

12 Setting Preferences

12.1 General Information about PREFERENCES

Hot Key P (Preferences)

Execute Time (not applicable)

Test Fixture Not active

Special Screens (none)

LED Lamps Off

Usable in Macro No

Related Disk File **PREF.DAT**

Possible Messages ... (none)

