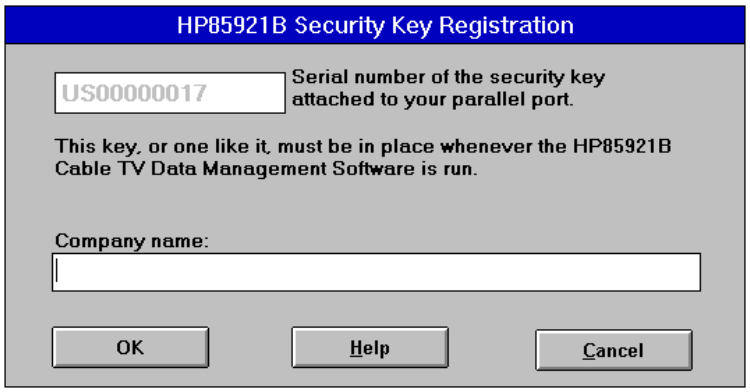
Click on **No** to proceed with the installation.

The following dialog box will be displayed.



In order for the software to run, the computer must be rebooted. You can choose to restart the computer by clicking on **OK**. Clicking on **Cancel** will return you to Windows. You can then reboot the computer at another time to complete the security key registration.

After the computer is rebooted, the software will display the HP 85921B Security Key Registration box.

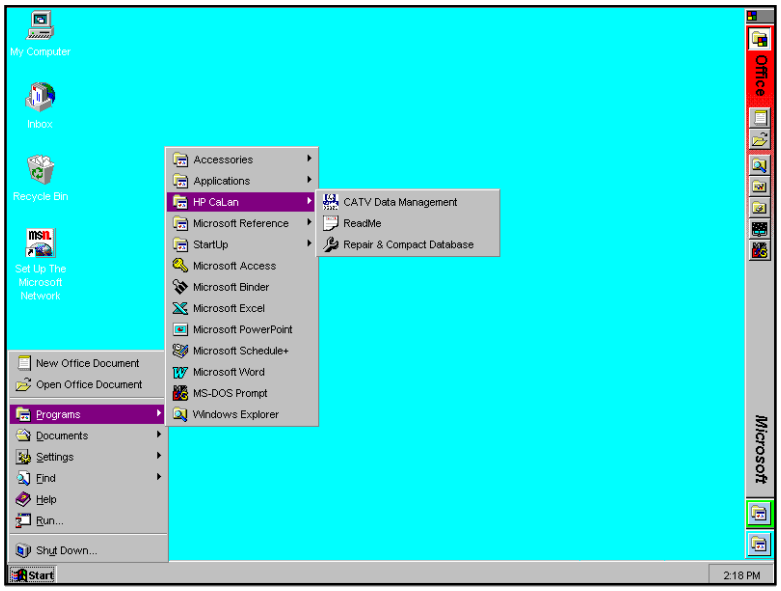


Enter your company name and select **OK**. If the security key registration fails, click on the **Help** button.

The software setup is now complete. To run the software, click on the CATV Data Management icon in the program group in which the icons were installed. Read the following section, “Program Group,” for more information.

Program Group

The HP CaLan group is accessed through the Start button on the desktop. Click on Programs, HP CaLan to display the list of installed HP CaLan items.



CATV Data Management allows you to start the cable TV data management program. The software proceeds to the HP CaLan 85921B main menu.

Read Me includes information about this software and updates not included in this manual.

Repair & Compact Database allows you to repair and compact the cable TV data management software program file and database files. It is recommended to repair and compact files periodically to prevent problems with your database.

Note: Other items may exist which are installed by this or other HP CaLan products.

3

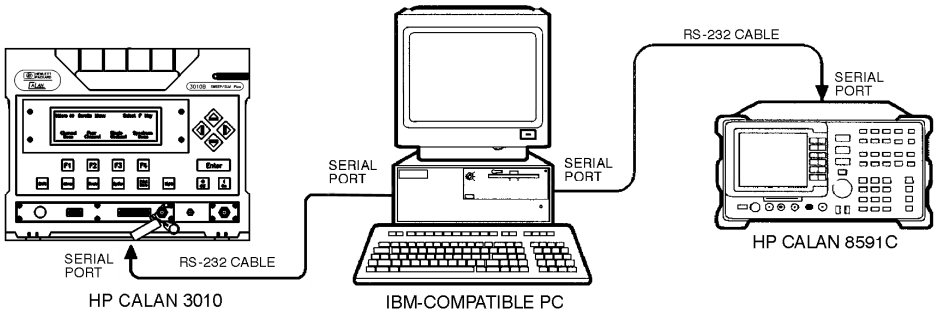
Getting Started and Setting Up the Network

This chapter describes how to get started using the data management software. In this chapter, you will learn how to do the following:

- Set up the equipment.
- Start the software.
- Define the cable system network.
- Set up communication ports.
- Set up system settings.
- Use the limits setup function.

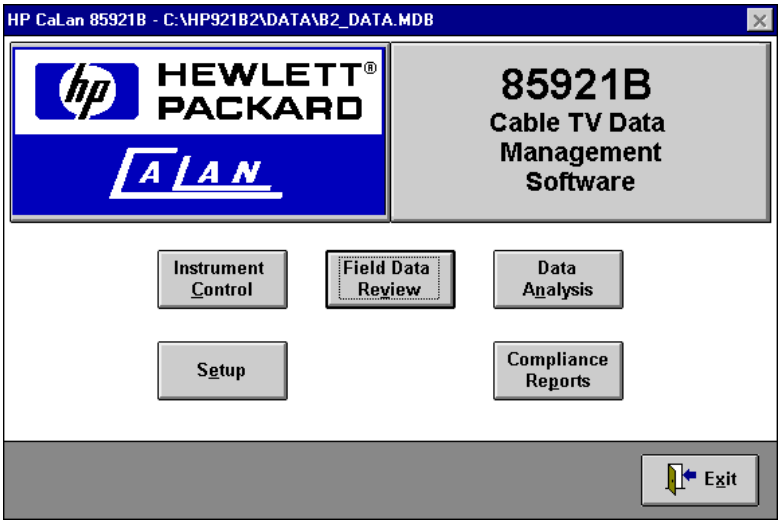
Setting Up the Equipment

You need to set up the equipment properly in order for the software to communicate with your analyzer. Connect the computer to the cable TV analyzer(s) as illustrated below.



Starting the Cable TV Data Management Software

Choose Start, Programs, the HP CaLan group and CATV Data Management selection. The main menu will appear on screen.



HP CaLan 85921B Main Functions

The Cable TV Data Management software functions are described briefly below. They will be described in more detail in later chapters.

Note: If this is the first time the software is run, you *must* perform the setup functions first. It is recommended that the functions are performed in the order described below.

1. **Setting up the network.**

   The **Setup** function allows you to access the setup functions for the network, which are described later in this chapter.

2. **Send a test plan to or get data from an instrument.**

   The **Instrument Control** function allows you to send test plans channel plans, sweep tables, and history file labels to or from an instrument. Refer to Chapter 6 for more detailed information about getting and sending plans and information to your instruments.

3. **Review your data.**

   The **Field Data Review** function allows you to review data in the test data module prior to insertion into the permanent data module. Refer to Chapter 7 for more information about data review.

4. **Analyze your data.**

   The **Data Analysis** function allows you to view the data in a graphical form, print reports and export data. It also provides filters to more selectively view the data. Refer to Chapter 8 for more information about data analysis.

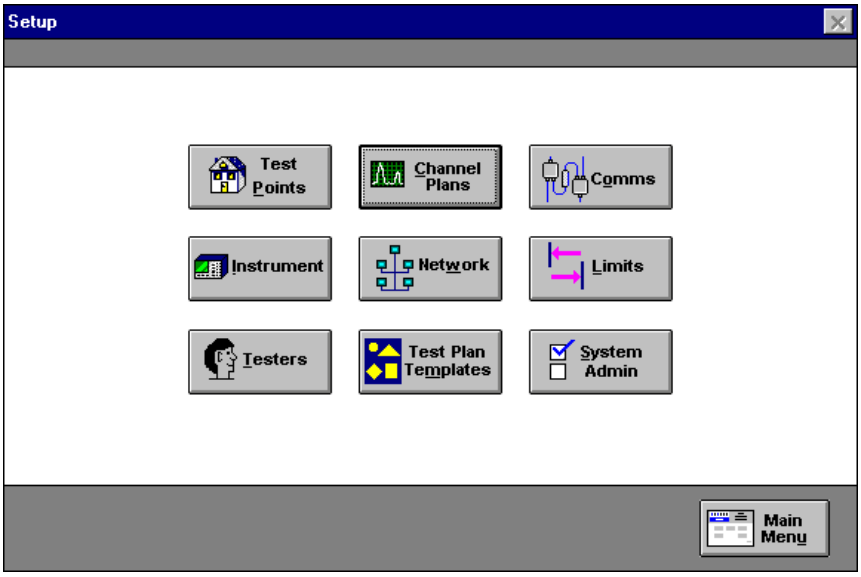
5. **Generating compliance reports.**

   The **Compliance Reports** function allows you to select data for report generation. Chapter 10 describes more detailed information about generating reports. This menu selection may be grayed and is not be available on software without the report options installed.

Setting up the Cable System Network

The **Setup** button on the main menu opens the Setup Menu from which you may choose buttons to set up any of the following:

Test Points	allows you to set up a new, or modify an existing test location.
Instrument	allows you to specify a new, or modify data on an existing test instrument supported by the software.
Testers	allows you to create and activate a new, or modify an existing tester. A tester is the person who will perform the tests.
Channel Plans	allows you to select, create and modify channel plans. See Chapter 4 for more information on channel plans.
Network	allows you to identify the number of subscribers, FCC test points and channels, and the network upper frequency limit. The FCC requirements use this data to specify a minimum number of test points and channels for reporting purposes. The program will use these values if you do not meet these specifications.
Test Plan Templates	allows the creation and modification of test plan templates for the HP CaLan 8591C analyzer.
Comms	allows the setting of the communication (comm) port for communication to and from analyzers.
Limits	allows you to modify the FCC specification constants and the valid data ranges.
System Admin	allows the system administrator to control editing of data and to toggle Tool Tips on and off.



To define the cable system for the first time

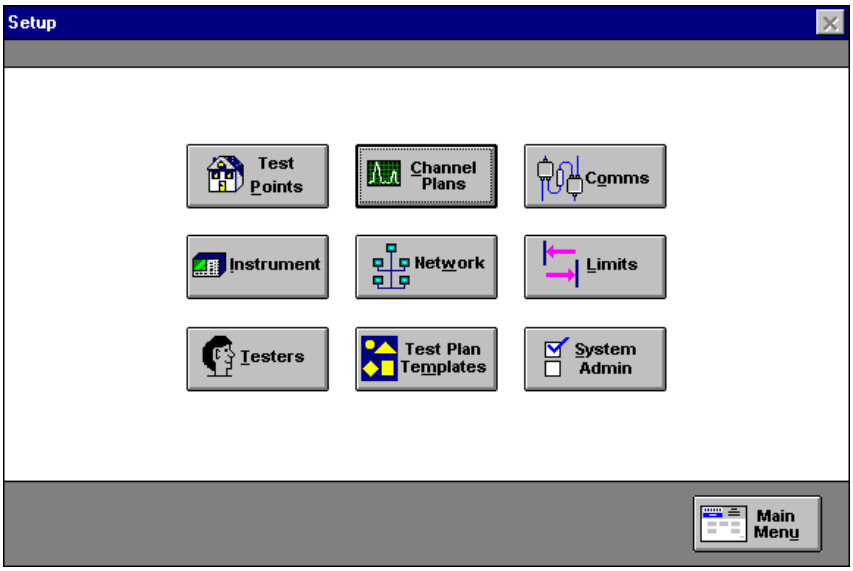
If this is the first time you are running the data management software you *must* perform the following steps.

1. **Set up the network description.**
2. **Set up testers.**
3. **Set up test points.**
4. **Set up instruments.**
5. **Set up test plan templates.**
6. **Set up system administration.**
7. **Set up communication ports.**
8. **Set up limits function.**

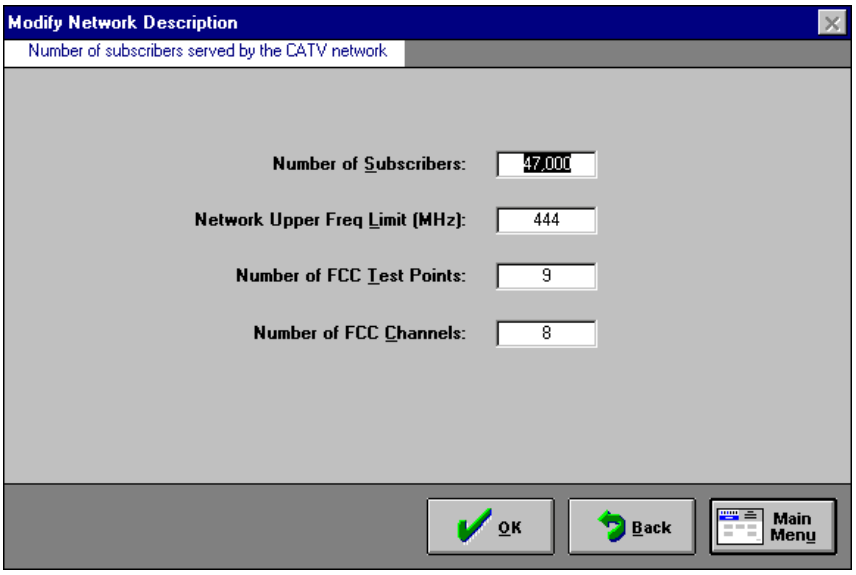
The procedures for these steps are on the following pages.

1. Set up the network description

Set up a network description by performing the following steps.



1. Select **Network** from the Setup menu to open the Modify Network Description dialog box.



2. Type the *number of subscribers* served by the cable TV network in the Number of Subscribers text field. Note this field cannot contain 0 (zero) or be left blank.
3. Type the *upper frequency limit* (MHz) of the cable TV network in the Network Upper Freq Limit (MHz) text field. Note this field cannot contain 0 (zero) or be left blank.

4. Type the *number of FCC test points* of the cable TV network in the Number of FCC Test Points text field. Note this field cannot contain 0 (zero) or be left blank.
5. Type the *number of FCC channels* of the cable TV network in the Number of FCC Channels text field. Note this field cannot contain 0 (zero) or be left blank.

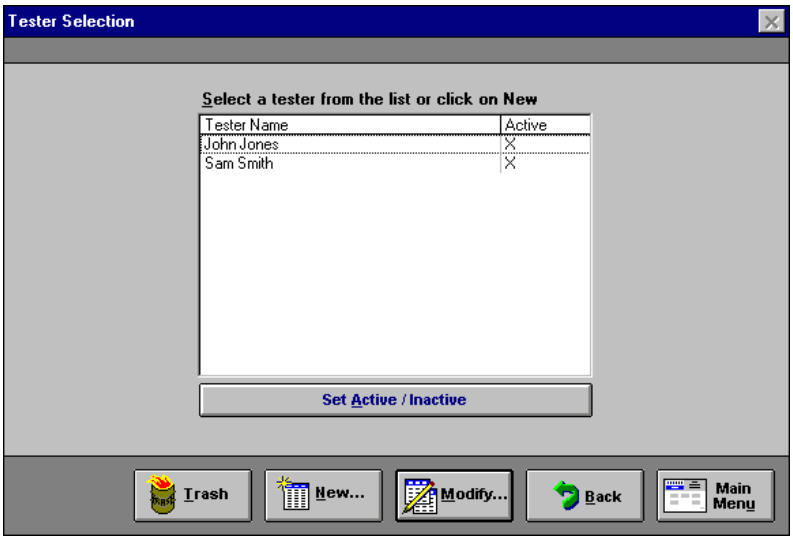
Note: If the number entered for the FCC Test Points or FCC Channels is less than or greater than the FCC regulations, the software will warn you. The software has the ability to re-calculate the numbers required by the FCC regulations. Select **Yes** if you wish the software to re-calculate, or select **No** if you wish to continue with the numbers entered.
The software calculates the number of FCC test points in accordance with the formula stipulated by the FCC in Part 76, paragraph 601 of the *FCC Technical Standards for CATV Systems*.

6. Click **OK**.

2. Set up testers

Set up testers by performing the following steps.

1. Select **Testers** from the Setup menu.

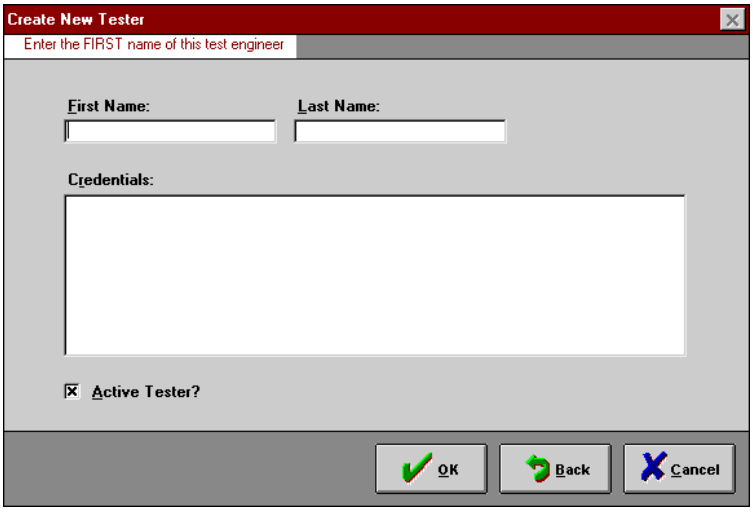


2. Select **New** from the Tester Selection menu if you are setting up or adding new testers.

   If you want to modify an existing tester, select the tester entry to be modified. There are two ways you can select a tester.

   - Double-click on the desired tester name.
   - Highlight a name with a single click, then select **Modify**.

Note: An "X" in the Active Tester column indicates the tester is an active user. If you wish to change the tester's availability, first select the tester and then click the **Set Active/Inactive** button to change the status.



3. Type the *tester's name* in the First Name, and Last Name text fields. Note that both the first and last names are required and the combination must be unique. Leading and trailing spaces are ignored.

Note: Some characters (**{ }] [\ | _ ~ ‘ ^,**) will not be accepted into the fields and will result in an error message.

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4. ***Optional:*** Type in the qualifications or other pertinent information about the individual tester in the Credentials text box. This information will be reproduced in the Tester List report.

Note: Pressing ENTER will move the cursor out of the Credentials: field and into the Active Tester? field. Use CNTRL+ENTER to create a carriage return within the Credentials: field.

---

5. An "X" in the Active Tester check box indicates the tester is an active user. Note that an active tester is the default.

   If you wish the tester to be inactive until a later date, click the Active Tester check box to clear the box.

Note: Inactive testers cannot be applied to the test data when saving test data to the data module.

---

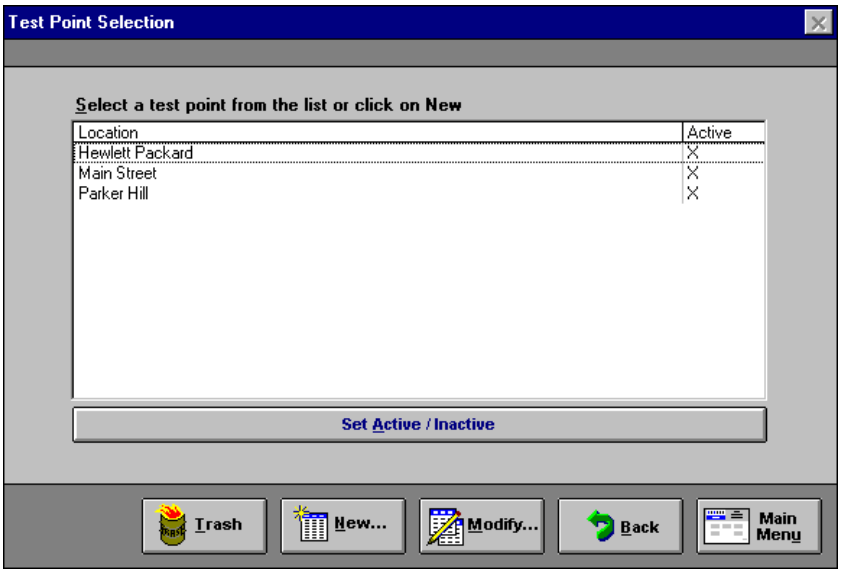
6. Click **OK**.
7. Repeat this procedure to add more testers.

If you want to delete a tester, make sure that the tester is not used in a dataset, select the tester and then click on the **Trash** button. If the tester is not used in a dataset, the tester will be deleted.

3. Set up test points

Set up new test point locations by performing the following steps.

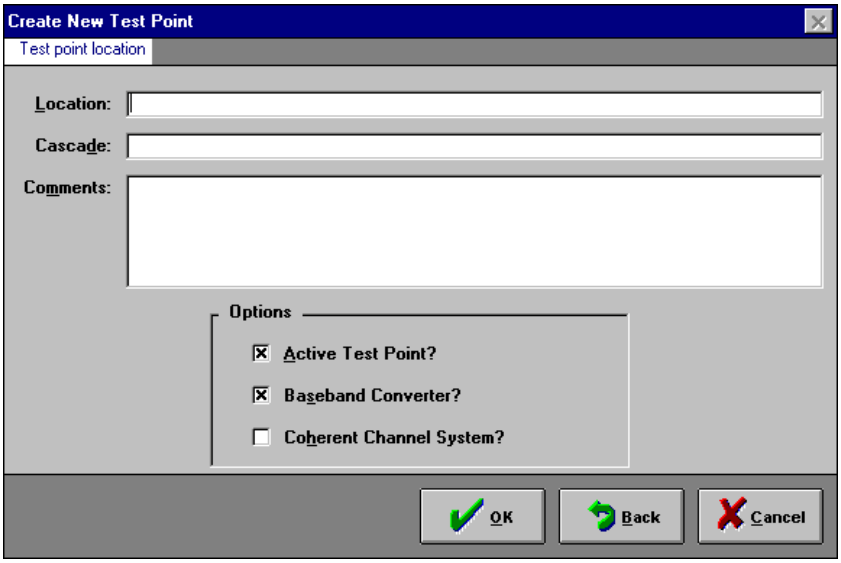
1. Select **Test Points** from the Setup menu.



2. Select **New** from the Test Points Selection menu if you are setting up or adding new test points.

   If you want to modify a test point, select the test point entry to be modified. There are two ways you can select a test point.

   - Double-click on the desired test point name.
   - Highlight a test point with a single click, then select **Modify**.



3. Type the *location* in the Location text box. Note that the Location text box cannot be empty, a location name is required, and must be unique. Leading and trailing spaces are ignored. Location names can be used to identify amplifiers, conditions or address, to give a few examples.

4. ***Optional:*** Type in the test-point *cascade description* in the Cascade: text box.

Note: Some characters (**{ }] [\ | _ ~ ‘ ^,**) will not be accepted into the fields and will result in an error message.

---

5. ***Optional:*** Type in the *comments* describing the test point in the Comments: text box.

6. An “X” in the Active Test Point? check box indicates the test point is active. Note that an active test point is the default.

   If you wish the test point to be inactive until a later date, click the Active Test Point? check box to clear the box.

Note: The software will not accept data into the permanent data module from any location other than an active test point. An “X” in the Active Test Point? check box indicates the test point is active. If you wish to change the test point's availability, click on the check box to change the status.

---

7. An “X” in the Baseband Converter? check box indicates the FCC report for this test point is to include a baseband converter assessment. Note that this box is checked by default.

   This option assumes that the user is making the signal level measurement WITH a baseband converter in place, so that the measured value already reflects the attenuation produced by the converter.

   If you wish for the baseband converter assessment not to be included, click the text box to clear the **X**.

   This option assumes that the user is making the signal level measurement WITHOUT a baseband converter in place, so that the measured value does NOT reflect any attenuation from a converter (i.e. signal level is only attenuated by the network path, plus a 30m drop cable).

Note: Setting the Baseband Converter option changes the way in which Compliance Reports are generated for this test point:

1) The FCC Minimum Visual Signal Level assessment (see FCC Regulations para. 76. 605(a)3) is handled differently.

2) The FCC Relative Aural Signal Level (with baseband converter) assessment (see FCC Regulations para. 76.605(a)5) is enabled; the assessment without a baseband converter is unaffected.

For more information, see the Compensation Factors section in Chapter 4, and the FCC Regulations, Part 76.

8. An "X" in the Coherent Channel System? check box indicates the FCC report for this test point should use the 47 dB value for a coherent-channel cable system (such as an HRC system) to assess distortion.

   A cleared check box indicates that the FCC report for this test point should use the 51 dB value for a non-coherent channel cable system to assess distortion. Note that a non-coherent channel system is the default.

9. Click **OK**.

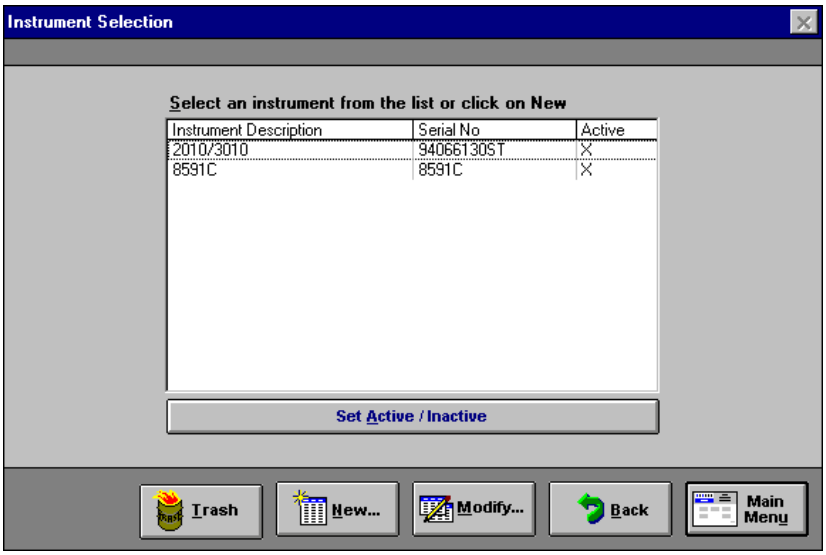
10. Repeat this procedure to add more test point locations.

If you want to delete a test point, make sure that the test point is not used in a dataset, select the test point and then click on the **Trash** button. If the test point is not used in a dataset, the test point will be deleted.

4. Set up instruments

Set up a new instrument by performing the following steps.

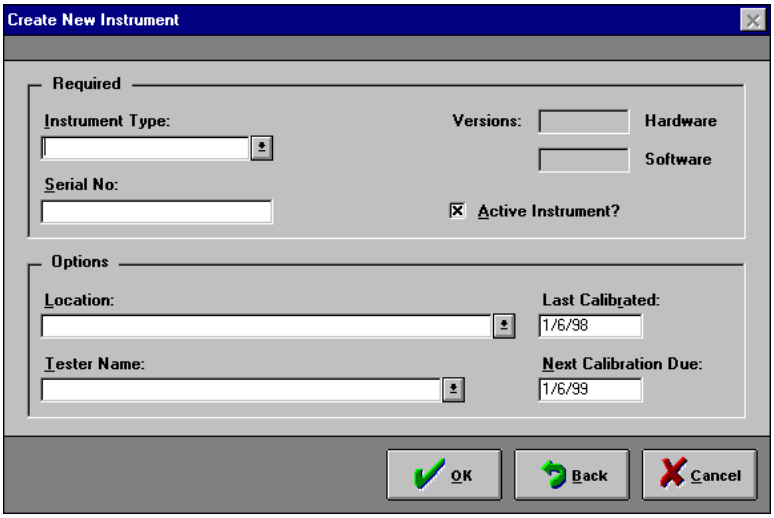
1. Select **Instruments** from the Setup menu.



2. Select **New** from the Instruments Selection menu if you are setting up or adding instruments.

   If you want to modify an existing instrument, select the instrument to be modified. There are two ways you can select an instrument.

   - Double-click on the desired instrument name.
   - Highlight an instrument with a single click, then select **Modify**.



3. Open the Instrument Type: drop-down list box, then select the desired instrument type. Note this field cannot be left blank.

Note: Currently, the data management software only supports the HP CaLan 2010/3010 version A.01.5.2 or later, 2010B/3010B/H/R series version 3.0 or later, and HP CaLan 8591C, 91E, 93E, 94E, 95E, 96E, 90L or 92L (version A.01.04 or later of the cable TV measurements DLP) Analyzers. Refer to chapter 2 for information about verifying versions of the DLP for your analyzer.

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4. Type the *full instrument serial number* in the Serial No. text field. Note this field cannot be left blank.

Note: The full *instrument serial number* must be used. The full *instrument serial number* is a combination of the model number of the instrument with the serial number from the label on the back of the instrument.

For the 2010/3010 series this would be 8596#XXX######## where "#" is a number and "X" is a letter. The first 8 characters will be the model number of the instrument (8596#X). The last 10 characters will be the serial number on the label (XX########). The 2010/3010 series label MAY only contain the serial number and not start with the model number.

For the HP 8590 series of instruments the serial number would be 3###X##### where the first 5 characters (3###X) would be the model number and the last 5 (#####) the serial number. For the HP 8590 series the label on the instrument should contain the model number with the serial number.

---

5. An “X” in the Active Instrument? check box indicates instrument is active. Note that an active instrument is the default.

   If you wish the instrument to be marked inactive, click the Active Instrument? check box to clear the box.

Note: The software will not accept data into the permanent data module from any instrument other than an active instrument. An “X” in the Active Instrument? check box indicates the instrument is active. If you wish to change the instrument’s availability, click on the check box to change the status.

6. Open the Location: drop-down list box, then select the location where the instrument is used. Selecting a location is optional.
7. Open the Tester Name: drop-down list box, then select the tester. Selecting a tester name is optional.

Note: Some characters (**{ }] [\ | _ ~ ‘ ^** ,) will not be accepted into the fields and will result in an error message.

8. Type the *last calibration date* (MM/DD/YY) of the instrument in the Last Calibrated: text field. Note this field can be left blank or it can be filled in with a valid date.
9. Type the *next calibration date* (MM/DD/YY) of the instrument in the Next Calibration Due: text field. Note this field can be left blank or it can be filled in with a valid date. If the date has expired, the user will see a warning message. Select **Yes** to acknowledge and continue or **No** to return to the form and edit it.
10. Click **OK**.
11. Repeat this procedure to add more instruments.

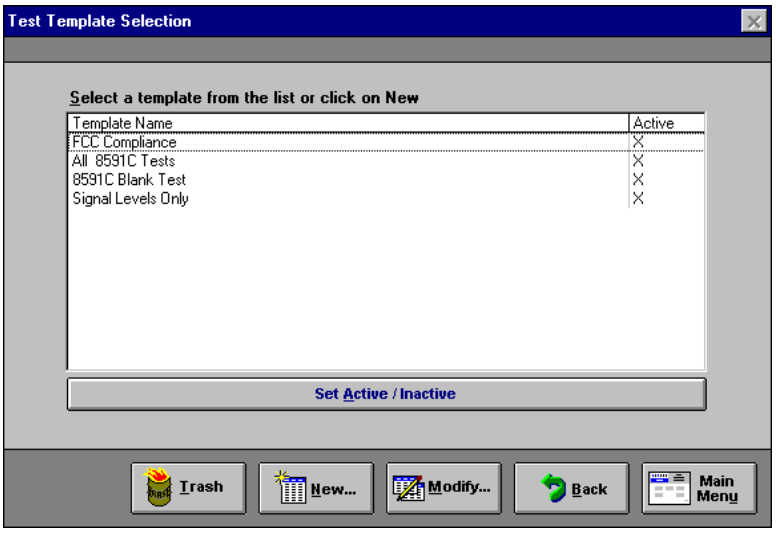
If you want to delete an instrument, make sure that the instrument is not used in a dataset, select the instrument and then click on the **Trash** button. If the instrument is not used in a dataset, the instrument will be deleted.

5. Set up test plan templates

Test plan templates give you a starting point from which to create specific HP CaLan 8591C test plans. This is useful if you have many test plans that are nearly the same. You can define the common parameters here and then enter the differences when you create the test plan.

Set up new test plan templates by performing the following steps.

1. Select **Test Plan Templates** from the Setup menu.



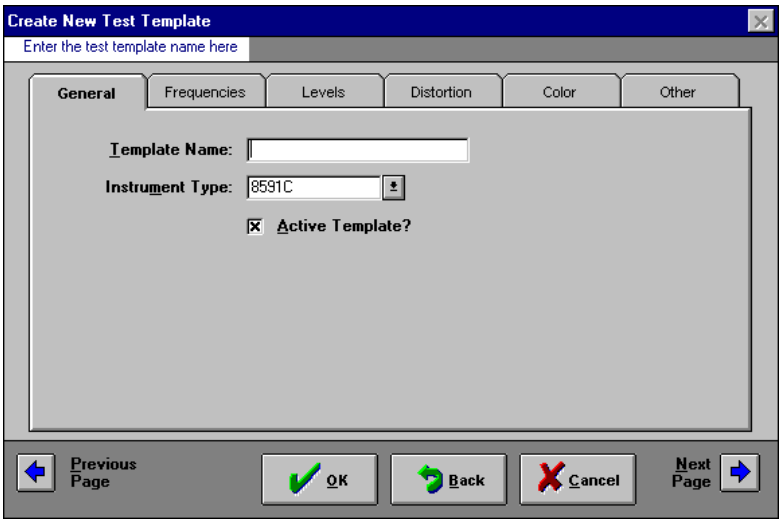
2. Select **New** from the Test Plan Template Selection menu if you are setting up a new template.

   If you want to modify an existing test plan template, select the test plan template to be modified. There are two ways you can select a test plan template.

   - Double-click on the desired template name.
   - Highlight a template name with a single click, then select **Modify**.

The test plan template can be toggled active or inactive by using the **Set Active/Inactive** button. This will determine whether or not the test plan will be available to make a new test plan.

This brings up the Create New Test Template dialog box.



3. Type the template name in the Template Name field.

Note: Some characters (**{ }] [\ | _ ~ ‘ ^,**) will not be accepted into the Template Name field will result in an error message.

4. Select the instrument from the Instrument Description drop-down list box. Currently only the HP CaLan 8591C supports test plans and will be listed.

5. An “X” in the Active Template? check box indicates the template is active. Note that an active template is the default. An inactive test plan template will not be available to make a new test plan.

   If you wish the template to be inactive until a later date, click the Active Template? check box to clear the box.

   The Create New Test Template dialog box has several pages. Each page has a different group of test measurements. Click on the tabs or the page buttons to display the pages with their settings. Click on the check boxes to select or deselect the test measurements. Check the glossary if you need a description of each test measurement.

   Click on the **OK** button to accept the selections made on all of the pages. Click on **Back** to go to the Test Plan Template Selection dialog box. Click on **Cancel** to return to the Setup menu.

If you want to delete a template, make sure that the template is not used in a test plan, then click on the **Trash** button. If the template is not used in a test plan, the template will be deleted.

.

6. Set up system administration

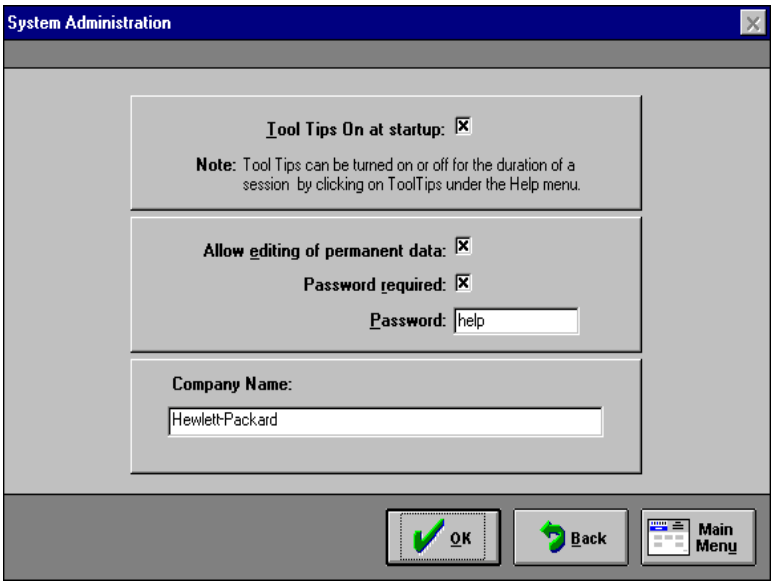
Set up the system administration features by performing the following steps.

1. Select **System Admin** from the Setup menu.

From the System Administration dialog box, Tool Tips can be turned on or off. Control over the editing of permanent data can also be given. Mark an "X" in the corresponding box to enable these features.

Note: If Allow Editing of Permanent Data is deselected, the Editing option will not appear on the Data Analysis menu.

Enter the company name. The name you enter into this field will be displayed in the reports.



2. Click **OK** to save the changes. Click on **Back** to abort any changes and go back to the previous form.

Note: This will setup the default for Tool Tips at the startup of the program. Tool Tips can be turned on temporarily for the session through the Help drop-down menu.

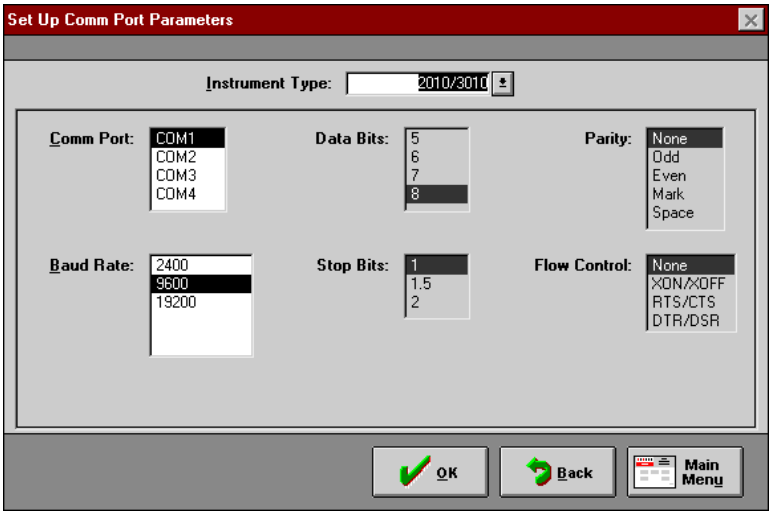
Note: Some characters ({ }] [\ | _ ~ ‘ ^,) will not be accepted into the Company Name: field and result in an error message.

7. Set up communication ports

Set up communication port settings by performing the following steps.

1. Select **Comms** from the Setup menu.

   The Set Up Comm Port Parameters dialog box is displayed.



2. Select the instrument type from the Instrument Type: drop-down list box.
3. Select a communications port from the Comm Port: list box.
4. Select a baud rate from the Baud Rate: list box.
5. If another instrument type needs to be set up, repeat steps 2, 3, and 4.
6. Select **OK**. Click on **Back** to abort any changes and go back to the previous form.

Warning: If the settings for the comm ports do not match those of the instruments, you will get a "COM port read error." Make sure the settings for baud rate and comm port are correct.

---

8. Set up Limits functions

The **Limits** setup function allows you to modify the compliance report constants or the test data module valid ranges for your system. **Limits** is located under **Setup** in the main menu.

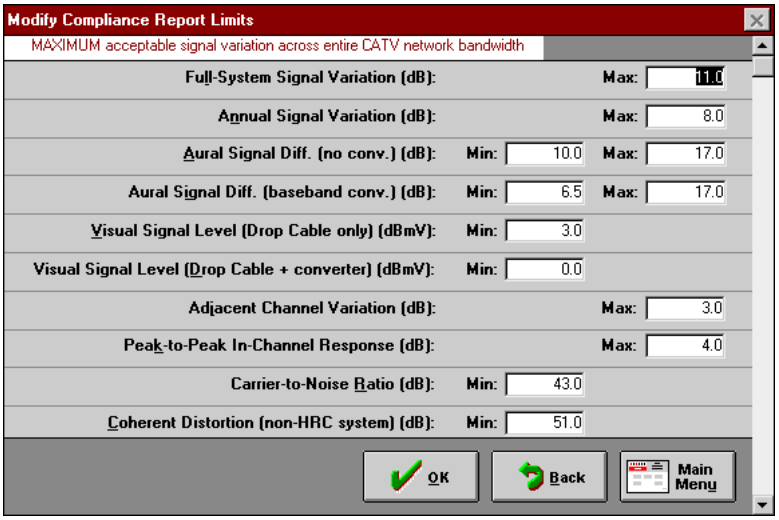
Modifying the Specification Constants

The Compliance Report Limits define the FCC compliance specifications, as outlined in the *FCC Technical Standards for CATV Systems*, paragraph 76.605. These constants are used to define the PASS/FAIL criteria for an FCC report.

Caution: You should *not* change any of these values. This function is *only* available for making necessary adjustments whenever the FCC compliance specifications change or for international use..

To modify the Compliance Report Limits, perform the following steps.

1. Select **Limits** from the Setup menu, the software proceeds to the Set Up Limits Menu.
2. Select **Compliance Report Limits** from the Set Up Limits Menu, the software proceeds to the Modify Compliance Reports Limits dialog box.



3. Modify the text boxes for the Compliance Report Limits as needed.
4. Select **OK** to save any changes made to the Compliance Report Limits. The software will return you to the Setup menu.

Modifying the Valid Ranges

The valid ranges can be modified for data acceptance. These values are used by the Data Review functions. They determine the PASS/FAIL assessments made when a test dataset is first obtained from an instrument. Data values outside of these ranges will be flagged with a **FAIL** when the test dataset is viewed.

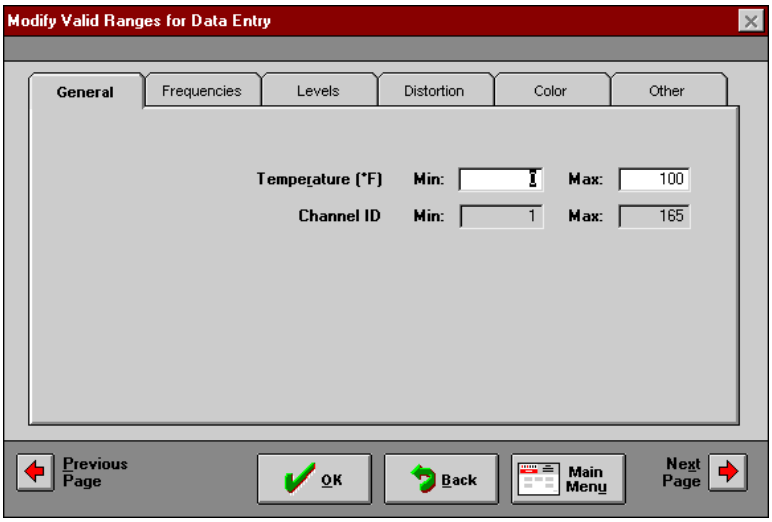
It is important to understand that the FAIL assessment is only intended to serve as a means of highlighting out-of-normal range data; it has no affect on FCC compliance assessments, nor does it prevent the user from saving these values into the test data module.

Suggested uses of the valid ranges are as follows:

- You can set values which are deemed “reasonable” for a particular system. Failing cases might then serve as a warning of an incorrect test process.
- By setting values which are more restrictive than the FCC limits, you can obtain advance warning of drift in the system parameters before FCC compliance limits are exceeded.

To modify the FCC constants, perform the following steps.

1. Select **Limits** from the Setup menu. The software proceeds to the Set Up Limits menu.
2. Select **Valid Ranges** from the Set Up Limits menu. The software proceeds to the Modify Valid Ranges dialog box.



3. Modify the text boxes as desired. Click on the tabs or Next Page/Previous Page to go through different pages on the form. Note that the line and field text boxes for some of the specifications are *not* editable (grayed out).

4. Select **OK** to save any changes made to the valid ranges into the Test Data Module. The software will return you to the Setup menu.

   Click on **Back** to abort any changes and go back to the previous form.

Note: The valid ranges set at installation are *not* set as defaults within the software. If the original values are desired, they must be reentered. These values are described in the following table. You may set the valid ranges back to the original installation values using the previous procedure, entering the values listed in Table 3-1.

Table 3-1 Valid Ranges Set at Software Installation

Specification	Minimum	Maximum
Temperature	0° F	100° F
Visual Carrier Frequency Tolerance	±50 kHz from nominal carrier freq.	
Aural Carrier Frequency Difference	4.495 MHz	4.505 MHz
Visual Carrier Signal Level	–55.0 dBmV	80.0 dBmV
Aural Carrier Signal Level Difference	5.0 dB	20 dB
Digital Channel Power Level	–99.0 dBmv	99.0 dBmv
Peak-to-Peak In-Channel Response	0.0 dB	7.0 dB
In-Channel Response Line (not editable)	8	23
In-Channel Response Field (not editable)	1	3
Hum	0.0 %	5.0 %
Carrier-to-Noise Ratio (C/N)	40.0 dB	75.0 dB
Composite Second Order (CSO)	45.0 dB	75.0 dB
CN/CSO Line (not editable)	8	23
CN/CSO Field (not editable)	1	3
Composite Triple Beat (CTB)	45.0 dB	75.0 dB
CTB Line (not editable)	8	23
CTB Field (not editable)	1	3
Chrominance-Luminance Delay Interval (CLDI)	–200.00 ns	200.00 ns
Differential Gain	0	30
Differential Phase	–20.0°	20.0°
Color Line (not editable)	8	23
Color Field (not editable)	1	2
FM Deviation	5.0 kHz	25.0 kHz
Depth of Modulation	75.0 %	95.0 %
Terminal Isolation	16.0 dB	25.0 dB

4

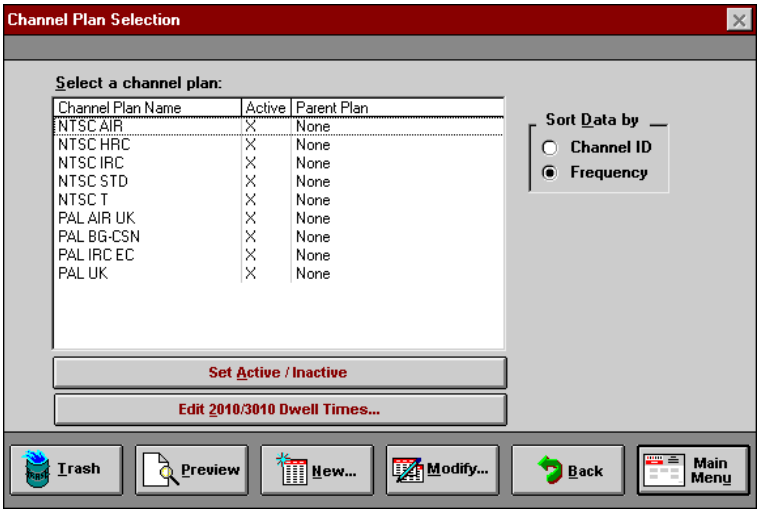
Creating and Modifying Channel Plans

This chapter describes how to create new, and modify existing channel plans from the Channel Plan selection menu. In this chapter, you will learn how to do the following:

- Use channel plan setup functions.
- Create a new channel plan.
- Modify an existing channel plan.

Using Channel Plan Setup Functions

The channel plans setup function allows you to modify or create a channel plan for your system. Select Channel Plans from the Setup drop-down menu or the **Setup** and **Channel Plans** buttons from the main menu. The software proceeds to the Channel Plan Selection dialog box. From here, you can create or modify a channel plan.



The channel plans can be toggled active or inactive by highlighting the channel plan and using the **Set Active/Inactive** button. This will determine whether or not the channel plan can be sent to a 3010 instrument, or used to build a test plan for an HP CaLan 8591C. Note that the HP CaLan 8591 series of instruments currently only support the NTSC-standard plans.

If you would like to view or change the user-programmable dwell times for tests run by the 3010 analyzer you can open the Edit Dwell Times dialog box. Click the **Edit 2010/3010 Dwell Times...** button to change the dwell times for the 2010/3010.

The Sort Data by section, allows you to select the order in which the channels are listed. You may select to list the channels either by channel identification number or by frequency.

Click on **New** to create a new channel plan. Continue on to the next section to create a new channel plan.

Click on **Modify** to modify a current channel plan. Continue on to page 4-6 for more information on modifying existing channel plans.

If you want to return to the previous screen without saving changes, click on **Back**.

Click on **Main Menu** to return to the Setup menu without saving changes.

Click on **Preview** to preview and then print a copy of the selected channel plan.

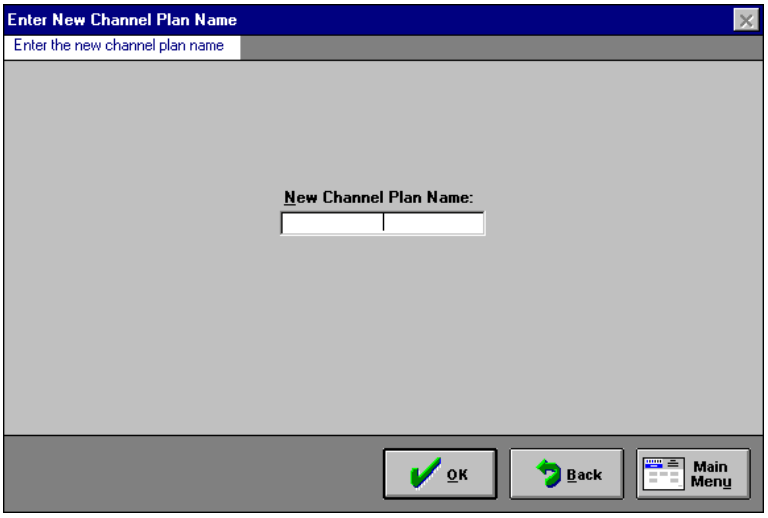
If you want to delete a channel plan, make sure that the channel plan is not used in a dataset, select the channel plan and then click on the **Trash** button. If the channel plan is not used in a dataset, the channel plan will be deleted.

Creating a New Channel Plan (3010 only)

To create a new channel plan for the 3010, perform the following steps.

1. Highlight an existing plan in the Channel Plan Selection dialog box, then select **New**. This will give you an editable copy of the original Channel Plan.

The software then proceeds to the Enter New Channel Plan Name dialog box.



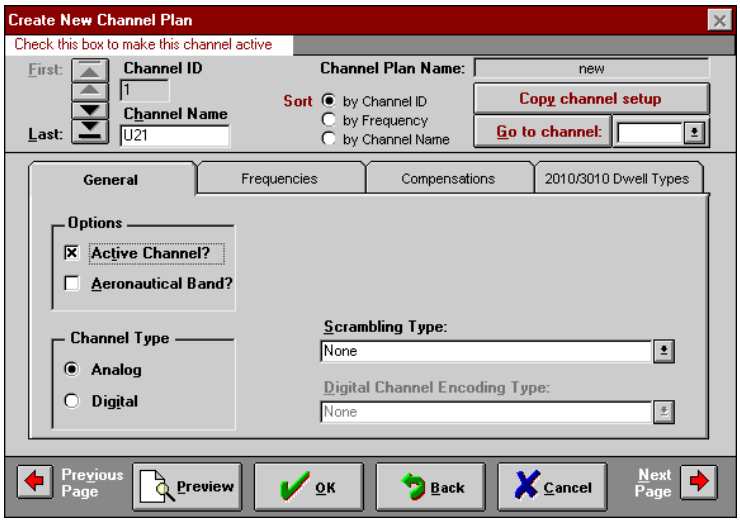
2. Enter a name for the new channel plan and select **OK**.

   Click on **Back** to abort any changes and go back to the previous form.

Note: Some characters (**{ }] [\ | _ ~ ‘ ^,**) will not be accepted into the Channel Plan Name field and will result in an error message.

Note: Channel plans can only be sent to a 3010. These can be any of the built-in plans, or a user-defined plan. See Chapter 6 for instructions on how to send or receive a channel plan.

The software then proceeds to the Create New Channel Plan dialog box.



Set up the channels in the channel plan as desired. The Create New Channel Plan dialog box includes several tabular forms, most of which have editable fields. Use the field definitions in the "Channel Plan Field Names" section (page 4-8) as a guide to fill in the values.

Select **OK** to save any changes and return to the Channel Plan Selection dialog box. Select **Back** to return to the Channel Plan Selection dialog box without saving any changes. Select **Cancel** to cancel any changes and return to the Setup menu. Select **Preview** to preview and then print a copy of the selected channel plan.

Note: Do not leave the channel name field blank and avoid using duplicate channel names within a channel plan.

Note: Channel plans can only be sent to a 3010. These can be any of the built-in plans, or a user-defined plan. See Chapter 6 for instructions on how to send or receive a channel plan.

Note: You should not send channel plans containing digital channels to a 3010 version 1.5.2. If you do, the digital channels in the plan will be changed to inactive. This will make data retrieval difficult, with the same plan, from the 3010 B/H/R series of instruments.
The solution for this is to create a new channel plan (copy the one with the digital channels), then inactivate or delete the digital channels. Save this plan and then send it to the 3010 version 1.5.2.

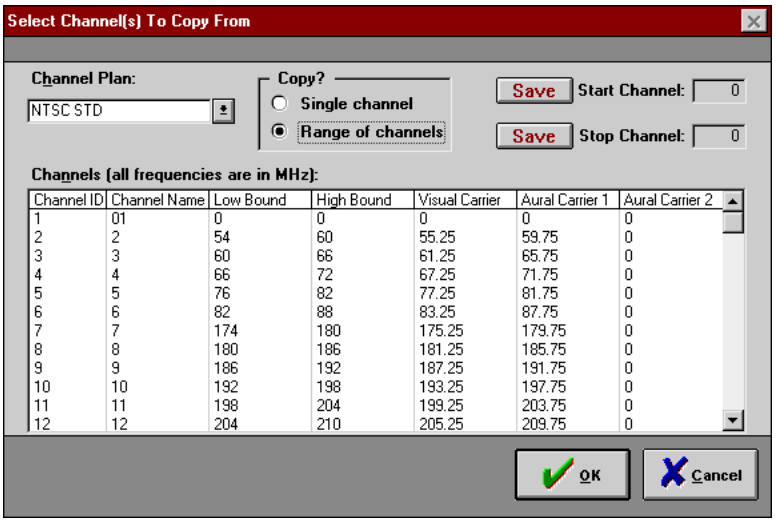
Copying Channels From Other Channel Plans

The **Copy channel setup** button will allow the channel settings of one or more records from another channel plan to be copied into the current channel plan. This button is available only when creating a new channel plan, or when modifying a user-defined plan.

To copy channel settings, perform the following steps from the Create New Channel Plan dialog box.

1. Select the **Copy channel setup** button.

The Select Channel(s) To Copy From dialog box is displayed.



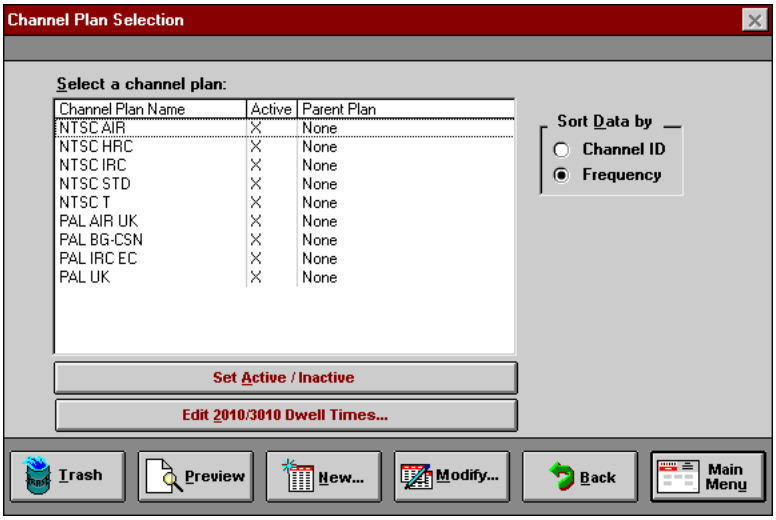
2. Select the channel plan to copy from the Channel Plan drop-down list.
3. Select to copy either a single channel or a range of channels.
4. Enter the channel or channels to copy.
   - To select a single channel:

     Click on the channel of choice, and click the **Save** Start Channel button.
   - To select a range of channels:

     Click on the first channel in the range, then click on the **Save** Start Channel button. Click on the last channel of the range, then click on the **Save** Stop Channel button.
5. Select **OK**.

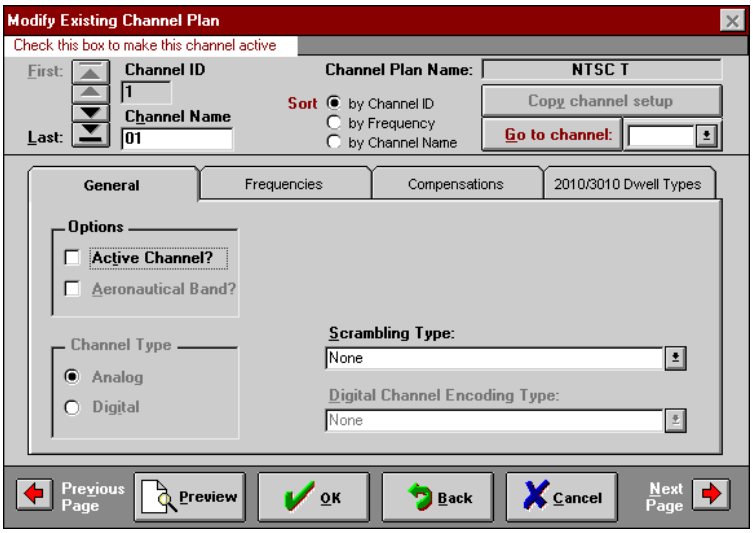
Modifying an Existing Channel Plan

You can modify an existing channel plan by performing the following steps from the Channel Plan Selection dialog box.



1. Select the channel plan you wish to view or modify by clicking the channel plan name.
2. Select **Modify**.

The Modify Existing Channel Plan dialog box is displayed.



Select the channel to modify by using the arrows in the Channel box in the upper left area. The “First” and “Last” button will move to the beginning or end of the channel list. To go to a specific channel, select that channel from the pick list next to the Go to channel: button. Then click on **Go to channel:**

Modify the channels in the channel plan as desired. The Modify Existing Channel Plan dialog box includes several tabular forms, most of which have editable fields. Use the field names in the “Channel Plan Field Names” section (page 4-8) as a guide to fill in the values.

Note: Do not leave the channel name field blank and avoid using duplicate channel names within a channel plan.

Note: If you are looking at one of the NTSC or PAL “standard” plans, several of the fields are grayed out and are not editable. These fields are grayed out because these parameters are part of the standard plan’s definition (for example, channel frequencies) and cannot be changed. You can copy one of the standard plans and then edit the fields in the copy.

Note: You should not send channel plans containing digital channels to a 3010 version 1.5.2. If you do, the digital channels in the plan will be changed to inactive. This will make data retrieval difficult, with the same plan, from the 3010 B/H/R series of instruments. The solution for this is to create a new channel plan (copy the one with the digital channels), then inactivate or delete the digital channels. Save this plan and then send it to the 3010 version 1.5.2.

Channel Plan Field Names

Below is an explanation of the field names found in the Create New Channel Plan dialog box and the Modify Existing Channel Plan dialog box.

Channel Plan Name: *(not editable)*
The name of the selected channel plan.

Channel Name:
Name of the channel using six characters or less. The channel name entered here will appear on the Test Plan editor, FCC and Data Analysis reports.

Go To Channel:
A drop-down list which allows you to quickly go to another channel.

Copy Other Channel Setup:
Brings up a dialog box, which allows you to copy all channel parameters for a single channel or a range of channels (from another plan) into the current channel and plan.

Channel: *(not editable)*
The identification number of the current channel being modified.

General

Active Channel:
Mark this check box to make the current channel active. It will then appear in the Channel lists. If the box is cleared, the channel is not active. An inactive channel will not be included when a test plan is generated.

Aeronautical Band:
Mark this check box if the channel lies within an aeronautical frequency band. If the box is cleared, the channel is not considered to lie within an aeronautical band, so it will use the larger visual carrier tolerance default values described in the Frequencies Section.

Channel Type:
Select whether the channel is analog or digitally encoded.

Scramble Type:
If the channel is scrambled, select the scrambling type from the drop-down list.

Digital Channel Encoding Type:
If the channel is digitally encoded, select digital coding type in this field.

Frequencies

Low Bound (MHz):
Defines the low end frequency of the channel.

High Bound (MHz):
Defines the high end frequency of the channel.

Adjacent Channel # Low:
Defines the adjacent channel number on the low frequency side.

Adjacent Channel # High:
Defines the adjacent channel number on the high frequency side.

Visual Carrier (MHz):
The nominal visual carrier frequency (MHz).

Aural Carrier 1 & 2 (MHz):
The primary aural carrier frequency (MHz) and the secondary aural carrier frequency (MHz). NTSC channel plans do not define a second aural carrier frequency. The field is accessible in case a PAL channel plan is being modeled.

Upper Vis Bound (kHz):
The upper limit of visual-carrier frequency tolerance (kHz). The default is 25 kHz (5 kHz for an aeronautical band channel).

Lower Vis Bound (kHz):
The lower limit of visual-carrier frequency tolerance (kHz). The default is −25 kHz (−5 kHz for an aeronautical band channel).

Aural Bound:
The maximum aural carrier frequency tolerance. The default is ±5 kHz.

Compensation Factors

Compensation Factors are available in the HP CaLan 85921B program, primarily to allow the user to model the presence of a baseband converter in a subscriber's cable drop. A compensation value for a baseband converter can be entered into each channel in a channel plan, in order to allow for the spectral variation in converter attenuation across the network bandwidth.

There are three independent compensation values which can be entered, Baseband Converter, No Converter, and Drop Cable + Converter.

1. "Baseband Converter (dB)" Compensation

   If the Baseband Converter option is enabled (see Set Up Test Points - Chapter 3) for a test point, the FCC Relative Aural Signal Level (with baseband converter) assessment (see FCC Regulations para. 76.605(a)5) is performed; if not, this assessment will always appear as "N/A" in the Compliance Report for that test point.

   If the option is enabled, the change of the V-A Signal Difference produced by the baseband converter is simulated using the following formula:

   FCC Lower Limit (with baseband converter)

   <= (Measured V-A Level Difference) – (Baseband Converter Comp. Factor)

   <= FCC Upper Limit (with baseband converter)

   then PASS, else FAIL.

   The default compensation factor value is 0 dB. The FCC limit values are obtained from FCC Regulations para. 76.605(a)5.

2. "No Converter (dB)" Compensation

   Regardless of whether or not the Baseband Converter option is enabled (see Set Up Test Point - Chapter 3) for a test point, the FCC Relative Aural Signal Level (without baseband converter) assessment (see FCC Regulations para. 76.605(a)5) is ALWAYS performed.

   Compliance with the FCC requirements is assessed using the following formula:

   FCC Lower Limit (without baseband converter)

   <= (Measured V-A Level Difference) – (No Converter Comp. Factor)

   <= FCC Upper Limit (without baseband converter)

   then PASS, else FAIL.

The default compensation factor value is 0 dB, but this can be changed for any purpose you choose. For example, compensation could be inserted on a per-channel basis to act as a "guard threshold" above the FCC lower limit (or below the upper one). The compliance reports would then flag a failure before the actual FCC limits are exceeded.

The FCC limit values are obtained from FCC Regulations para. 76.605(a)5.

3. "Drop Cable + Converter (dB)" Compensation

   This factor is used in the FCC Minimum Visual Signal Level assessment (see FCC Regulations para. 76.605(a)3). At the time of writing (Fall 1997), the FCC specifies two separate requirements, which have been interpreted as follows:

   The measured visual carrier signal level for an analog cable channel must be at least 3 dBmV at the end of a 30 m drop cable, *and* it must also be at least 0 dBmV at the output of a converter box at the end of a 30 m drop cable. Clearly, these two requirements are equivalent as long as the signal attenuation due to the converter box alone is 3 dB or less.

   It is important to understand that the measured values stored into the 85921 data module do *not* have the compensation factors applied, nor should entered data be edited to include a compensation factor. This would make the data module difficult or impossible to use for purposes other than compliance reporting, and changes to the threshold values for compliance assessment would be harder to apply.

   The default compensation factor value is 0 dB.

   To give users maximum flexibility in designing their measurements, and in anticipation of the year 2000 requirement that these measurements be performed with a converter in place, the program can perform the FCC Minimum Visual Signal Level assessment in one of two ways.

Dwell Times:

Dwell types define which carriers should be measured, and how long they will be measured. These values are not used in the HP CaLan 8591C. The 3010 dwells can be selected from among several predefined types, as well as four user programmable types. Furthermore, the predefined types available depend upon whether an analog digital or user-defined channel is being examined. The measurement times associated with the predefined types are fixed within the instrument. The predefined dwell times associated with the user programmable ones can be modified through the HP CaLan 85921B software, over the range of 1 to 999 milliseconds. The table of user-programmable dwell times can be sent to, or retrieved from a 3010 at any time using the instrument control functions.

Visual Carrier:
Use this field to select a dwell type for the visual carrier.

Aural Carrier:
Use these fields to select dwell types for the aural carriers. Aural carrier 2 is inaccessible for NTSC channel plans. Aural carrier dwell types are inaccessible for digital channels.

Note: Selecting an inactive visual dwell type turns off all measurements for that channel. Inactivating the aural dwell turns off the measurement for that carrier only.

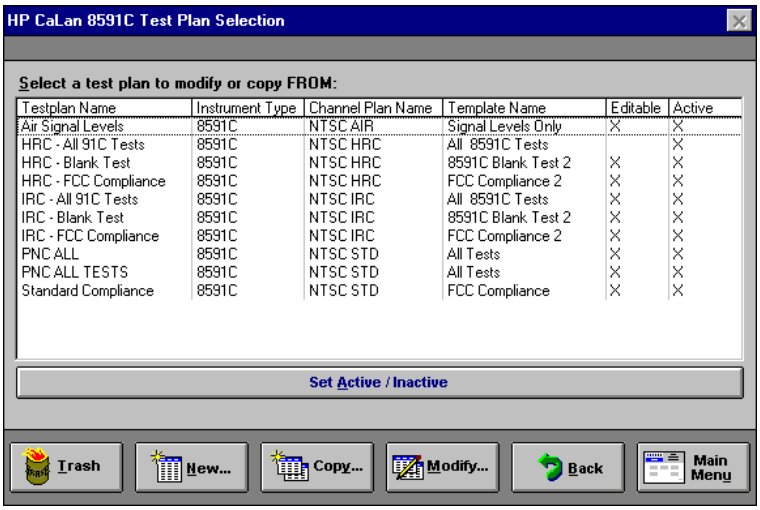
5

Creating and Modifying Test Plans

This chapter describes how to create new and modify existing test plans for the HP CaLan 8591C. In this chapter you will learn how to do the following:

- Create a new test plan.
- Copy an existing test plan.
- Modify an existing test plan.

To select test plans, click the **Instrument Control** button and then the **Test Plans** button. Test plans can also be selected through Instrument Control in the drop-down menu. The HP CaLan 8591C Test Plan Selection dialog box is displayed.



New	allows you to create a new test plan.
Copy	allows you to copy an existing test plan.
Modify	allows you to modify an existing test plan.
Back	returns to the previous menu.
Main Menu	exits this menu and returns to the main menu.
Trash	permanently deletes the selected test plan.

If you want to create a new test plan, proceed with the next section, "Creating a New Test Plan."

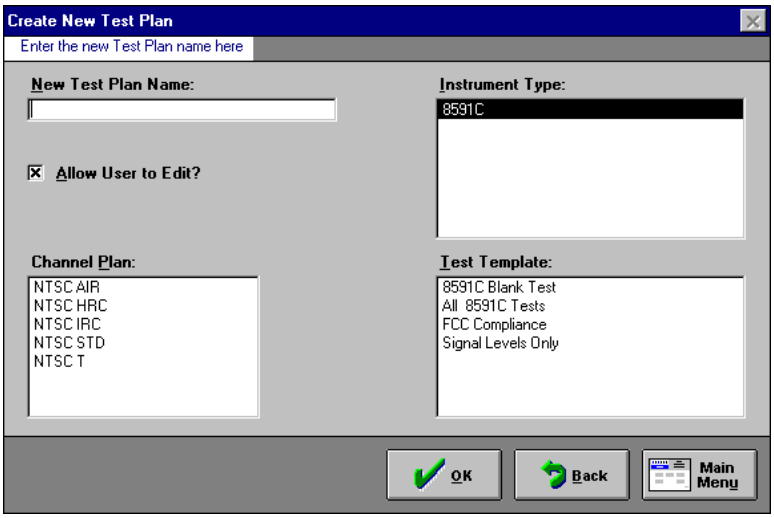
If you want to edit or modify an existing test plan, skip to "Modifying an Existing Test Plan" on page 5-9.

If you want to copy a test plan, skip to "Copying an Existing Test Plan" on page 5-6.

Creating a New Test Plan

You can create a new test plan by performing the following steps from the HP CaLan 8591C Test Plan Selection dialog box.

1. Choose **New** to create a new test plan. The software opens the Create New Test Plan dialog box.



2. Type a *test plan name* in the New Test Plan Name: text box.
3. Click on the check box for Allow User to Edit?. The default is to allow editing.
   - Check this box if you wish to make this test plan editable by users *after* it has been created (default).
   - Clearing the check box secures the test plan so that it may not be altered once the test plan is created. However, it may still be copied to be used as a starting point for another new test plan. See "Copying an Existing Test Plan" on page 5-6 for more information.

Note: The software will not allow you to duplicate or delete an existing test plan name.

Note: Some characters (**{ }] [\ | _ ~ ‘ ^,**) will not be accepted into the fields and will result in an error message.

4. Select a Channel Plan from the menu. The plans shown below are standard plans that come with the software. Only these Channel Plans can be used to create Test Plans. There may be additional channel plans on the list that have been created.

   - **NTSC AIR**
     Selects the AIR channel tuning configuration. AIR is also called the off-the-air or over-the-air tuning configuration. It refers to signals that are broadcast over the air and received with an antenna. The AIR frequency assignments are defined in the FCC channel identification plan, part 76.612.
   - **NTSC HRC**
     Selects the harmonically related carriers (HRC) tuning configuration. HRC is the channel tuning configuration in which the frequency of each video carrier is a multiple of 6 MHz.
   - **NTSC IRC**
     Selects the incrementally related carriers (IRC) channel-tuning configuration.
   - **NTSC STD** (default)
     Selects the standard (STD) channel tuning configuration.
   - **NTSC T**
     Selects the T channel tuning configuration.

5. Select the Instrument Type:

   - 8591C (default)

Note: An inactive test template will not be listed under test templates. To activate a test template go to **Setup**, **Test Templates**.

Note: Currently, the data management software only supports test plans for the HP CaLan 8591C Cable TV Analyzer with version A.01.04 or better of the Cable TV Measurements downloadable program (DLP) installed.

6. Select the Test Template:
   - **All 8591C Tests**
   - **8591C Blank Test**
   - **FCC Compliance** (with optional FCC reports only)
   - **Signal Levels Only**

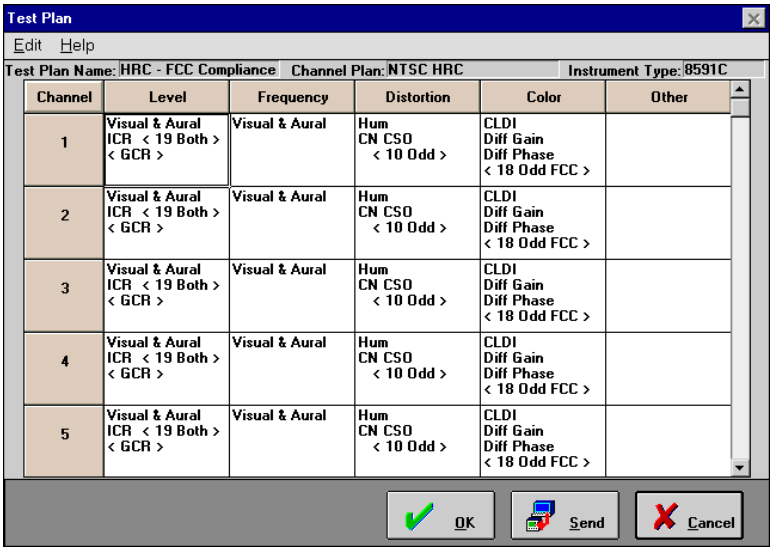
The templates listed above are supplied with the software package. Refer to the table below for the tests contained by default, in the FCC Compliance and All 91C Tests templates. The 8591C Blank Test template contains no tests and is provided to assist in defining or customizing your own test template. Test templates are created and modified in chapter 3 "Getting Started and Setting Up the Network."

Note: Defining or customizing your own test template is described in chapter 3.

Measurement	FCC Compliance	All Tests
Visual and Aural Carrier Frequency	√	√
Visual and Aural Signal Level	√	√
Chrominance-Luminance Delay Inequality (CLDI)	√	√
Differential Gain	√	√
Differential Phase	√	√
Carrier-to-Noise Ratio	√	√
Composite-Second Order (CSO)	√	√
Hum	√	√
Depth of Modulation		√
FM Deviation		√
In-Channel Response	√	√

7. When you are finished selecting options from this dialog box, choose **OK** to proceed with the test plan generation.

   The software will proceed to load the test plan, then open the Test Plan dialog box.



   The test plan that is automatically created will duplicate the tests specified in the chosen test template for every active channel within the selected channel plan.

8. If you wish to save the test plan to the data module, choose one of the following:

   - Choose **OK** to save this test plan to the data module.
   - Choose **Send** to send it to a connected HP CaLan 8591C analyzer. You will be given the option to save the test plan. Be sure the computer is connected to the analyzer before choosing **Send**. Refer to Chapter 3 for information about setting up the equipment.

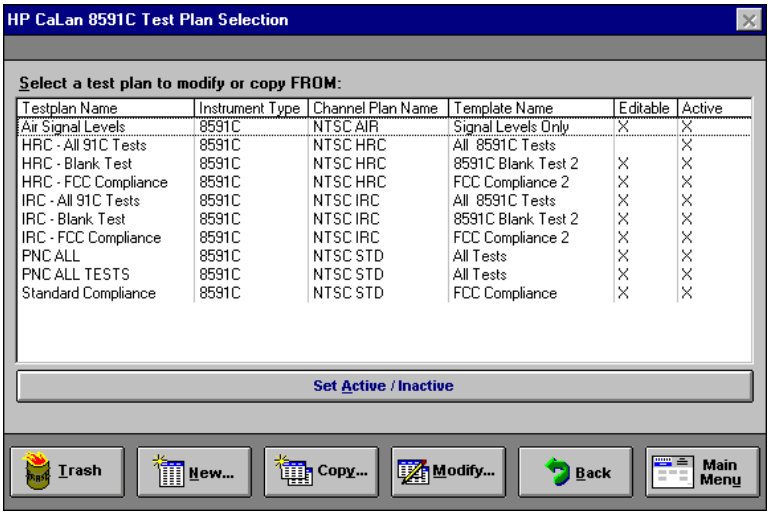
   If you want to make changes to this test plan (for example, to delete or add channels), proceed to "Modifying an Existing Test Plan," page 5-9.

Note: Once the plan has been saved (**OK** or **Send**), it can only be modified if it has previously been declared editable in the Allow User to Edit? check box.

Copying an Existing Test Plan

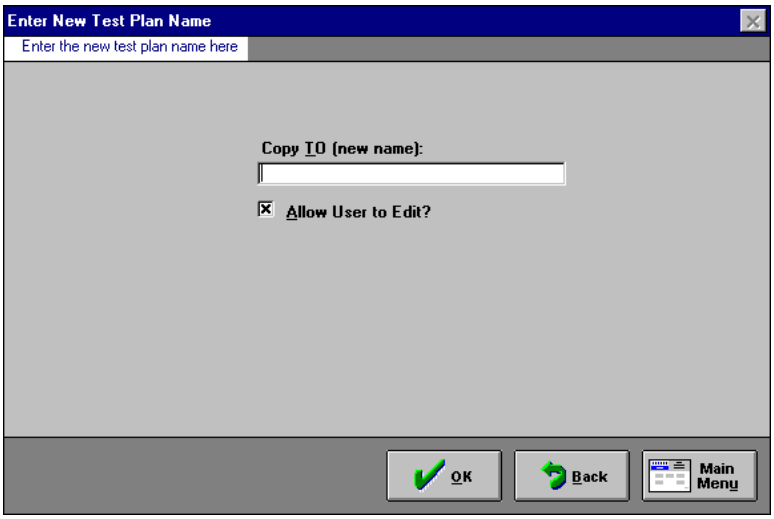
You can copy an existing test plan and give it a new name by performing the following steps from the HP CaLan 8591C Test Plan Selection dialog box.

1. Select a test plan to copy and then click on **Copy**.



Note: If the test plan you have chosen to copy is *inactive,* a message box will appear to verify that the selected test plan is the correct choice. Selecting **Yes** proceeds to load the test plan. **No** returns the software to the test plan selection dialog box.

The Enter New Test Plan Name dialog box is displayed.

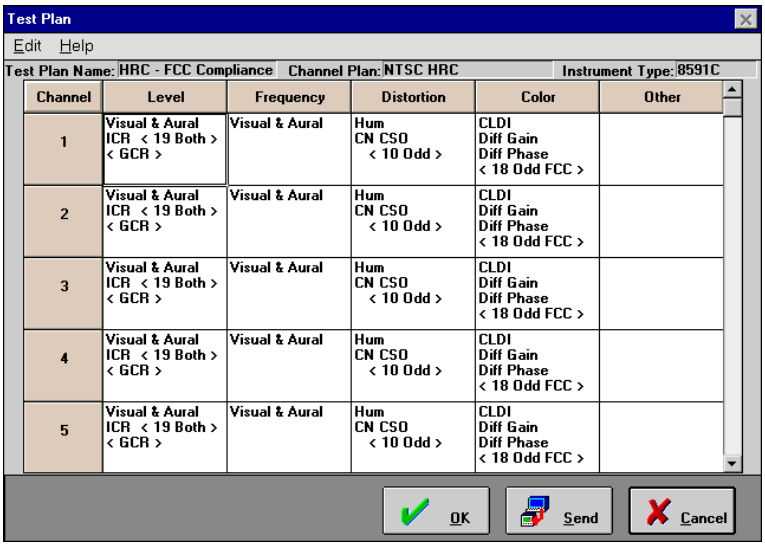


2. Type the new *test plan name* in the Copy TO text box.
3. Check the Allow User to Edit? check box:
   - Check this box if you wish to make this test plan editable by users *after* it has been created (default).
   - Leaving the check box blank secures the test plan so that it may not be altered once the test plan is created.

   When finished making your entries to this dialog box, choose **OK** to proceed with copying the new test plan.

   The software will load the test plan, then open the Test Plan dialog box.

Note: Some characters (**{ }] [\ | _ ~ ‘ ^,**) will not be accepted into the fields and will result in an error message.



The test plan is automatically created, duplicating the chosen test plan. You are allowed to modify the test plan within this dialog box.

4. If you wish to save the test plan to the data module, choose one of the following:

   - Choose **OK** to save this test plan to the data module.
   - Choose **Send** to send it to a connected HP CaLan 8591C analyzer. You will be given the option to save the test plan. Be sure the computer is connected to the analyzer before choosing **Send**. Refer to chapter 3 for information about setting up the equipment.

Note: Once the plan has been saved (**OK** or **Send**), it can only be modified if it has previously been declared editable in the Allow User to Edit? check box.

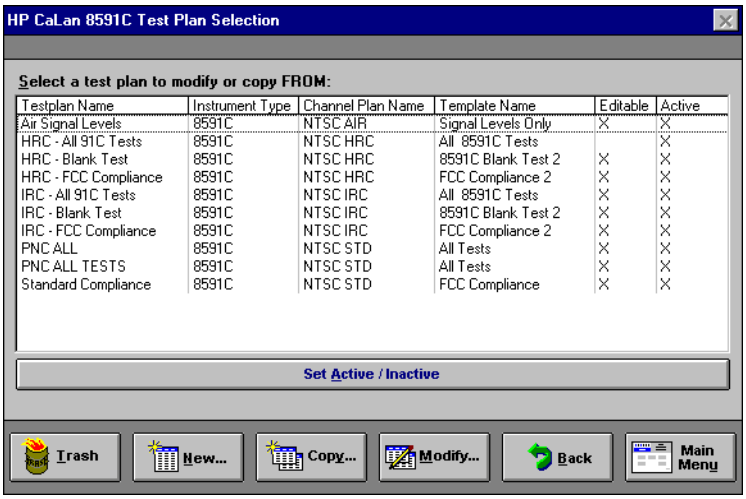
Modifying an Existing Test Plan

During the creation or copying of a test plan, or after an editable test plan has been created, it can be modified. In this section you will learn how to do the following:

- Select a test plan to modify.
- Delete channels.
- Add channels.
- Modify channel measurements.
- Save the modified test plan to the data module.

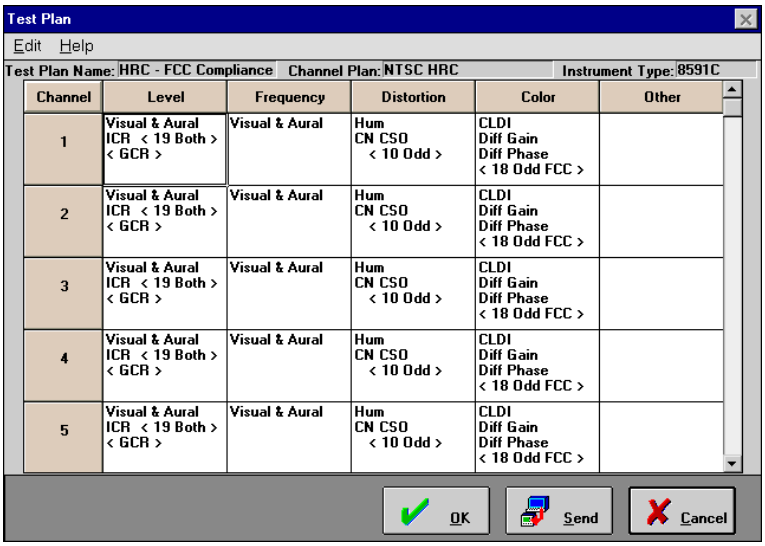
Selecting a Test Plan to Modify

You can select an existing test plan to modify by performing the following steps within the HP CaLan 8591C Test Plan Selection dialog box.



1. After selecting a test plan, choose **Modify** to open the Test Plan dialog box.

Choosing Modify opens the Test Plan dialog box.



Note: You are only able to modify editable, active test plans. If the test plan you have chosen to modify is *not* "editable", a message box will appear to give you the opportunity to create a copy of the test plan. If you choose **Yes,** the Test Plan dialog box is opened to enable you to copy this test plan to a new name before proceeding with the edit functions. **No** takes the software to the Test Plan dialog box.

2. Choose **OK** to modify the selected test plan. The software will load the test plan, then it will open the Test Plan dialog box.

Deleting Channels from a Test Plan

You may delete channels from the test plan using one of the following methods:

- Pull-down menus
- Drag (mouse users only)

Using pull-down menus to delete channels

1. Select the Edit pull-down menu located in the top-left corner of the Test Plan dialog box.
2. Choose Delete Channel from the pull-down menu. A dialog box will appear.
3. Enter the channel number or numbers to be deleted in the Channel to Delete dialog box as follows:
   - If deleting one channel, enter the channel number in both of the text boxes. For example, to delete channel 99, enter 99 in the Starting Channel text box and 99 again in the Ending Channel text box.
   - If you want to delete a range of channels enter the channel range to be deleted. For example, to delete channels 6 through 22, enter 6 into the Starting Channel text box and 22 into the Ending Channel text box.
4. Choose **OK** to delete the channels. The software will delete the channels from the test plan.

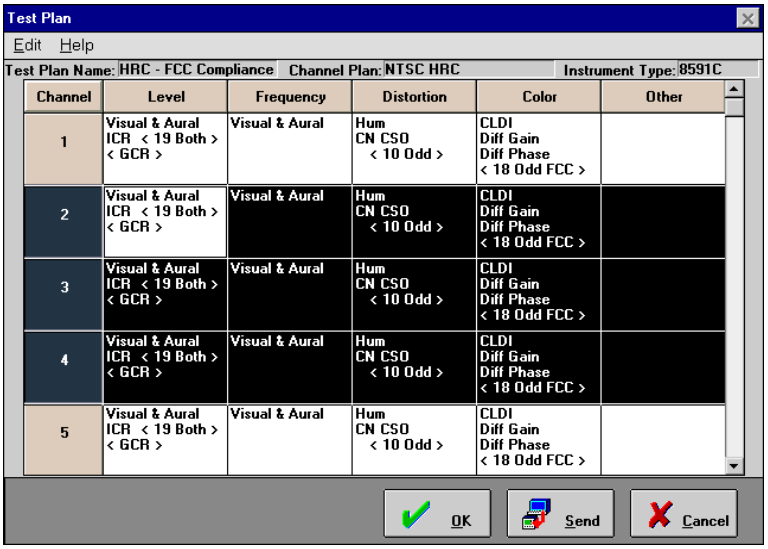
   If you wish to cancel the channel deletion, choose **Cancel** to return to the Test Plan dialog box.

Using drag to delete channels (mouse users only)

Mouse users have the added capability of being able to select a range of channels to delete using the drag method.

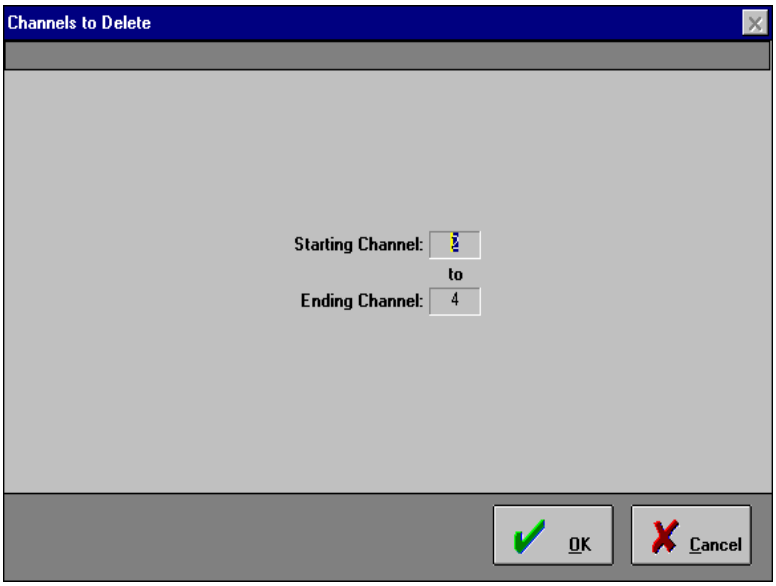
1. Select a range of channels, simply by clicking on the channel number for the first channel in the range, holding the left mouse button down, “dragging” the pointer to the last channel in the selected range, then releasing the left mouse button. Note that all the channels in the selected range will be highlighted.

   If you wish to cancel this selection, simply click on a single channel number with the left mouse button.



2. Select the Edit pull-down menu located in the top-left corner of the Test Plan dialog box.

3. Choose **Delete Channel** from the pull-down menu. A dialog box will appear with the selected range listed in the text box. For example, if you highlighted channels 6 through 22, then 6 will be in the starting channel text field and 22 will be in the ending channel text field.



4. Verify that the channel numbers to be deleted are correct.

   If you want to change the range of channels, enter the channel range to be deleted.

5. Choose **OK** to delete the channels. The software will delete the channels from the test plan.

   If you wish to cancel the channel deletion, choose **Cancel** to return to the Test Plan dialog box.

Selecting cells without a mouse

To select all of the cells in a column, use the arrow keys to move to the column, then press CTRL-ENTER to select all of the cells.

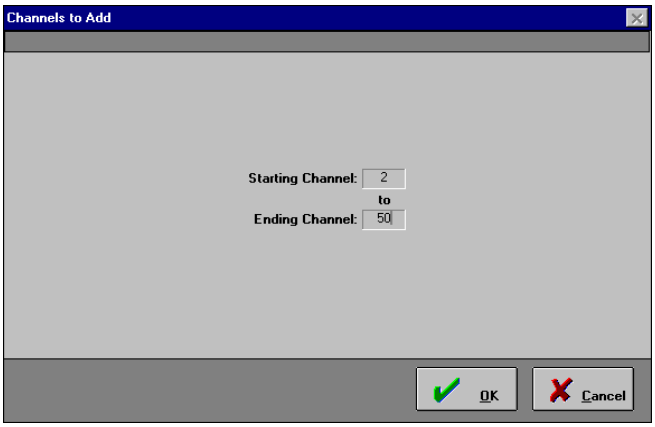
To select all of the cells in a row, use the arrow keys to move to the row, then press SHIFT-ENTER to select all of the cells.

To move from the grid area to the selection buttons, press CTRL-TAB.

Adding Channels to a Test Plan

After a test plan is selected for modification, you may add channels to the test plan.

1. An added channel will normally not have any tests active. If you want to copy a channel's tests when adding a channel, click on that channel's number and the row will be highlighted.
2. Select the Edit pull-down menu located in the top-left corner of the Test Plan dialog box.
3. Choose **Add Channel** from the pull-down menu. The Channels to Add dialog box will appear.



4. Enter the channel number or numbers to be added in the Channels to Add dialog box as follows:
   - If adding one channel, enter the channel number in both of the text boxes. For example, to add channel 99 enter 99 in the Starting Channel text box and 99 again in the Ending Channel text box.
   - If you want to add a range of channels enter the channel range to be added. For example, to add channels 6 through 22, enter 6 in the Starting Channel text box and 22 in the Ending Channel text box.
5. Choose **OK** to continue adding channels. Choose **Cancel** to return to the Test Plan dialog box.

Continue to the next section to add tests for the added channels.

Note: The software will not allow you to add channels that are not active. You must set a channel to active to add it to a test plan. Refer to chapter 3 for information on setting channels to active.
Note: The software will not allow you to add a channel that is already part of the test plan.
Caution!: The HP CaLan 8591C only has memory for 79 channels in a test plan. If you send a test plan with more than 79 channels you will see a warning message. If you choose to send more than 79 channels, only the first 79 will be received into the instrument.

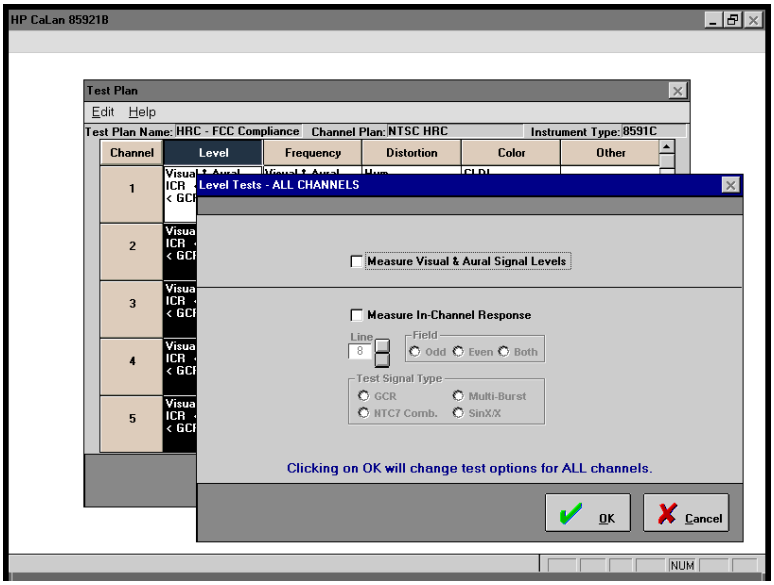
Modifying Channel Measurements in a Test Plan

Within the Test Plan dialog box you have the option to edit channel measurements within a test plan. There are two methods to modify channel measurements:

- Modify one set of measurements for all channels.
- Modify individual channel measurements.

Modifying a measurement set for all channels

To select one measurement set to modify for all channels, simply click on the measurement column heading at the top of the test plan table. The entire measurement column will be highlighted. All channels in the plan will be selected for that set of tests. Any changes to the measurement will apply to all channels.



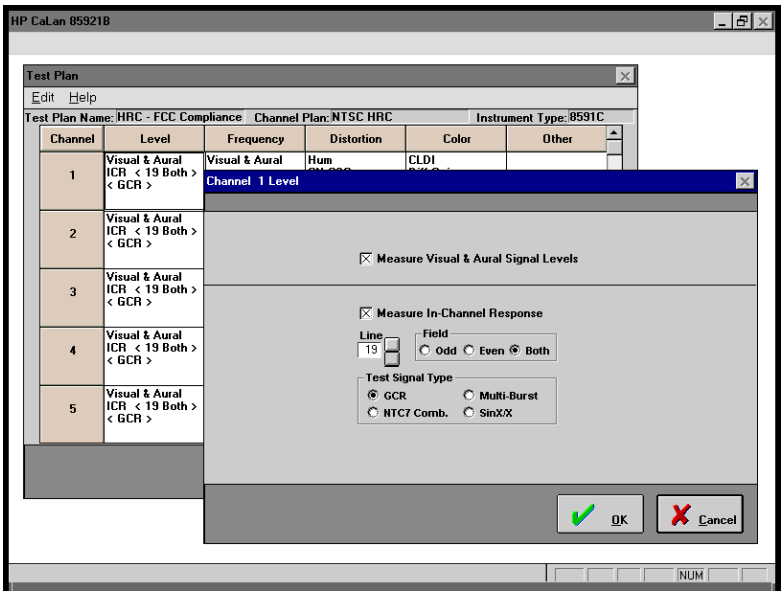
A dialog box will appear for each measurement with options to select for the measurement. The dialog boxes for each measurement are described later in this section.

Note: The dialog box will appear with no tests selected. The selection you make will apply to all channels for that group of tests.

Note: To deselect all cells, click on the cell labeled “Channel” in the upper left corner.

Modifying an individual channel measurement

To select an individual channel measurement for modification with the mouse, click on the measurement cell for that channel. You can also use the arrow keys to move to that cell and press ENTER.



A dialog box will appear for each measurement category with options to select for the measurement. The dialog boxes for each measurement are described later in this section.

Modifying Measurements

After selecting measurements using one of the previous methods, a dialog box for the selected measurement will be displayed. Each dialog box has options for you to select for each measurement. These measurement dialog boxes are described on the following pages.

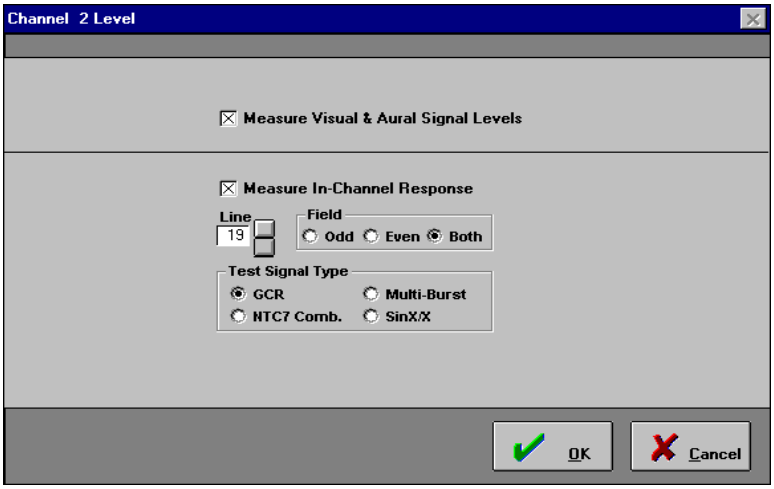
- Level
- Frequency
- Distortion
- Color
- Other

After modifications are made, choose **OK** to add the channel measurement information to the test plan.

If you wish to cancel the channel measurement modification, choose **Cancel** to return to the Test Plan dialog box.

Note: The title bar of the dialog box will indicate either the channel number of the measurement for individual channel measurements or ALL CHANNELS if a measurement for all channels was selected. The title bars displayed on your computer will reflect the method you choose to modify channel measurements.

Level Dialog Box



The measurement options available within the Level dialog box are:

- **Measure Visual & Aural Signal Levels**
  An ”X” in this check box turns visual and aural signal level measurements on.
- **Measure In-Channel Response**
  An “X” in this check box turns the in-channel response measurement on.

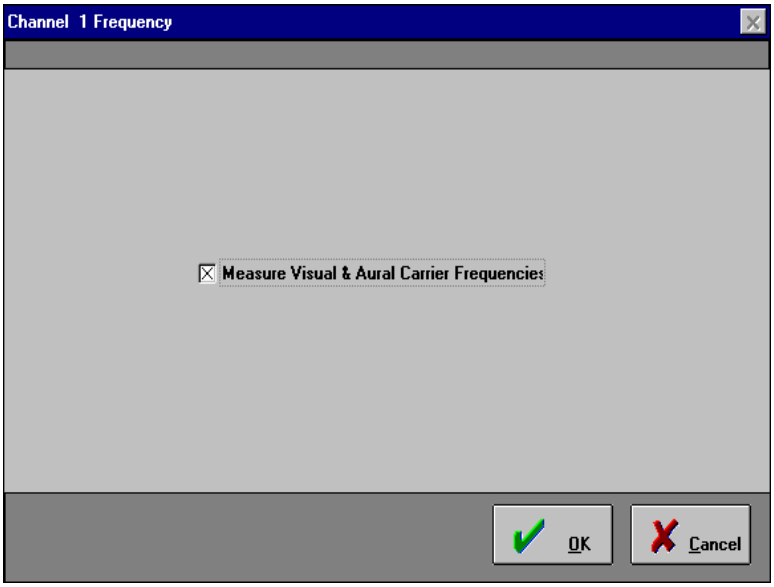
  If this box is marked, then you *must* select the Line number, Field, and Test Signal Type to continue with the measurement modification. You are not allowed to leave these options blank.

  To select the Line number, enter a value (between 8 and 23) or use the up and down arrows next to the text box, then select a line number from the list.

  To select the Field, select Odd, Even, or Both. Be sure that the option you select is marked appropriately.

  To select the Test Signal Type, select GCR, Multi-Burst, NTC7 Comb., or SinX/X. Be sure that the option you select is marked appropriately.

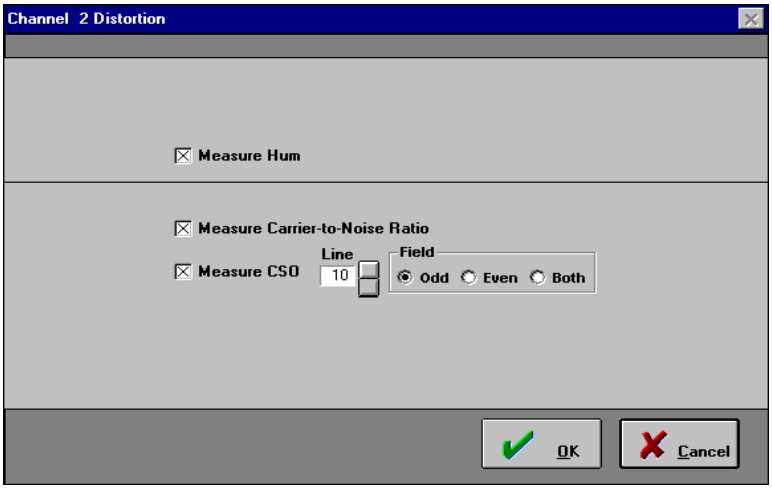
Frequency Dialog Box



The only measurement option available within the Frequency dialog box is:

Measure Visual and Aural Carrier Frequency
An “X” in this check box turns visual and aural frequency measurements on.

Distortion Dialog Box



The measurement options available within the Distortion dialog box are:

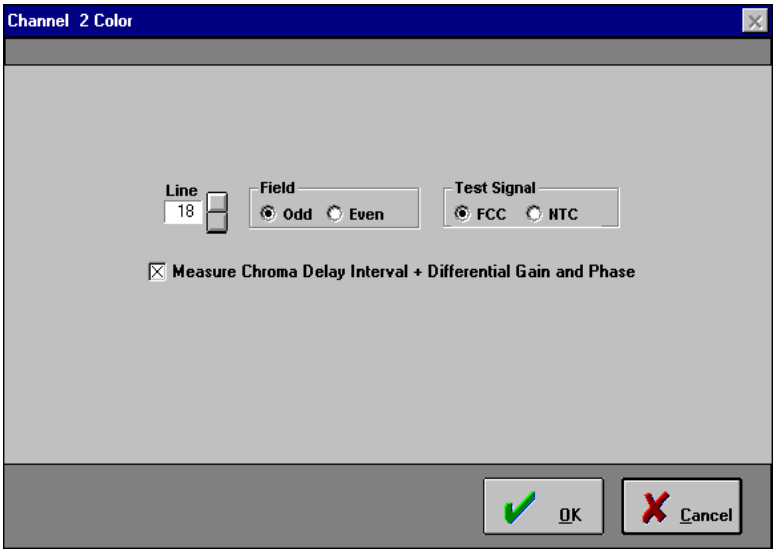
- **Measure Hum**
  An "X" in this check box turns the hum measurement on.
- **Measure Carrier-to-Noise Ratio**
  An "X" in this check box turns the carrier-to-noise measurement on.
- **Measure CSO** (composite-second order)
  An "X" in this check box turns the composite-second order measurement on.

  If either Measure CSO or Measure Carrier-to-Noise are selected, you *must* select the Line and Field options to continue with the measurement modification. You are not allowed to leave these options blank.

  To select the Line number, enter a value (between 8 and 23) or use the up and down arrows next to the text box, to increment or decrement the line number.

  To select the Field, select Odd, Even, or Both. Be sure that the option you select is marked appropriately.

Color Dialog Box



The only measurement option available within the Color dialog box is:

Measure Chroma Delay Interval + Differential Gain and Phase
An "X" in this check box turns the measurement on.

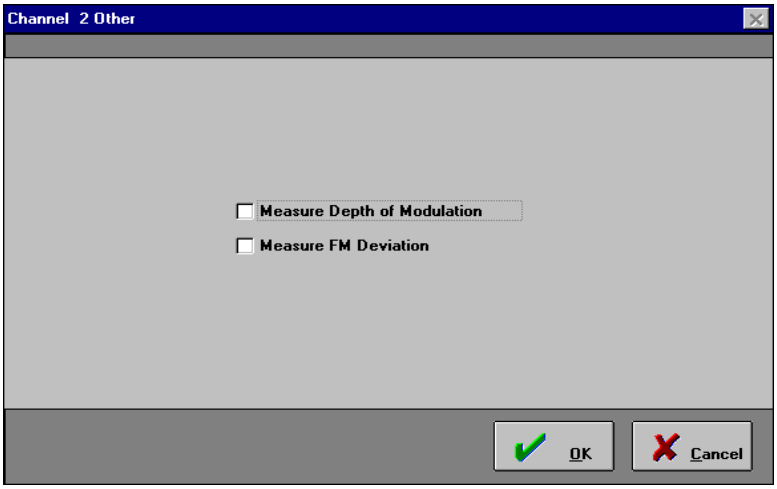
If Chroma Delay Interval + Differential Gain and Phase is selected, you *must* select a Line, Field, and Test Signal to continue with the measurement modification. You are not allowed to leave these options blank.

To select the Line number, enter a value (between 8 and 23, the default is 10) or use the up and down arrows next to the text box to increment or decrement the line number.

To select the Field, select Odd or Even. Be sure that the option you select is marked appropriately.

To select the Test Signal, select FCC or NTC. Be sure that the option you select is marked appropriately.

Other Dialog Box



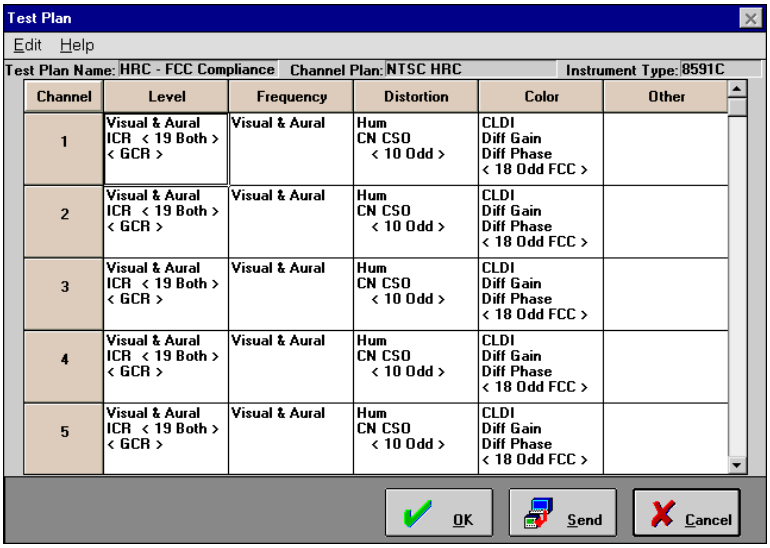
The measurement options available within the Other dialog box are:

- **Measure Depth of Modulation**
  An “X” in this check box turns the depth of modulation measurement on.
- **Measure FM Deviation**
  An “X” in this check box turns the FM deviation measurement on.

Saving the Modified Test Plan to the Data Module

After all modifications have been made to the test plan, save the test plan to the data module by choosing one of the following:

- Choose **OK** to save this test plan to the data module.
- Choose **Send** to send it to a connected HP CaLan 8591C analyzer. You will be given the option to save the test plan. Be sure the computer is connected to the analyzer before choosing **Send**. Refer to chapter 3 for information about setting up the equipment.



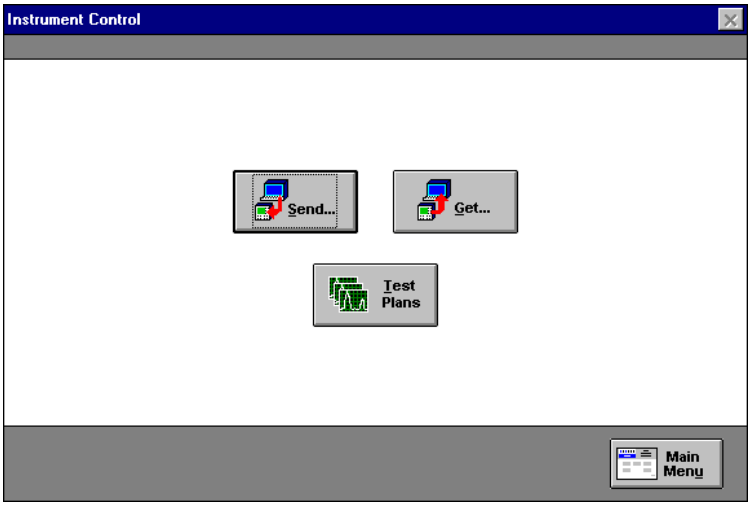
6

Controlling the Instrument

This chapter contains information about sending a test plan *to* and getting test results data *from* an instrument. In this chapter, you will learn how to do the following:

- Send Information to the HP CaLan 8591C family of analyzers.
- Send Information to the HP CaLan 2010/3010 family of analyzers.
- Get Information from the HP CaLan 8591C family of analyzers.
- Get Information from the HP CaLan 2010/3010 family of analyzers.

Choose **Instrument Control** from the main menu. Access can also be found through Instrument Control in the main drop-down menu. The Instrument Control screen will be displayed.

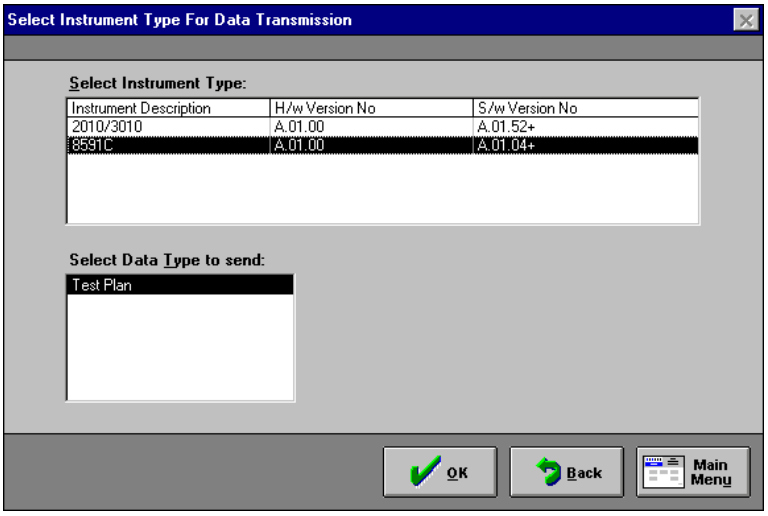


Test Plans	allows you to view, create, or modify a test plan for the HP CaLan 8591C series of instruments.
Send...	allows you to send data and information to an analyzer.
Get...	allows you to retrieve data and information from an analyzer.
Main Menu	exits to the Main Menu.

Sending Information to the HP CaLan 8591C Analyzer

To transfer a test plan to the HP CaLan 8591C analyzer, perform the following steps within the Instrument Control dialog box. Access can also be found through Instrument Control in the main drop-down menu.

1. Choose **Send...**, to open the Select Instrument Type for Data Transmission dialog box.



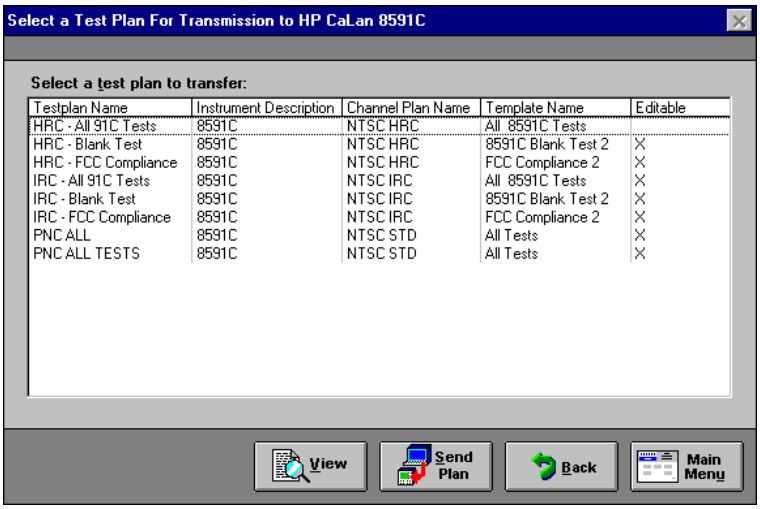
2. Select 8591C for instrument type.

   Selection of an instrument type will result in a list of all available data types for the instrument being displayed. In the case of the HP CaLan 8591C there is only one choice, test plans.

3. Select Test Plan as data type.

4. Choose **OK**.

The Select a Test Plan For Transmission to HP CaLan 8591C dialog box will be displayed.



5. Select the test plan you want to transfer to the analyzer.
6. Choose **View** to preview the test plan before transmission.
7. Choose **Send Plan** or double-click on the test plan, to send the test plan to the analyzer.

   If you want to return to the previous menu without choosing a test plan, choose **Back**.

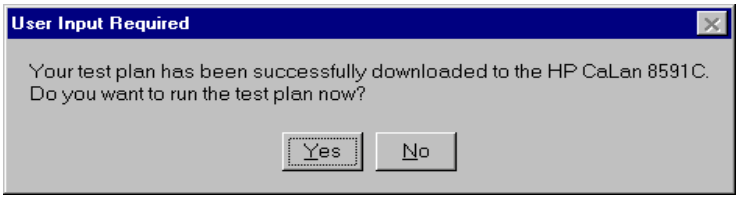
   If you want to cancel test plan selection, choose **Main Menu** to return to the main menu.

Note: If a test plan is not available, it may not be set to active. Choose **Test Plans** from Instrument Control in the main menu and use the **Active/Inactive** button to make the test plan available.

Note: When making measurements with a test plan, unpredictable results and long measurement times may be encountered when measuring channels where no visual carrier is present. The HP CaLan 8591C will attempt to follow instructions and make the measurement using the existing noise and interference signals. If any channels in a test plan are known not to have a visual carrier during the expected time of testing, it is best to delete those channels from the test plan prior to sending it to the instrument.

If a scrambled channel is not specified as such in the test plan, measurement speed will be slow and the results will be incorrect.

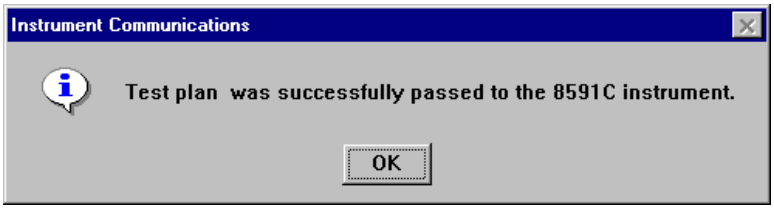
After choosing **Send Plan** the User Input Required dialog box is displayed. You have the option to run the test plan now or later.



Choose **Yes** if you want to instruct the HP CaLan 8591C to run the test plan now.

Choose **No** if you want to run the test plan later using the analyzer front-panel keys. Refer to the user's guide for your instrument, for information about how to execute a test plan from the instrument front-panel.

When the test plan transfer is complete, an Instrument Communications message box will appear advising you if the transfer was successful or if it failed. Choose **OK** to continue.

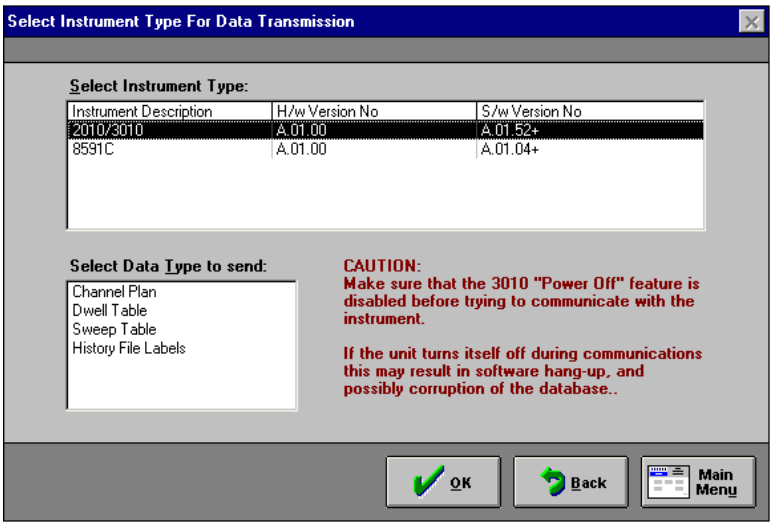


Note: The transferred test plan is now in the HP CaLan 8591C on a temporary basis and will be replaced by the next transferred test plan. If you want to use the test plan continuously from within the instrument, store the plan on a RAM card. See your instrument or DLP user's guide for more details on how to store a test plan to a RAM card.

Sending Information to the 2010/3010 Analyzer

To transfer data to the 2010/3010 analyzer, perform the following steps within the Instrument Control dialog box. Access can also be found through Instrument Control in the main drop-down menu.

1. Choose **Send...** to open Select Instrument Type For Data Transmission dialog box.



2. Select 2010/3010 for instrument type.

Selection of an instrument type will display a list of all available data types for the instrument.

3. Select the data type to send to the analyzer.
4. Choose **OK**.

Note: With an HP CaLan 3010 version 1.5.2 it can take several minutes to transmit data to or from the instrument. To improve the transmission speed, contact Hewlett-Packard to upgrade your instrument.

If Channel Plan was selected for data type, continue to the next page.

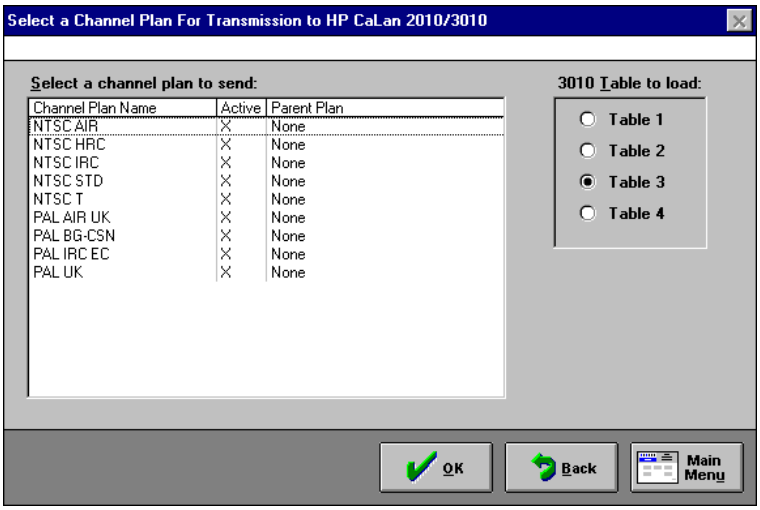
If Dwell Tables have been selected for the data type, the data will be sent to the HP CaLan 3010 and the “Please wait sending dwell table to HP CaLan 3010” message box will be displayed.

If Sweep Table was selected for data type, continue to “Sending Sweep Tables” on page 6-7.

If History File Labels were selected for data type, continue “Sending History File Labels” on page 6-8 .

Sending a Channel Plan

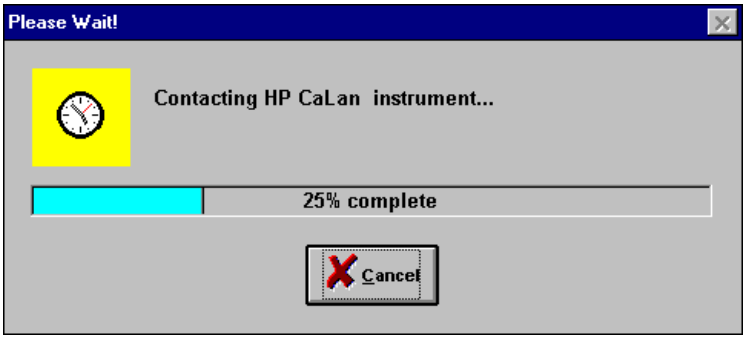
If Channel Plan was selected the Select a Channel Plan For Transmission to the HP CaLan 2010/3010 dialog box is displayed.



5. Select the plan you want to send, and table you want to load.
6. Choose **OK** to send the channel plan to the analyzer. You will see a Please Wait progress box.

   If you want to return to the previous menu without choosing a channel plan, choose **Back**.

   If you want to cancel sending a channel plan, choose **Main Menu** to return to the main menu.

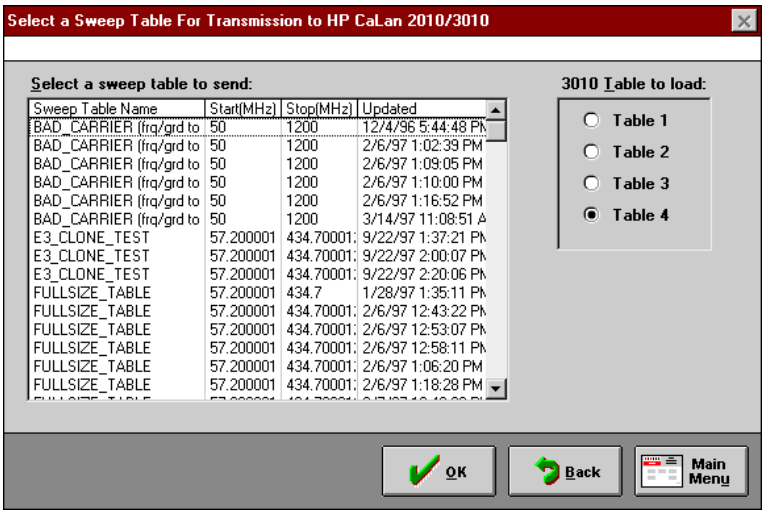


Note: If the channel plan is not available it may not be set to active. Choose **Channel Plans** from Setup in the main menu and use the **Active/Inactive** button to make the Channel Plan available.

When the channel plan transfer is complete, a message box will appear advising you if the transfer was successful or if it failed. Choose **OK** to continue.

Sending Sweep Tables

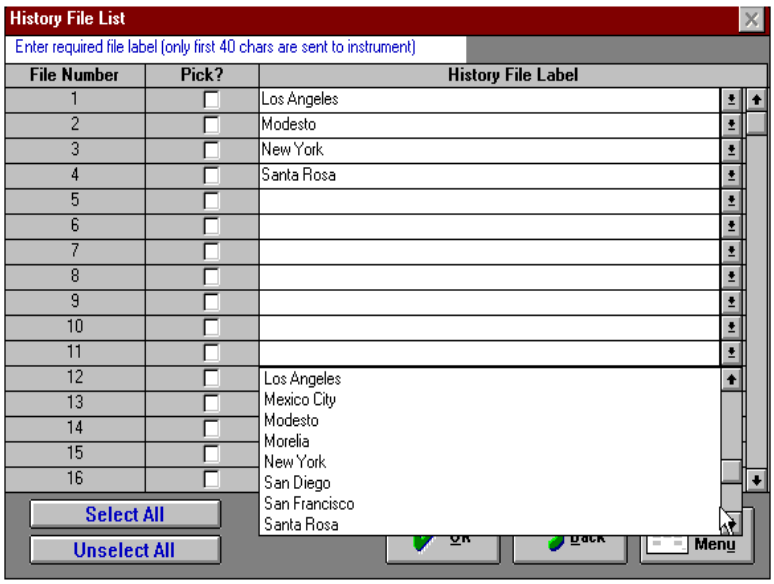
If Sweep Tables was selected, the Select a Sweep Table For Transmission to HP CaLan 2010/3010 dialog box is displayed.



1. Select the sweep table you want to send and the table to load.
2. Choose **OK**.

Sending History File Labels

If History File Labels were selected, the History File Label dialog box is displayed.



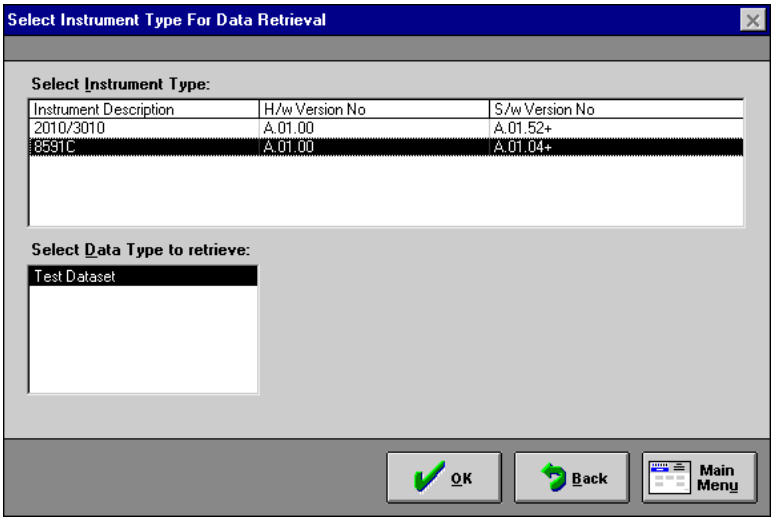
1. In the “History File Label” list, select from the drop-down list the history file label you want from the list of locations. If you want to type in a label manually, highlight the field and enter the information.
2. Use the check box to select the file number(s) you want to send.
3. Choose **OK** to send the labels.

Note: This system can be used to enter file labels into the HP CaLan 3010 instruments. You may find this method much easier than entering label information through the front panel of the instrument.

Getting Information from the HP CaLan 8591C

After a test plan has been sent and run, you are able to retrieve the test results data from the analyzer by using the **Get...** function from the Instrument Control dialog box. Access to the **Get...** function can also be found through Instrument Control in the main drop-down menu.

1. Choose **Get...** to open the Select Instrument Type For Data Retrieval dialog box.



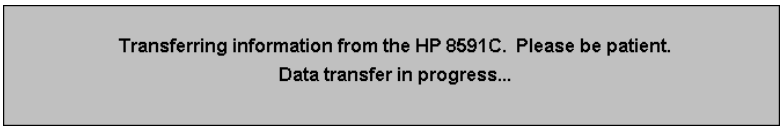
2. Select 8591C for the instrument type.

   Selection of an instrument type will result in a list of all available data types for the instrument being displayed. For the HP CaLan 8591C, there is only one choice, Test Dataset.

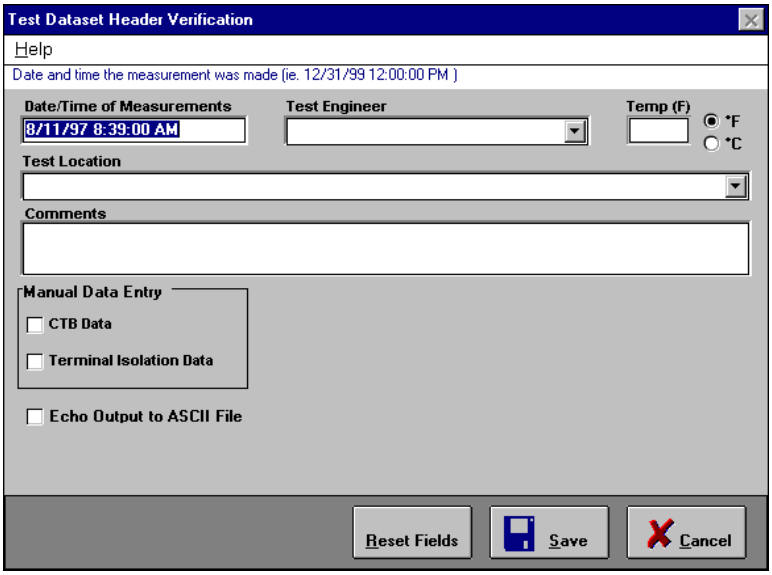
3. Select the data type you want to transfer from the analyzer. For the HP CaLan 8591C, Test Dataset is the only selection.

4. Choose **OK**.

This displays a message box that advises you that the information is being transferred.



Then the Test Dataset Header Verification dialog box is displayed.



Note: The date and time the measurements were performed will be displayed in the Date/Time of Measurements text box.

5. Select the Test Engineer from the Test Engineer drop-down list.
6. Enter the temperature. To select Centigrade rather than Fahrenheit, use the radio button.
7. Select the Test Location from the Test Location drop-down list.
8. ***Optional:*** Type in the Comments Field any pertinent information that you want to include in this header.
9. ***Optional:*** Creating an ASCII file of the test results data enables you to export test results to an ASCII text file for other analysis and usage. An **X** in the Echo Output to ASCII File check box indicates that an ASCII file of this dataset will be created. Refer to "Saving Test Results to a Text File" page 6-14 for more information.

10. ***Optional:*** You may want to provide CTB data for the report. Mark whether you want to make manual data entries for CTB. Refer to “Entering CTB Data Manually” on page 6-12.

11. ***Optional:*** You may want to provide terminal isolation data for the report. Mark whether you want to make manual data entries for terminal isolation data. Refer to “Entering Terminal Isolation Data Manually” on page 6-13.

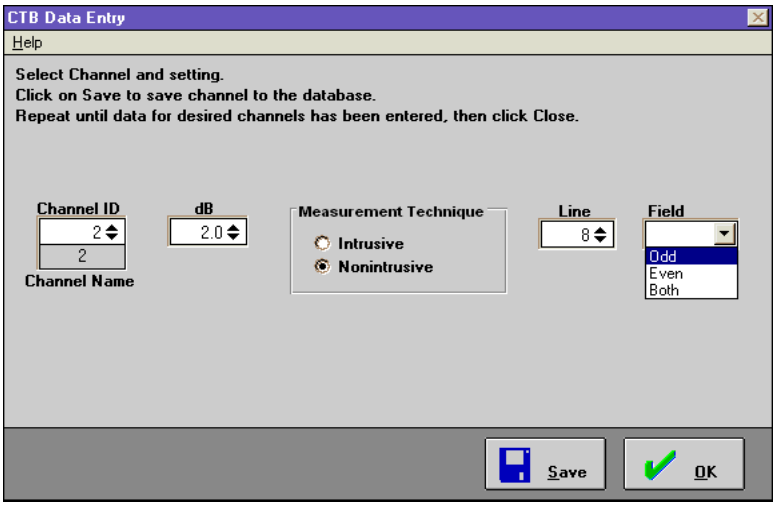
12. Choose **Save** to save the test results data from the analyzer.

    If you want to reset the values to the original settings choose the **Reset Fields** button.

    If you want to cancel getting test results data, choose **Cancel** to return to the main menu.

Entering CTB Data Manually

If you have marked the manual data entry check box for CTB data, perform the following steps for the CTB Data Entry dialog box that appears after **Save** is chosen in Test Dataset Header Verification dialog box.



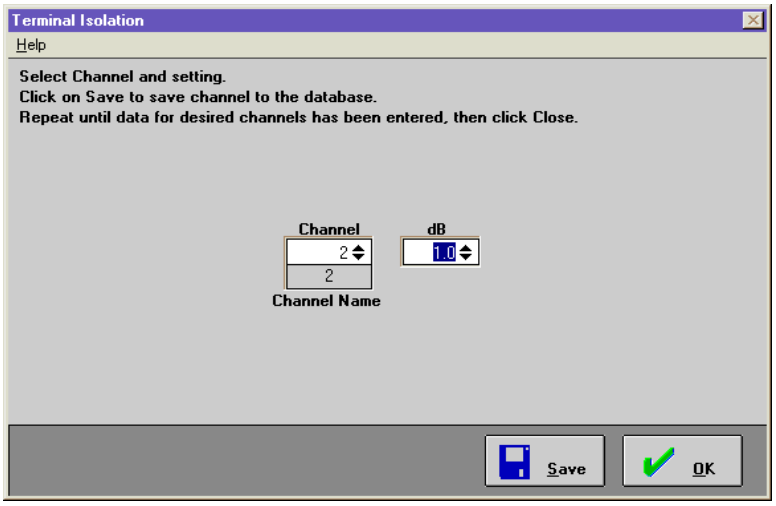
1. Enter the channel number in the Channel ID text box.
2. Enter the CTB level (dB) in the dB text box.
3. Select the Measurement Technique. Be sure that the option you select is marked appropriately.
   - Intrusive
   - Nonintrusive

   If Nonintrusive is selected you must also enter the line (8-23) and the field (Odd, Even, or Both)
4. Choose **Save** to enter the data for the selected channel, then continue to enter data for other channels.

   Choose **OK** when you have finished entering channel data.

Entering Terminal Isolation Data Manually

If you have marked the manual data entry check box for Terminal Isolation Data, perform the following steps for the Terminal Isolation dialog box that appears after **OK** is selected in Test Dataset Verification dialog box.

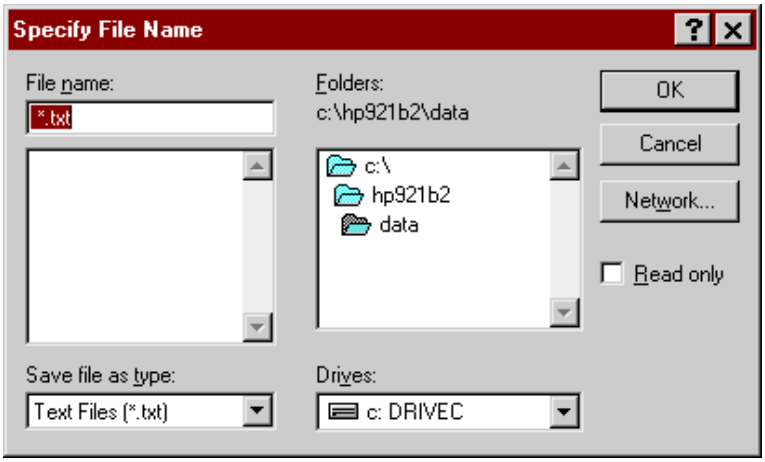


1. Enter the channel number in the Channel text box.
2. Enter the terminal isolation level (dB) in the dB text box.
3. Choose **Save** to enter the data for the selected channel, then continue to enter data for other channels.

   Choose **OK** when you have no more channel data to enter.

Saving Test Results to a Text File

If you have marked the Echo Output to Text File check box, a file dialog box appears after **Save** is selected in the Test Dataset Header Verification dialog box. Perform the following steps after the Specify File Name dialog box appears.



1. Enter the *filename* in the File Name text box.
2. Select the directory and path that you want to save the text file to.
3. Choose **OK** to save the file. The software will proceed to save the file in a text format.

   Choose **Cancel** to cancel the save operation.

Note: If you want to save the file as read only, mark the Read Only check box. This will prevent deleting or overwriting the file.

Note: If no filename is entered, the file will not be saved.

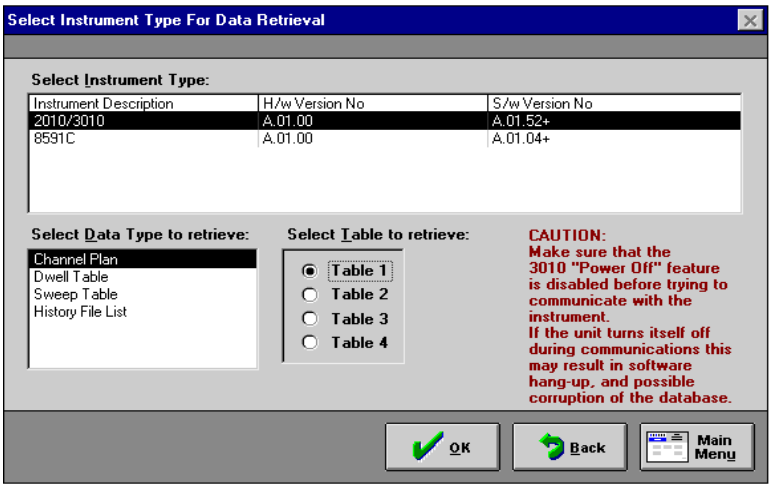
Getting Information from the 2010/3010 Analyzer

Channel Plans, Dwell Tables, Sweep Tables and History File Name lists can be transferred between the HP CaLan 2010/3010 analyzer and the computer. This will allow you to manipulate and store this information in the computer.

Retrieving Channel Plan Information

After a channel plan has been loaded or created, you are able to retrieve the channel plan by using the **Get...** function within the Instrument Control dialog box. Access to the **Get...** function can also be found through Instrument Control in the main drop-down menu.

1. Choose **Get...** to open the Select Instrument Type For Data Retrieval dialog box.



2. Select 2010/3010 for the instrument type.

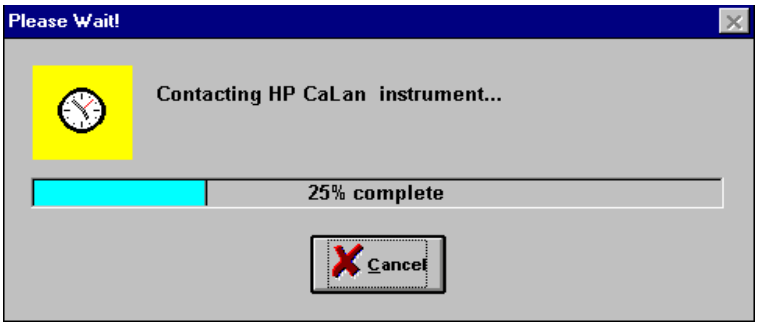
   Selection of an instrument type will result in a list of all available data types for the instrument being displayed.

3. In the Select Data Type to retrieve list, select Channel Plan for the data type you want to transfer from the analyzer.

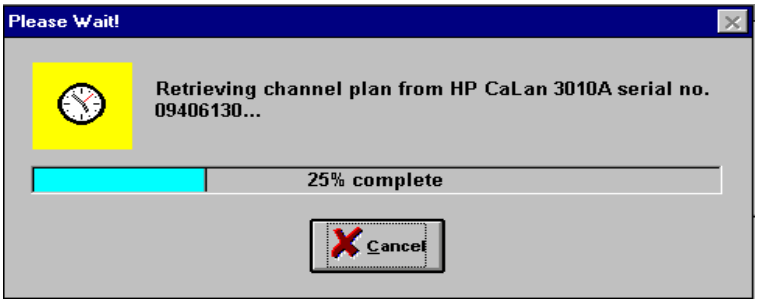
4. In the Select Table to retrieve radio buttons, select the table in the analyzer that holds the channel plan you want to retrieve from the HP CaLan 2010/3010.

5. Choose **OK**.

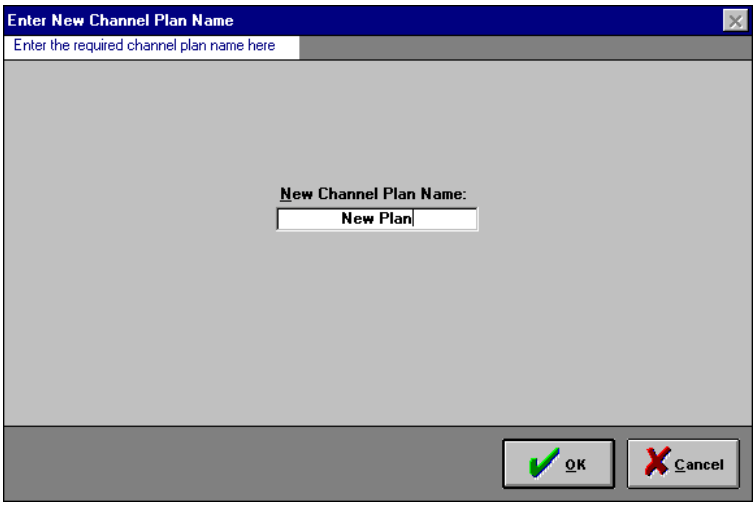
This results in the Please Wait progress box. Wait while the software contacts the instrument to retrieve the data.



After the instrument has been contacted, the software will retrieve the channel plan. Another Please Wait progress box will be displayed.

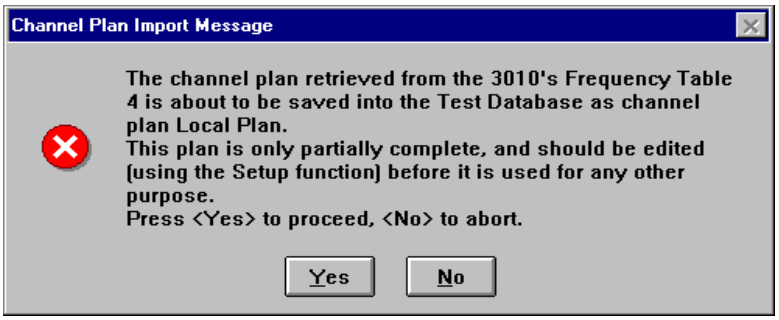


When the data retrieval is complete, the Enter New Channel Plan Name dialog box is displayed.



6. Enter a name for the channel plan just retrieved.
7. Choose **OK**.

After the retrieval, the Channel Plan Import Message box is displayed.



8. Choose **YES** to save the data.

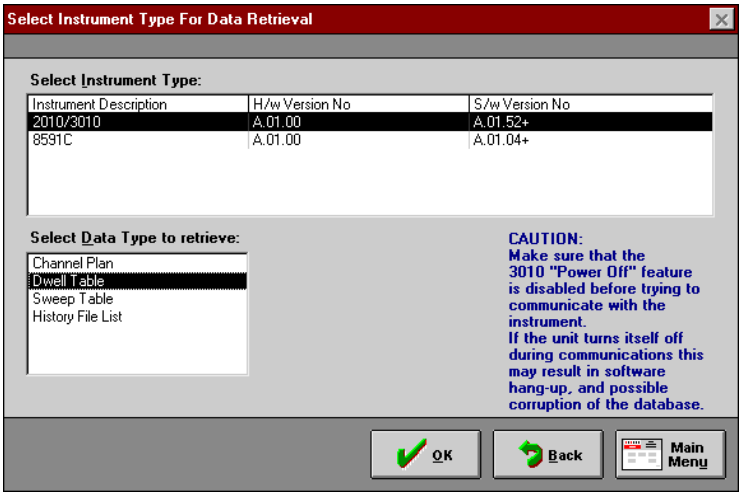
Note: The retrieved channel plan will need to be edited. Refer to Chapter 4 titled "Creating and Modifying Channel Plans," for more information.

Note: With an HP CaLan 3010 version 1.5.2 it can take several minutes to transmit data to or from the instrument. To improve the transmission speed, contact Hewlett-Packard to upgrade your instrument.

Retrieving Dwell Table Settings

Dwell table settings can be retrieved from the HP CaLan 2010/3010 instruments. The **Get...** function within the Instrument Control dialog box will retrieve the dwell table settings for storage into the data module. Access to the **Get...** function can also be found through Instrument Control in the main drop-down menu.

1. Choose **Get...** to open the Select Instrument Type For Data Retrieval dialog box.



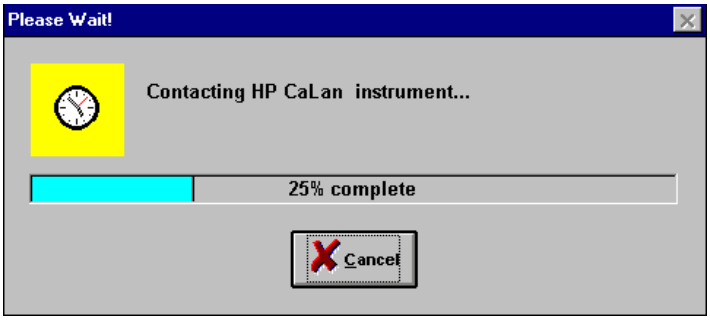
2. Select 2010/3010 for the instrument type.

   Selection of an instrument type will result in a list of all available data types for the instrument being displayed.

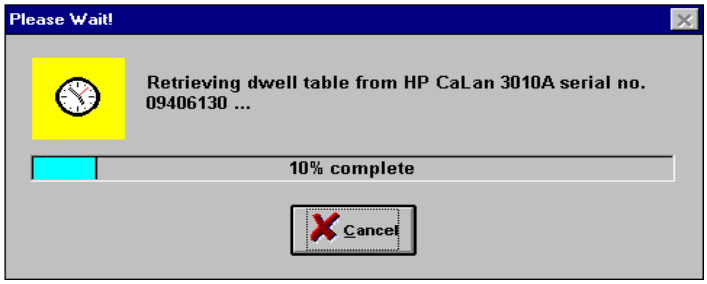
3. Select the Dwell Table for the data type you want to transfer from the analyzer.

4. Choose **OK**.

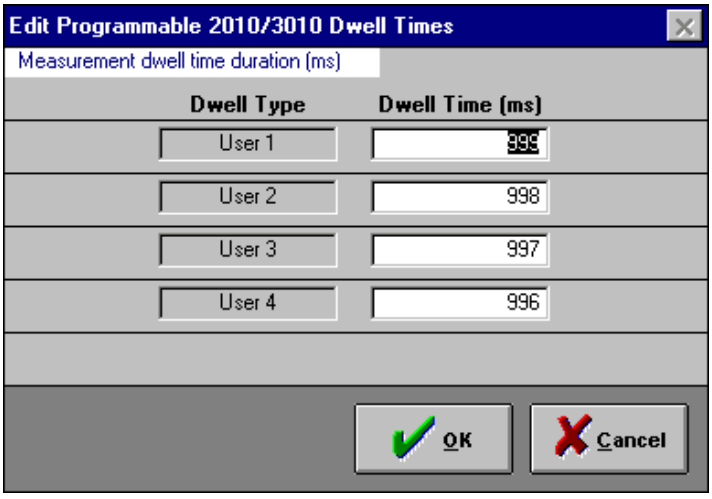
This results in the Please Wait progress box. Wait while the software contacts the instrument to retrieve the data.



After the instrument has been contacted, the software will then retrieve the dwell table information. Another Please Wait progress box will be displayed.



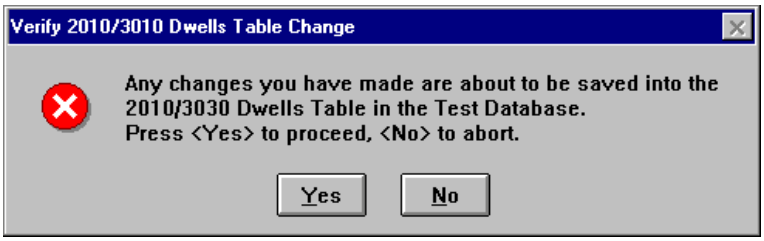
When the dwell table settings have been retrieved, the Edit Programmable 2010/3010 Dwell Times dialog box will be displayed.



Edit the dwell times as needed. Choose **OK** to proceed.

Note: This will not change the dwell times in the 2010/3010 instrument. In order to change dwell times in the instrument, the dwell table information must be sent back to the instrument.

Choosing **OK** will cause the Verify 2010/3010 Dwells Table Change dialog box to be displayed.



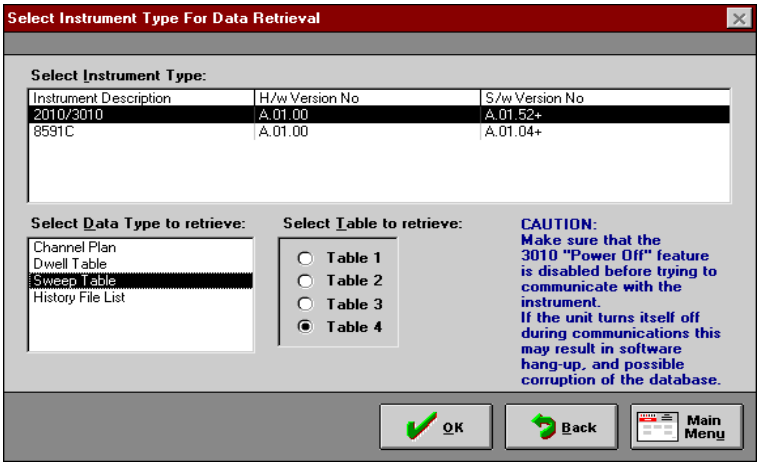
Choose **YES** to save the dwell information into the data module.

Note: With a HP CaLan 3010 version 1.5.2 it can take several minutes to transmit data to or from the instrument. To improve the transmission speed contact Hewlett-Packard to upgrade your instrument.

Retrieving Sweep Table Information

Sweep table information can be retrieved from the HP CaLan 2010/3010 instruments. The **Get...** function within the Instrument Control dialog box will retrieve the sweep table information for storage into the data module. Access to the **Get...** function can also be found through Instrument Control in the main drop-down menu.

1. Choose **Get...** to open the Select Instrument Type For Data Retrieval dialog box. The Select Instrument Type For Data Retrieval dialog box is displayed.



2. Select 2010/3010 for the instrument type.

   Selection of an instrument type will result in a list of all available data types for the instrument being displayed.

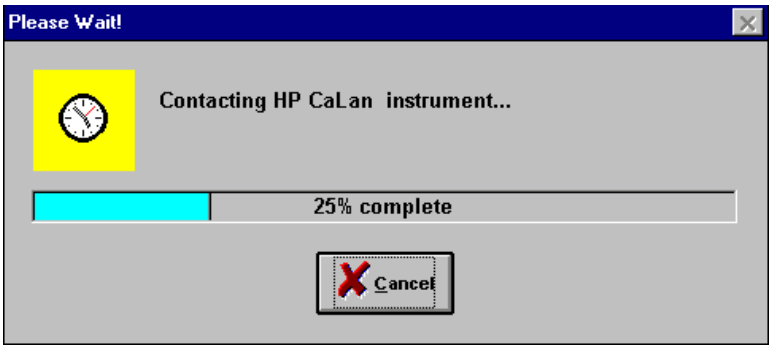
3. Select the Sweep Table for the data type you want to retrieve from the analyzer.

4. Select the table to retrieve from the instrument.

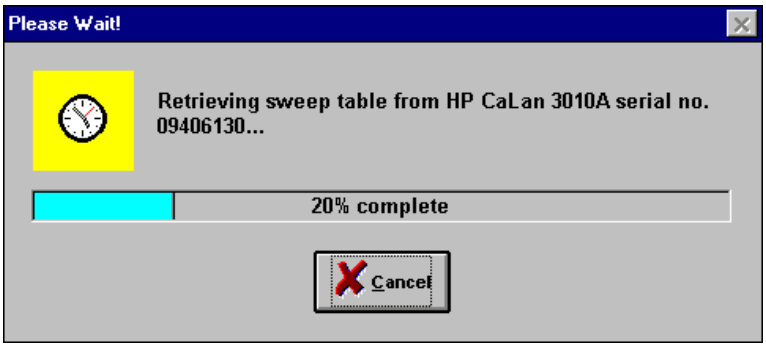
5. Choose **OK**.

This results in the Please Wait progress box being displayed. Wait while the software contacts the instrument to retrieve the data.

Note: With a HP CaLan 3010 version 1.5.2 it can take several minutes to transmit data to or from the instrument. To improve the transmission speed, contact Hewlett-Packard to upgrade your instrument.



After the instrument has been contacted, the software will then retrieve the sweep table information. Another Please Wait progress box will be displayed.

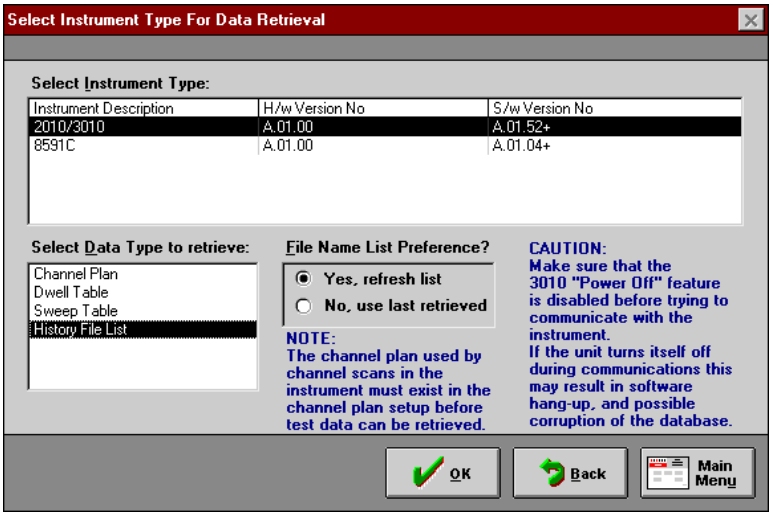


The sweep table information has been retrieved and saved into the data module.

Retrieving HP CaLan 2010/3010 History File Lists

History Files can be retrieved from the HP CaLan 2010/3010 by using the **Get...** function within the Instrument Control dialog box. Access to the **Get...** function can also be found through Instrument Control in the main drop-down menu.

1. Choose **Get...** to open the Select Instrument Type For Data Retrieval dialog box.



2. Select 2010/3010 for the instrument type.

   Selection of an instrument type will result in a list of all available data types for the instrument being displayed.

3. Select the “History File List.”

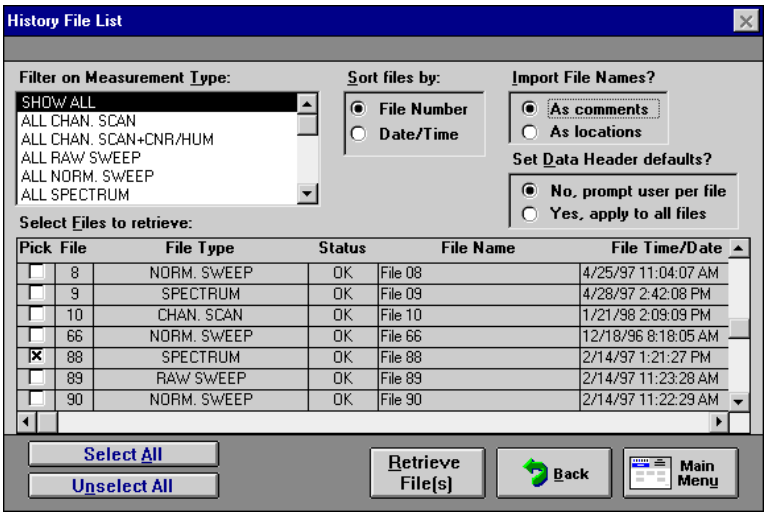
4. Select “Yes, refresh list” from “File Name List Preference?” to again query the instrument for a file list or “No, use last retrieved” to use the last file list retrieved.

   Selecting “Yes, refresh list” will get a new History File List from the instrument. Make this selection if you have not recently retrieved a list of history file names. If you have a recent list select “No, use last retrieved.”

5. Choose **OK**.

Note: With a HP CaLan 3010 version 1.5.2 it can take several minutes to transmit data to or from the instrument. To improve the transmission speed, contact Hewlett-Packard to upgrade your instrument.

This will display the History File List dialog box. In this dialog box you can filter and sort the test results. You can also modify a test point, tester and comments for each test.

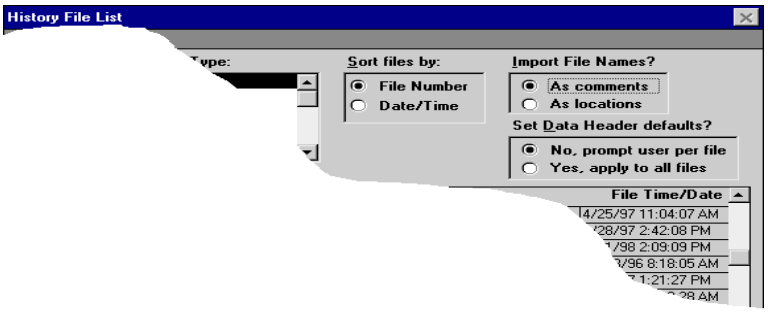


6. Choose from the “Filter on Measurement Type:” list. This will filter the tests displayed in the “Select Files to retrieve” section of the dialog box.
7. Select from “Sort files by” to sort the tests displayed in the lower section.
8. Select the files to retrieve in the lower section by clicking on the check box(es) for those file(s).

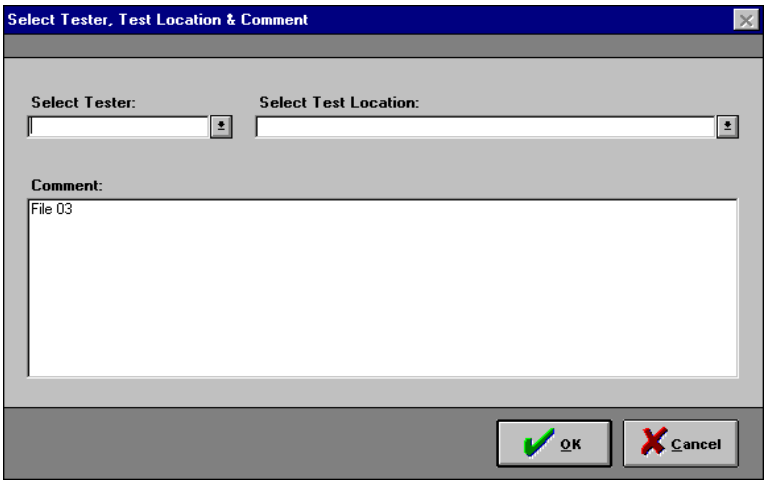
Selecting Tester, Location and Comments Field Options

At this point, you may want to group your selections by test point, tester, or comments. If a group of tests have the same tester, test point, or comments, you can select all the tests for that group and have the software apply that information automatically.

In this procedure the “History File List” data is imported from the instrument into the software data module. Part of the History File List data in the instrument is the File Name. The Import File Names? selection determines whether the file name is assigned to the Comments field or to the Location field of the data module. The "As comments" or "As locations" choices in this area assign the file name to the appropriate field.



There are three text fields to be filled in the data module through this form. They are tester, comments, and location fields. The previous step will complete either the comments or the location field with the file name. The tester field and the remaining field still need to be completed using a variation of the window shown below.



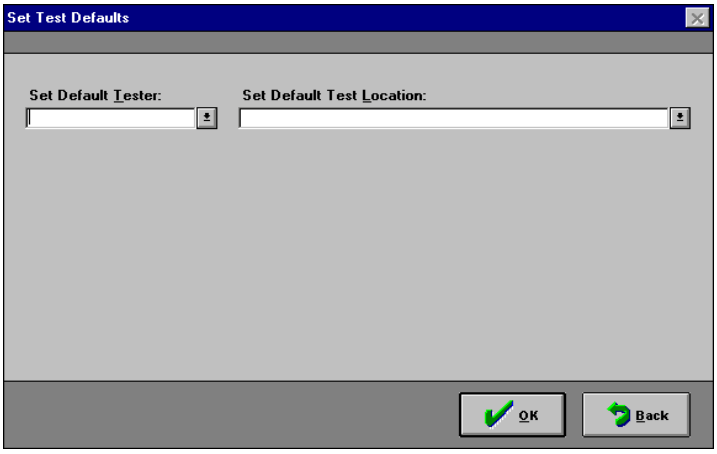
You have the opportunity to fill out the tester field and the remaining field separately for each test or let the software fill out the group automatically. If you have selected under “Set Data Header defaults?” “No, prompt user per file” a dialog box will be displayed for each test retrieved. You will need to fill out all of the fields in each dialog box for each test separately. This will give you the option of filling out the fields for each test with different information.

If the group of tests you selected have the same comments or location, you can enter that information once and have the software apply that information to all the selected files. Select “Yes, apply to all files,” and you can fill out the fields once and they will be applied to all of the selected files automatically.

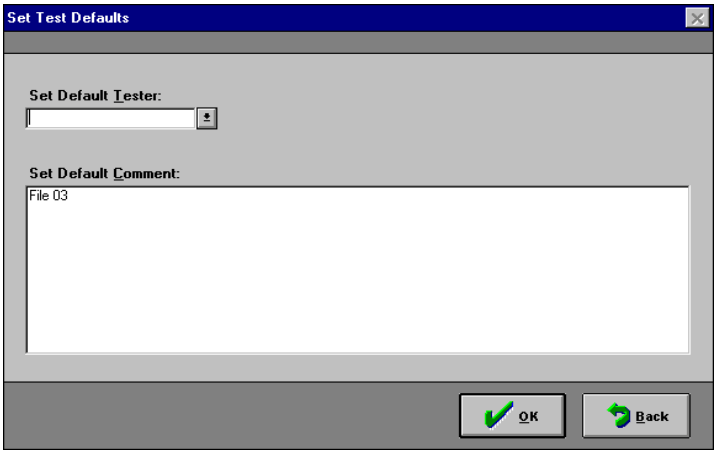
9. Select in the “Import File Names?” section to import the file names as comments or locations.
10. Select in the “Set Data Header defaults?” section to prompt user per file or apply to all files.

Click on the **Retrieve File(s)** button. Depending on your previous selections, one of the following dialog boxes will be displayed.

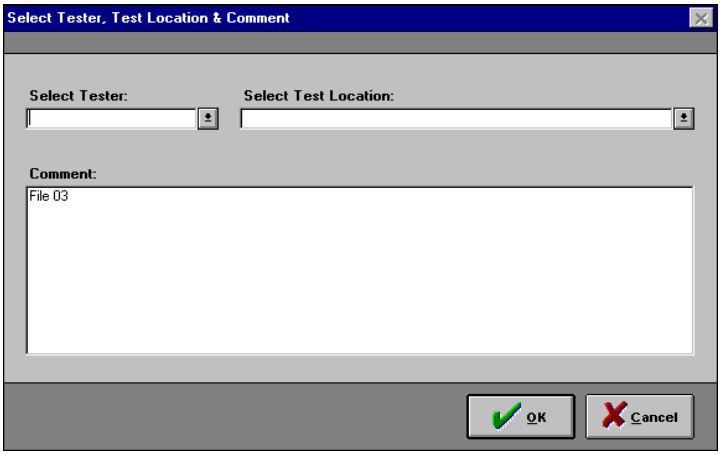
If you selected “As Comments” the comments field is filled with the History List file name. The remaining fields, tester and location need to be filled.



If you selected “As Locations” the locations field is filled with the History List file name. The remaining fields, tester and comment need to be filled.

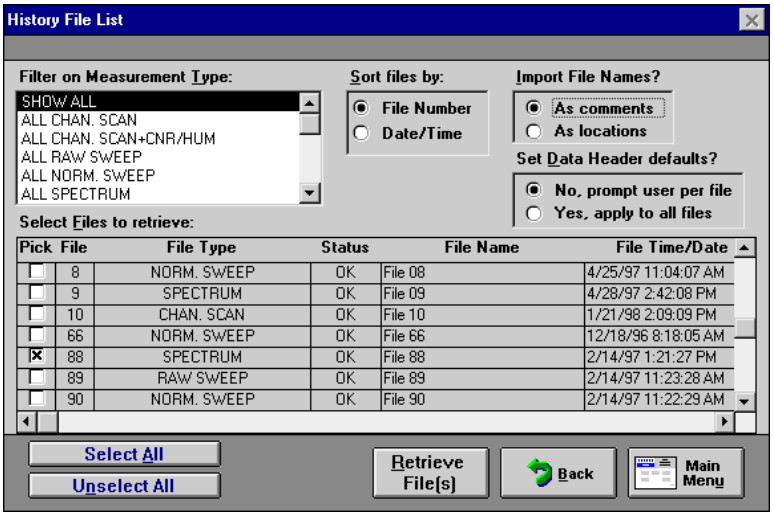


If you selected “No, prompt user per file” the following dialog box will come up for each file.



11. Fill out each field with the correct information. When you have completed each form, click **OK**.

When the forms are complete, the software will again display the History File List dialog box.



Using this method you can select a group of files to retrieve that have common testers, locations or comments and apply those fields automatically. If there are no common elements each file can be filled out separately by prompting the user for each file.

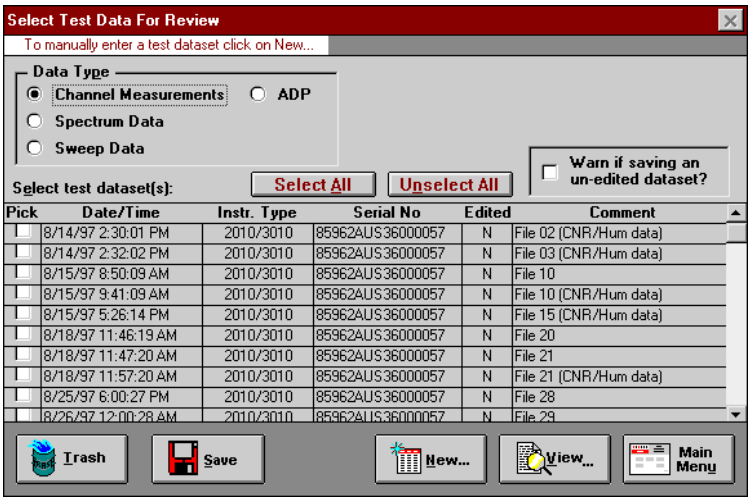
Continue the operation of selecting and retrieving files, filling out the fields in the forms, until the list is empty. When you are finished, select **Main Menu** to return to the main menu.

7

Reviewing and Editing Field Data

When test results are retrieved from the analyzers they are saved as a test dataset. Datasets are initially stored into a holding area for review, prior to saving into the permanent data module. This chapter contains information about reviewing, editing, and manually adding a test dataset while in this holding area by using Field Data Review.

Clicking on the **Field Data Review** button, located in the main menu, displays the Select Test Data for Review dialog box.



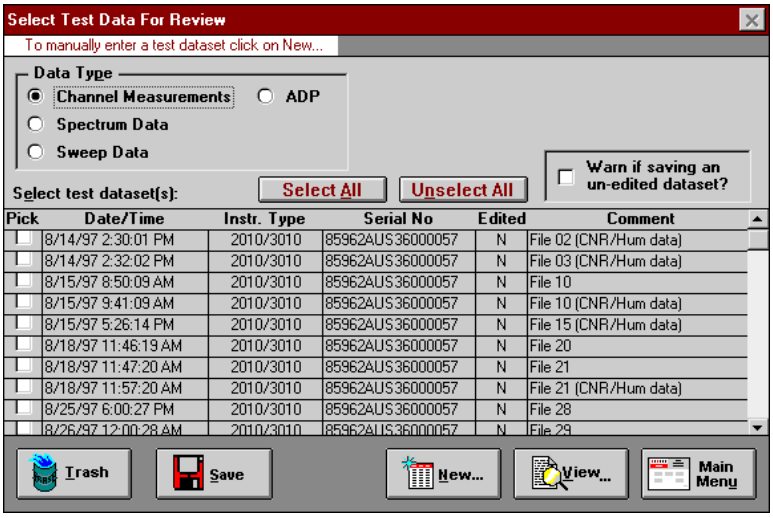
CAUTION: Selecting **Trash** deletes the selected dataset(s) permanently from the software. Be sure that you want to delete the dataset *before* you choose **Trash**.

Trash	allows you to *irretrievably* delete the selected dataset(s).
Save	saves the selected dataset(s) into the permanent data module for reports and analysis.
New	allows you to manually enter a new test dataset.
View	allows you to preview, and edit the selected dataset(s).
Main Menu	allows you to return to the main menu.
Select All or **Unselect All**	allows quick marking or unmarking of all of the datasets in the list.
Warn if saving an un-edited dataset?	Mark this check box if you want to be warned if you are saving a dataset that has not been reviewed or edited.

Selecting Test Datasets to Review and Edit

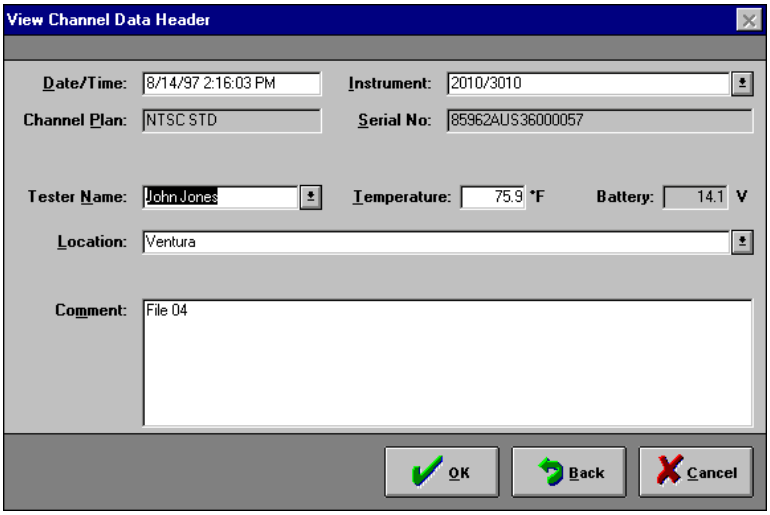
You can select one or more datasets to review or edit by performing the following steps.

1. Select the **Field Data Review** button from the main menu. The Select Test Data For Review dialog box is displayed.



2. Select the data type. Selection of the data type will determine which data set type is listed.
3. Select the test dataset(s) to review by marking the check box before the test dataset. Note that the list will be empty if there are no datasets to review. Use the **Select All** or **Unselect All** buttons to mark or unmark all datasets.
4. Select the **View** button to review the data.

After selecting the **View** button the View Channel Data Header dialog box will be displayed.

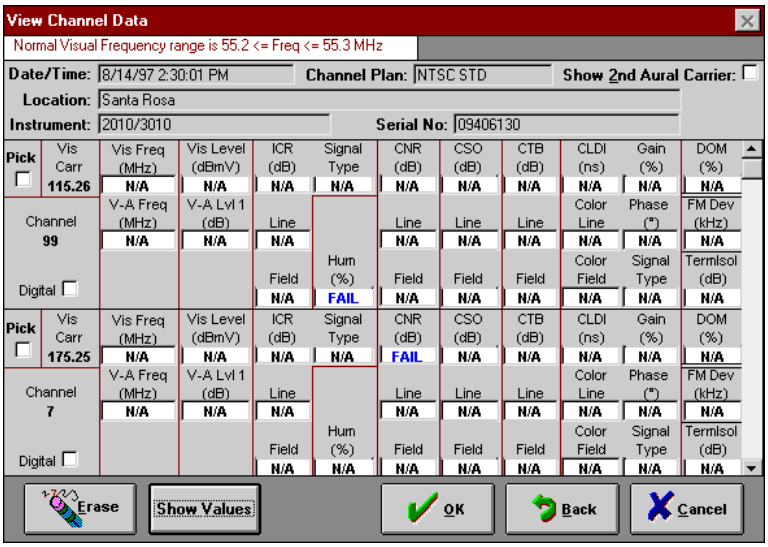


5. Review the test header information for accuracy. Selecting **OK** will display one of the following forms depending on the data type selected previously.

- If you selected Channel Measurements for the data type continue on the next page, 7-4.
- If you selected Spectrum Data for the data type continue on page 7-7.
- If you selected Sweep Data for the data type continue on page 7-9.
- If you selected ADP for the data type continue on page 7-11.

Channel Measurements

If you selected Channel Measurements, the View Channel Data form will be displayed.



Review the channel data for pass/fail status. To erase channel data, click on the check box and then click on the **Erase** button.

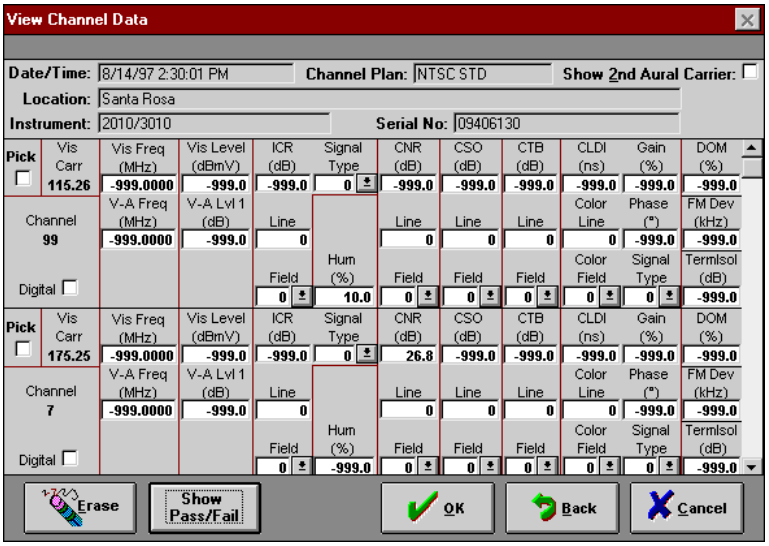
N/A	measurement not made
PASS	passes according to criteria set in valid ranges
FAIL	fails according to criteria set in valid ranges

The valid ranges setup in the software determine if the tests pass or fail. Valid ranges are definable in the software. Choose Setup, Limits, Valid Ranges from the main menu. Refer to limits in Chapter 3 for more information on setting up valid ranges.

Note: For channels marked as digital the V-A Lvl fields do not apply and will display a -999.0 or N/A. The field name will not be displayed.

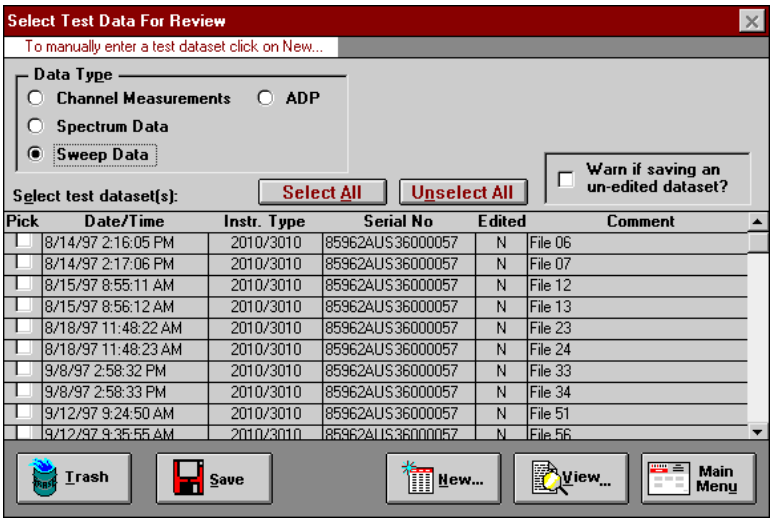
Note: Data for a second aural carrier will be shown only if the check box for that field is marked.

If you want to review or edit the data values, click on **Show Values**. The data values will be displayed. If you want to view pass/fail status, click on **Show Pass/Fail**. The pass/fail limits are set in Valid Ranges in the Setup, Limits menu. These limits are advisory only and do not affect your ability to save the dataset.



- Fields highlighted in white are editable. You can edit the channel data by clicking on the field and entering the new data. To set a test measurement value to N/A, edit the value to -999.0 (0 for a line or field entry).
- Channel data can be erased. Mark the check box to select a channel and click on the **Erase** button. The channel data will be *irretrievably* erased.
- Select the **OK** button to exit and keep any changes you have made.
- Select **Back** to go to the View Channel Data Header dialog box. Any changes you have made will not be saved.
- Select **Cancel** to go back to the Select Test Data for Review dialog box. Any changes you have made will not be saved.

If you choose **OK**, the Select Test Data for Review dialog box is again displayed.



- Select **Save** to save the marked datasets to the permanent data module.

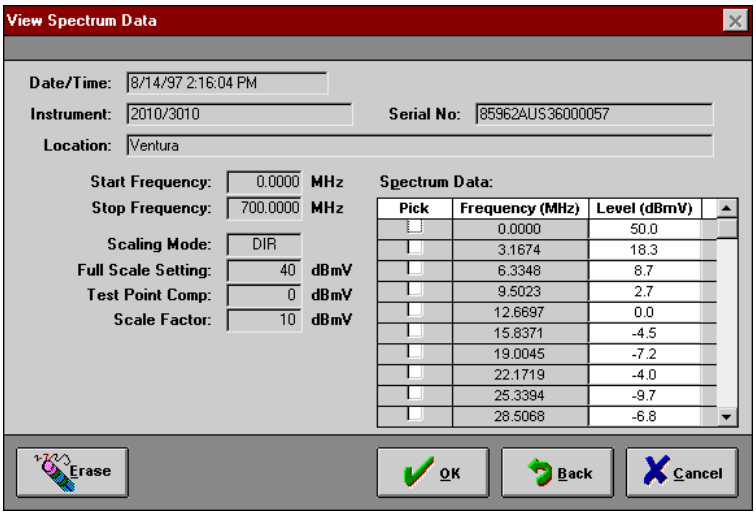
Note: If the header information for a dataset has not been viewed and is not acceptable, the view Channel Data Header screen will be displayed before the dataset is saved.

- Datasets can be erased. Click on the check box to select a dataset and then click on the **Trash** button. The dataset will be *irretrievably* erased.
- If you selected more than one test data to review, the software will return to the Select Test Data For Review dialog box. This will continue cycling through the review and edit process until all the test data has been reviewed.

Note: If you have reviewed a dataset, the edited field in the dialog box above will display "Y" instead of "N." You can save a dataset into the permanent data module without reviewing it; however, you will be warned if you attempt this. If a bad value is found while trying to save an unreviewed dataset, the software will warn you, and will not move that dataset into the permanent data module. You must review the dataset and resolve the discrepancy (usually an unrecognizable value, such as a test location) before the dataset can be saved.

Spectrum Data

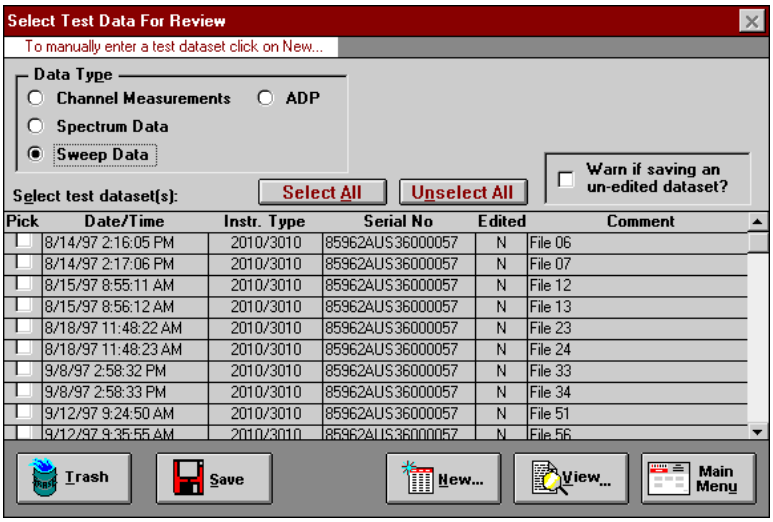
If you selected Spectrum Data, the View Spectrum Data form will be displayed.



- Fields highlighted in white are editable. You can edit the level field by clicking on the field and entering the new data.
- Spectrum data can be erased. Mark the check box to select a frequency and click on the **Erase** button. The spectrum data will be erased. The start and stop frequencies will be automatically updated as necessary.
- Select the **OK** button to exit and keep any changes you have made.
- Select **Back** to go to the View Channel Data Header dialog box. Any changes you have made will not be saved.
- Select **Cancel** to go back to the Select Test Data for Review dialog box. Any selections you have made will not be saved.

Note: Spectrum data can only be gathered with an HP CaLan 2010/3010 instrument.

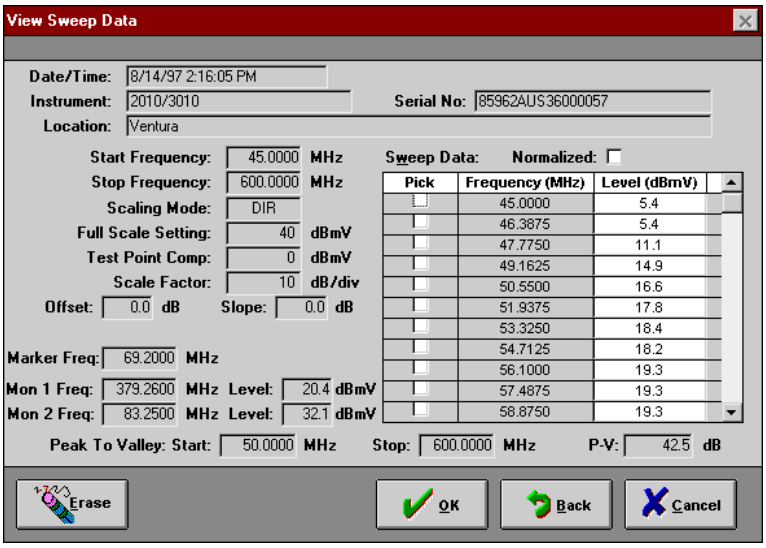
If you select **OK**, the Select Test Data for Review dialog box is again displayed.



- Select **Save** to save the marked datasets to the permanent data module.
- Datasets can be erased. Click on the check box to select a dataset and then click on the **Trash** button. The dataset will be *irretrievably* erased.
- If you selected more than one test data to review, the software will return to the Select Test Data For Review dialog box. This will continue cycling through the review and edit process until all the test data has been reviewed.

Sweep Data

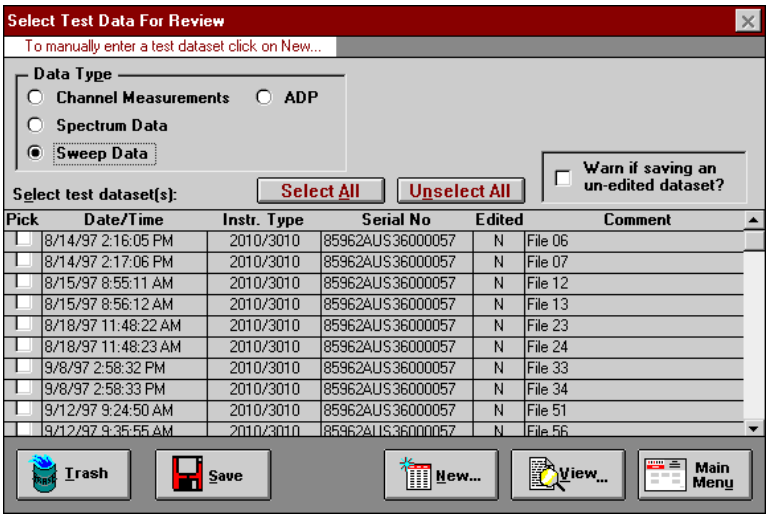
If you selected Sweep Data, the View Sweep Data form will be displayed.



- Fields highlighted in white are editable. You can edit the sweep data by clicking on the field and entering the new data.
- Sweep data can be erased. Mark the check box to select a frequency and click on the **Erase** button. The sweep data will be erased. The start and stop frequencies will be automatically updated as necessary.
- Select the **OK** button to exit and keep any changes you have made.
- Select **Back** to go to the View Channel Data Header dialog box. Any changes you have made will not be saved.
- Select **Cancel** to go back to the Select Test Data for Review dialog box. Any changes you have made will not be saved.

Note: Sweep data can currently only be gathered with an HP CaLan 2010/3010 instrument.

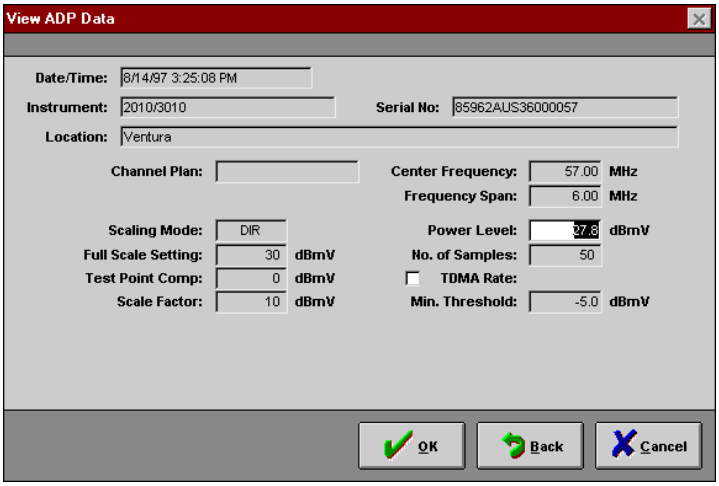
If you select **OK**, the Select Test Data for Review dialog box is again displayed.



- Select **Save** to save the marked datasets to the permanent data module.
- Datasets can be erased. Click on the check box to select a dataset and then click on the **Trash** button. The dataset will be erased.
- If you selected more than one test data to review, the software will return to the Select Test Data For Review dialog box. This will continue cycling through the review and edit process until all the selected test data has been reviewed.

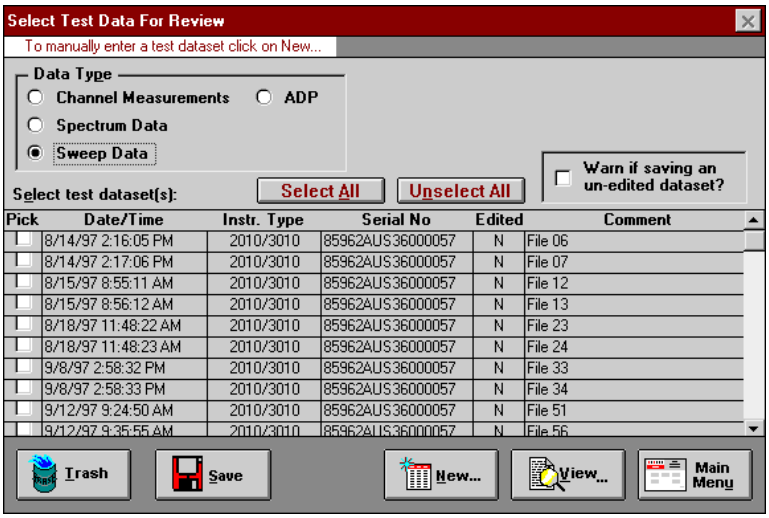
Average Digital Power (ADP)

If you selected ADP, the View ADP Data form will be displayed.



- You can edit the power level data by clicking on the field and entering the new data.
- Select the **OK** button to exit and keep any changes you have made.
- Select **Back** to go to the View Channel Data Header dialog box. Any changes you have made will not be saved.
- Select **Cancel** to go back to the Select Test Data for Review dialog box. Any changes you have made will not be saved.

If you select **OK**, the Select Test Data for Review dialog box is again displayed.



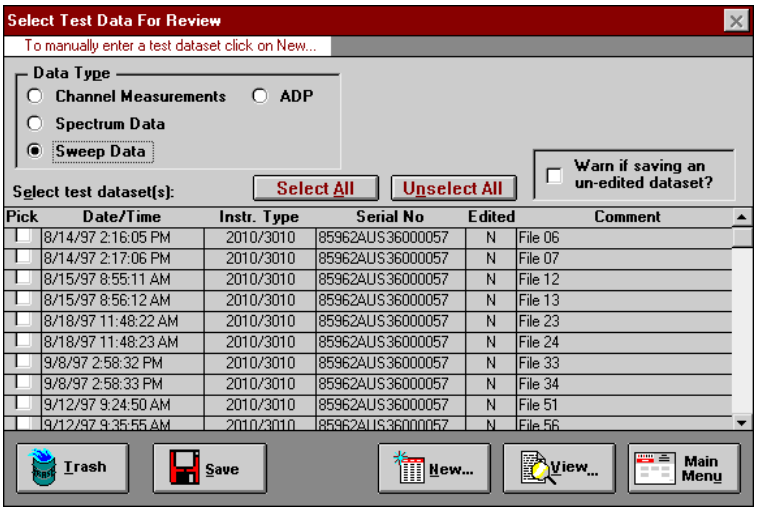
- Select **Save** to save the marked datasets to the permanent data module.
- Datasets can be erased. Click on the check box to select a dataset and then click on the **Trash** button. The dataset will be *irretrievably* erased.
- If you selected more than one test data to review, the software will return to the Select Test Data For Review dialog box. This will continue cycling through the review and edit process until all the test data has been reviewed.

Manual Data Entry

To enter data manually, perform the following steps.

1. From the main menu select **Field Data Review**.

The Select Test Data for Review dialog box will be displayed.

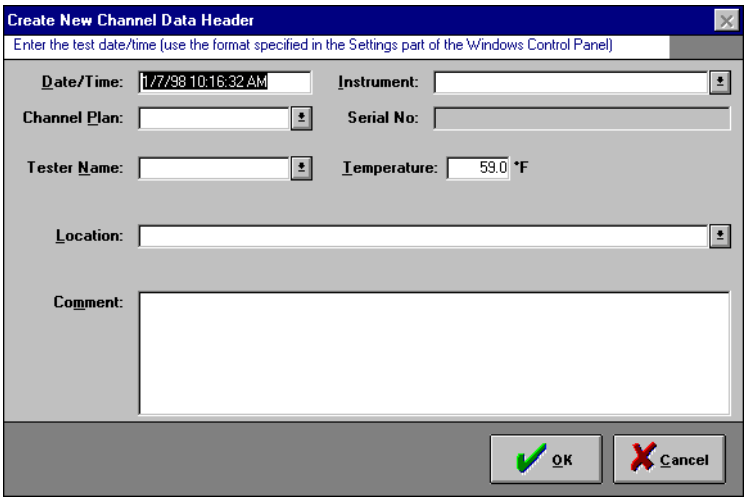


2. In the Data Type section select the data type you want to enter.
3. Click on the **New** button.

- If you selected Channel Measurements for the data type continue on the next page, 7-14.
- If you selected Spectrum Data for the data type continue on page 7-16.
- If you selected Sweep Data for the data type continue on page 7-19.
- If you selected ADP for the data type continue on page 7-22.

Channel Measurements

If you selected Channel Measurements for the data type, the Create New Channel Data Header dialog box is displayed.

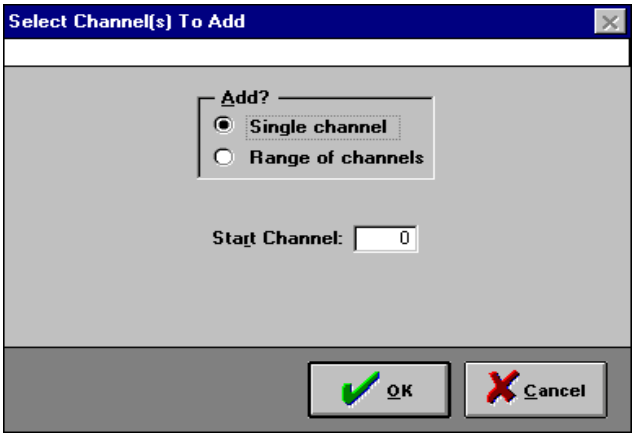


1. From the drop-down list boxes select an instrument, channel plan, tester name and location.

   Temperature and comment text fields can also be modified.

2. Click on the **OK** button.

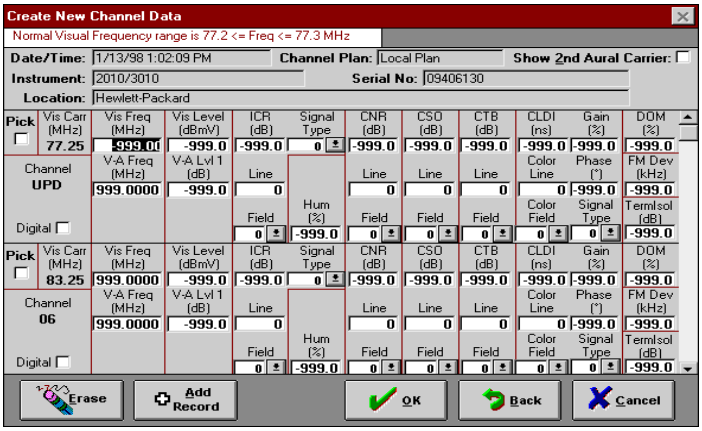
   After clicking on **OK** the Select Channel(s) To Add dialog box is displayed.



3. Select single channel or a range of channels. Enter the channel numbers into the start (and end channel) fields.

4. Click on the **OK** button.

The Create New Channel Data dialog box is displayed with data for the selected channel(s).



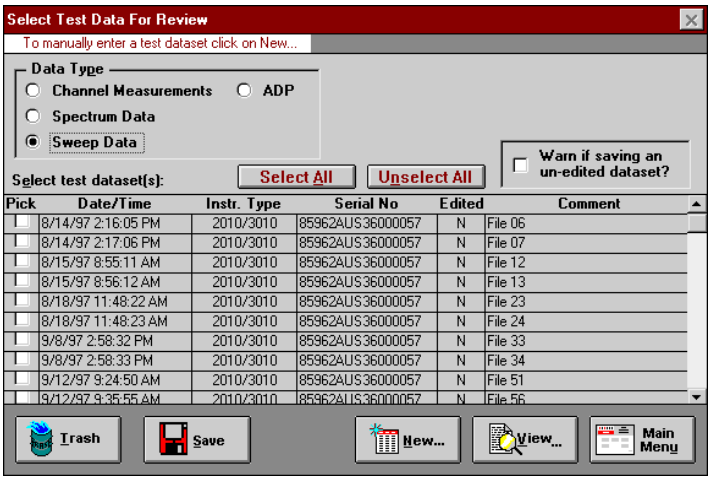
Edit the fields as needed. Each of the channels in the Create New Channel Data dialog box have several editable fields.

You can click on the **Add Record** button to add another channel or range of channels.

You can use the check box to mark a channel, then click on **Erase** to erase the channels marked with an X.

5. Click on **OK** to accept the changes and continue.

   The Select Test Data for Review dialog box is again displayed. The new dataset can now be edited, saved, or deleted.



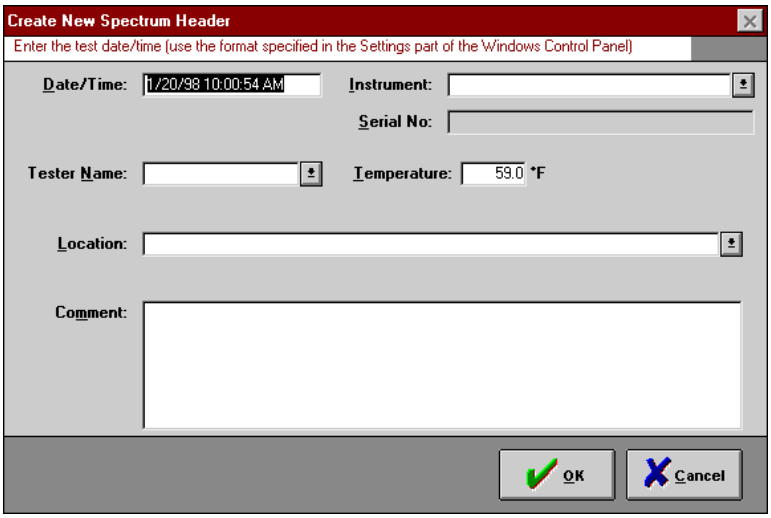
6. Click on the check box to select a dataset and then click on **Save** to save the marked dataset(s) to the permanent data module.

   Datasets can be erased. Click on the check box to select a dataset and then click on the **Trash** button. The dataset will be *irretrievably* erased.

   When all data review is complete, select the **Main Menu** button to return to the main menu.

Spectrum Data

If you selected Spectrum Data for the data type, the Create New Spectrum Header dialog box is displayed.

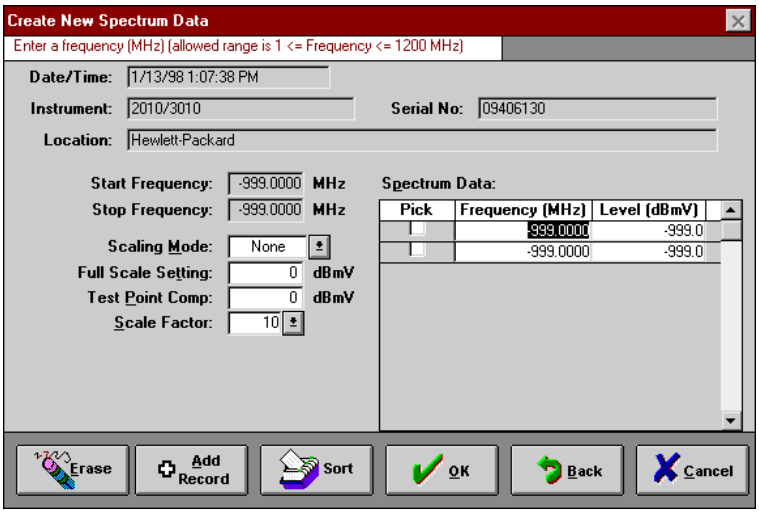


1. From the drop-down list boxes select an instrument, tester name and location.

   Temperature and comment text fields can also be modified.

2. Click on the **OK** button.

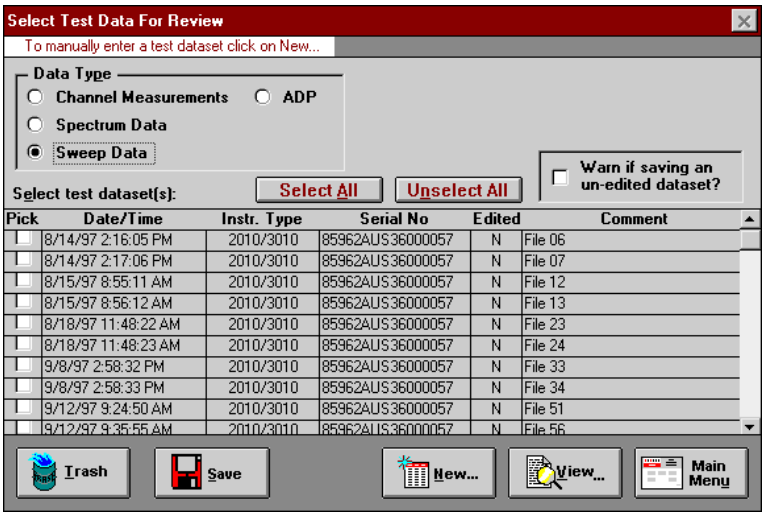
After clicking on **OK** in the Create New Spectrum Data Header dialog box, the Create New Spectrum Data dialog box is displayed.



3. Select the **Add Record** button to add a frequency.
4. Manually enter the data for frequency and level. The start and stop frequency fields are updated automatically.
   - If you want to sort the entries in ascending frequency order, choose **Sort**.
   - If you want to erase a frequency, click on the check box and then click on **Erase**.
5. Select **OK** to accept the changes and continue.

Note: The Scaling Mode, Scale Setting, Test Point Compensation, and Scale Factor settings correspond to parameters used by the 3010 for graphing data. Refer to the user's guide for your instrument for more details.

The Select Test Data for Review dialog box is again displayed, with the new dataset added to the list. It can now be edited, saved or deleted.

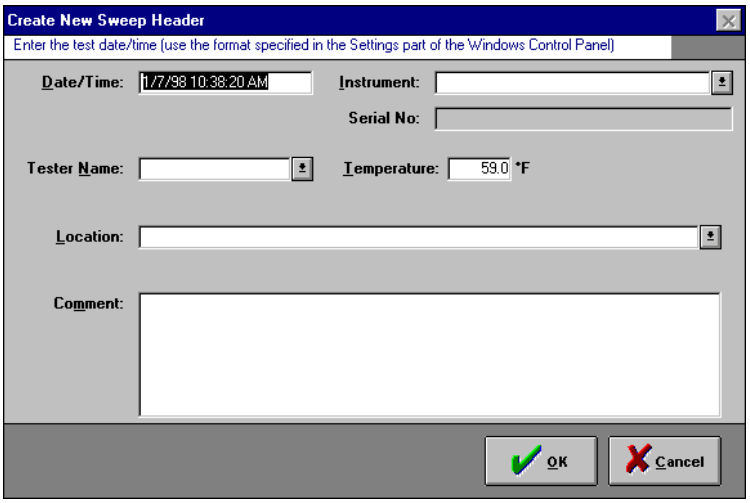


- Click on the check box to select a dataset and then click on **Save** to save the marked datasets to the permanent data module.
- Datasets can be erased. Click on the check box to select a dataset and then click on the **Trash** button. The dataset will be *irretrievably* erased.

When all data review is complete select the **Main Menu** button to return to the main menu.

Sweep Data

If you selected Sweep Data for the data type, the Create New Sweep Header dialog box is displayed.

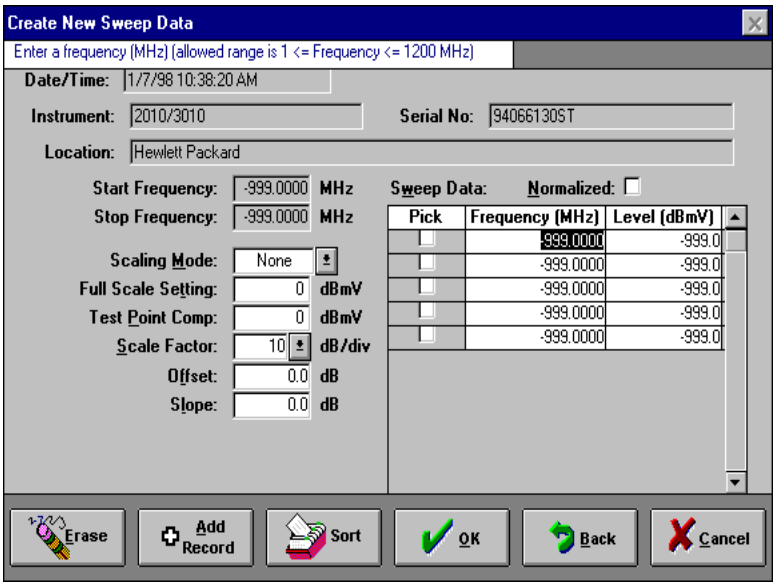


1. From the drop-down list boxes select an instrument, tester name, and location.

   Temperature and comment text fields can also be modified.

2. Click on the **OK** button to accept the entries and continue.

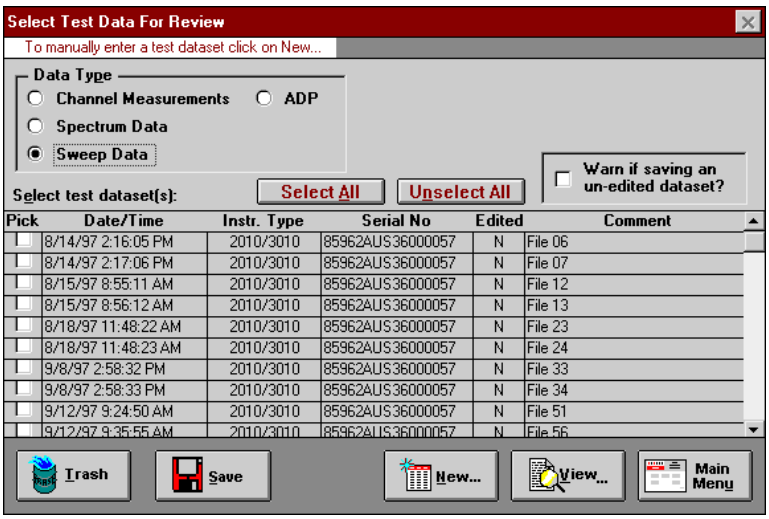
The Create New Sweep Data dialog box is displayed.



3. Select the **Add Record** button to enter a frequency.
4. Manually enter the data for frequency and level. The start and stop frequency fields are updated automatically.
5. Click on the Normalized check box if you are entering a normalized dataset.
   - If you want to sort the entries in ascending frequency order, choose Sort.
   - If you want to erase a frequency, click on the check box and then click on **Erase**.
6. Select **OK** to accept the changes and continue.

Note: The Scaling Mode, Scale Setting, Test Point Compensation, and Scale Factor settings correspond to parameters used by the HP CaLan 3010 for graphing data. Refer to the user's guide for your instrument for more details.

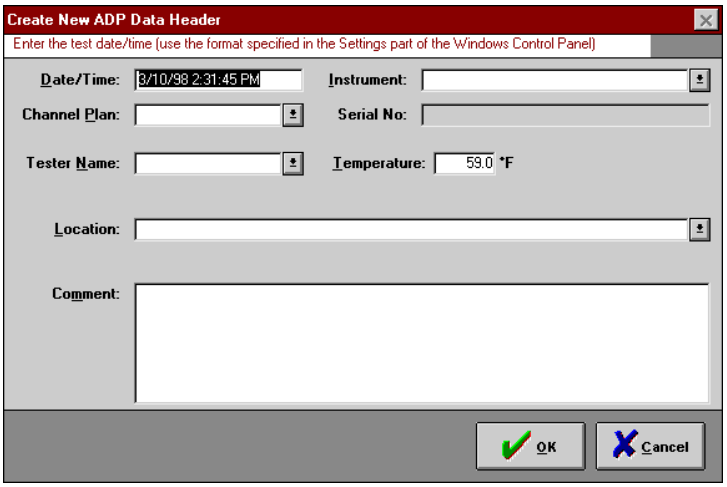
The Select Test Data for Review dialog box is again displayed, with the new dataset added to the list. It can now be edited, saved or deleted.



- Click on the check box to select a dataset and then click on **Save** to save the marked datasets to the permanent data module.
- Datasets can be erased. Click on the check box to select a dataset and then click on the **Trash** button. The dataset will be *irretrievably* erased.

Average Digital Power (ADP)

If you selected ADP for the data type, the Create New ADP Header dialog box is displayed.



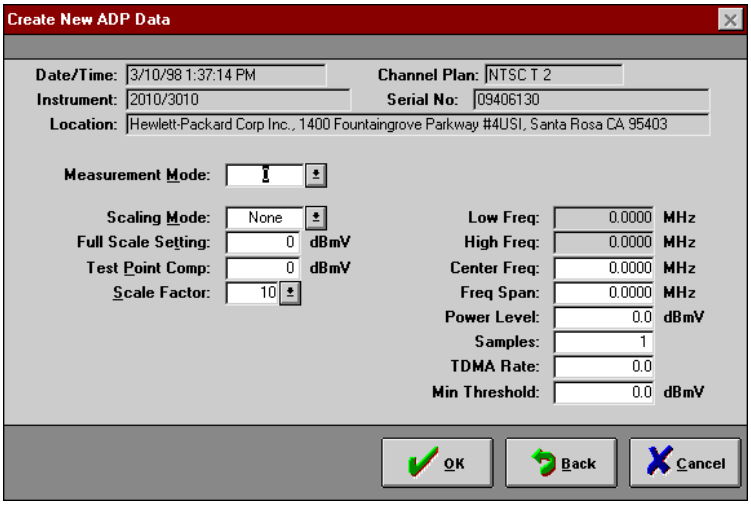
1. From the drop-down list boxes select an instrument, tester name, and location.

   Temperature and comment text fields can also be modified.

2. Click on the **OK** button to accept the entries and continue.

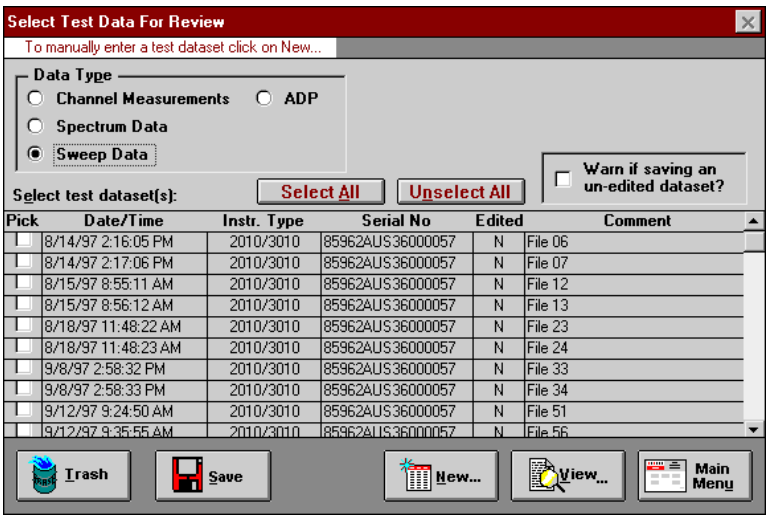
Note: Only use a channel plan that has digital channels.

The Create New ADP Data dialog box is displayed.



3. Manually enter the ADP data.
4. Select **OK** to accept the changes and continue.

The Select Test Data for Review dialog box is again displayed, with the new dataset added to the list. It can now be edited, saved or deleted.



- Click on the check box to select a dataset and then click on **Save** to save the marked datasets to the permanent data module.
- Datasets can be erased. Click on the check box to select a dataset and then click on the **Trash** button. The dataset will be *irretrievably* erased.

Entering Data From Other Instruments

The HP CaLan 85921B software will input test data from other instruments including non-HP cable test instruments. Use the following procedure to enter information from one of these instruments.

1. Select **Setup** from the main menu.
2. Select **Instrument** and **New**.
3. When creating the instrument, use the serial number field to name the device as well as enter the serial number.

Continue to setup the instrument as outlined in chapter 3 “Getting Started.” Choose the instrument type according to the test data you are trying to manually input. Use the following chart to determine which instrument performs the test data for your input.

For test data...	**Use instrument...**
digital power levels, ICR, analog signal levels, carrier frequencies, carrier-to-noise, color, FM deviation, terminal isolation hum, CSO, CTB, depth-of-modulation	HP CaLan 8591C
spectrum scans, sweep data	HP CaLan 2010/3010

Use the steps outlined on page 7-13 to manually enter the data for the instrument.

8

Analyzing Data

This chapter will describe how to select, edit and present the test data by selecting **Data Analysis**.

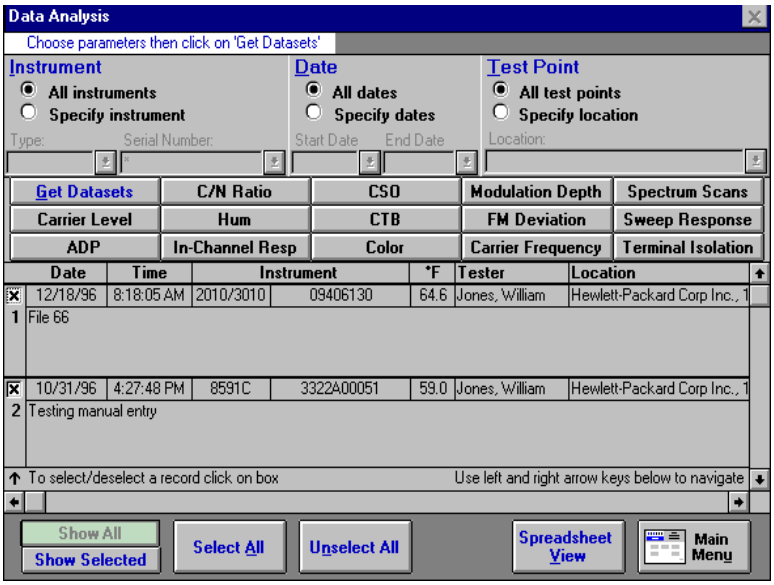
In this chapter you will learn how to do the following:

- Review and select datasets
- Edit data
- Generate reports
- Export data
- Archive data
- Delete dataset
- Delete test measurements
- Sort datasets
- Graph data

Selecting the **Data Analysis** button located in the main menu opens the Data Analysis dialog box.

Note: A *test measurement* is the type of test (for example CSO, CTB and carrier level) that has been taken. A *dataset* is a set of selected test measurements taken by a specific instrument at a specific time and location.

Data Analysis Overview



In the data module are datasets that contain sets of test measurements. In the Data Analysis form there are three levels for selecting the test measurements for use in reports, graphs and so forth.

Initially you must make a selection from the Instrument, Date and Location section. Next, clicking on the Get Datasets button will get the datasets based on those selections and display them in the lower window. Selections can be made from this display. Finally, clicking on the test measurements (CSO, CTB and so forth) will allow you to view and modify the selected test measurements, individually for each test. See the following pages for more detailed information.

Selections made in Get Datasets create the initial default selections for the test measurements. To change the settings in any test measurement group, first select that measurement. Then further refine the selections by using the check boxes in that test measurement group.

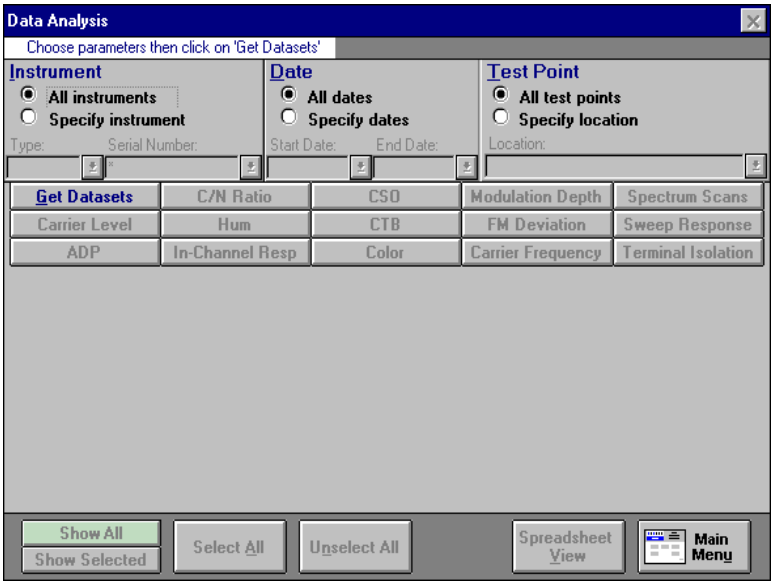
Note: Once a test measurement group is opened, or included in a composite report, the selections in that group will no longer be affected by dataset selection changes in the Get Datasets selection.

Note: All test measurement selections will be reset when you change the Instrument, Date and Location choices.

Review and Select Datasets

You can review and select specific datasets to use in reports, exports and graphs by performing the following steps.

1. Select **Data** **Analysis** from the main menu. The Data Analysis dialog box is displayed.



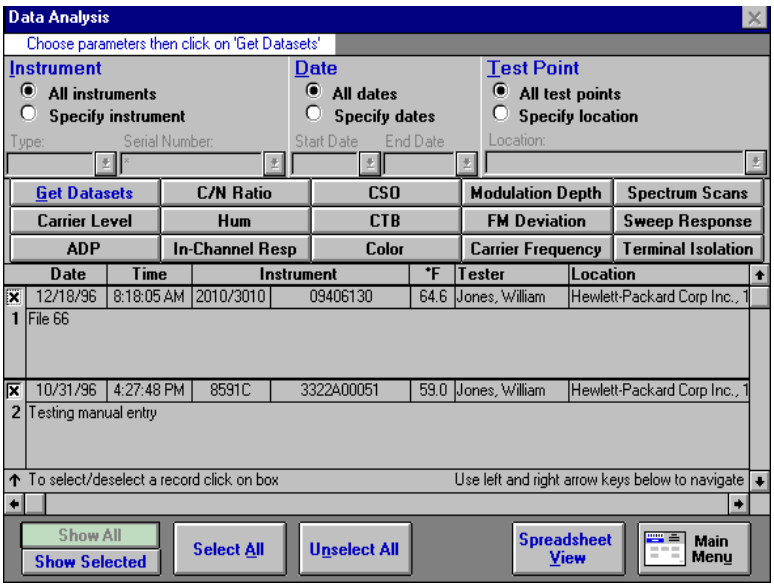
2. Choose the dataset parameters to use.

   When you choose to specify an instrument, test point or date, the drop-down lists will become available for selecting the specific instrument, location and dates from which data has been collected.

3. Select the **Get Datasets** button.

   When the **Get Datasets** button is used, the list of datasets will appear in the lower window. Select the datasets to use by scrolling through the list and marking an "X" in the box in the first column. Use the **Select All** or **Unselect All** button to select or unselect all datasets.

   The **Show Selected** (only) button will simplify the viewing of the data by hiding data that is not selected. Deselecting data while in this viewing mode, will cause the data to be recalculated and hide the newly deselected data.



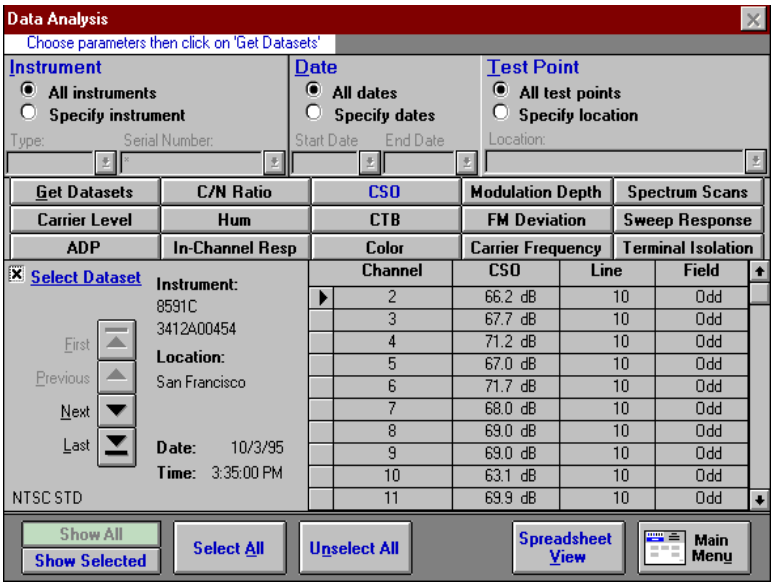
Note: If you select a dataset in the Get Datasets section, it will automatically be selected when a measurement section is first viewed. Once a dataset has been viewed in a measurement section it will no longer be affected by selection changes in the Get Datasets section. Selections in the measurement section do not affect selections in the Get Datasets section.

Caution! Whenever one of the instrument, date or test point parameters is changed, you will have to start over from step three. Any selections made will be lost.

Note: An asterisk "*" in the serial number field indicates all serial numbers for that instrument type will be included.

4. Review and select which measurements to use.

   After choosing **Get Datasets**, the test measurement buttons will become highlighted and available. After choosing a test measurement button, you may scroll through the test measurements and review the data. You may now select or deselect the specific test measurement dataset by marking an "X" in the check box next to Select Datasets. You can scroll through the different datasets by using the **Previous** and **Next** buttons. Also, you can advance to the end or beginning of the list, by using the **First** and **Last** buttons.



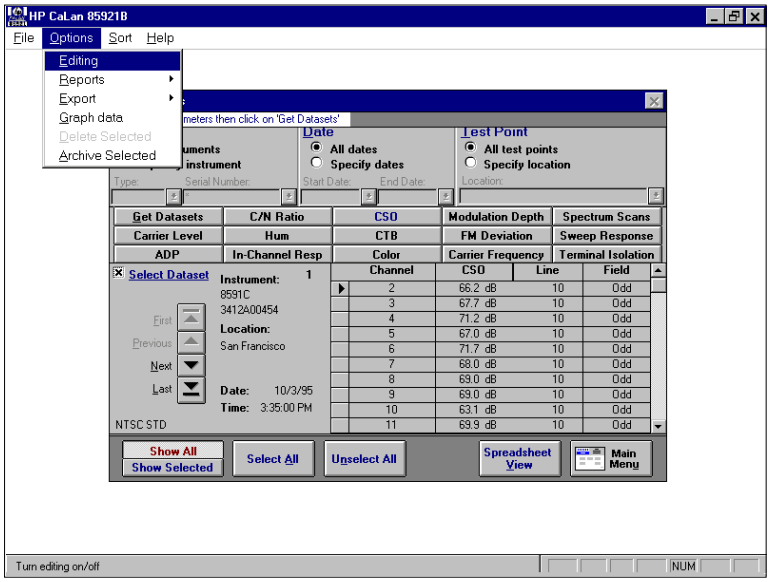
You are now ready to work with the data selected. By choosing Options from the drop-down menu, you can edit the data, present the data in reports or graphs, export the data for use in another software package, archive and/or delete datasets.

Note: Selecting the **Spreadsheet View** button will give a more global view of the datasets.

Edit Data

Some of the test measurements and notes in the Data Analysis dialog box can be edited by the user. In order to access the edit feature the option must be turned on by **System Admin** in the Setup menu. See the section in Chapter 3 on system administration for more information on making editing available. You can edit the data in the Data Analysis dialog box by performing the following steps.

1. From the main menu select **Data Analysis**.
2. Select the datasets you wish to edit by using the steps in the Review and Select Datasets section page 8-3.
3. Select Editing under Options from the pull down menu. Type in the password if the software asks for it.

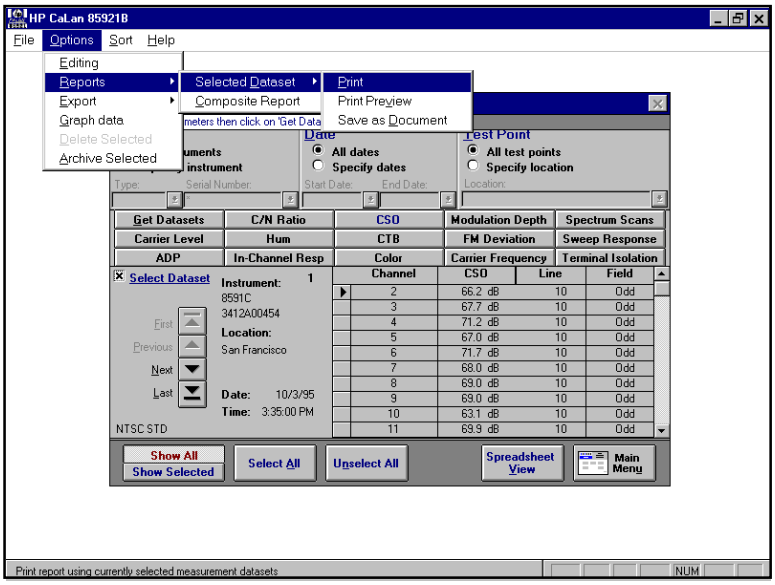


All the fields in the Data Analysis dialog box that are editable will turn white and you will be able to highlight and edit the data in those fields as well as delete selected measurements or datasets.

Generate Reports

You can create reports by performing the following steps from within the Data Analysis dialog box.

1. Select the datasets you wish to report on by using the steps in the Review and Select Datasets section page 8-3.
2. From the main pull down menu, select Options and then Reports.



3. Choose the type of report from the menu.

   Choose Selected Dataset to report on all the datasets marked with an “X” for the test measurement currently selected (for example, CSO). In the example above, this would print a report on CSO for all locations, instruments and dates, for all datasets selected with an “X.”

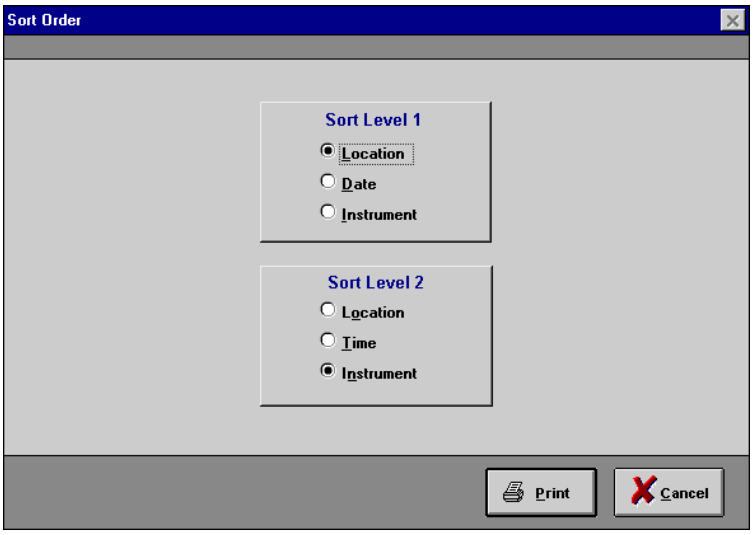
   Choose Composite Report for a report with several test measurements included. For more information on Composite Reports see page 8-8.

4. Choose Print to print the reports on a printer.

   Choose Print Preview to view the report before printing on a printer.

   Choose Save as Document to save the report to file in a Rich Text Format (.RTF) for use in a word processor.

The Sort Order dialog box is displayed.

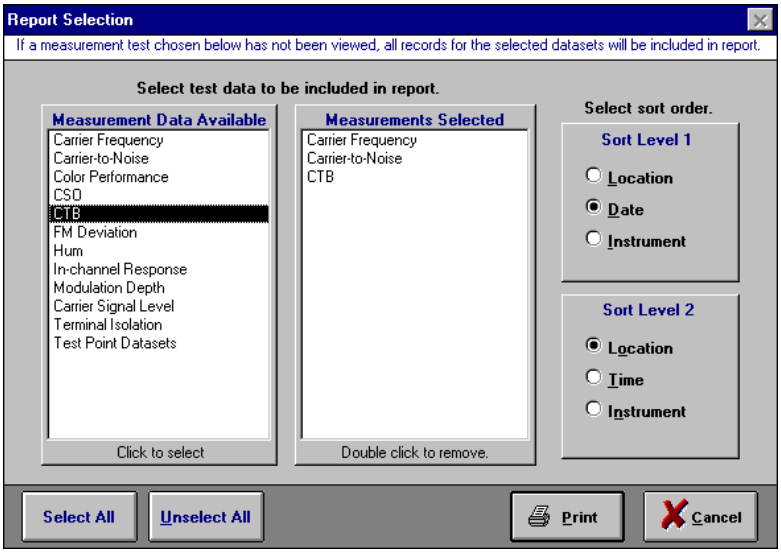


5. Choose a sorting sequence. The dialog box gives you two levels of sorting. Sort Level 1 provides you with a top level sort, while Sort Level 2 provides sorting within that sorted level.

Click on **Save**, **Preview** or **Print** to accept this form (the button displayed will depend on your previous selection to print, preview or save as document). The software will open a dialog box for saving, display a preview of the report or print the report depending on your previous selection.

Composite Report

When the Composite Report is chosen, the Report Selection dialog box is displayed. In this report, multiple test measurements (for example, CSO, CTB, Signal Level) can be shown on the same report for the datasets selected. In the previous example, this would print a report for all test points, instruments and dates, for the measurements selected in the Report Selection box below.



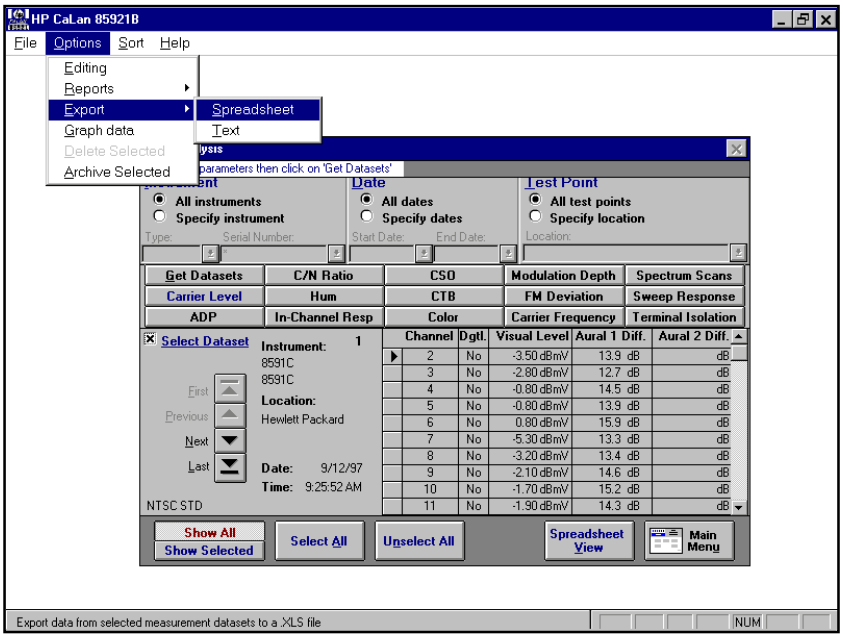
1. Click on an item in the Measurement Data Available column. This will include that Measurement Data in the Measurement Selected column and in the report.
2. Choose a sorting sequence for the reports by making a selection in Sort Level 1 and Sort Level 2.

Note: Test data can be sorted and subsorted by location, date and instrument by selecting the Sort Level buttons.

Export Data

You can export data by performing the following steps from within the Data Analysis dialog box.

1. Select the datasets you wish to report on by using the steps in the Review and Select Datasets section page 8-3.
2. From the main pull down menu, select Options and then Export.



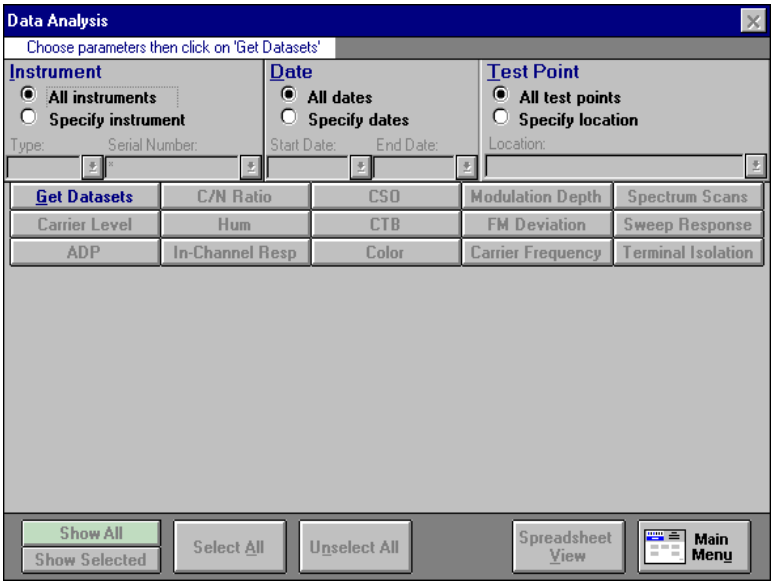
You can select an Excel spreadsheet or a text file format. Data will be exported on all the datasets selected with an “X” for the test measurement currently selected (for example, CSO). In the example above, this would export data on CSO for all instruments, dates, and test points for all datasets that are selected with an “X.”

Note: Reports can be saved in a Rich Text File (.RTF) for use in a word processor. See page 8-7 for more information.

Archiving Datasets

You can archive selected datasets by performing the following steps.

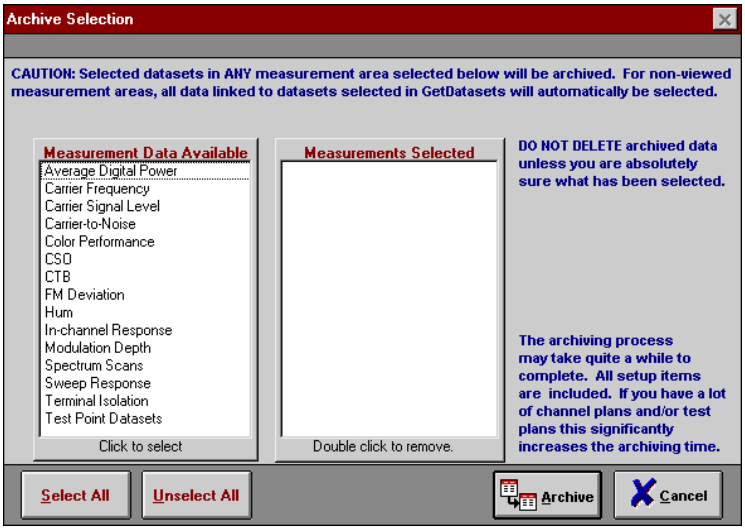
1. Select **Data** **Analysis** from the main menu. The Data Analysis dialog box is displayed.



2. Select the datasets to archive as described in Review and Select Datasets page 8-3.

3. After the dataset selections have been made, from the main menu, select Options and then Archive Selected.

   The Archive Selection dialog box will be displayed.

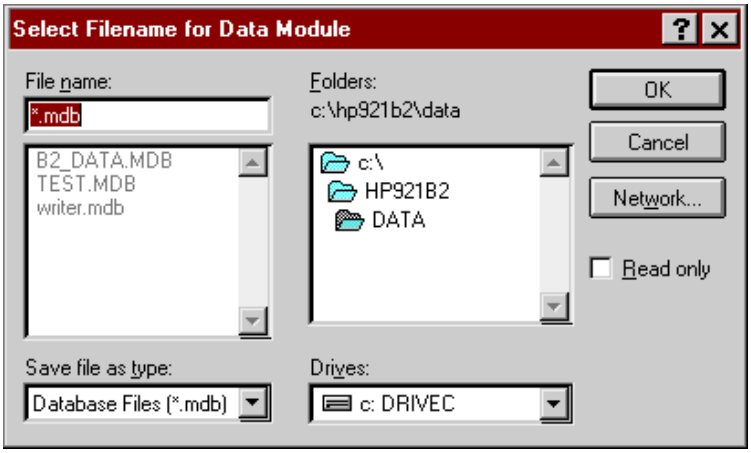


4. Choose what to archive from the Measurement Data Available list by clicking on the selection.

The selections you have made will be displayed in the Measurements Selected list. Measurement areas already viewed will already appear in the Measurement Selected box.

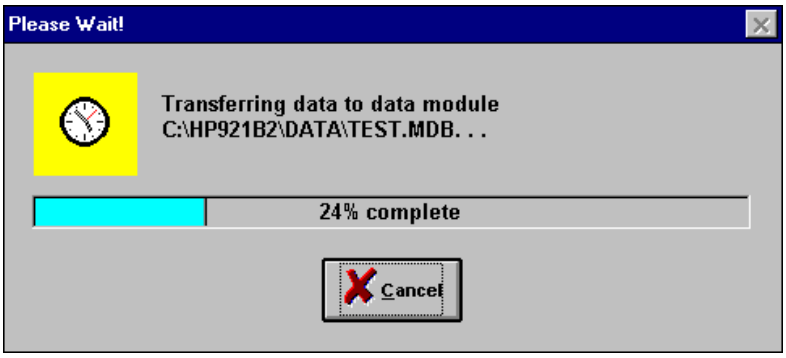
Note: Remember that all datasets selected under Get Datasets (the default is Select All) will be selected for archiving. Any selections made within the test measurements will also be selected for archiving. All of these selections will be deleted from the data module if you choose to delete after the archive.

When you have finished selecting, click on **Archive**. The Select Filename for Data Module dialog box will be displayed.



5. Select the location and filename for the archive file.
6. When you have made your selections click on **OK**.

The Please Wait progress box will be displayed.



Note: The archiving process can take a long time depending on the amount of data you are archiving.

If data editing is turned on in Setup, a dialog box will be displayed.

7. If you want to permanently delete the data that was archived from the current data module click on **Yes**. If you do not want to delete the data select **No**.

Caution!: Remember that all datasets selected under Get Datasets (the default is Select All) will be selected for deletion.

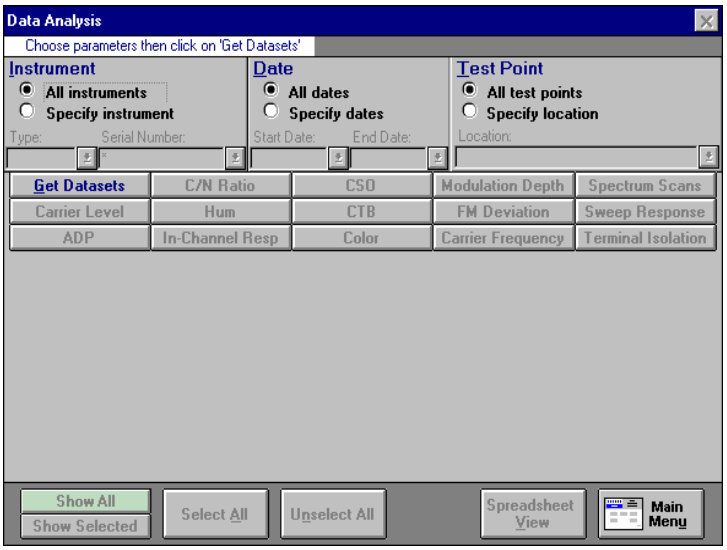
The archiving process is now complete.

Deleting Datasets

If editing is turned on you can delete selected test measurements or entire datasets by performing the following steps.

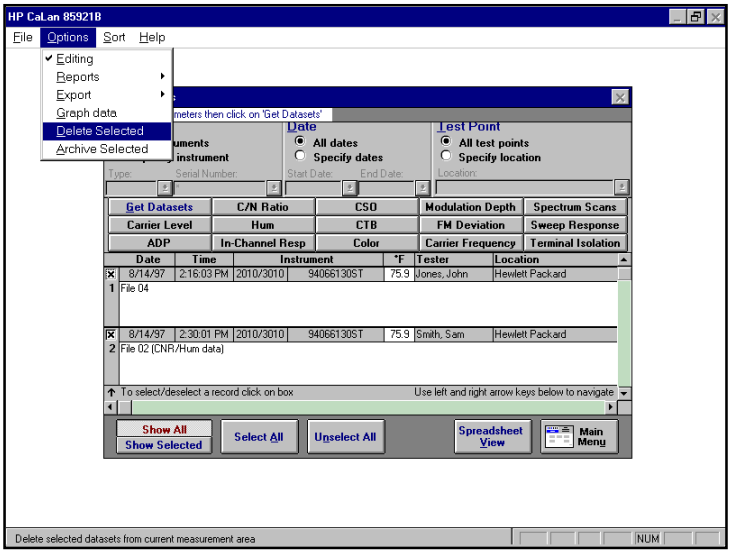
Note: The editing feature must be turned on in order to use this delete feature. Control over editing can be found in the System Admininstration section in chapter 3, and through the Options menu. Both selections must be turned on.

1. Select **Data** **Analysis** from the main menu. The Data Analysis dialog box is displayed.



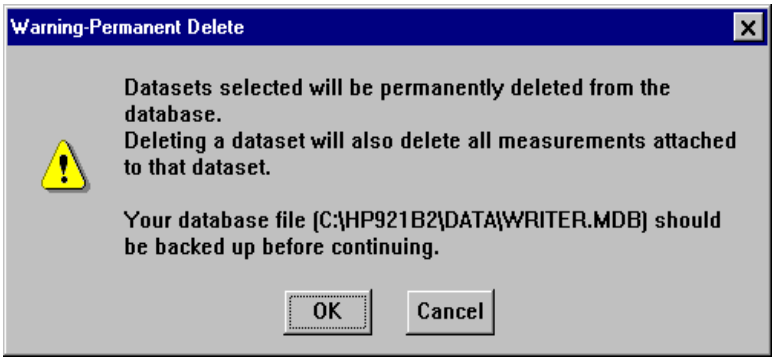
2. Select the datasets to delete as described in Review and Select Datasets page 8-3.
3. Select Options and then Delete Selected from the main menu.

The following dialog box is displayed.



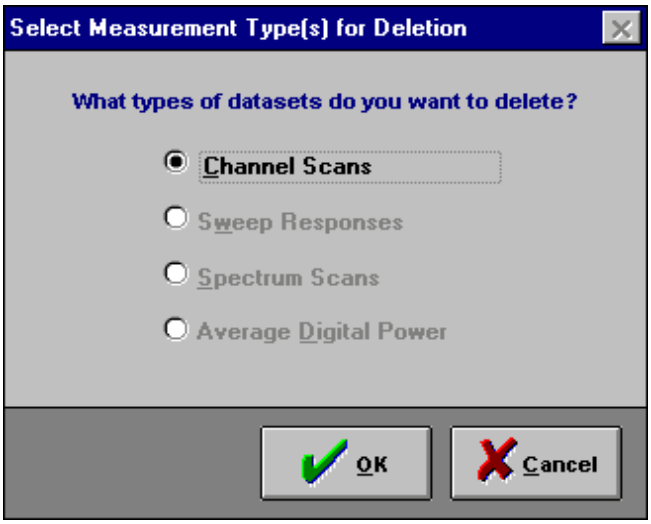
Only datasets form the currently viewed measurement area will be deleted.

The following dialog box will be displayed.



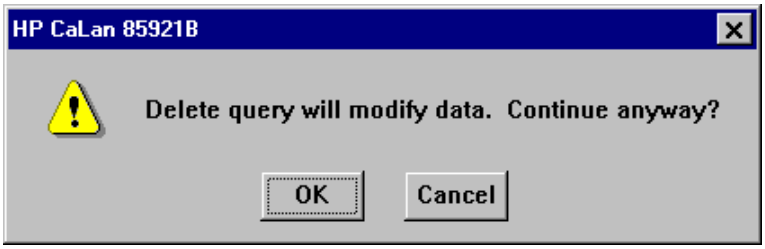
4. Click on **OK**. If you have not backed up your data module and want to before making deletions click on **Cancel**.

The Select Measurement Type(s) for Deletion dialog box is displayed.



5. Use the radio buttons to choose the type of dataset(s) you want to delete from the selections displayed.

   This will give a warning that you are about to modify your data.



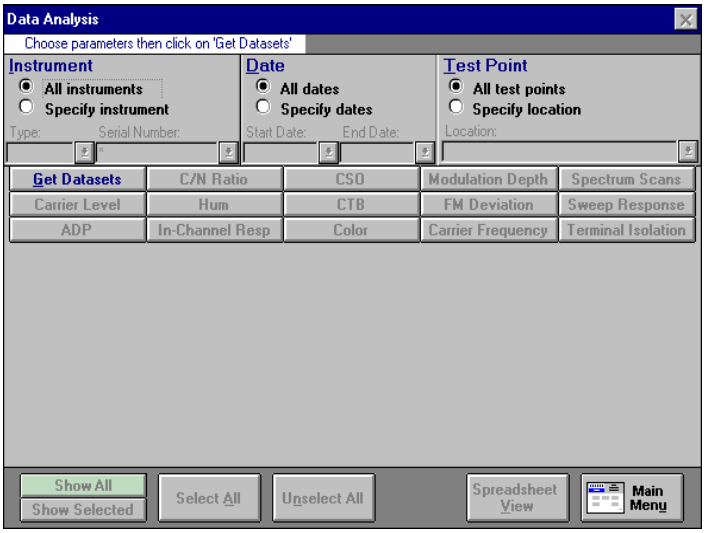
6. Click on **OK** to continue with the deletion. Click on **Cancel** to abort the deletion.

The deletion process is now complete.

Deleting Test Measurements

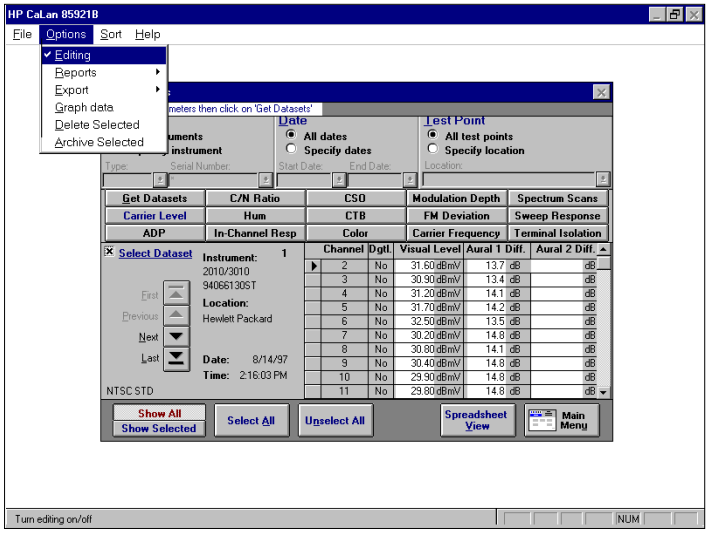
Test measurements records within a dataset can be deleted. To delete test measurement records perform the following steps.

1. Select **Data** **Analysis** from the main menu. The Data Analysis dialog box is displayed.



2. Select the measurements from which you want to delete individual measurements.

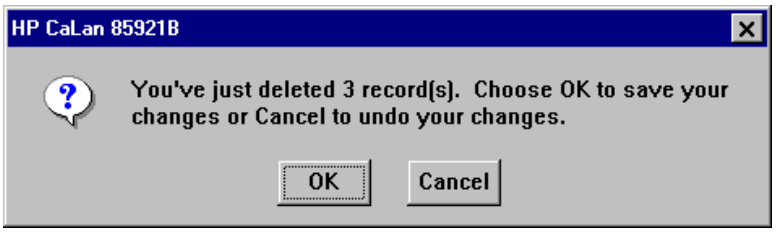
3. To delete test measurement records editing is turned on in the Options menu.



4. Select the channel to delete by clicking on the box in the column next to the channels. You can select several channels by dragging the mouse over several adjacent boxes.

5. After you have made your selection press the delete key on the keyboard to delete the test measurement channels.

   The following dialog box is displayed.

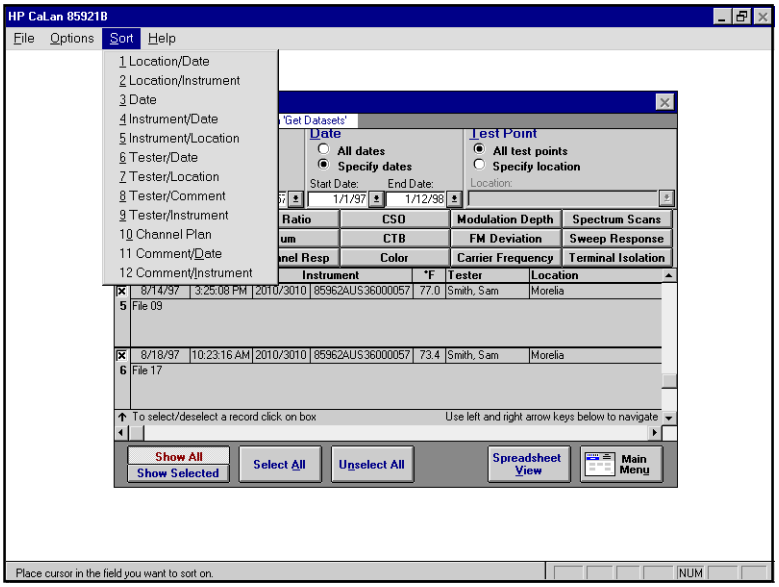


Click on **OK** to save your changes. The records you deleted will be permanently removed from the data module. Clicking on **Cancel** will not remove the records from the data module.

Sorting Datasets

You can sort your view of the datasets, according to the selections found in the Sort pull down menu. For some of the selections there are two sorting criteria. For example, Location/Date will sort first by location. Then within each location, datasets will be “subsorted” by date. Perform the following steps to sort the datasets.

1. Select Data Analysis from the main menu. The Data Analysis dialog box will appear.

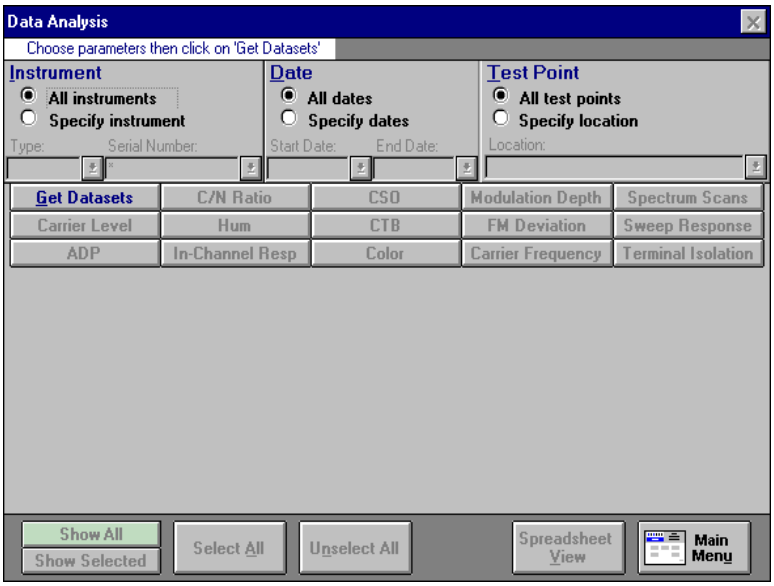


2. Select the datasets you want to sort by using the steps in “Review and Select Datasets” on page 8-3.
3. From the pull down menu select Sort.
4. Choose the sort criteria.

Graphing Data

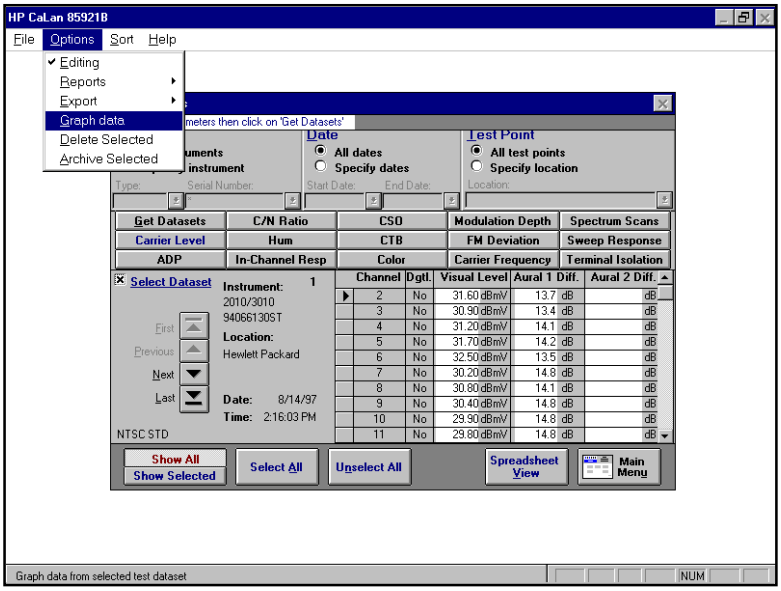
Some of the data found in Data Analysis can be represented in a graphical format. To graph test results from Spectrum Scans, Sweep Response and Carrier Level measurements, perform the following steps.

1. From main menu select Data Analysis. The Data Analysis dialog box is displayed.



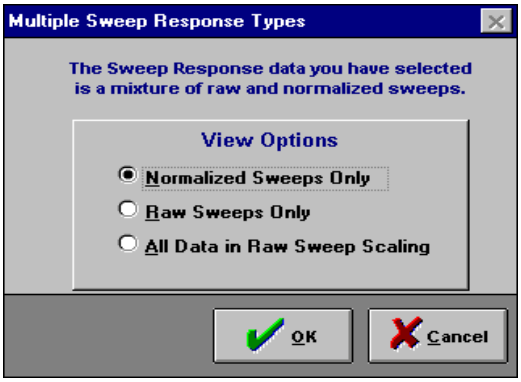
2. Select the datasets you want to graph by using the steps in “Review and Select Datasets” on page 8-3.
3. Select Spectrum Scan, Sweep Response or Carrier Level from the test measurement buttons. The software provides graphs for these test measurements only.

4. From the drop-down menu select Options, Graph data.



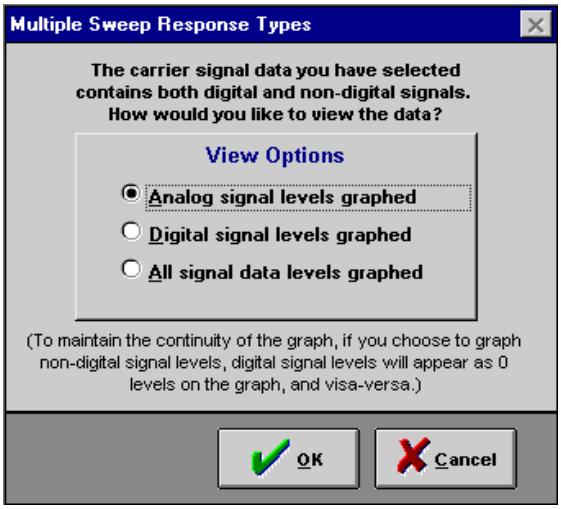
Sweep Response

If you selected Sweep Response and have a mixture of raw and normalized sweep data a Multiple Sweep Response Types dialog box is displayed.



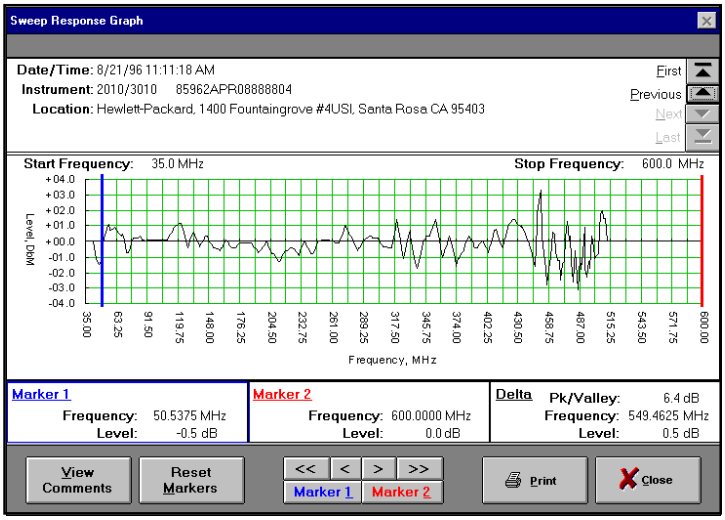
- Selecting Normalized Sweeps Only will limit your graphs, reports and text output to the normalized sweep data within the selected datasets.
- Selecting Raw Sweeps Only will limit your graphs, reports and text output to the raw sweeps data within the selected datasets.
- Selecting All Data in Raw Sweep Scaling will combine the data and graph it in the raw sweep scale.

Carrier Level



- Selecting Analog signal levels will limit your graphs and reports to the analog signal level data within the selected datasets.
- Selecting Digital signal levels will limit your graphs and reports to the digital signal levels data within the selected datasets.
- Selecting All signal data levels graphed will combine the data and graph it.

Next the graphic display window will be displayed.



4. Use the Previous ▲ and Next ▼ arrow buttons to scroll through the test measurements. The First ⏫ and Last ⏬ buttons will move you to the first and last datasets in the selected group. Arrow buttons will gray when the end of the test measurements have been reached.

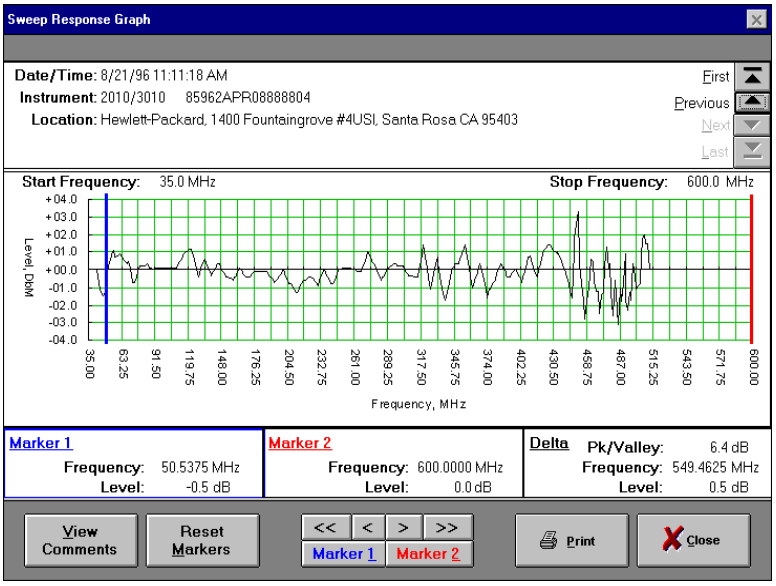
Setting Markers

There are two markers that can be set on the graph to help show information at specific points. Also the difference (delta) of those measurements between the markers for some measurements is calculated and displayed. To set the marker locations, follow one of these steps:

- Select **Marker 1** or **Marker 2**. Place the mouse cursor on the desired location on the graph and click. The marker will move to that location.

  or

- Select **Marker 1** or **Marker 2**. Click on the arrow buttons. The single arrows [>] move small increments while the double arrows [>>] will move large increments.



The display in the lower window shows information for the specific datapoint represented by the markers. Delta in the lower window displays information on the difference between the markers.

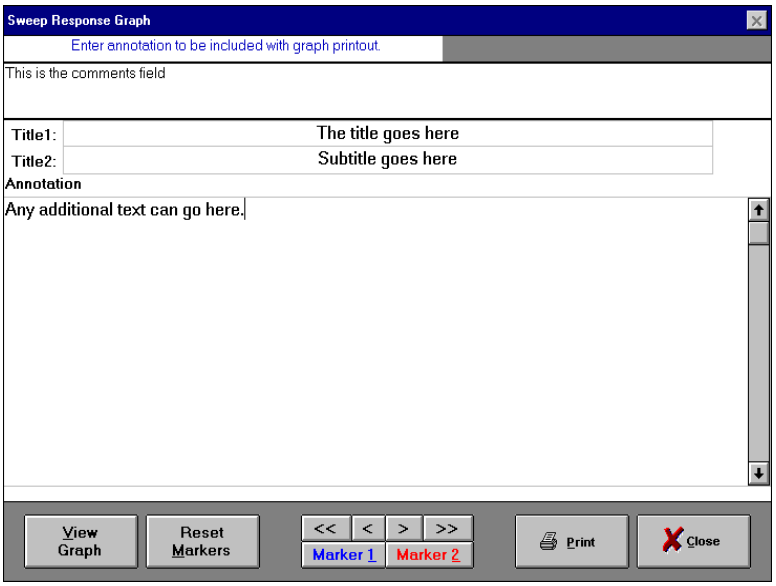
Select the **Reset Markers** button to return the markers to their original locations.

Note: Markers will not appear if there is only one data point or all data points are the same value.

Titles, Comments and Annotations

Titles, comments and annotations can be included with the graph. Titles and annotations are entered directly, while the comments come from the dataset information. To enter information into the title or annotation fields, perform the following steps.

1. Select the **View Comments** button from the lower part of the graph window. The Comments form is displayed.



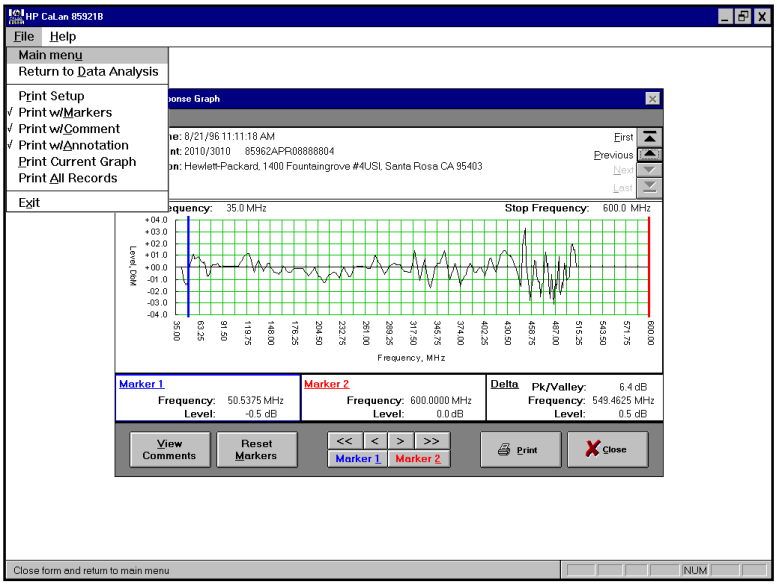
2. Enter information into the fields.

Note: The comment field can be edited through the Data Analysis dialog box.

Printing Graphical Reports

Graphical reports can be printed with or without markers, comments or annotations. Also, you have the choice of printing the displayed graph or all of the graphs in the current group. If you print all the graphs with the annotation and comments selected, you will get one graph per page. If you graph all the graphs with annotations unselected, you will get three graphs per page. Marker values can only be printed with the current graph.

To print the graphical reports choose File from the drop-down menu. The print options are displayed.



9

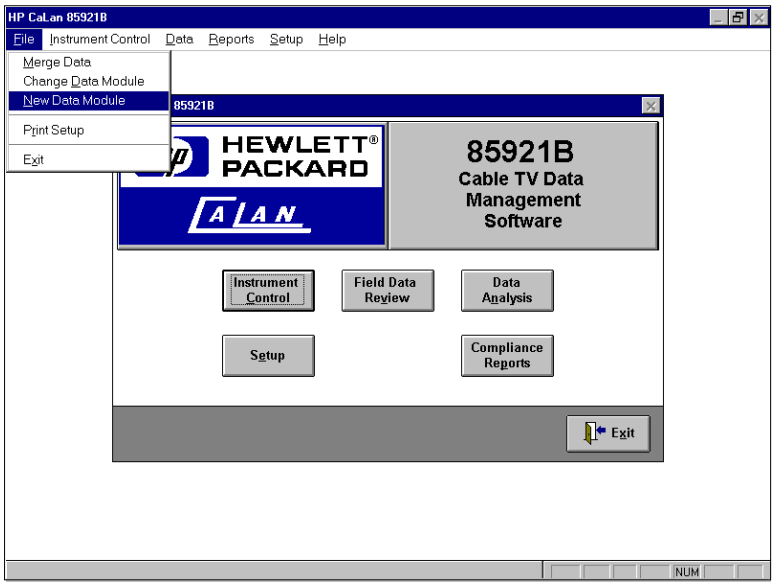
Choosing the Data Module

The HP CaLan 85921B will allow the user to create a new data module, select a different data module to use, as well as merge data modules together. This chapter contains information about creating, selecting or merging data modules.

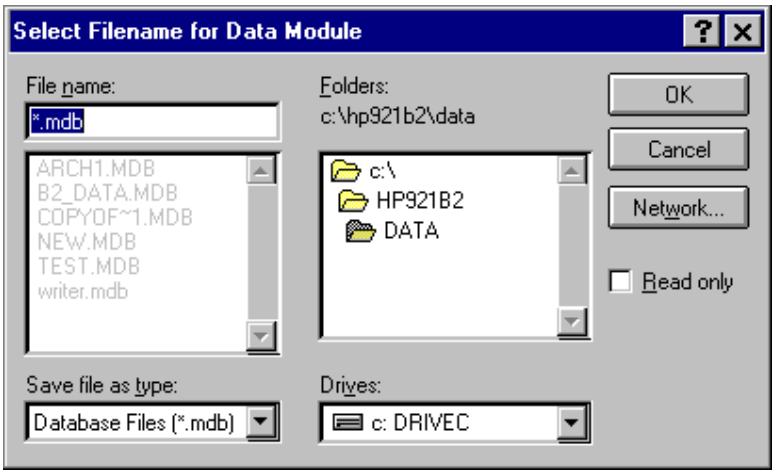
Creating a New Data Module

You can create a new, empty data module by performing the following steps.

1. Choose File from the main menu and then choose New Data Module.

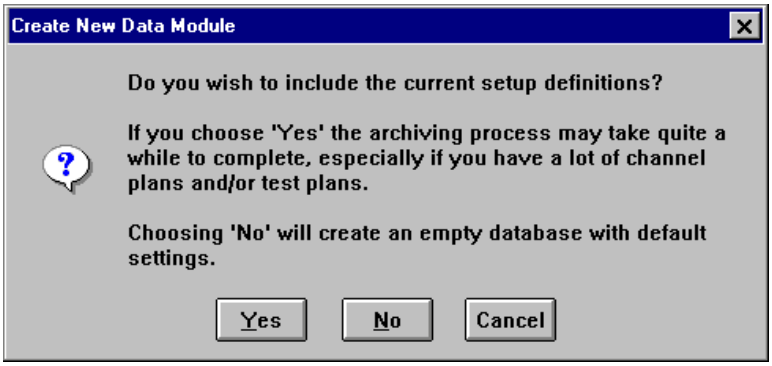


The Select Filename for Data Module dialog box is displayed.



Enter a filename and location for the new data module. When you are finished, click on **OK**.

This will cause the Create New Data Module dialog box to be displayed.

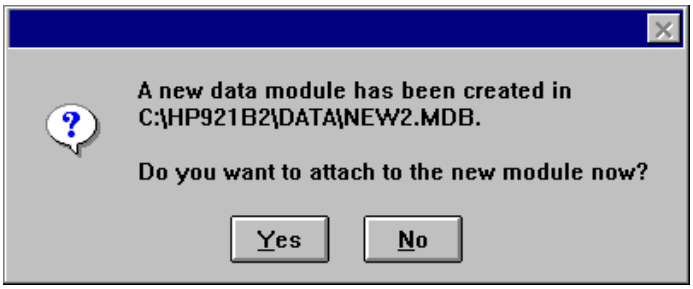


The Create New Data Module dialog box will give you the opportunity to transfer the current setup definitions to the newly-created data module. If you choose **Yes** the current setup definitions (testers, instruments, test points, and so forth) will be saved into the new data module. Selecting **No** will not transfer these settings to the new data module.

Note: If you select Yes, the process could take several minutes.

2. Choose **Yes** or **No** depending on if you want the current setup information in your new data module.

After the file has been created, the following dialog box will be displayed.



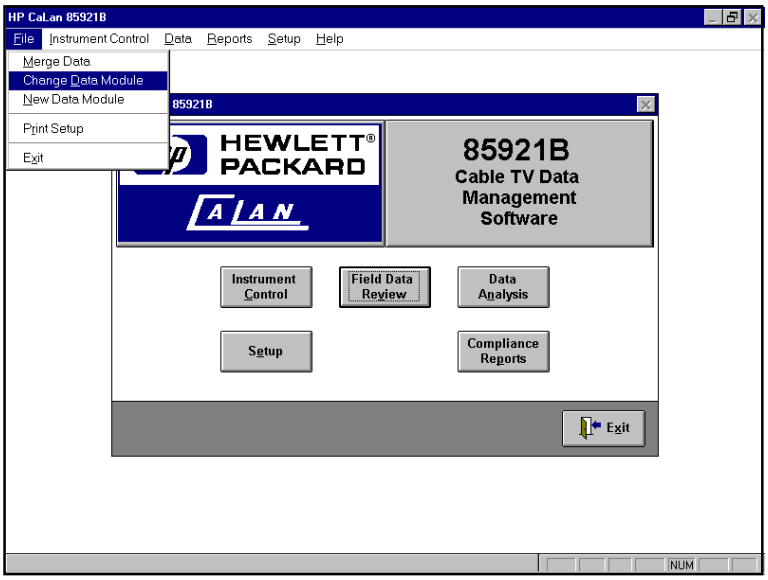
3. Choose **Yes** if you want to use the new data module. If you want to continue to use the current data module choose **No**.

The process is complete and the software returns to the Main Menu.

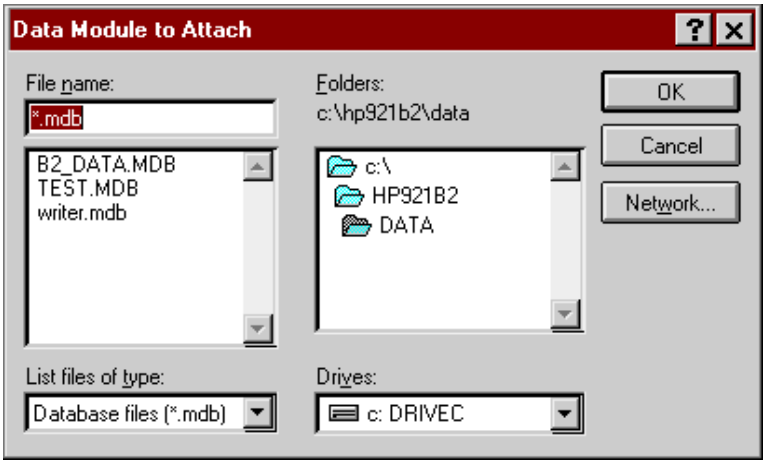
Changing the Data Module

You can change to a different data module by performing the following steps.

1. Choose File from the main menu and then choose Change Data Module.



The Data Module to Attach dialog box is displayed.



2. Select the data module file you want to use. When you have made your selection, click on **OK**.

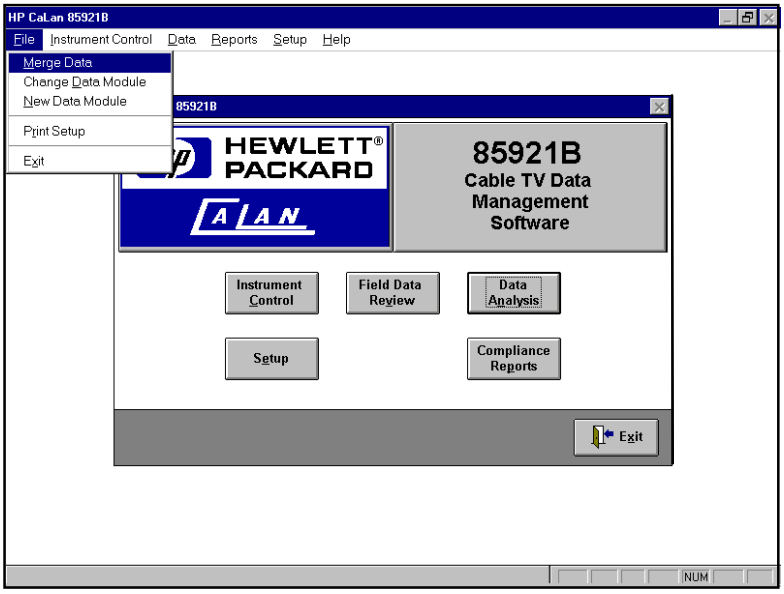
The software will load the selected data module.

Note: Do not attempt to run the data module from a floppy disk. The software was not designed to do this. If you need a data module from a floppy, copy the data module from the floppy into your data directory where the other data modules are stored.

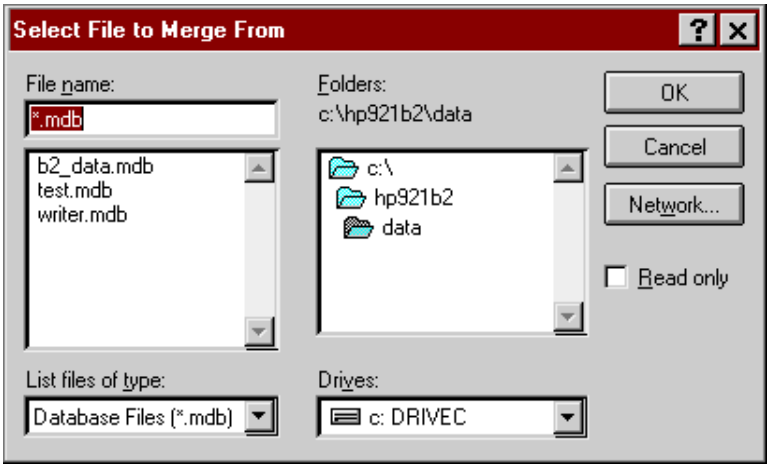
Merging Data Modules

You can merge the data from another data module, or a previous version, into the current data module by performing the following steps. It is recommended to collect all of your current instrument data prior to performing a merge. Also, any newly merged channel plans should be sent to the instrument after the merge.

1. From the main menu, select File and then select Merge Data.

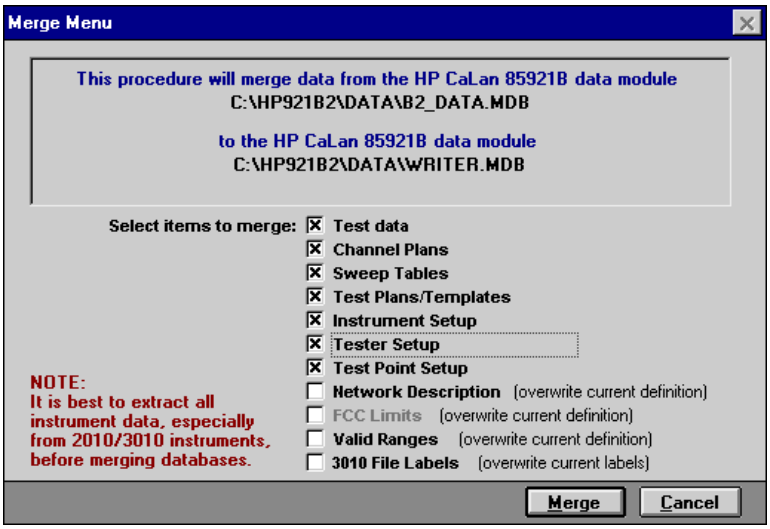


The Select File to Merge From dialog box is displayed.



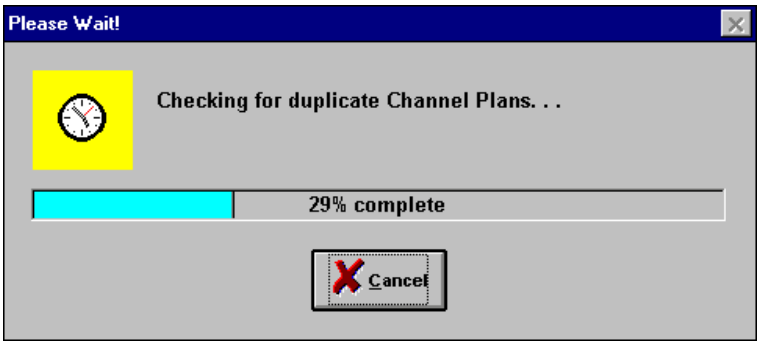
2. Select the file with the data you want to merge. Click on **OK** to continue.

The Merge Menu dialog box is displayed.



3. Select the items you want to merge into your current data module by clicking in the corresponding box so that an “X” appears.
4. When you have finished making your selection click on **Merge**.

The software will look for duplicate merge items.

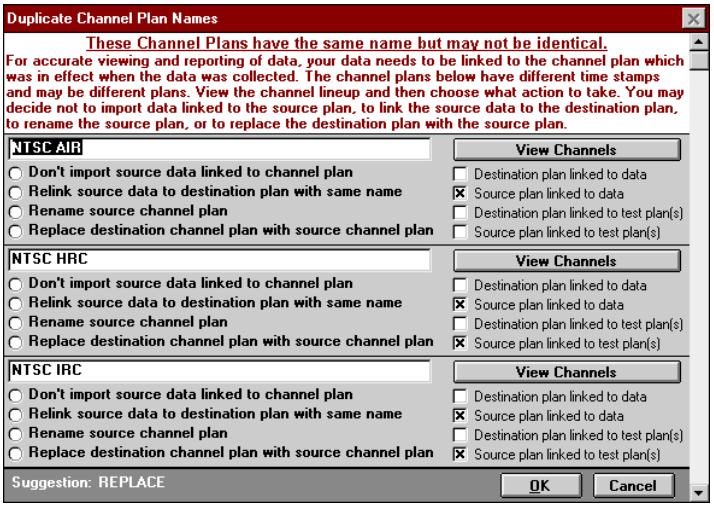


Importing Duplicate Setup Items

After the software checks for duplicate setup items you will be given an opportunity to decide what to do with the duplicate information. Some or all of the following duplicate items may be displayed.

Duplicate Channel Plan Names

If the merging data modules have duplicate channel plan names the Duplicate Channel Plan Names dialog box is displayed.



Select what to do with duplicate channel plans. Use the information in the Duplicate Channel Plan Names Table below to help make the selections. Also, suggestions are given in the screen footer. If you need to view the details of the channel plans, follow the instructions in the next section, "Viewing Duplicate Channel Plans."

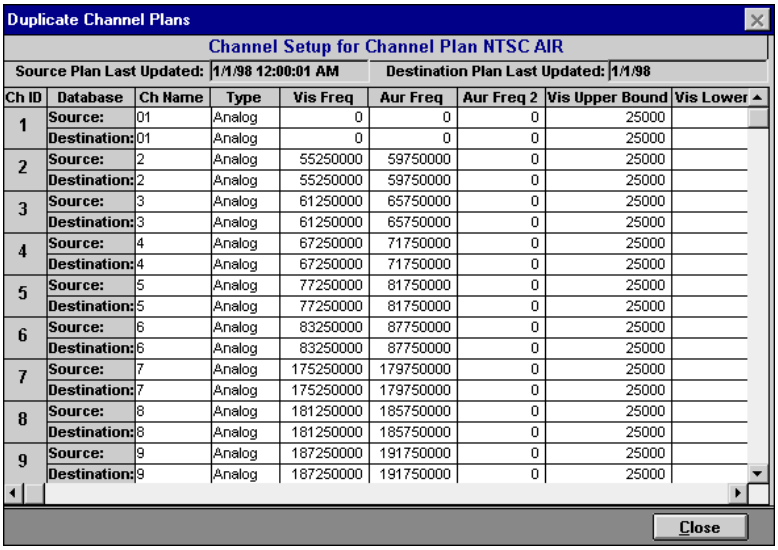
Use the information under the View Channels button to find out more information on the channel plans.

Duplicate Channel Plan Names Table	
Don't import source data linked to channel plan	This will keep your current channel plan with its data and not allow a merging channel plan to overwrite it. The merging channel plan information and any data created with it will not be included in the final, resulting data module.
Link source data to destination plan with same name	Use this selection to import and link the data in the imported, duplicate channel plan with the current channel plan of the same name.
Rename source channel plan	Rename the merging channel plan and bring it and it's data into the currently active data module under a new name.
Replace destination channel plan with source channel plan	This will replace the current data for this channel plan with the imported channel plan data.

After you have made your selections, click on **OK**.

Viewing Duplicate Channel Plans

You can view both of the duplicate channel plans to compare them by clicking on the **View Channels** button in the Duplicate Channel Plan Names dialog box. Clicking on the **View Channels** button will cause the Duplicate Channel Plans dialog box to be displayed.

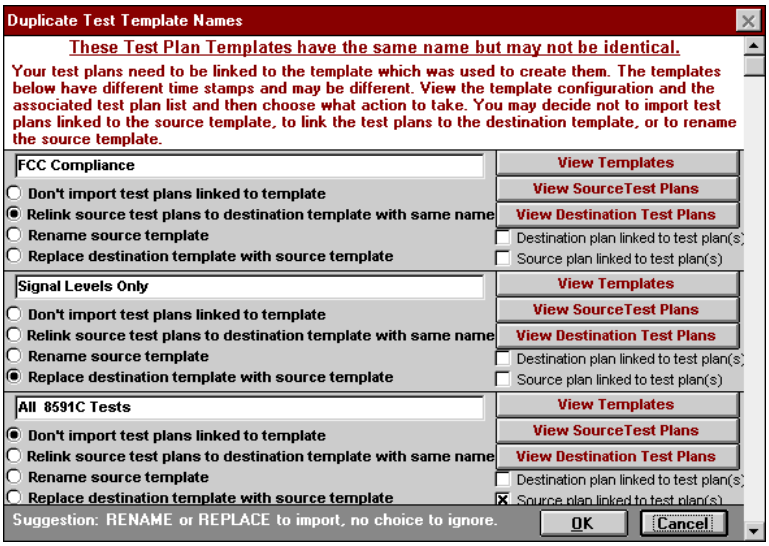


Ch ID	Database	Ch Name	Type	Vis Freq	Aur Freq	Aur Freq 2	Vis Upper Bound	Vis Lower
1	Source:	01	Analog	0	0	0	25000	
	Destination:	01	Analog	0	0	0	25000	
2	Source:	2	Analog	55250000	59750000	0	25000	
	Destination:	2	Analog	55250000	59750000	0	25000	
3	Source:	3	Analog	61250000	65750000	0	25000	
	Destination:	3	Analog	61250000	65750000	0	25000	
4	Source:	4	Analog	67250000	71750000	0	25000	
	Destination:	4	Analog	67250000	71750000	0	25000	
5	Source:	5	Analog	77250000	81750000	0	25000	
	Destination:	5	Analog	77250000	81750000	0	25000	
6	Source:	6	Analog	83250000	87750000	0	25000	
	Destination:	6	Analog	83250000	87750000	0	25000	
7	Source:	7	Analog	175250000	179750000	0	25000	
	Destination:	7	Analog	175250000	179750000	0	25000	
8	Source:	8	Analog	181250000	185750000	0	25000	
	Destination:	8	Analog	181250000	185750000	0	25000	
9	Source:	9	Analog	187250000	191750000	0	25000	
	Destination:	9	Analog	187250000	191750000	0	25000	

When you have finished viewing the channel plans click on **Close**. This will return you to the Duplicate Channel Plan Names dialog box.

Duplicate Test Template Names

If the merging data modules have duplicate test template names the Duplicate Test Template Names dialog box will be displayed.



Select what to do with duplicate test template names. Suggestions are provided in the screen footer. Use the information in the Duplicate Test Template Names Table below to help make the selections.

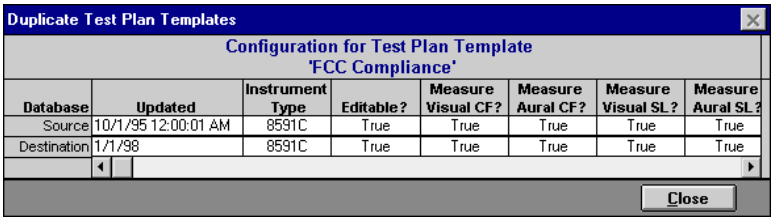
If you need to view the details of the Test Templates, Duplicate Test Plans or Source Test Plans, follow the instructions in the following section, "Viewing Duplicate Test Templates and Test Plans."

Duplicate Test Template Names Table	
Don't import test plans linked to template	This choice will not import the test plans linked to the imported template.
Link source test plans to destination template with same name	Use this selection to import and link the test plan with the current test template of the same name.
Rename source template	This choice will import the merging test template with a new name. This will prevent the merging test template with the same name from overwriting the existing one. If you make this selection you must enter the new name.
Replace destination test template with source template	This will overwrite the existing test template with the imported test template. All test plans from both data modules will be linked to this template.

Make the selections on what to do with duplicate test templates. After you have made your selections, click on **OK**.

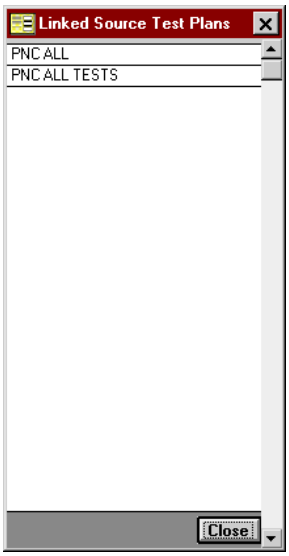
Viewing Duplicate Test Templates and Test Plans

You can view both the source and destination test templates to compare them by clicking on the **View Templates** button in the Duplicate Test Template Names dialog box. Clicking on the **View Templates** button will cause the Duplicate Test Plan Template dialog box to be displayed.



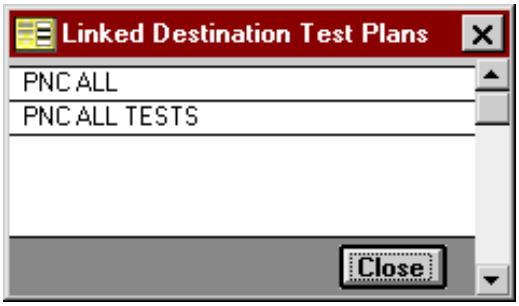
When you have finished viewing the test plan templates click on **Close**. This will return you to the Duplicate Test Template Names dialog box.

You can view a list of test plans in the importing data module by clicking on the **View Source Test Plans** button. This will cause the Linked Source Test Plans dialog box to be displayed.



When you have finished viewing the linked source test plans click on **Close**. This will return you to the Duplicate Test Template Names dialog box.

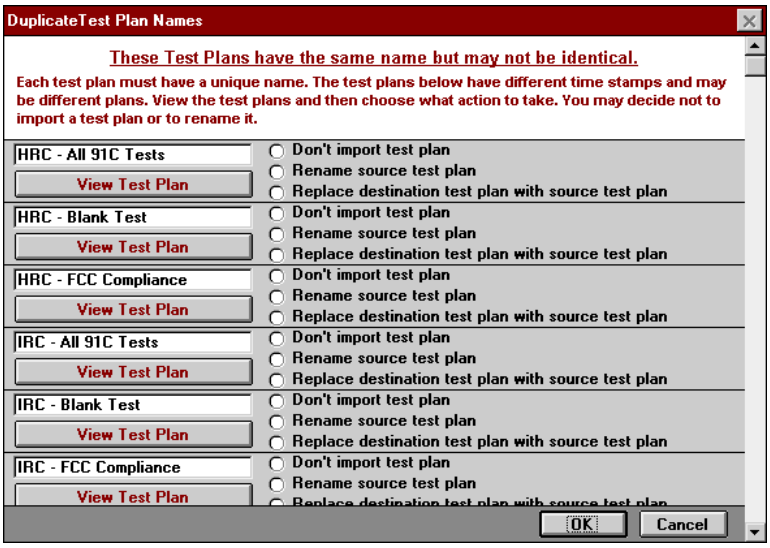
You can view a list of test plans in the destination data module by clicking on the **View Destination Test Plans** button. This will cause the Linked Destination Test Plans dialog box to be displayed.



When you have finished viewing the linked destination test plans click on **Close**. This will return you to the Duplicate Test Template Names dialog box.

Duplicate Test Plan Names

If the merging data modules have duplicate test plan names the Duplicate Test Plan Names dialog box will be displayed.



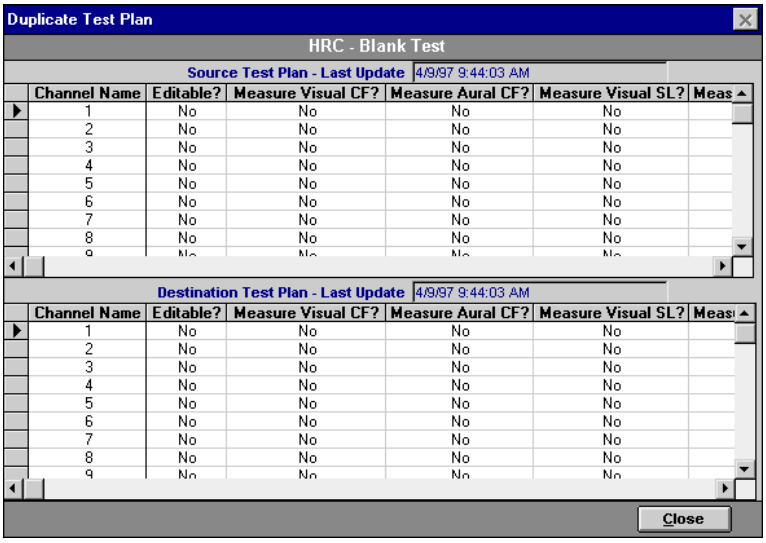
Select what to do with duplicate test plan names. Use the information in the Duplicate Test Plan Names Table below to help make the selections. If you need to view the details of the test plans follow the instructions in the following section, "Viewing Duplicate Test Plans."

Duplicate Test Plan Names Table	
Don't import test plan	This choice will not import the test plan with this name.
Rename source test plan	This choice will rename and import the test plan. This will prevent the imported test plan with the same name from overwriting the existing one. If you make this selection you must enter the new name.
Replace destination test plan with source test plan	This will overwrite the existing test plan with the imported test plan.

Make the selections on what to do with duplicate test plans. After you have made your selections, click on **OK**.

Viewing Duplicate Test Plans

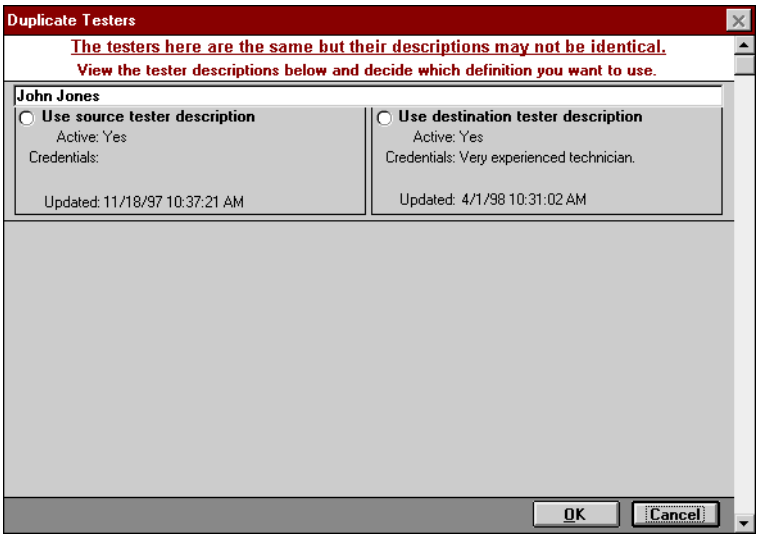
You can view both of the test plans to compare them by clicking on the **View Test Plan** button in the Duplicate Test Plan dialog box. Clicking on the **View Test Plan** button will cause the Duplicate Test Plan dialog box to be displayed.



When you have finished viewing the channel plans click on **Close**. This will return you to the Duplicate Test Plan Names dialog box.

Duplicate Testers

If the merging data modules have duplicate testers the Duplicate Testers dialog box will be displayed.

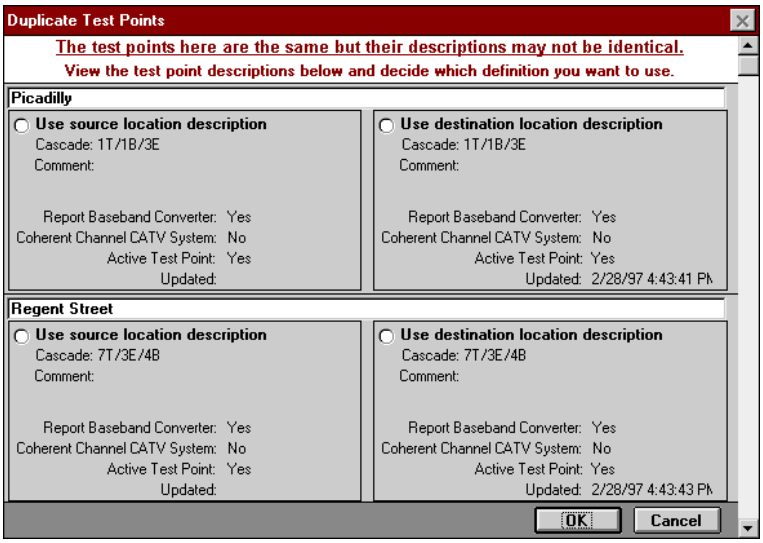


Select what to do with duplicate tester names. Use the information in the Duplicate Testers dialog box and the Duplicate Tester Table below to help make the selections.

Duplicate Tester Table	
Use source tester description	This selection will override the current tester information and replace it with the imported tester information.
Use destination tester description	Use this selection to keep the current tester information. The imported tester information will not override the current information.

Duplicate Test Points

If the merging data modules have duplicate test points the Duplicate Test Points dialog box will be displayed.



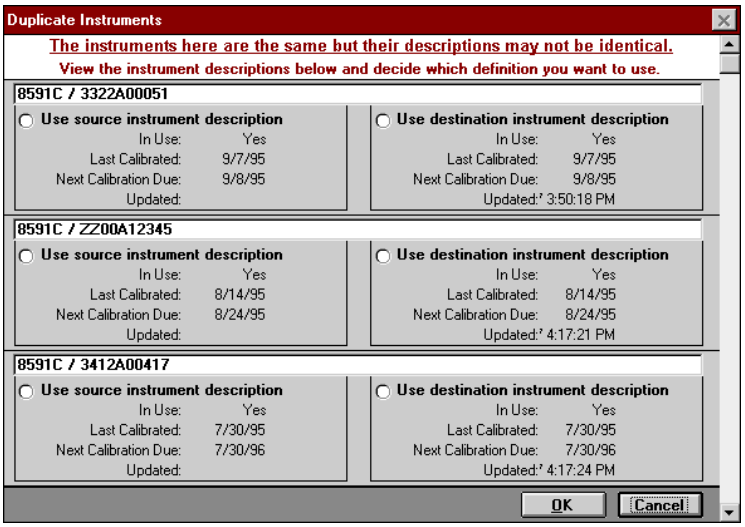
Select what to do with duplicate test points. Use the information in the Duplicate Test Point Table to help make the selections.

Duplicate Test Points Table	
Use source location description	Use this selection to use the imported test point information.
Use destination location description	Use this selection to use the original test point information.

After you have made your selections, click on **OK**.

Duplicate Instruments

If the merging data modules have duplicate instruments the Duplicate Instruments dialog box will be displayed.



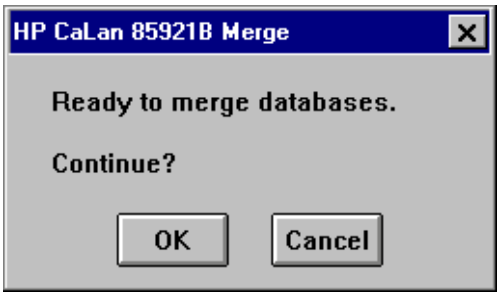
Select what to do with duplicate instruments. Use the information in the Duplicate Instrument Table to help make the selections.

Duplicate Instrument Table	
Use source instrument description	Use this selection to use the imported instrument information.
Use destination instrument description	Use this selection to use the original instrument information.

After you have made your selections, click on **OK**.

Completing the Merge

After checking for duplicate information the HP CaLan 85921B Merge dialog box will be displayed, giving you the choice to continue to merge the data modules.



Click on **OK** to continue and merge the data modules. If you want to start the merge over or do not want to merge the data modules click on **Cancel**.

After the data modules are merged the HP CaLan 85921B Merge dialog box will be displayed.

Click on **OK** to clear this dialog box.

Note: Merging data module files does not import files waiting to be reviewed in the Field Data Review section.

10

Generating Compliance Reports

This chapter contains information about generating compliance reports. Descriptions and examples of reports that can be generated using the software are located at the end of this chapter. Keep in mind that the compliance reporting capability is an option and may not be included with your software package.

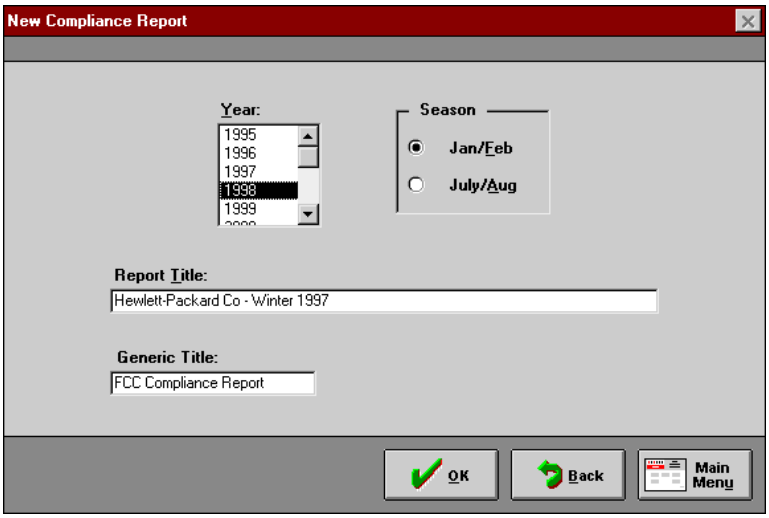
In this chapter you will learn how to do the following:

- Create a new compliance report.
- Edit a compliance report.
- View a compliance report.
- Print a compliance report.

Creating a New Compliance Report

To create a new compliance report, perform the following steps.

1. Choose **Compliance Reports** from the main menu.
2. Choose **New Compliance Report** from the Compliance Reports Menu. The software displays the New Compliance Report dialog box.



3. Select the year for the compliance report from the Year list box.

4. Select the time period for the report from the Season selection box. For reports other than 24-hour stability reports, this includes the six-month period ending with February for the winter season, or the six-month period ending with August for the summer season. For 24-hour stability reports the time period included is that shown on the screen, Jan/Feb for winter and July/Aug for summer.

5. Enter the title for the compliance report in the Report Title and Generic Title text boxes. Note that this title will appear on the compliance report.

Note: Some characters (**{ }] [\ | _ ~ ‘ ^,**) will not be accepted into the fields and result in an error message.

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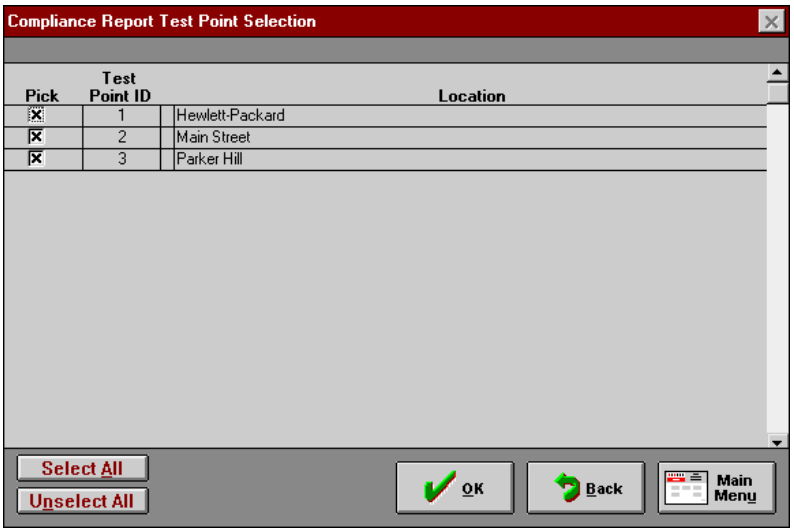
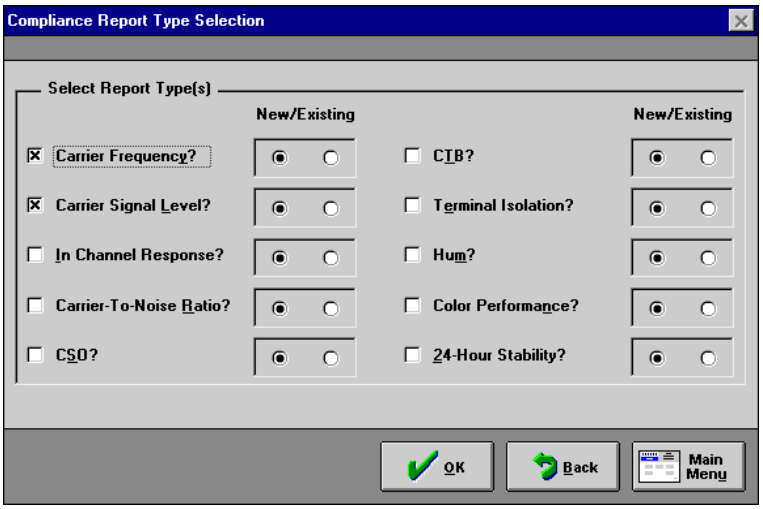
6. Choose **OK** to save the compliance report date and title. The software will proceed to the Compliance Report Test Point Selection Menu.
   - If you wish to return to the previous menu, choose **Back**.
   - If you wish to return to the main menu, choose **Main Menu**.



7. Mark the test-point locations you wish to include in the Compliance Report. An **X** in the check box indicates the test point location is selected. Note that if the box is clear, the test point is not selected.

8. Choose **OK** to save the test-point selection.
   - If you wish to return to the previous menu, choose **Back**.
   - If you wish to return to the main menu, choose **Main Menu**.

The software will proceed to the Compliance Report Type Selection dialog box.



9. Use the check boxes to select the reports you wish to create. Note that you will *not* be able to print or view report types at a later date, which were not selected in this step. An **X** in the check box indicates the report is selected.

10. Select the desired New/Existing query option for each report type. Be sure that the option you choose is marked appropriately.

    - Select the New option to query the test data module to obtain a new match to the report date and test point requirements. It is recommended to always choose New.
    - Select the Existing option to use data previously retrieved. Note that selecting Existing is *only* useful if the same report parameters were requested the last time you were in this menu. If in doubt, select New.

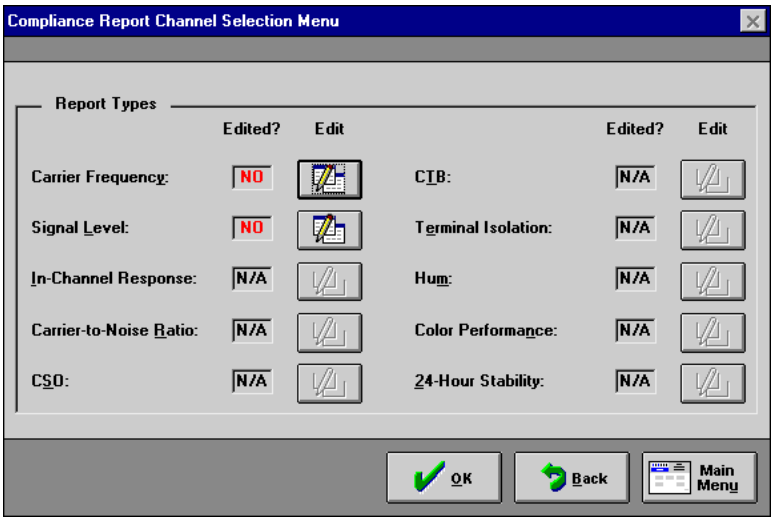
11. If you choose the 24-Hour Stability report, select NCTA or FCC report type. See page 10-13 for details on the differences in these reports.

12. Choose **OK** to save the report type selection. The software will proceed to the Compliance Report Channel Selection Menu for report selection. To continue generating the compliance report, go to the following section, “Editing a Compliance Report.”

    - If you wish to return to the previous menu, choose **Back**.
    - If you wish to cancel, choose **Main Menu** to return to the main menu.

Editing a Compliance Report

After the data module has been searched for data matching your selections, you may edit the channel-selection records to be included in each compliance report type selected. This is achieved within the Compliance Report Channel Selection Menu.



The Compliance Report Channel Selection Menu contains three main columns:

Report Types
Lists the reports available, by type.

Edited?
Read-only indicators that show whether or not channel selection has been performed for each type of compliance report. There are three indicators:

NO	Indicates that channel selection has not yet been performed. Printing of this report will fail.
YES	Indicates that channel selection has been performed, either in this session, or on the last report generation session. You are able to review or edit the channel selection at any time.
N/A	Indicates that the report type was not selected, therefore no channel selection can be made.

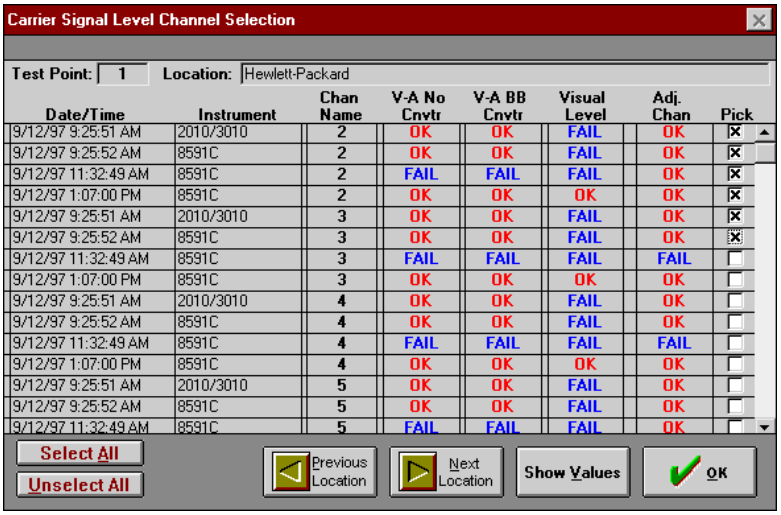
Edit
Choosing any of these buttons opens a form, which allows channel selection to be performed for each compliance report type. Note that if you did not select a particular report type earlier, its button will be inactive (grayed).

Selecting Channels for Compliance Reports

The following procedure describes how to select channels for compliance reports.

- If you are editing an existing compliance report, access the Compliance Report Channel Selection Menu by choosing **Compliance Reports** from the main menu. Then choose **Go to Compliance Report Channel Selection Menu** from the Compliance Reports Menu. Continue with step 1 below.
- If you are continuing to create a new compliance report, you should already be in the Compliance Report Control Menu. Continue with step 1 below.

1. Choose **Edit** for the desired report type to make channel-record selections. The channel-selection menu for the selected report type will appear. For example, if you choose **Edit** for Carrier Frequency, the Carrier Frequency Channel Selection menu will appear displaying the channels for the current test point selected for report generation. Note that each channel selection will be unique to each report type.



2. Review the records for selection:

   - **Show Values** displays the measurement values.
   - **Show Pass/Fail** displays the measurement results with a **FAIL,** or **OK**.

3. Select the records you wish to include in the compliance report for the current test point. An "X" in the check box indicates the channel record is selected.

   Note that there may be multiple records displayed for each channel number, depending on how many data samples you have collected during the specified compliance reporting period. It is your responsibility to select a set of records which accurately represents your system's performance.

4. Select the next test point location to mark using one of the following methods:

   - **Next Location** proceeds to the next selected test-point location.
   - **Previous Location** backs up to the previous selected test-point location.

5. Repeat steps 2 and 3 until all selections for the compliance report have been made.

6. Repeat this procedure for each compliance report type selected.

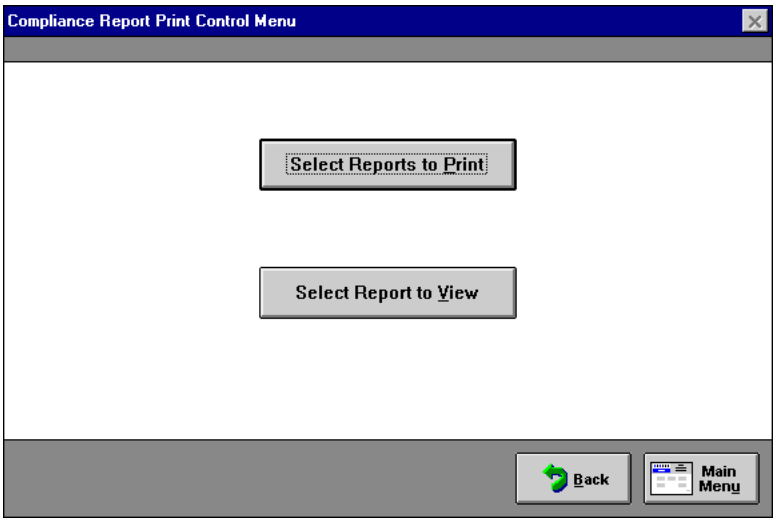
After all compliance report types have been generated, you are ready to print or view the compliance reports. Continue with "Printing and Viewing Reports."

Note: Data cannot be edited in the Generating Reports section. Editing of the data can be done in the Data Analysis section.

Printing and Viewing Reports

After all compliance report types have been generated, you are ready to print and view the compliance reports. Access the Compliance Report Print Control Menu using one of the following methods.

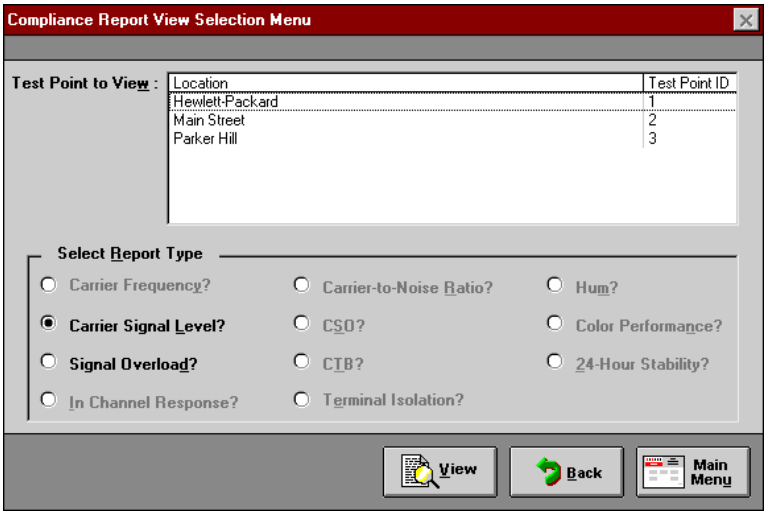
- If you are printing or viewing an existing compliance report, access the Compliance Report Print Control Menu by choosing **Compliance Reports** from the main menu. Then choose **Go to Compliance Report Print Control Menu** from the Compliance Report Control Menu. Continue by selecting "Select Reports to Print" to print the reports or "Select Reports to View" to view the reports.
- If you are continuing to create or edit a compliance report, access the Compliance Report Print Control Menu by choosing **OK** from the Compliance Report Channel Selection Menu. Continue with "Select Reports to Print" to print the reports or "Select Reports to View" to view the reports.



Viewing Compliance Reports

After all compliance report types have been generated, perform the following procedure to view the compliance reports.

1. Choose **Select Report to View** from the Compliance Report Print Control Menu; the software opens the Compliance Report View Selection Menu.
2. Select the test-point location to view from the Test Point to View pull-down menu.



3. Select the compliance report you wish to view. Be sure that the desired report is marked appropriately, by marking the selected radio button.

Note: Radio buttons do not work for reports which were not requested during the compliance report generation process, or for which no channel selections were made. These non-working selections are grayed.

4. Choose **View** to view the selected report. (The software proceeds to display the selected report.) Note there are two ways to view the report.

    - Use the vertical and horizontal scrolls to view the entire report.
    - Use the zoom functions. Click the cursor (magnifying glass) on the report to zoom out for a full page view of the report. After you have zoomed out, click the cursor on an area of the report you would like to zoom in for a more detailed look at the area.
    - If the report has multiple pages, use the page selectors in the lower-left corner to select a page to view.

    Choose **Back** if you wish to return to the previous menu without viewing the report.

    Choose **Main Menu** if you wish to cancel and return to the main menu.

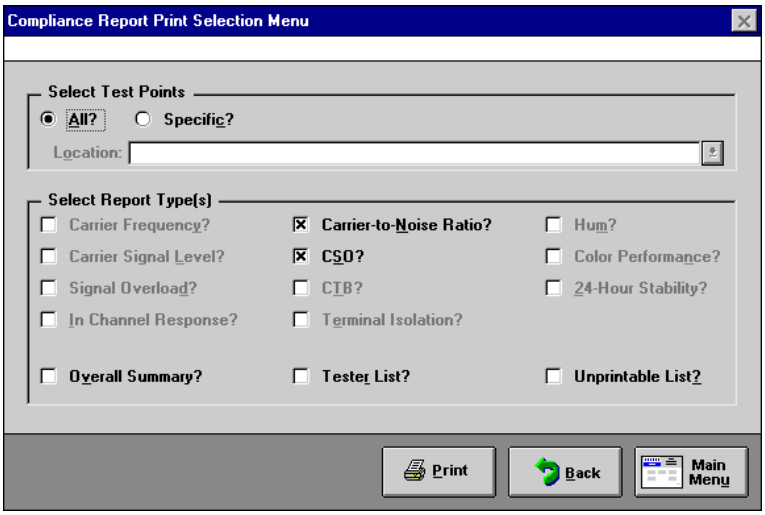
5. After viewing the selected report you may close the compliance report window by choosing **File**, **Close** from the drop-down menu. Also you may print the report from the drop-down menu by choosing **File**, **Print**. The destination printer can be changed using **File**, **Print Setup**.

6. Repeat steps 3 through 5 to view other reports.

Printing Compliance Reports

As seen in the last section, printing can be done when viewing the report. After all desired compliance report types have been generated, printing can also be done with the following procedure.

1. Choose **Select Reports to Print** from the Compliance Report Print Control Menu; the software opens the Compliance Report Print Selection Menu.
2. Select the desired Test Points option:
   - **ALL** selects all the test point locations marked during the compliance report generation process for printing.
   - **Specific** allows you to select one of the test point locations marked during the compliance report generation process for printing.



3. Verify that all of the compliance report types you wish to print are marked. An "X" in the report type check box designates the report as selected. If the check box is cleared, the compliance report will not be printed for that report type. Note that the Overall Summary report and the lists of Tester Credentials and unprintable reports can only be requested from this menu.

Note: Check boxes do not work for reports which were not requested during the compliance report generation process, or for which no channel selections were made. These non-working selections are grayed.

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4. Choose **Print** to print the selected reports.

   If you wish to return to the previous menu, choose **Back**.

   If you wish to cancel, choose **Cancel** to return to the main menu.

Compliance Report Descriptions

There are fifteen different compliance reports that can be generated. Examples of all of the compliance reports you can generate with this software are included at the end of this chapter.

The reports that you can generate using the compliance report generator software are as follows:

FCC Overall Summary Report
Summarizes all of the overall test results with a **PASS** or **FAIL**.

Carrier Frequency Data
Demonstrates compliance with the FCC Regulations paragraphs 76.605 (a) 1 and 76.605 (a) 2.

Signal Level Data
Demonstrates compliance with the FCC Regulations paragraphs 76.605 (a) 3, 76.605 (a) 4 (i), 76.605 (a) 4 (ii) and 76.605 (a) 5.

Signal Overload Data
Demonstrates compliance with the FCC Regulations paragraph 76.605 (a) 4 (iii). Because this report is a subjective evaluation, the method of determination of compliance is left to the operator. The report defaults to a PASS result.

In-Channel Response
Demonstrates compliance with the FCC Regulations paragraph 76.605 (a) 6.

Carrier-to-Noise Ratio Data
Demonstrates compliance with the FCC Regulations paragraph 76.605 (a) 7 (ii).

Composite Second Order Data
Demonstrates compliance with the FCC Regulations paragraph 76.605 (a) 8.

Composite Triple Beat Data
Demonstrates compliance with the FCC Regulations paragraph 76.605 (a) 8.

Terminal Isolation Data
Demonstrates compliance with the FCC Regulations 76.605 (a) 9 (i). The method of measurement is left to the operator. Data is input by the operator. This report allows the operator to report actual test results for their system, as an alternative or in addition to manufacturer specifications.

Hum Data
Demonstrates compliance with the FCC Regulations paragraph 76.605 (a) 10.

Color Performance Data
Demonstrates compliance with the FCC Regulations paragraphs 76.605 (a) 11 (i), 76.605 (a) 11 (ii), and 76.605 (a) 11 (iii).

24-Hour Stability Reports
The user has the option of selecting to output the 24-Hour Stability report *either* in the NCTA format, *or* in the FCC format (see below). When this report type is first selected, an option group will be presented to allow the user to choose. Selected format can be changed any time a new report is generated.

FCC Format
Demonstrates compliance with the FCC Regulations paragraph 76.605 (a) (4). This has been interpreted as requiring that 4 visual signal measurements be conducted in a 24-hour period during the cold months (January/February) and another 4 measurements be made during a 24-hour period in the warm months (July/August). The visual signal levels must demonstrate a maximum to minimum variation of 8 dB or less, over all eight measurements.

The stability report accomplishes this task by searching through the data module for all level measurements in the current FCC reporting period, that satisfy the 24-hour test requirements of 4 tests that are each at least 5 hours but not more than 7 hours apart. A second set of measurements from the previous FCC reporting season is also found. All possible legal combinations are generated from the two season' datasets. The user is then free to pick test sets from the combinations.

The stability report depends on level measurements being present in the data module from the previous FCC reporting season. The manual data entry area in the Data Review section allows the user the ability to manually enter data from past compliance reports so that this comparison may be accomplished.

FCC Reporting Seasons

Stability Reports	Summer - data must be gathered in July/August
	Winter - data must be gathered in January/February
Other Report Types	Summer - data must be gathered from March to August
	Winter - data must be gathered from September to February

NCTA Format
Demonstrates compliance with the National Cable Television Association (NCTA) recommended practices. Four visual signal measurements are made in a 24-hour period during the reporting season. The visual signal levels must demonstrate a maximum to minimum variation of 8 dB or less over the 24 hours.

This report searches through the data module for all visual level measurements in the current FCC reporting season that satisfy the 24-hour test requirements of four tests that are each at least 5 hours but not more than 7 hours apart. The user is then free to pick test sets from the valid measurements.

Unprintable Reports List
Lists all of the reports that could not be printed because there were no channel records available and selected for the designated test point location.

Tester List
Lists all of the test engineers and their credentials.

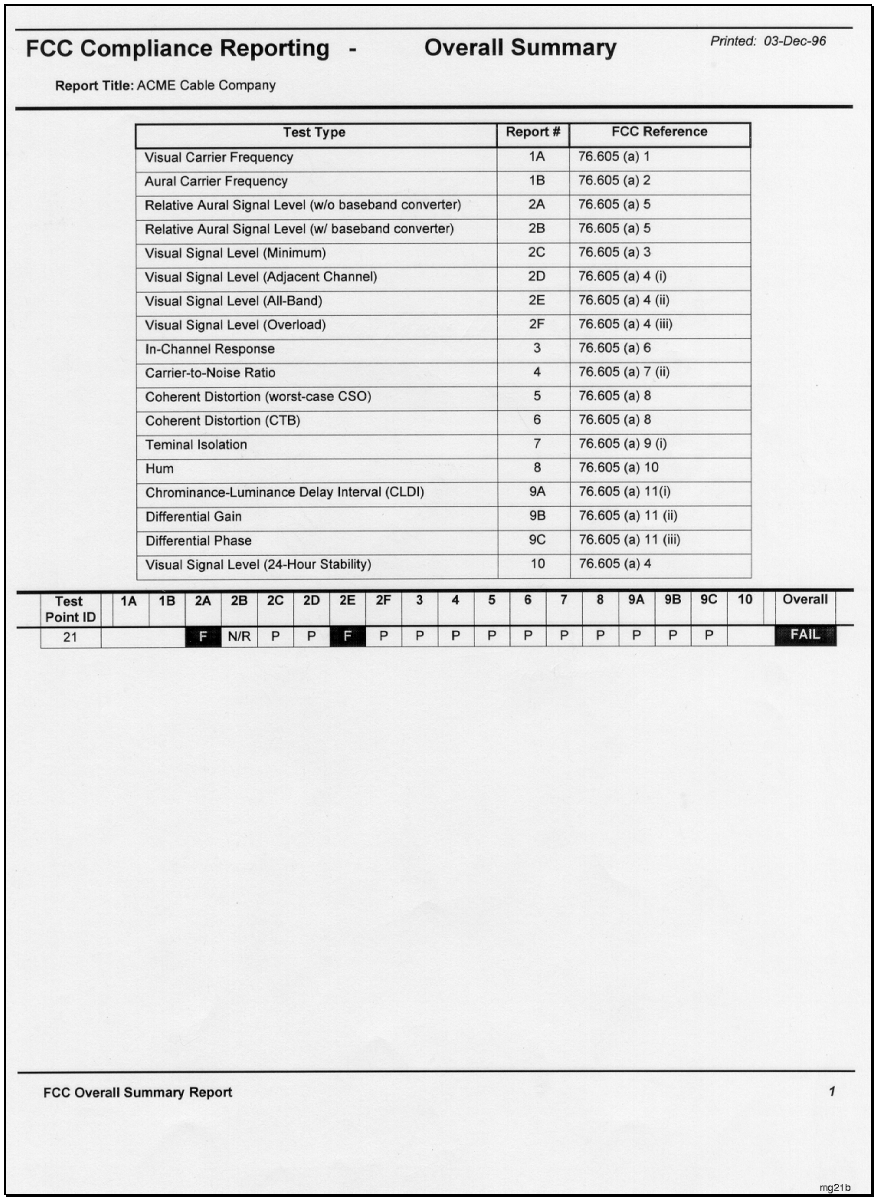
FCC Report Examples

This section contains examples of all of the FCC reports that can be generated using the Cable TV Data Management software.

The samples included in this section are as follows:

- FCC Overall Summary Report
- Carrier Frequency Data
- Signal Level Data
- Signal Overload Data
- In-Channel Response
- Carrier-to-Noise Ratio Data
- Composite Second Order Data
- Composite Triple Beat Data
- Terminal Isolation Data
- Hum Data
- Color Performance Data
- Stability Data
- 24-Hour Signal Variation Data
- Unprintable Reports
- Tester List

FCC Overall Summary Report Example



FCC Compliance Reporting - Overall Summary *Printed: 03-Dec-96*

Report Title: ACME Cable Company

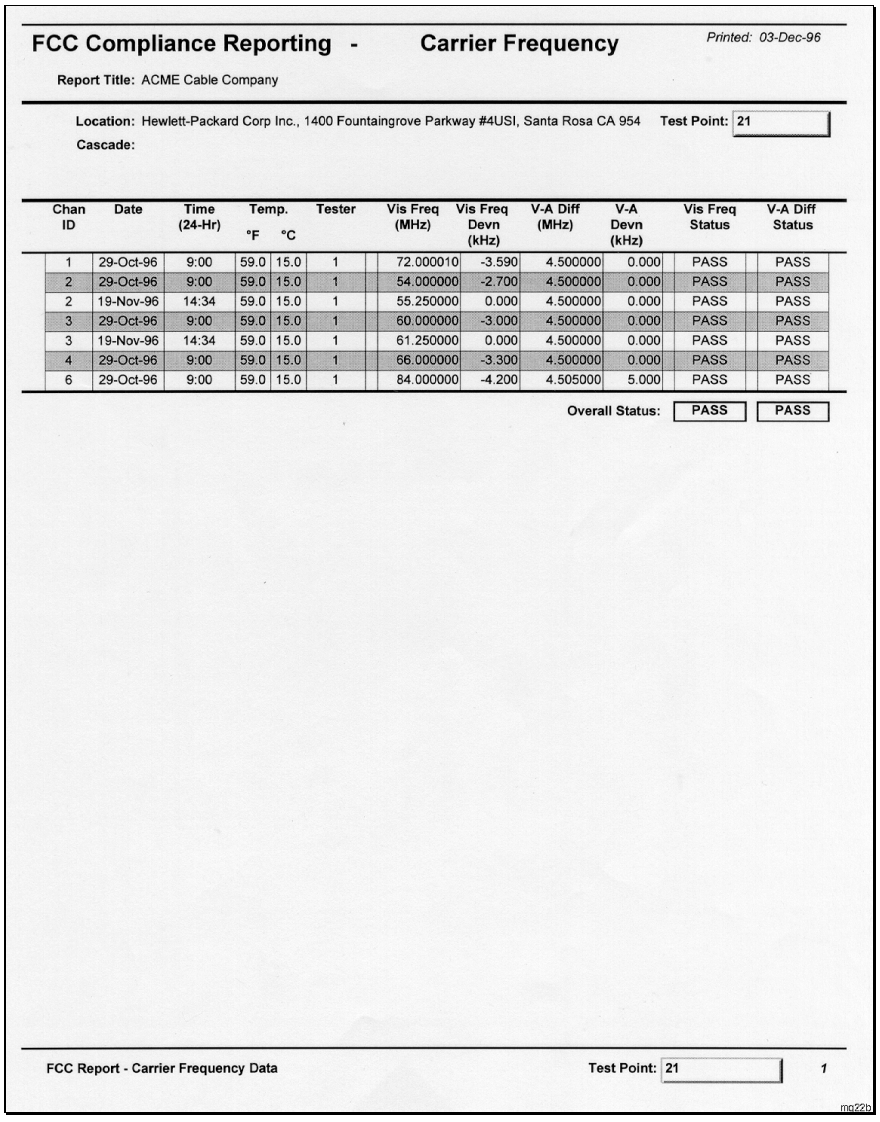
Test Type	Report #	FCC Reference
Visual Carrier Frequency	1A	76.605 (a) 1
Aural Carrier Frequency	1B	76.605 (a) 2
Relative Aural Signal Level (w/o baseband converter)	2A	76.605 (a) 5
Relative Aural Signal Level (w/ baseband converter)	2B	76.605 (a) 5
Visual Signal Level (Minimum)	2C	76.605 (a) 3
Visual Signal Level (Adjacent Channel)	2D	76.605 (a) 4 (i)
Visual Signal Level (All-Band)	2E	76.605 (a) 4 (ii)
Visual Signal Level (Overload)	2F	76.605 (a) 4 (iii)
In-Channel Response	3	76.605 (a) 6
Carrier-to-Noise Ratio	4	76.605 (a) 7 (ii)
Coherent Distortion (worst-case CSO)	5	76.605 (a) 8
Coherent Distortion (CTB)	6	76.605 (a) 8
Teminal Isolation	7	76.605 (a) 9 (i)
Hum	8	76.605 (a) 10
Chrominance-Luminance Delay Interval (CLDI)	9A	76.605 (a) 11(i)
Differential Gain	9B	76.605 (a) 11 (ii)
Differential Phase	9C	76.605 (a) 11 (iii)
Visual Signal Level (24-Hour Stability)	10	76.605 (a) 4

Test Point ID	1A	1B	2A	2B	2C	2D	2E	2F	3	4	5	6	7	8	9A	9B	9C	10	Overall
21			F	N/R	P	P	F	P	P	P	P	P	P	P	P	P	P		FAIL

FCC Overall Summary Report *1*

mg21b

Carrier Frequency Data Example



FCC Compliance Reporting - Carrier Frequency *Printed: 03-Dec-96*

Report Title: ACME Cable Company

Location: Hewlett-Packard Corp Inc., 1400 Fountaingrove Parkway #4USI, Santa Rosa CA 954 **Test Point:** 21

Cascade:

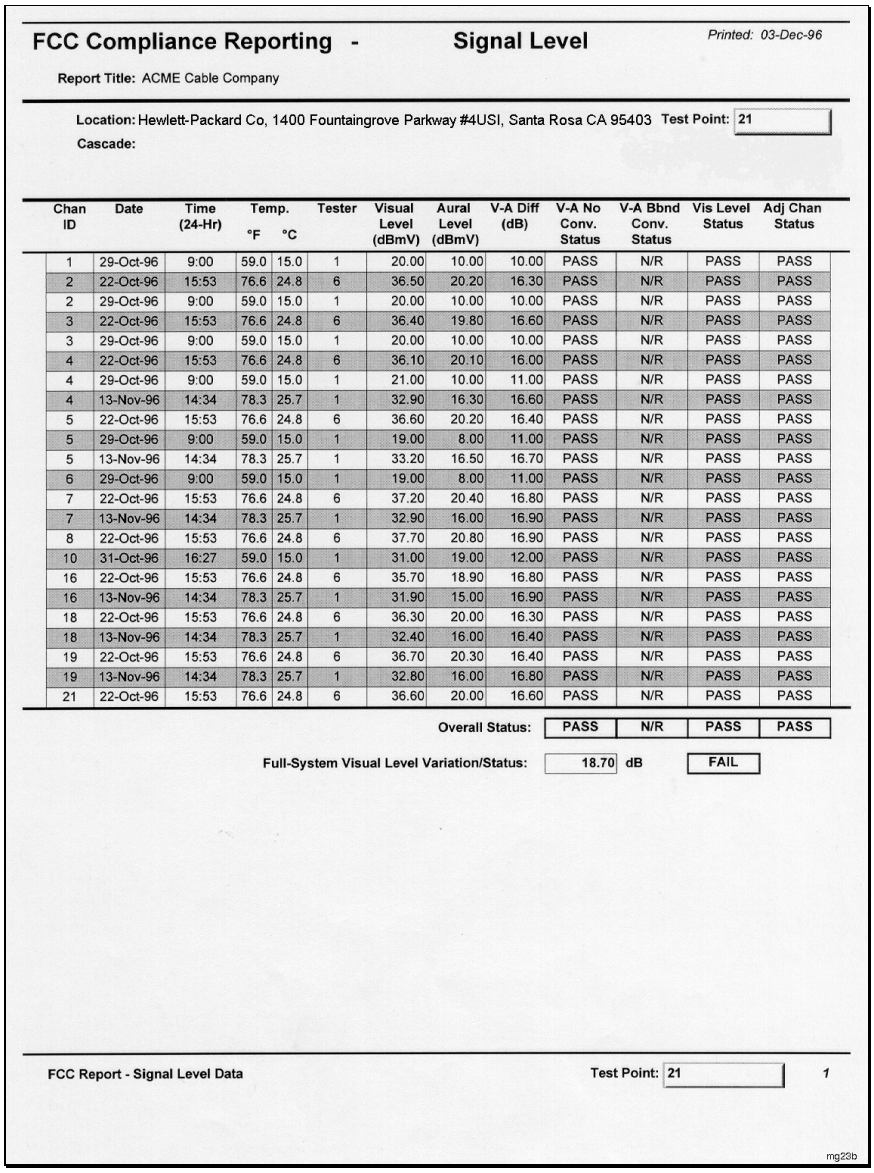
Chan ID	Date	Time (24-Hr)	Temp. °F	Temp. °C	Tester	Vis Freq (MHz)	Vis Freq Devn (kHz)	V-A Diff (MHz)	V-A Devn (kHz)	Vis Freq Status	V-A Diff Status
1	29-Oct-96	9:00	59.0	15.0	1	72.000010	-3.590	4.500000	0.000	PASS	PASS
2	29-Oct-96	9:00	59.0	15.0	1	54.000000	-2.700	4.500000	0.000	PASS	PASS
2	19-Nov-96	14:34	59.0	15.0	1	55.250000	0.000	4.500000	0.000	PASS	PASS
3	29-Oct-96	9:00	59.0	15.0	1	60.000000	-3.000	4.500000	0.000	PASS	PASS
3	19-Nov-96	14:34	59.0	15.0	1	61.250000	0.000	4.500000	0.000	PASS	PASS
4	29-Oct-96	9:00	59.0	15.0	1	66.000000	-3.300	4.500000	0.000	PASS	PASS
6	29-Oct-96	9:00	59.0	15.0	1	84.000000	-4.200	4.505000	5.000	PASS	PASS

Overall Status: PASS PASS

FCC Report - Carrier Frequency Data **Test Point:** 21 *1*

mg22b

Signal Level Data Example



FCC Compliance Reporting - Signal Level *Printed: 03-Dec-96*

Report Title: ACME Cable Company

Location: Hewlett-Packard Co, 1400 Fountaingrove Parkway #4USI, Santa Rosa CA 95403 **Test Point:** 21

Cascade:

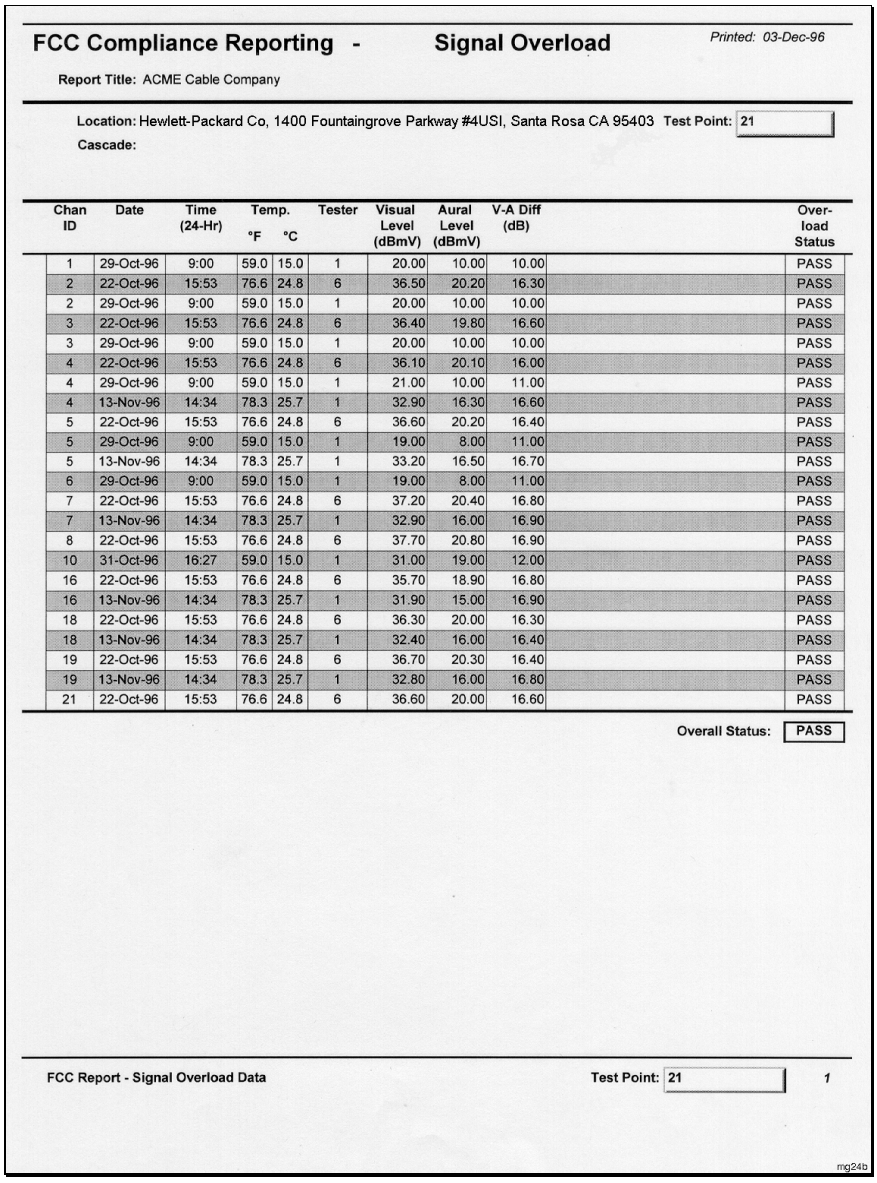
Chan ID	Date	Time (24-Hr)	Temp. °F	Temp. °C	Tester	Visual Level (dBmV)	Aural Level (dBmV)	V-A Diff (dB)	V-A No Conv. Status	V-A Bbnd Conv. Status	Vis Level Status	Adj Chan Status
1	29-Oct-96	9:00	59.0	15.0	1	20.00	10.00	10.00	PASS	N/R	PASS	PASS
2	22-Oct-96	15:53	76.6	24.8	6	36.50	20.20	16.30	PASS	N/R	PASS	PASS
2	29-Oct-96	9:00	59.0	15.0	1	20.00	10.00	10.00	PASS	N/R	PASS	PASS
3	22-Oct-96	15:53	76.6	24.8	6	36.40	19.80	16.60	PASS	N/R	PASS	PASS
3	29-Oct-96	9:00	59.0	15.0	1	20.00	10.00	10.00	PASS	N/R	PASS	PASS
4	22-Oct-96	15:53	76.6	24.8	6	36.10	20.10	16.00	PASS	N/R	PASS	PASS
4	29-Oct-96	9:00	59.0	15.0	1	21.00	10.00	11.00	PASS	N/R	PASS	PASS
4	13-Nov-96	14:34	78.3	25.7	1	32.90	16.30	16.60	PASS	N/R	PASS	PASS
5	22-Oct-96	15:53	76.6	24.8	6	36.60	20.20	16.40	PASS	N/R	PASS	PASS
5	29-Oct-96	9:00	59.0	15.0	1	19.00	8.00	11.00	PASS	N/R	PASS	PASS
5	13-Nov-96	14:34	78.3	25.7	1	33.20	16.50	16.70	PASS	N/R	PASS	PASS
6	29-Oct-96	9:00	59.0	15.0	1	19.00	8.00	11.00	PASS	N/R	PASS	PASS
7	22-Oct-96	15:53	76.6	24.8	6	37.20	20.40	16.80	PASS	N/R	PASS	PASS
7	13-Nov-96	14:34	78.3	25.7	1	32.90	16.00	16.90	PASS	N/R	PASS	PASS
8	22-Oct-96	15:53	76.6	24.8	6	37.70	20.80	16.90	PASS	N/R	PASS	PASS
10	31-Oct-96	16:27	59.0	15.0	1	31.00	19.00	12.00	PASS	N/R	PASS	PASS
16	22-Oct-96	15:53	76.6	24.8	6	35.70	18.90	16.80	PASS	N/R	PASS	PASS
16	13-Nov-96	14:34	78.3	25.7	1	31.90	15.00	16.90	PASS	N/R	PASS	PASS
18	22-Oct-96	15:53	76.6	24.8	6	36.30	20.00	16.30	PASS	N/R	PASS	PASS
18	13-Nov-96	14:34	78.3	25.7	1	32.40	16.00	16.40	PASS	N/R	PASS	PASS
19	22-Oct-96	15:53	76.6	24.8	6	36.70	20.30	16.40	PASS	N/R	PASS	PASS
19	13-Nov-96	14:34	78.3	25.7	1	32.80	16.00	16.80	PASS	N/R	PASS	PASS
21	22-Oct-96	15:53	76.6	24.8	6	36.60	20.00	16.60	PASS	N/R	PASS	PASS
							Overall Status:		PASS	N/R	PASS	PASS

Full-System Visual Level Variation/Status: 18.70 dB FAIL

FCC Report - Signal Level Data **Test Point:** 21 *1*

mg23b

Signal Overload Data Example



FCC Compliance Reporting - Signal Overload *Printed: 03-Dec-96*

Report Title: ACME Cable Company

Location: Hewlett-Packard Co, 1400 Fountaingrove Parkway #4USI, Santa Rosa CA 95403 **Test Point:** 21

Cascade:

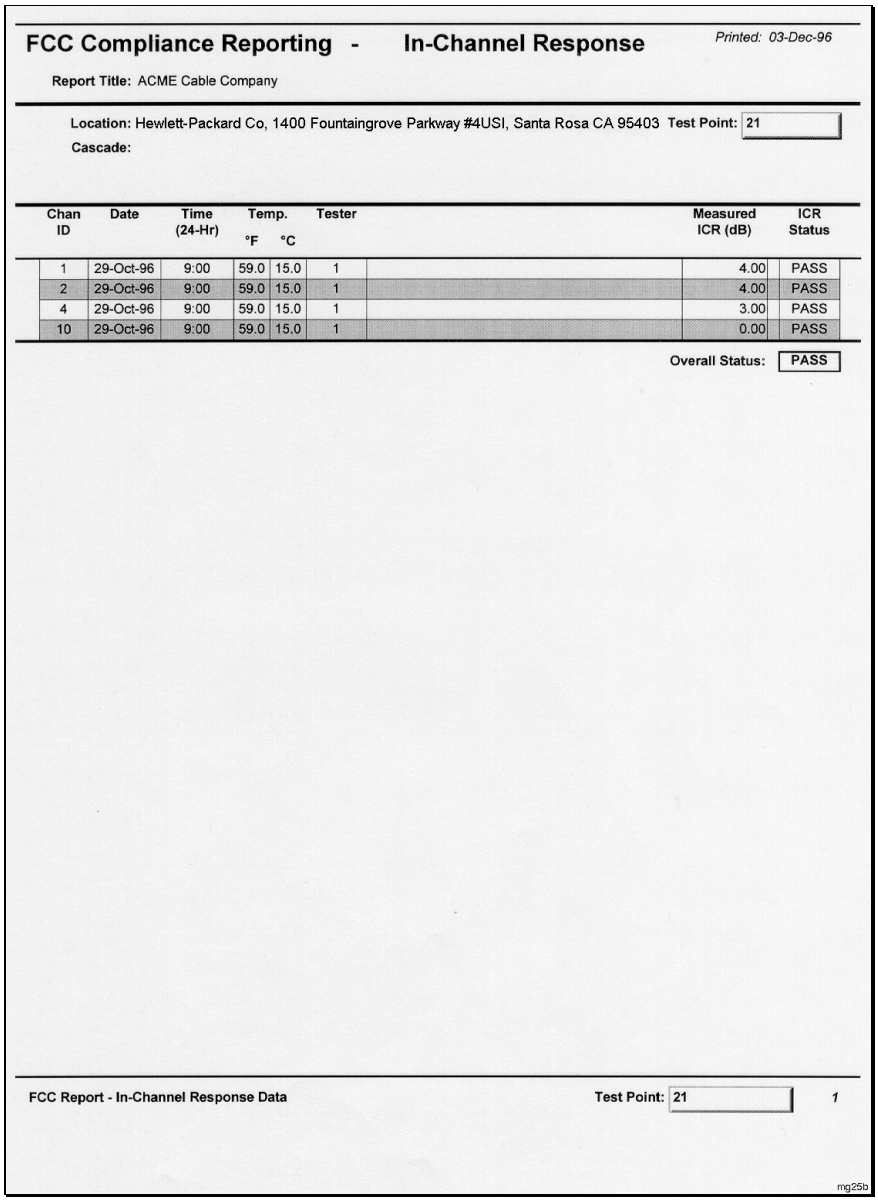
Chan ID	Date	Time (24-Hr)	Temp. °F	Temp. °C	Tester	Visual Level (dBmV)	Aural Level (dBmV)	V-A Diff (dB)		Over-load Status
1	29-Oct-96	9:00	59.0	15.0	1	20.00	10.00	10.00		PASS
2	22-Oct-96	15:53	76.6	24.8	6	36.50	20.20	16.30		PASS
2	29-Oct-96	9:00	59.0	15.0	1	20.00	10.00	10.00		PASS
3	22-Oct-96	15:53	76.6	24.8	6	36.40	19.80	16.60		PASS
3	29-Oct-96	9:00	59.0	15.0	1	20.00	10.00	10.00		PASS
4	22-Oct-96	15:53	76.6	24.8	6	36.10	20.10	16.00		PASS
4	29-Oct-96	9:00	59.0	15.0	1	21.00	10.00	11.00		PASS
4	13-Nov-96	14:34	78.3	25.7	1	32.90	16.30	16.60		PASS
5	22-Oct-96	15:53	76.6	24.8	6	36.60	20.20	16.40		PASS
5	29-Oct-96	9:00	59.0	15.0	1	19.00	8.00	11.00		PASS
5	13-Nov-96	14:34	78.3	25.7	1	33.20	16.50	16.70		PASS
6	29-Oct-96	9:00	59.0	15.0	1	19.00	8.00	11.00		PASS
7	22-Oct-96	15:53	76.6	24.8	6	37.20	20.40	16.80		PASS
7	13-Nov-96	14:34	78.3	25.7	1	32.90	16.00	16.90		PASS
8	22-Oct-96	15:53	76.6	24.8	6	37.70	20.80	16.90		PASS
10	31-Oct-96	16:27	59.0	15.0	1	31.00	19.00	12.00		PASS
16	22-Oct-96	15:53	76.6	24.8	6	35.70	18.90	16.80		PASS
16	13-Nov-96	14:34	78.3	25.7	1	31.90	15.00	16.90		PASS
18	22-Oct-96	15:53	76.6	24.8	6	36.30	20.00	16.30		PASS
18	13-Nov-96	14:34	78.3	25.7	1	32.40	16.00	16.40		PASS
19	22-Oct-96	15:53	76.6	24.8	6	36.70	20.30	16.40		PASS
19	13-Nov-96	14:34	78.3	25.7	1	32.80	16.00	16.80		PASS
21	22-Oct-96	15:53	76.6	24.8	6	36.60	20.00	16.60		PASS

Overall Status: PASS

FCC Report - Signal Overload Data **Test Point:** 21 *1*

mg24b

In-Channel Response Example



FCC Compliance Reporting - In-Channel Response

Printed: 03-Dec-96

Report Title: ACME Cable Company

Location: Hewlett-Packard Co, 1400 Fountaingrove Parkway #4USI, Santa Rosa CA 95403 **Test Point:** 21

Cascade:

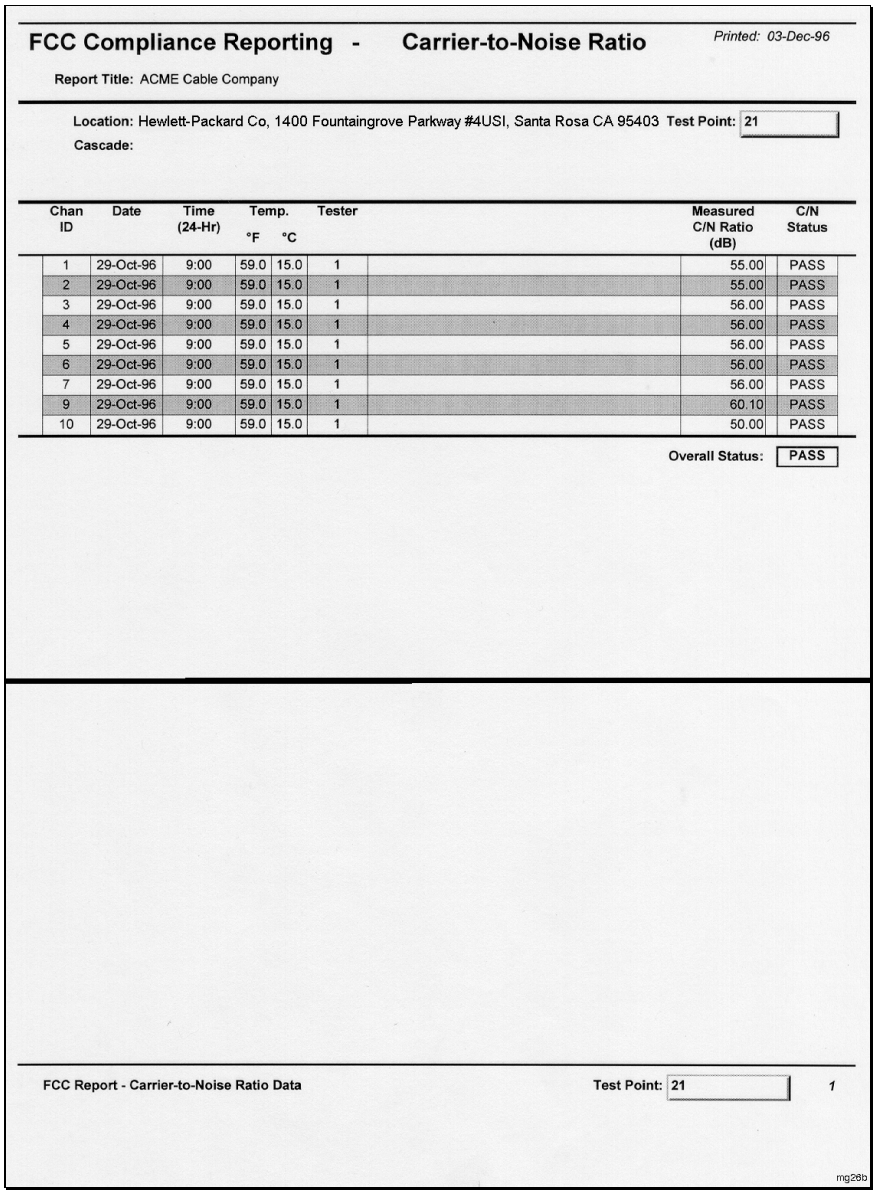
Chan ID	Date	Time (24-Hr)	Temp. °F	Temp. °C	Tester	Measured ICR (dB)	ICR Status
1	29-Oct-96	9:00	59.0	15.0	1	4.00	PASS
2	29-Oct-96	9:00	59.0	15.0	1	4.00	PASS
4	29-Oct-96	9:00	59.0	15.0	1	3.00	PASS
10	29-Oct-96	9:00	59.0	15.0	1	0.00	PASS

Overall Status: PASS

FCC Report - In-Channel Response Data **Test Point:** 21 *1*

mg25b

Carrier-to-Noise Ratio Data Example



FCC Compliance Reporting - Carrier-to-Noise Ratio *Printed: 03-Dec-96*

Report Title: ACME Cable Company

Location: Hewlett-Packard Co, 1400 Fountaingrove Parkway #4USI, Santa Rosa CA 95403 **Test Point:** 21

Cascade:

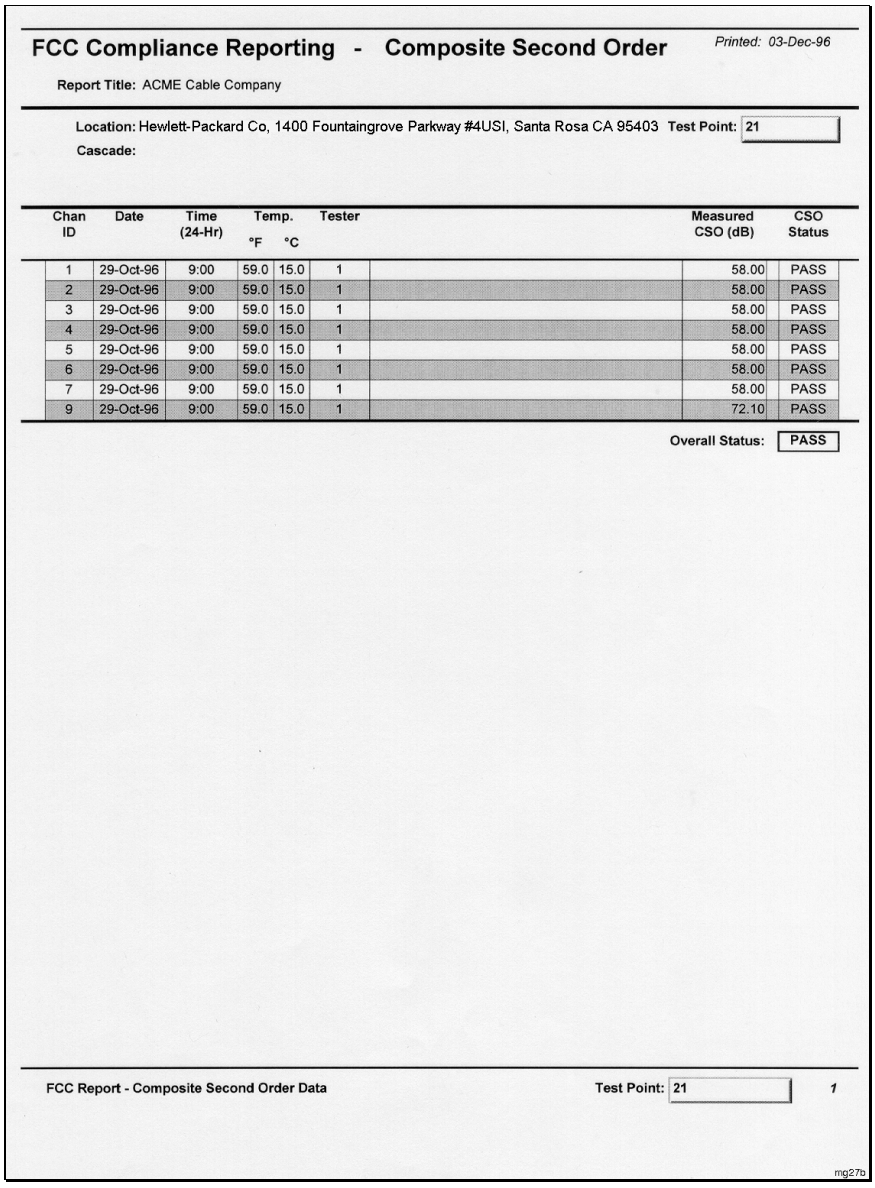
Chan ID	Date	Time (24-Hr)	Temp. °F	Temp. °C	Tester		Measured C/N Ratio (dB)	C/N Status
1	29-Oct-96	9:00	59.0	15.0	1		55.00	PASS
2	29-Oct-96	9:00	59.0	15.0	1		55.00	PASS
3	29-Oct-96	9:00	59.0	15.0	1		56.00	PASS
4	29-Oct-96	9:00	59.0	15.0	1		56.00	PASS
5	29-Oct-96	9:00	59.0	15.0	1		56.00	PASS
6	29-Oct-96	9:00	59.0	15.0	1		56.00	PASS
7	29-Oct-96	9:00	59.0	15.0	1		56.00	PASS
9	29-Oct-96	9:00	59.0	15.0	1		60.10	PASS
10	29-Oct-96	9:00	59.0	15.0	1		50.00	PASS

Overall Status: PASS

FCC Report - Carrier-to-Noise Ratio Data **Test Point:** 21 *1*

mg26b

Composite Second Order Data Example



FCC Compliance Reporting - Composite Second Order *Printed: 03-Dec-96*

Report Title: ACME Cable Company

Location: Hewlett-Packard Co, 1400 Fountaingrove Parkway #4USI, Santa Rosa CA 95403 **Test Point:** 21

Cascade:

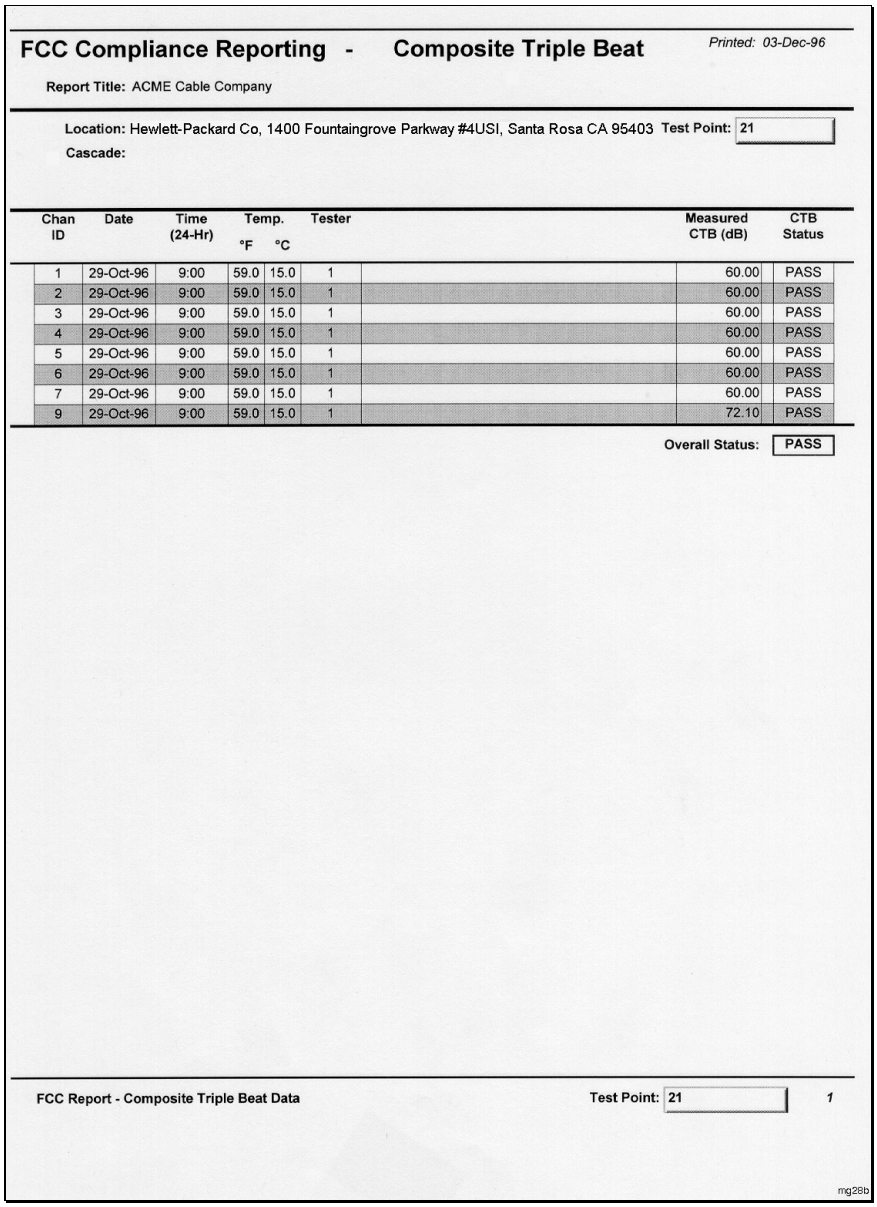
Chan ID	Date	Time (24-Hr)	Temp. °F	Temp. °C	Tester		Measured CSO (dB)	CSO Status
1	29-Oct-96	9:00	59.0	15.0	1		58.00	PASS
2	29-Oct-96	9:00	59.0	15.0	1		58.00	PASS
3	29-Oct-96	9:00	59.0	15.0	1		58.00	PASS
4	29-Oct-96	9:00	59.0	15.0	1		58.00	PASS
5	29-Oct-96	9:00	59.0	15.0	1		58.00	PASS
6	29-Oct-96	9:00	59.0	15.0	1		58.00	PASS
7	29-Oct-96	9:00	59.0	15.0	1		58.00	PASS
9	29-Oct-96	9:00	59.0	15.0	1		72.10	PASS

Overall Status: PASS

FCC Report - Composite Second Order Data **Test Point:** 21 *1*

mg27b

Composite Triple Beat Data Example



FCC Compliance Reporting - Composite Triple Beat *Printed: 03-Dec-96*

Report Title: ACME Cable Company

Location: Hewlett-Packard Co, 1400 Fountaingrove Parkway #4USI, Santa Rosa CA 95403 **Test Point:** 21

Cascade:

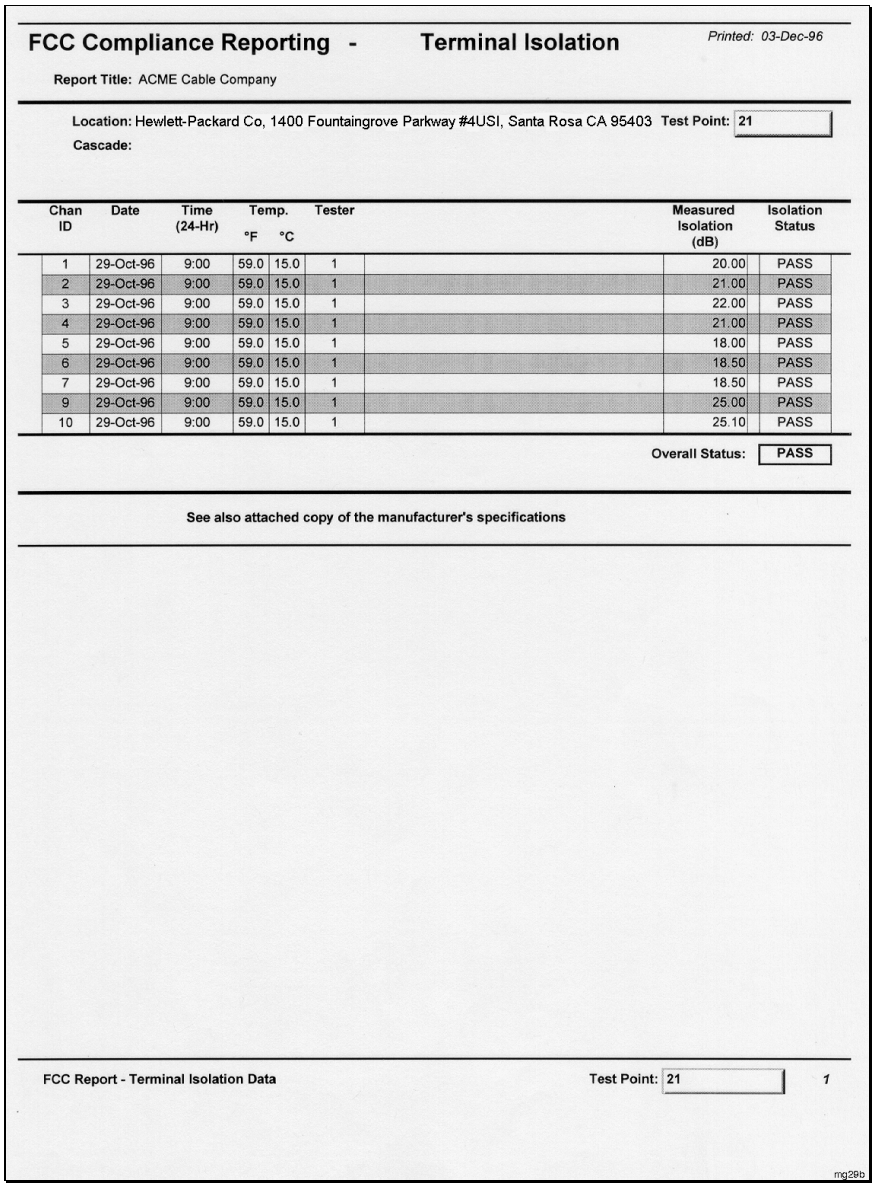
Chan ID	Date	Time (24-Hr)	Temp. °F	Temp. °C	Tester		Measured CTB (dB)	CTB Status
1	29-Oct-96	9:00	59.0	15.0	1		60.00	PASS
2	29-Oct-96	9:00	59.0	15.0	1		60.00	PASS
3	29-Oct-96	9:00	59.0	15.0	1		60.00	PASS
4	29-Oct-96	9:00	59.0	15.0	1		60.00	PASS
5	29-Oct-96	9:00	59.0	15.0	1		60.00	PASS
6	29-Oct-96	9:00	59.0	15.0	1		60.00	PASS
7	29-Oct-96	9:00	59.0	15.0	1		60.00	PASS
9	29-Oct-96	9:00	59.0	15.0	1		72.10	PASS

Overall Status: PASS

FCC Report - Composite Triple Beat Data **Test Point:** 21 *1*

mg28b

Terminal Isolation Data Example



FCC Compliance Reporting - Terminal Isolation *Printed: 03-Dec-96*

Report Title: ACME Cable Company

Location: Hewlett-Packard Co, 1400 Fountaingrove Parkway #4USI, Santa Rosa CA 95403 **Test Point:** 21

Cascade:

Chan ID	Date	Time (24-Hr)	Temp. °F	Temp. °C	Tester		Measured Isolation (dB)	Isolation Status
1	29-Oct-96	9:00	59.0	15.0	1		20.00	PASS
2	29-Oct-96	9:00	59.0	15.0	1		21.00	PASS
3	29-Oct-96	9:00	59.0	15.0	1		22.00	PASS
4	29-Oct-96	9:00	59.0	15.0	1		21.00	PASS
5	29-Oct-96	9:00	59.0	15.0	1		18.00	PASS
6	29-Oct-96	9:00	59.0	15.0	1		18.50	PASS
7	29-Oct-96	9:00	59.0	15.0	1		18.50	PASS
9	29-Oct-96	9:00	59.0	15.0	1		25.00	PASS
10	29-Oct-96	9:00	59.0	15.0	1		25.10	PASS

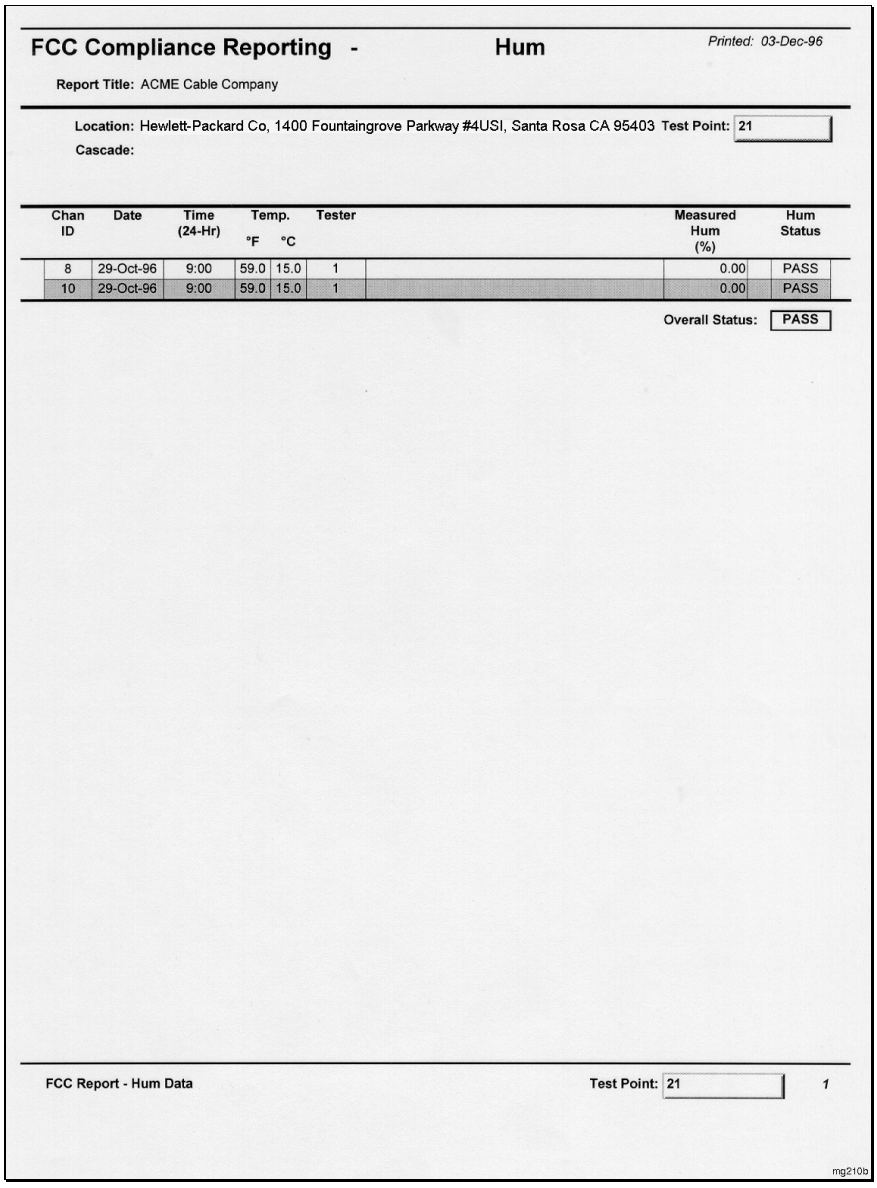
Overall Status: PASS

See also attached copy of the manufacturer's specifications

FCC Report - Terminal Isolation Data **Test Point:** 21 *1*

mg28b

Hum Data Example



FCC Compliance Reporting - Hum *Printed: 03-Dec-96*

Report Title: ACME Cable Company

Location: Hewlett-Packard Co, 1400 Fountaingrove Parkway #4USI, Santa Rosa CA 95403 **Test Point:** 21

Cascade:

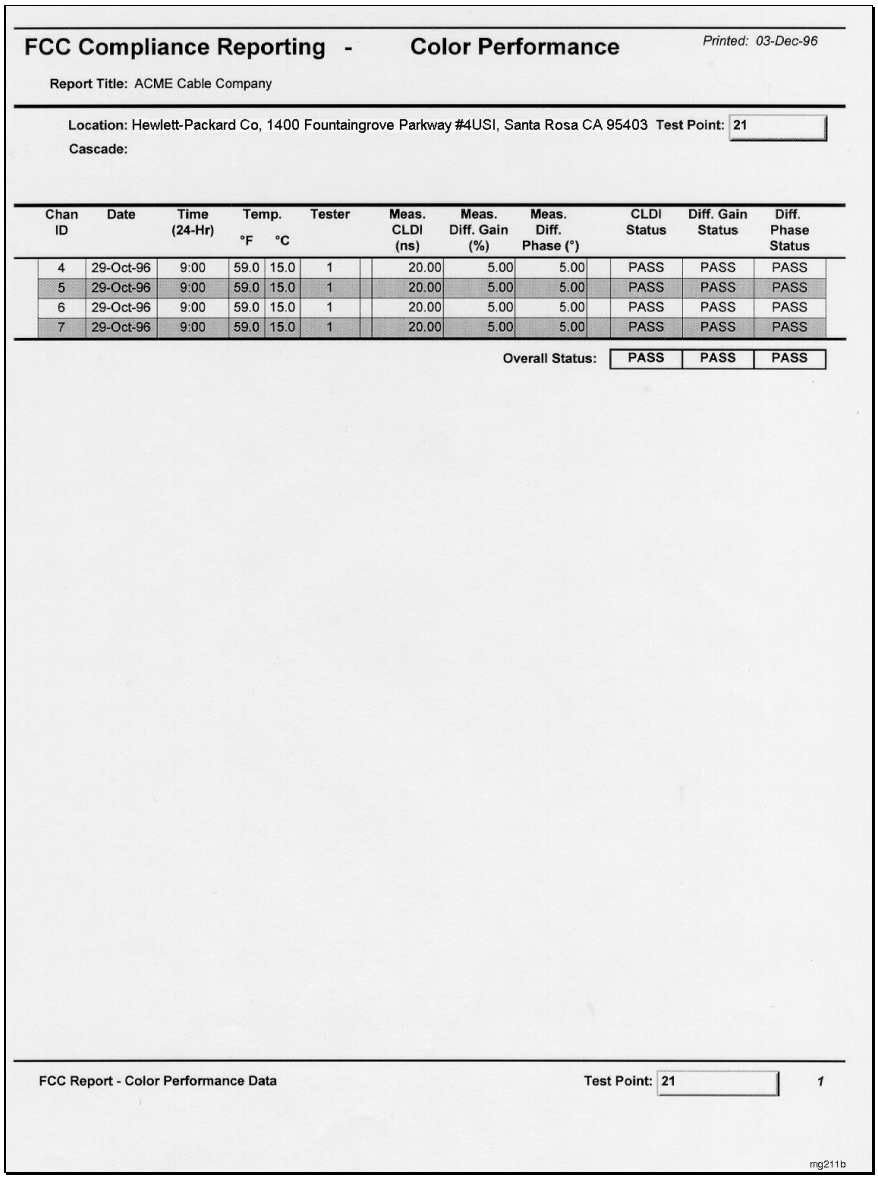
Chan ID	Date	Time (24-Hr)	Temp. °F	Temp. °C	Tester	Measured Hum (%)	Hum Status
8	29-Oct-96	9:00	59.0	15.0	1	0.00	PASS
10	29-Oct-96	9:00	59.0	15.0	1	0.00	PASS

Overall Status: PASS

FCC Report - Hum Data **Test Point:** 21 *1*

mg210b

Color Performance Data Example



FCC Compliance Reporting - Color Performance *Printed: 03-Dec-96*

Report Title: ACME Cable Company

Location: Hewlett-Packard Co, 1400 Fountaingrove Parkway #4USI, Santa Rosa CA 95403 **Test Point:** 21

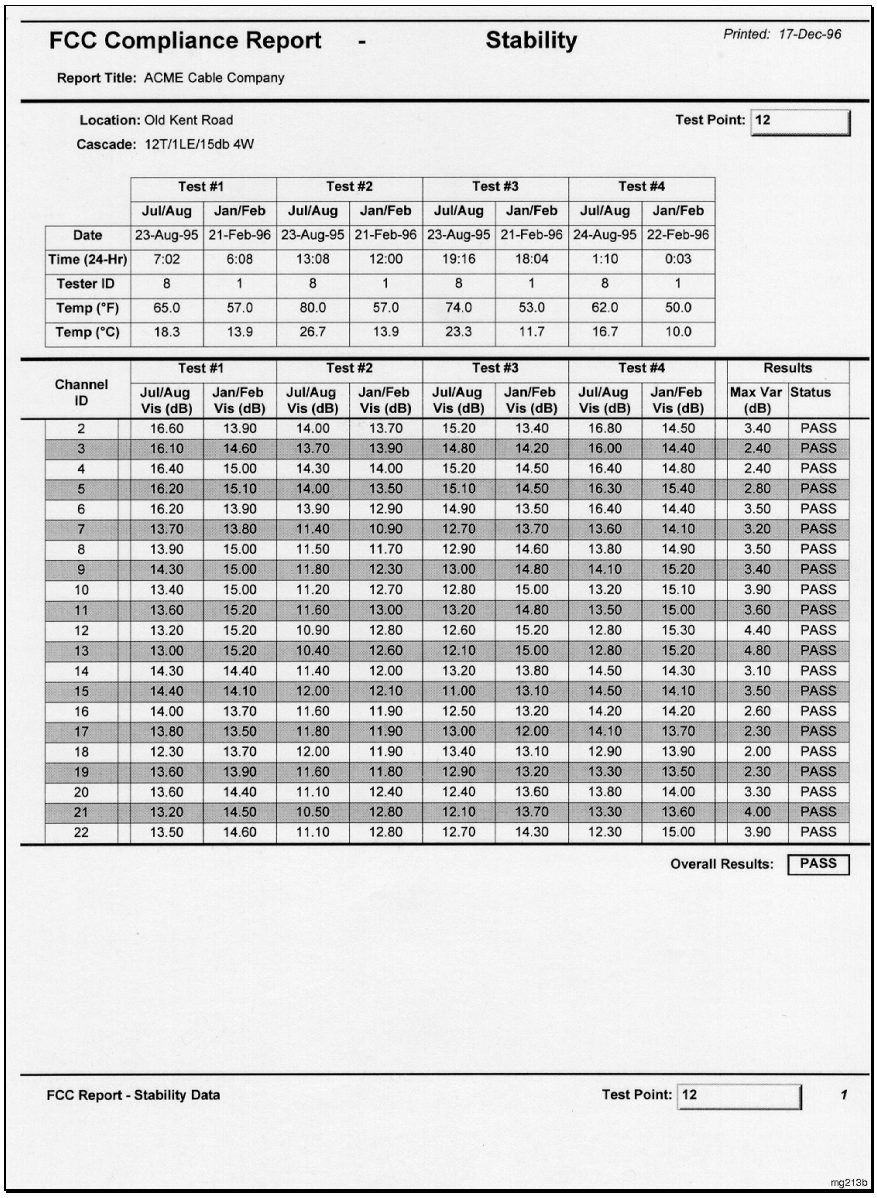
Cascade:

Chan ID	Date	Time (24-Hr)	Temp. °F	Temp. °C	Tester	Meas. CLDI (ns)	Meas. Diff. Gain (%)	Meas. Diff. Phase (°)	CLDI Status	Diff. Gain Status	Diff. Phase Status
4	29-Oct-96	9:00	59.0	15.0	1	20.00	5.00	5.00	PASS	PASS	PASS
5	29-Oct-96	9:00	59.0	15.0	1	20.00	5.00	5.00	PASS	PASS	PASS
6	29-Oct-96	9:00	59.0	15.0	1	20.00	5.00	5.00	PASS	PASS	PASS
7	29-Oct-96	9:00	59.0	15.0	1	20.00	5.00	5.00	PASS	PASS	PASS
								Overall Status:	PASS	PASS	PASS

FCC Report - Color Performance Data **Test Point:** 21 *1*

mg211b

Stability Data Example



FCC Compliance Report - Stability *Printed: 17-Dec-96*

Report Title: ACME Cable Company

Location: Old Kent Road
Cascade: 12T/1LE/15db 4W

Test Point: 12

	Test #1		Test #2		Test #3		Test #4	
	Jul/Aug	Jan/Feb	Jul/Aug	Jan/Feb	Jul/Aug	Jan/Feb	Jul/Aug	Jan/Feb
Date	23-Aug-95	21-Feb-96	23-Aug-95	21-Feb-96	23-Aug-95	21-Feb-96	24-Aug-95	22-Feb-96
Time (24-Hr)	7:02	6:08	13:08	12:00	19:16	18:04	1:10	0:03
Tester ID	8	1	8	1	8	1	8	1
Temp (°F)	65.0	57.0	80.0	57.0	74.0	53.0	62.0	50.0
Temp (°C)	18.3	13.9	26.7	13.9	23.3	11.7	16.7	10.0

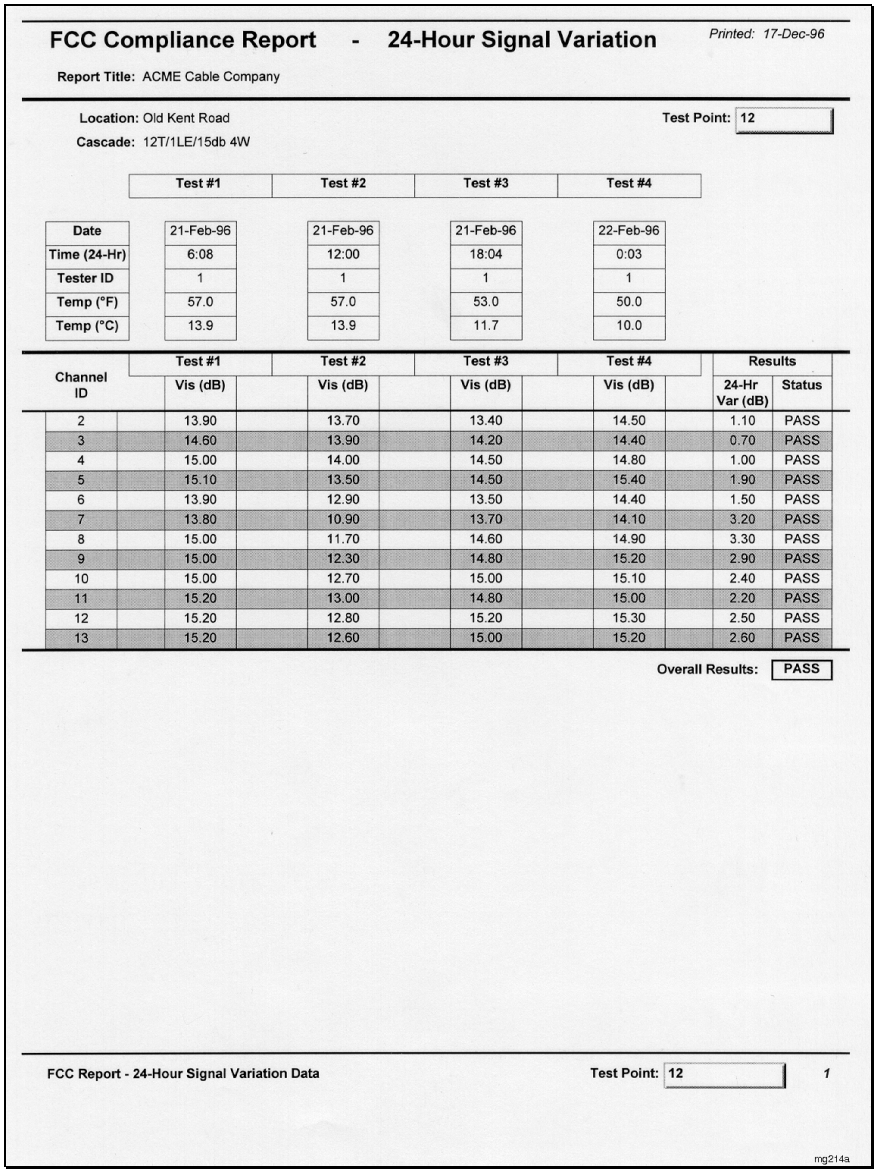
Channel ID	Test #1		Test #2		Test #3		Test #4		Results	
	Jul/Aug Vis (dB)	Jan/Feb Vis (dB)	Jul/Aug Vis (dB)	Jan/Feb Vis (dB)	Jul/Aug Vis (dB)	Jan/Feb Vis (dB)	Jul/Aug Vis (dB)	Jan/Feb Vis (dB)	Max Var (dB)	Status
2	16.60	13.90	14.00	13.70	15.20	13.40	16.80	14.50	3.40	PASS
3	16.10	14.60	13.70	13.90	14.80	14.20	16.00	14.40	2.40	PASS
4	16.40	15.00	14.30	14.00	15.20	14.50	16.40	14.80	2.40	PASS
5	16.20	15.10	14.00	13.50	15.10	14.50	16.30	15.40	2.80	PASS
6	16.20	13.90	13.90	12.90	14.90	13.50	16.40	14.40	3.50	PASS
7	13.70	13.80	11.40	10.90	12.70	13.70	13.60	14.10	3.20	PASS
8	13.90	15.00	11.50	11.70	12.90	14.60	13.80	14.90	3.50	PASS
9	14.30	15.00	11.80	12.30	13.00	14.80	14.10	15.20	3.40	PASS
10	13.40	15.00	11.20	12.70	12.80	15.00	13.20	15.10	3.90	PASS
11	13.60	15.20	11.60	13.00	13.20	14.80	13.50	15.00	3.60	PASS
12	13.20	15.20	10.90	12.80	12.60	15.20	12.80	15.30	4.40	PASS
13	13.00	15.20	10.40	12.60	12.10	15.00	12.80	15.20	4.80	PASS
14	14.30	14.40	11.40	12.00	13.20	13.80	14.50	14.30	3.10	PASS
15	14.40	14.10	12.00	12.10	11.00	13.10	14.50	14.10	3.50	PASS
16	14.00	13.70	11.60	11.90	12.50	13.20	14.20	14.20	2.60	PASS
17	13.80	13.50	11.80	11.90	13.00	12.00	14.10	13.70	2.30	PASS
18	12.30	13.70	12.00	11.90	13.40	13.10	12.90	13.90	2.00	PASS
19	13.60	13.90	11.60	11.80	12.90	13.20	13.30	13.50	2.30	PASS
20	13.60	14.40	11.10	12.40	12.40	13.60	13.80	14.00	3.30	PASS
21	13.20	14.50	10.50	12.80	12.10	13.70	13.30	13.60	4.00	PASS
22	13.50	14.60	11.10	12.80	12.70	14.30	12.30	15.00	3.90	PASS

Overall Results: PASS

FCC Report - Stability Data **Test Point:** 12 *1*

mg213b

24-Hour Signal Variation Data



FCC Compliance Report - 24-Hour Signal Variation *Printed: 17-Dec-96*

Report Title: ACME Cable Company

Location: Old Kent Road
Cascade: 12T/1LE/15db 4W

Test Point: 12

	Test #1	Test #2	Test #3	Test #4
Date	21-Feb-96	21-Feb-96	21-Feb-96	22-Feb-96
Time (24-Hr)	6:08	12:00	18:04	0:03
Tester ID	1	1	1	1
Temp (°F)	57.0	57.0	53.0	50.0
Temp (°C)	13.9	13.9	11.7	10.0

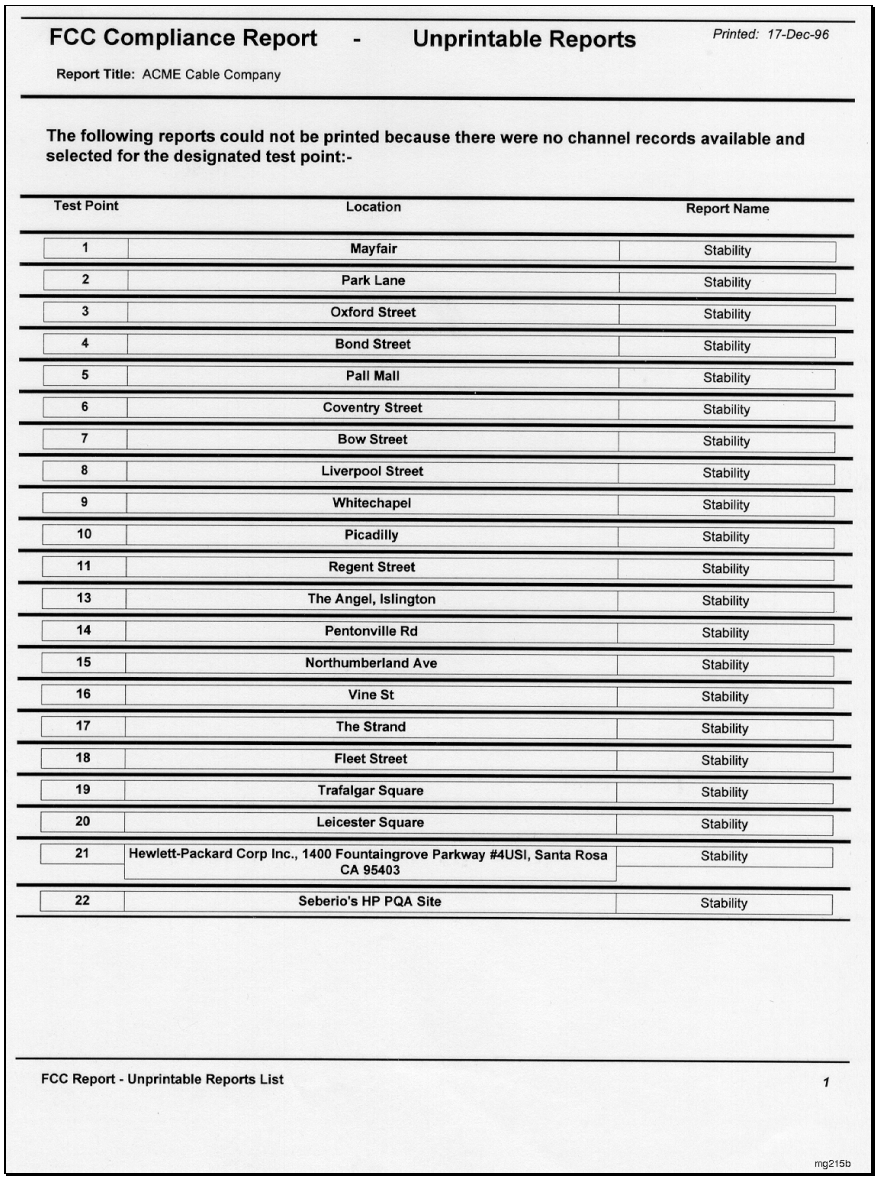
Channel ID	Test #1 Vis (dB)	Test #2 Vis (dB)	Test #3 Vis (dB)	Test #4 Vis (dB)	Results 24-Hr Var (dB)	Results Status
2	13.90	13.70	13.40	14.50	1.10	PASS
3	14.60	13.90	14.20	14.40	0.70	PASS
4	15.00	14.00	14.50	14.80	1.00	PASS
5	15.10	13.50	14.50	15.40	1.90	PASS
6	13.90	12.90	13.50	14.40	1.50	PASS
7	13.80	10.90	13.70	14.10	3.20	PASS
8	15.00	11.70	14.60	14.90	3.30	PASS
9	15.00	12.30	14.80	15.20	2.90	PASS
10	15.00	12.70	15.00	15.10	2.40	PASS
11	15.20	13.00	14.80	15.00	2.20	PASS
12	15.20	12.80	15.20	15.30	2.50	PASS
13	15.20	12.60	15.00	15.20	2.60	PASS

Overall Results: PASS

FCC Report - 24-Hour Signal Variation Data **Test Point:** 12 *1*

mg214a

Unprintable Reports List Example



FCC Compliance Report - Unprintable Reports *Printed: 17-Dec-96*

Report Title: ACME Cable Company

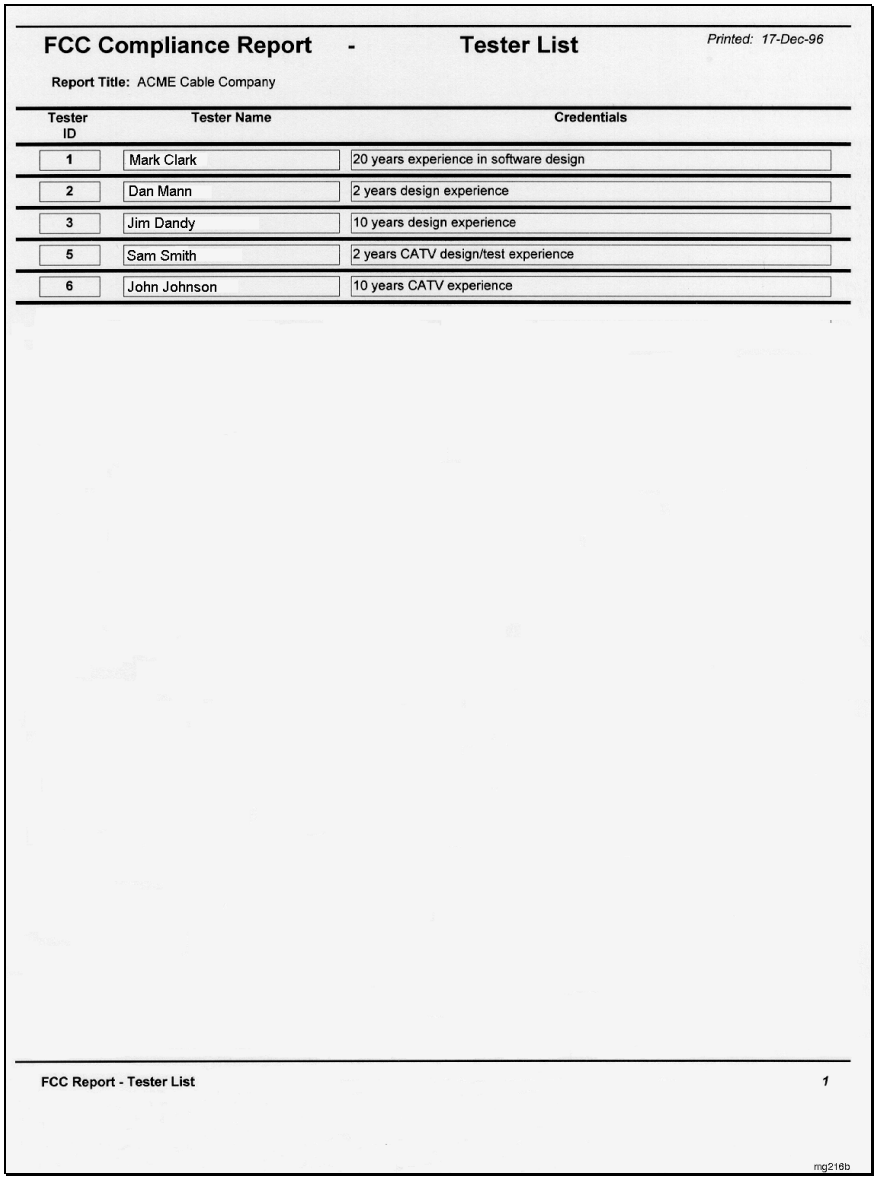
The following reports could not be printed because there were no channel records available and selected for the designated test point:-

Test Point	Location	Report Name
1	Mayfair	Stability
2	Park Lane	Stability
3	Oxford Street	Stability
4	Bond Street	Stability
5	Pall Mall	Stability
6	Coventry Street	Stability
7	Bow Street	Stability
8	Liverpool Street	Stability
9	Whitechapel	Stability
10	Picadilly	Stability
11	Regent Street	Stability
13	The Angel, Islington	Stability
14	Pentonville Rd	Stability
15	Northumberland Ave	Stability
16	Vine St	Stability
17	The Strand	Stability
18	Fleet Street	Stability
19	Trafalgar Square	Stability
20	Leicester Square	Stability
21	Hewlett-Packard Corp Inc., 1400 Fountaingrove Parkway #4USI, Santa Rosa CA 95403	Stability
22	Seberio's HP PQA Site	Stability

FCC Report - Unprintable Reports List 1

mg215b

Tester List Example



FCC Compliance Report - Tester List *Printed: 17-Dec-96*

Report Title: ACME Cable Company

Tester ID	Tester Name	Credentials
1	Mark Clark	20 years experience in software design
2	Dan Mann	2 years design experience
3	Jim Dandy	10 years design experience
5	Sam Smith	2 years CATV design/test experience
6	John Johnson	10 years CATV experience

mg216b

11

Database and Program File Maintenance

Regular maintenance of the program and data module files is important to assure performance of the software and the protection of the data. Through use of the file copy functions provided by Windows, and the repair and compacting utilities supplied with the HP CaLan 85921B software, you can protect your program and data from catastrophic loss.

Backing Up Data

In order to avoid losing data as a result of a catastrophe such as a power failure during a disk write operation or failure of the disk drive, it is necessary to backup your data module(s). The data module(s) should be backed up to another location on your computer, such as another hard disk drive or at least another directory on your hard disk, if you have only one.

Backing up to another location on your hard drive will allow you to copy the backed up version to your working directory in the event of a file failure. Backing up to another computer will allow you to restore your data in the event your hard disk suffers a catastrophic failure.

How often you should back up your data module depends upon how much data you can afford to lose. For example, how much can you afford to manually re-enter data (assuming you are keeping ASCII files for recently collected data or have hard copies). It is not a bad idea to backup your data as often as you make additions or changes to your data module. If you are collecting data on a daily basis, then perform a backup every day.

The most important files, which contain all your data, are the files with the **.MDB** extension. These are located in the directory that contains your program files and the directory you choose to save your data during installation of the software. Assuming you chose the default directory during install, the data directory is C:\hp921B2\data and the program directory is C:\hp921B2.

You can use the DOS backup command, Windows™ Explorer, or third-party packages to backup your file onto floppy disks. Many of these will also compress your data so that it can be stored more easily, using less disk space. Consult your DOS, Windows™ or third-party software manuals for specific details.

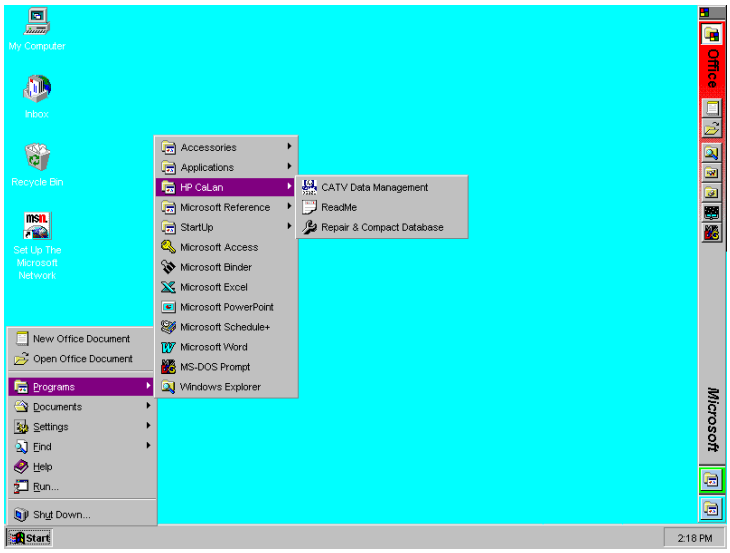
Repairing and Compacting the Database

Included in the program group where the HP CaLan 85921B software is installed is a Repair & Compact Database utility. To make your database run more efficiently, you should use this program regularly. Also, the utility program can repair some problems with corruption in the database.

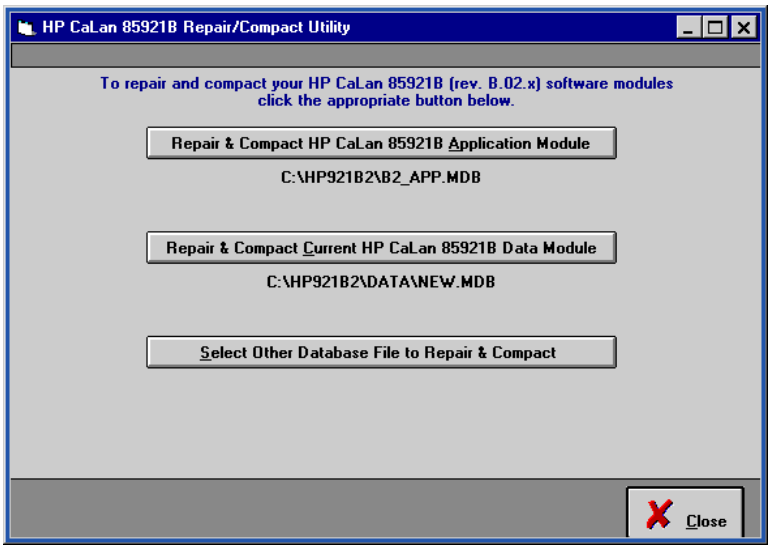
In the event of a program failure or crash the Repair and Compact Utility should be run immediately before running the HP CaLan 85921B software. The utility should be used to repair both the application module (B2_APP.MDB) and the data module that was in use at the time of the crash.

Use the following steps to run the Repair and Compact utility.

1. Windows 95 or Windows NT 4.0 users, go to Start, Programs, HP CaLan, Repair & Compact Database.



The HP CaLan 85921B Repair/Compact Utility dialog box will be displayed.



2. Click on the **Repair & Compact HP CaLan 85921B Application Module** button.

While the program is running, the cursor will appear as an hour glass. It will take a few moments to complete the work. When the utility has completed, the following dialog box will be displayed.

3. Click on **OK** to clear this message. The Repair/Compact Utility dialog box will again be displayed.
4. Click on **Repair & Compact Current HP CaLan 85921B Data Module** button.

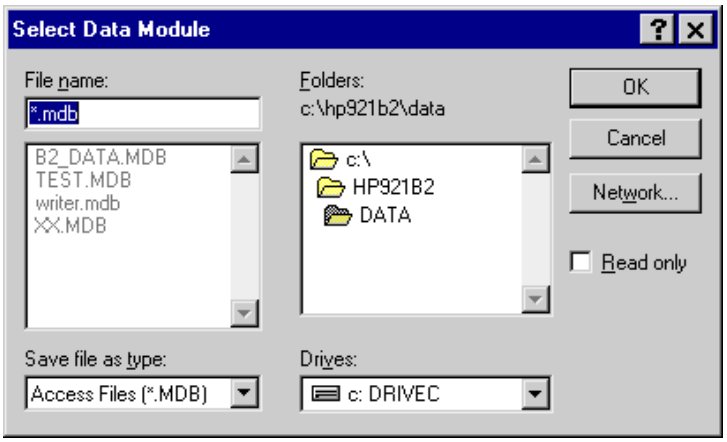
This will repair and compact the current data module. The current data module and it's path are displayed below the button.

Again a dialog box will be displayed showing the repair and compact is complete.

5. If you do not have any other data modules to repair and compact, click on the **Close** button. The Repair and Compact process is complete.

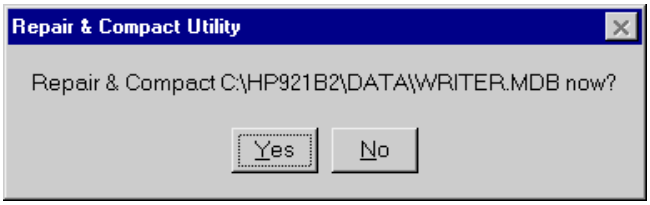
6. If you want to repair another module click on **Select Other Database File to Repair & Compact** button.

   The Select Data Module dialog box will be displayed.



6. Choose the data module and it's location through the Select Data Module dialog box.

7. When you have made your selection click on **OK**. The Repair & Compact Utility dialog box will again be displayed.



8. Click on **Yes** to continue the repair.

While the program is running, the cursor will appear as an hour glass. It may take a few moments to complete the work.

A dialog box indicating completion will be displayed.

9. Click on **OK** to clear this message. The Repair & Compact Utility dialog box will again be displayed.

If you have another data module to repair and compact, return to step 5. If you are finished with this utility, click on **Close**. The repair and compact process is now complete.

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If You Have a Problem

If you have a problem with the HP CaLan 85921B Cable TV Data Management Software, first check the basics. This chapter contains a checklist that will help identify some of the most common problems. This chapter is organized into the following sections:

Check the Basics
A quick checklist to help identify some of the most common problems.

Cabling
If you are having trouble communicating with the instrument, refer to this section on cabling.

Troubleshooting Common Problems
Provides information to help you troubleshoot further problems with the software.

Calling Hewlett-Packard Sales and Service Offices
Refer to this section for information about contacting the HP sales and service office.

Check the Basics

Often problems may be solved by repeating whatever was being done when the problem occurred. A few minutes spent performing these simple checks may eliminate the need for customer assistance from the HP Sales and Service Office.

Is the security key connected to the correct computer communications port?

- Check that the security key is connected to the parallel port of your computer.

CAUTION! The security key is required to operate this software. This key is not available separately. The purchase of a complete cable TV data management software package will be required if this key is lost or damaged, except as provided by the warranty.

Are the cables connected properly and operating correctly?

- Check that the cables are connected properly and operating correctly**.**
- Check that the correct communications port for the test equipment is selected. Refer to chapter 3 for information about changing the communications port.
- Check that you are using the correct cable. Refer to the following section for the recommended cable.

Cabling

One of the most common problems in poor communications between systems is improper cabling. Many users think that all RS-232 cables are the same, but if you look into the wiring of the cables you will find a variety of configurations. This is why the HP CaLan 85921B cable TV data management system software includes the correct cabling for the most common setups, with the package. This helps insure the installation will go smoothly with the right components. It is misleading to think that if the cable connectors fit correctly, or if it is a standard RS-232 cable, it will work.

If you are having trouble, and not sure you are using the cables that came with a system out of the box, *make sure that the correct HP part number is on the cable, for the instrument you are using* . Also, do not use a pin converter (9 to 25 pin or reverse) with the cable and expect it to work.

The information on the correct part number is provided below.

Computer	Instrument	Interface	HP Cable number	
9 pin	3010	25 pin	24542M	
9 pin	2010B/3010B/R/H	9 pin	C2932A	‡
9 pin	8591C	25 pin	24542G	
9 pin	8591C*	9 pin	24542U	
25 pin	3010	25 pin	13242M	
25 pin	2010B/3010B/R/H	9 pin	24542M	
25 pin	8591C	25 pin	13242G	
25 pin	8591C*	9 pin	24542G	

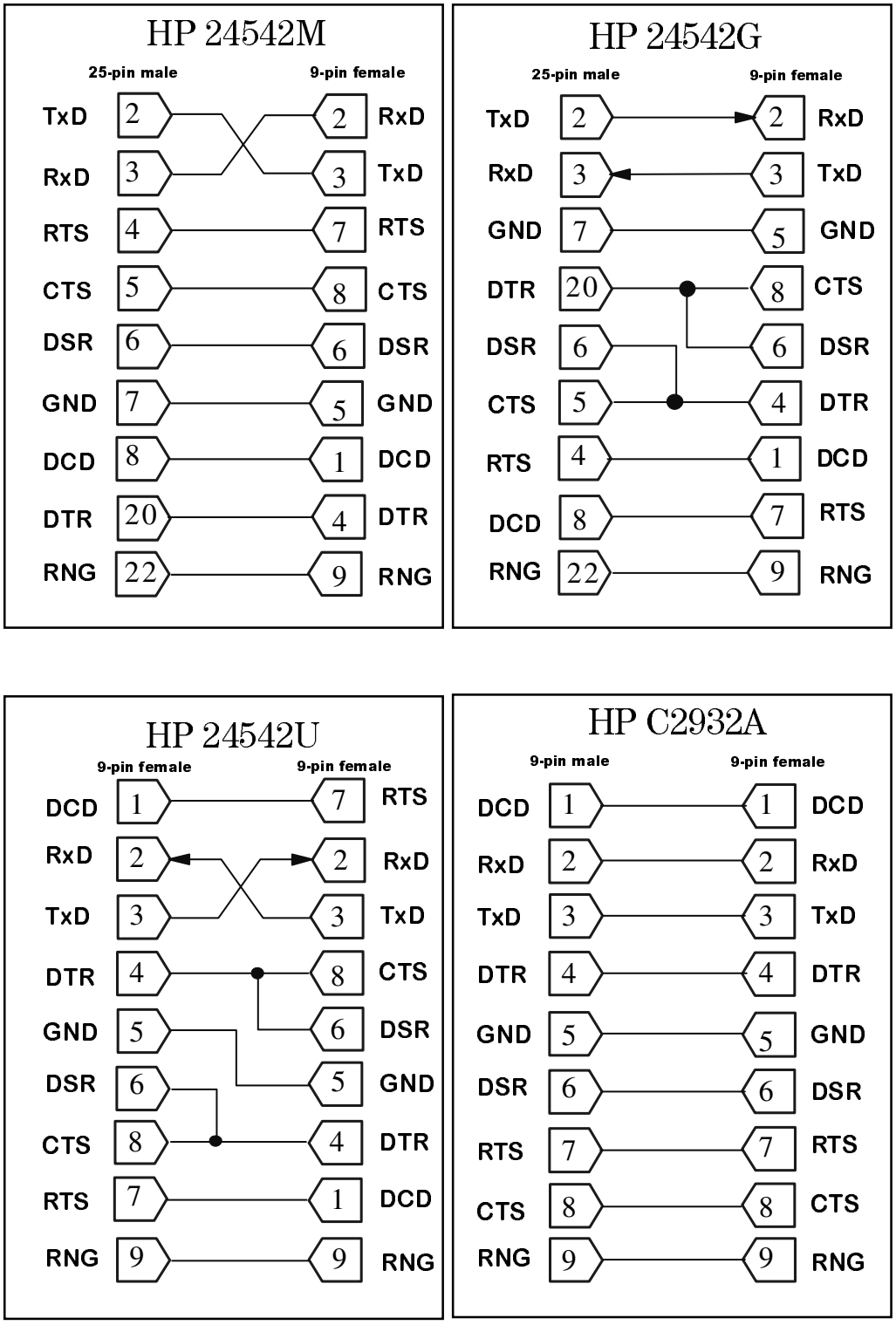
Grayed selections are cables included with non-upgrade purchase.

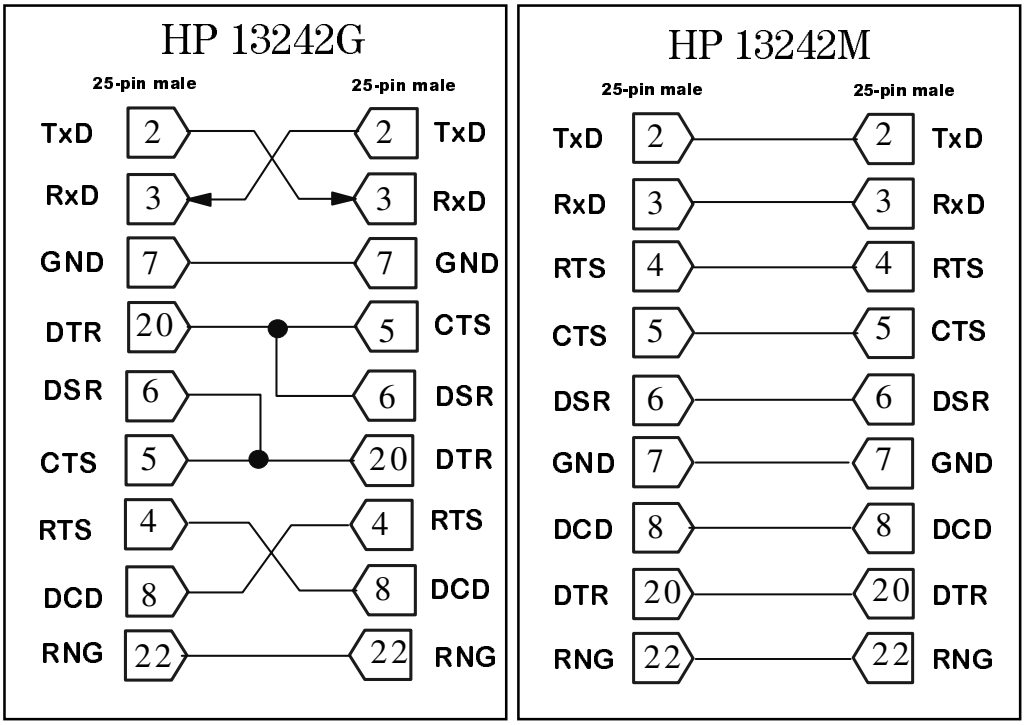
* Serial number prefixes 3523A and 3525U and above.

‡ Also known as HP part number 8120-6188.

Note: If your system does not have the cable with the correct HP part number on it, you can get the correct cable by calling Hewlett-Packard at 1-800-452-4844 ext. HPTV.

Cable Configurations




HP 13242G
25-pin male
25-pin male
TxD 2 2 TxD
RxD 3 3 RxD
GND 7 7 GND
DTR 20 5 CTS
DSR 6 6 DSR
CTS 5 20 DTR
RTS 4 4 RTS
DCD 8 8 DCD
RNG 22 22 RNG
HP 13242M
25-pin male
25-pin male
TxD 2 2 TxD
RxD 3 3 RxD
RTS 4 4 RTS
CTS 5 5 CTS
DSR 6 6 DSR
GND 7 7 GND
DCD 8 8 DCD
DTR 20 20 DTR
RNG 22 22 RNG

Troubleshooting Common Problems

The following troubleshooting section describes some common problems and their solutions.

If you get a low disk space warning.

The data management software will give a low disk space warning if there is less than 10 megabytes of hard disk space. The software will still be operational and you will be given the opportunity to continue. Keep in mind the software may perform slowly and there is a chance of losing data. A hard disk with less than 2 megabytes of space will prevent the data management software from operating. Hard disk space must be freed in order to bypass either of these situations. Use of the Repair and Compact Utility can help by reducing the size of your files.

If the software will not run

- Check that the security key is properly installed. Refer to chapter 2.
- Check the hardware and software requirements listed in chapter 2.
- Check that the software has been installed properly, following the installation instructions in chapter 2.
- Check if there is another Microsoft® Access application running on the PC. Close the other applications before running the software.
- Check that you are not trying the execute the ***.EXE** files independently, for example, from the Windows™ Program Manager.

If the software does not communicate with the instrument

- Check the cable connections and make sure you have the correct cable for the instrument you are using. Refer to the previous sections in this chapter on cabling and cable configurations for more help.
- Check that the communications ports have been assigned correctly.

If the software has trouble recognizing the 3010 channel plan after a merge.

The same channel plan used to collect the data in the instrument must be used to "Get" the data into the software. Use the "Get" function to import the original channel plan from the instrument into the software. You must use a new name in the software for this channel plan. Then use "Get" function to import the data into the software from the instrument.

If you have a problem pointing the mouse cursor

Check the speed of your mouse. You may need to readjust the mouse speed. Refer to your Microsoft® Windows™ documentation.

If you need to change the security key

If, for any reason you need to replace the security key, the registration program must be run to record the new serial number. To run the registration program, perform the following procedure.

1. Install the new security key on your parallel port 1 (LPT1).
2. Enter the Windows™ File Manager dialog box.
3. Open the directory that contains the HP CaLan 85921B software (the one you installed the program to).
4. Double-click the **reg921.exe** file to open the Registration Information dialog box.
5. Enter your company name.
6. Select **OK** to save the information.

If the software does not load to the main menu

Verify all previous suggestions in this chapter. If the problem still exists, try re-installing the software.

If you get an "Out of Memory" error when printing

Some reports generated from the HP CaLan 85921B software will be several pages long and require extensive amounts of printer memory. If this situation occurs try increasing the printer memory (make sure you have the memory in the printer) or reducing the resolution of the printer. Both of these Windows adjustments can be made in the Windows control panel. Consult your Windows manual for more information.

If you get a Serial port COM read error

While sending or getting from the instruments, you may get a warning box showing a COM read error. The communications with the instrument is not working for one of several reasons.

- Check to see the instrument is on.
- Check the cable. Make sure it is connected to the right port and that it is the correct cable. Refer to page 12-3 to verify the correct cable part number.
- Check the communication port settings in Comm under the Setup menu.
- Check to see the instrument is not running a test.
- Check that the baud rate selected in Setup, Comms matches the baud rate in the instrument.

Running Tests on Channels With No Visual Carrier Present

When making measurements with a test plan which has been sent to an HP CaLan 8591C cable TV analyzer, unpredictable results and long measurement times may be encountered when measuring channels where no visual carrier is present. The instrument will attempt to follow instructions and make the measurement using the existing noise and interference signals. If any channels in a test plan are known not to have a visual carrier during the expected time of testing, it is best to delete those channels from the test plan prior to sending it to the instrument.

Keep in mind that channels that shut down late at night will also cause problems. Under these conditions there will be no visual carrier.

And finally, if a scrambled channel is not specified as such in the test plan, measurement speed will be slow and the results incorrect.

If you get a Tester Name Invalid error

This will result from blank lines in the tester name field. Use a different tester and inactivate the invalid tester. Testers with blanks in field names cannot be modified.

If you cannot delete datasets

Make sure editing is turned on in system admin and the options menu is marked with an X next to edit. This will allow the editing and deletion of data.

HP CaLan 3010 is slow or seems to stop during data transfer

The earlier models of the HP CaLan 3010 with version 1.5.2 have a slower communication system. As a result, communications between the software and the instrument can take longer than expected. To remedy this call your Hewlett-Packard sales representative and upgrade your instrument.

Running Datamodules From a Floppy Disk

Do not attempt to run the datamodule from a floppy disk. The software was not designed to do this. If you need a datamodule from a floppy, copy the datamodule from the floppy into your data directory where the other datamodules are stored.

Computer System Setup

Virtual Memory

The HP CaLan 85921B is a large software application and uses many of Windows resources. For the best performance, we strongly recommend that a large, virtual memory be set up on the system hard disk. The recommended minimum size is 20 Megabytes. The swap file needs to be in one contiguous block, so the hard disk may need to be de-fragmented. If the virtual memory is too large, performance of your computer may also degrade. Please refer to your Windows documentation for more information on how to set up this virtual memory.

Screen Savers

Screen savers and notebook PC power saver programs may interfere with proper operation of the HP CaLan 85921B. Please remember to turn off screen-savers and power-saver utilities before using the HP CaLan 85921B.

Conflicting Applications

When installing or running the HP CaLan 85921B, make certain that there are no other Visual Basic or Microsoft Access programs loaded. If you need to run another application program when running the HP CaLan 85921B, we strongly recommend that you exit the HP CaLan 85921B program. Due to the complex nature of data transfer between the HP CaLan 85921B, the analyzers, and the database tables, you can get unpredictable results if the process is interrupted.

Channels with No Visual Carrier Present

When making measurements with a test plan that has been sent to an HP CaLan 8591C Cable TV Analyzer, unpredictable results may be encountered when measuring channels where no visual carrier is present, or when making color measurements on a black and white carrier. The instrument will attempt to follow instructions and make the measurement using the existing noise and interference signals. If any channels in a test plan are known not to have a visual carrier during the expected time of testing, it is best to delete those channels from the test plan prior to sending it to the instrument. Keep in mind some stations turn off their transmitters in the early morning hours.

Calling HP Sales and Service Offices

Use the information in this section to obtain Hewlett-Packard sales and service offices information. Sales and service offices are located around the world to provide complete support for your report generator software. To obtain support information or to order replacement parts, contact the nearest Hewlett-Packard Sales and Service office listed in the following table. In any correspondence or telephone conversations, refer to the software by its model number and full serial number. With this information, the HP representative can quickly determine whether your unit is still within its warranty period.

Before calling Hewlett-Packard please make the checks listed in "Check the Basics." If you still have a problem please read the warranty printed at the front of this guide.

Refer to the following table for HP sales and service office telephone and address information.

Hewlett-Packard Sales and Service Offices

UNITED STATES

Instrument Support Center
Hewlett-Packard Co.
(800) 403-0801

EUROPEAN FIELD OPERATIONS

Headquarters
Hewlett-Packard S.A.
150, Route du Nant-d'Avril
1217 Meyrin 2/Geneva
Switzerland
(41 22) 780.8111

France
Hewlett-Packard France
1 Avenue Du Canada
Zone D'Activite De Courtaboeuf
F-91947 Les Ulis Cedex
France
(33 1) 69 82 60 60

Germany
Hewlett-Packard GmbH
Hewlett-Packard Strasse
61352 Bad Homburg v.d.H
Germany
(49 6172) 16-0

Great Britain
Hewlett-Packard Ltd.
Eskdale Road, Winnersh Triangle
Wokingham, Berkshire RG41 5DZ
England
(44 734) 696622

INTERCON FIELD OPERATIONS

Headquarters
Hewlett-Packard Company
3495 Deer Creek Road
Palo Alto, California, USA
94304-1316
(415) 857-5027

Australia
Hewlett-Packard Australia Ltd.
31-41 Joseph Street
Blackburn, Victoria 3130
(61 3) 895-2895

Canada
Hewlett-Packard (Canada) Ltd.
17500 South Service Road
Trans-Canada Highway
Kirkland, Quebec H9J 2X8
Canada
(514) 697-4232

China
China Hewlett-Packard Company
38 Bei San Huan X1 Road
Shuang Yu Shu
Hai Dian District
Beijing, China
(86 1) 256-6888

Japan
Hewlett-Packard Japan, Ltd.
9-1 Takakura-Cho, Hachioji
Tokyo 192, Japan
(81 426) 60-2111

Singapore
Hewlett-Packard Singapore (Pte.) Ltd.
150 Beach Road
#29-00 Gateway West
Singapore 0718
(65) 291-9088

Taiwan
Hewlett-Packard Taiwan
8th Floor, H-P Building
337 Fu Hsing North Road
Taipei, Taiwan
(886 2) 712-0404

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Menu Map

The Menu Map was designed to make it easier to navigate through the HP CaLan 85921B software. Also, the map is easily removed from the manual to be posted near the equipment. This can then be used as a training tool and reduce the time it takes to become familiar with the software.

HP CaLan 85921B Menu

- Instrument Control
  - Test Plans
    - Trash
    - New
      - Set Active
      - Create New Test Plan
    - Modify
      - Copy
      - Test Plan
    - Back
    - Main Menu
  - Send...
    - Select Instrument/Data Type for Transmission
      - Back
      - OK
      - Main Menu
      - **3010**
        - Channel Plan — Selection for Transmission — OK / Back / Main Menu
        - Dwell Table — OK
        - Sweep Table — Selection for Transmission — OK / Back / Main Menu
        - File Labels — Selection for Transmission — OK / Back / Main Menu
      - **8591C**
        - Selection for Test Plan Transmission
          - View
          - Send Plan
          - Back
          - Main Menu
        - Channel Plan — Selection for Transmission — OK / Back / Main Menu
        - Dwell Table — OK
        - Sweep Table — Selection for Transmission — OK / Back / Main Menu
        - File Labels — Selection for Transmission — OK / Back / Main Menu
  - Get...
    - Select Instrument Type for Data Retrieval
      - OK
      - Back
      - Main Menu
      - **3010**
        - Channel Plan
        - Dwell Table
        - Sweep Table
        - History File List
          - Retrieve Files
          - Back
          - Main Menu
      - **8591C**
        - Test Dataset
          - Test Dataset Header Verification
            - Save
            - Reset Fields
            - Cancel
            - CTB — Save
            - OK
          - Terminal Isolation
            - OK
            - Save
  - Main Menu
- Field Data Review
  - Channel Measurements
  - Spectrum Data
  - Sweep Data
  - ADP
    - Trash
    - Save
    - New
      - Create New Test Header
      - Create New Test Data
        - Add Record
        - Erase
        - Sort
        - OK
        - Back
        - Cancel
    - View
      - View Test Header
      - View Test Data
        - Show+ Values
        - Erase
        - OK
        - Back
        - Cancel
    - Main Menu
- Data Analysis
  - Get Datasets
    - C/N Ratio
    - CSO
    - Modulation Depth
    - Carrier Frequency
    - Hum
    - CTB
    - FM Deviation
    - ADP
    - In-Channel
    - Color
    - Terminal Isolation
    - Sweep Response
    - Carrier Level
    - Spectrum Scans
      - File
        - Print Setup
        - Main Menu
        - Exit
      - Options
        - Delete Selected
        - Archive Selected
        - Reports
          - Selected Datasets
            - Print
            - Preview
            - Save as Document
          - Composite Reports
        - Export
          - Spreadsheet
          - Text
        - Graph Data*
        - Editing
      - Sort
        - Tester/ Date
        - Tester/ Comments
        - Tester/ Location
        - Location/ Date
        - Location/ Instrument
        - Tester/ Instrument
        - Date
        - Channel Plan
        - Instrument/ Date
        - Instrument/ Location
        - Comment/ Date
        - Comment/ Instrument
- Setup
  - Test Points
    - Trash
    - Set Active
    - New
    - Modify
    - Back
    - Main Menu
  - Comms
    - Instrument Type
      - Com Port
      - Baud Rate
  - Limits
    - Compliance Report Limits
    - Back
    - Main Menu
    - Valid Ranges
      - General
      - Frequency
      - Levels
      - Distortion
      - Color
      - Other
  - Testers
    - Trash
    - Set Active
    - New
    - Modify
    - Back
    - Main Menu
  - Channel Plans
    - Trash
    - Set Active
    - New
      - Preview
    - Modify
      - Preview
    - Back
      - Preview
    - Main Menu
    - Edit Dwell
  - Network
    - # Subscribers
    - #FCC Test Points
      - Network Upper Freq Limit
      - #FCC Channels
  - System Admin
    - Tool Tips
    - Allow Editing
      - Password
    - Company Name
  - Test Plan Templates
    - Trash
    - Set Active
    - New
    - Modify
    - Back
    - Main Menu
  - Instruments
    - Trash
    - Set Active
    - New
    - Modify
    - Back
    - Main Menu
    - Frequency
      - General
      - Frequency
    - Levels
    - Distortion
      - Levels
      - Distortion
    - Color
    - Other
  - Main Menu

Optional → Compliance Reports

- New Compliance Report
  - OK
  - Back
  - Main Menu
  - Report Header
  - Compliance Test Point Selection
    - OK
    - Back
    - Main Menu
    - Compliance Report Type Selection
      - OK
      - Back
      - Main Menu
      - Compliance Report Channel Selection
        - OK
        - Back
        - Main Menu
        - Select Report to Print
          - Print
          - Back
          - Main Menu
        - Select Report to View
          - View
            - File
              - Close
              - Print Setup
              - Print
          - Back
          - Main Menu
- Go to Compliance Report
  - Channel Selection Menu
- Go to Compliance Report
  - Print Control Menu
- Main Menu

+ Channel measurements only
*** Sweep Response, Carrier Level, and Spectrum Scans only**

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Glossary

AIR	AIR is also called the off-the-air or over-the-air tuning configuration. It refers to signals that are broadcast over the air and received with an antenna. The AIR frequency assignments are defined in the FCC channel identification plan, part 76.612.
ADP or average digital power	The average power of a digital signal.
carrier to noise ratio	The ratio of the amplitude of the carrier to the noise power in the portion of the spectrum occupied by the carrier. Also referred to as the C/N ratio.
cascade description	The description of inline devices (for example, amplifiers) between source and test point for documenting potential sources of loss and distortion.
CATV	Abbreviation for community antenna television or cable television system. A cable television system is a broadband communications system that provides multiple channels from centralized antennas.
channel plan	A group of channels along with the frequency characteristics for the channel components.
chrominance-luminance delay interval	The time delay between the low frequency luminance component and the high frequency chrominance component of the 12.5T pulse in the test signal.
coherent channel system	A system that configures video carrier frequencies to that of Composite Triple Beat frequencies in order to limit the effects of the distortion.
CSO (composite second order)	Composite Second Order (CSO) is the ratio of the composite second order beat products to the peak level of the visual carrier. For a system using the standard tune configuration, the composite second order beat products are the distortion products that occur at 750 khz and 1.25 MHz around the visual carrier.
CTB (composite triple beat)	Composite Triple Beat (CTB) is the ratio of the composite triple beat products to the peak level of the visual carrier. The composite triple beat products are distortion products that occur at the visual carrier frequency.
database	a data structure for storing related data.

data module	A number of datasets compiled into one file.
dataset	A group of measurement data organized by test site information. A set of data resulting from a specific group of tests at a specific time, location, instrument, and so forth.
depth of modulation	Measures the percentage of amplitude modulation on the video carrier between the horizontal synchronization-pulse and the vertical interval test signal white level.
differential gain	This is the change in amplitude of the chrominance subcarrier as the luminance changes from a blanking level to a white level.
differential phase	This is the maximum peak-to-peak change in phase of the chrominance subcarrier as the luminance changes from a blanking level towards white level.
DLP	Command or a sequence of programming commands used to perform specific operations. DLPs can be made up of several functions, variables, and traces defined by the program creator. The DLP can be downloaded from one electronic storage medium into another and executed without a controller.
dwell timing	The time the analyzer uses to take readings on the specified test.
FM deviation	Peak deviation of the audio FM signal of a cable TV channel.
HRC (harmonically related carriers)	The harmonically related carriers (HRC) tuning configuration. HRC is the channel-tuning configuration in which the frequency of each video carrier is a multiple of 6 Mhz.
hum	Undesired modulation of the television visual carrier by power-line frequencies or their harmonics or other low-frequency disturbances.
in-channel frequency response	Frequency response test that measures the flatness of an individual cable TV channel.
IRC (incrementally related carriers)	Incrementally related carriers (IRC), is a tune configuration where all channels except channels 5 and 6 are standard channels (see standard tune configuration for a definition of standard channels).
	The incrementally related carriers (IRC) channel-tuning configuration.
limits	data ranges and government specification constants used to define operational boundaries.
network	The number of uses, test points, and channels, and the upper frequency limit for the cable TV system.

scramble	To alter an electronic signal so that a decoding device is necessary to receive the signal.
STD (standard tune configuration)	The tune configuration in which the channels are at the frequencies that the Electronic Industries Association (EIA) and FCC define to be the standard channel frequencies.
spectrum scans	A plot of the level of signals present in the system in the measured frequency range.
sweep response	A plot of the response over frequency of the cable network at one location to a signal inserted at another location. For forward sweeps, the signal is inserted in the headend. For return sweeps, the signal is inserted in the field.
T	The T channel-tuning configuration.
test measurements	data organized by test type (for example, CSO, HUM, etc.)
test plan	The selection of tests to perform on a specific set of channels.
test point	The location where the test is taken.
tester	The name of the individual taking the test.
unscrambled	A signal that has not been scrambled. An unscrambled signal does not need a decoder to receive the signal correctly.
visual carrier	The portion of a television signal that contains the picture. A television signal contains both a visual and a sound carrier.

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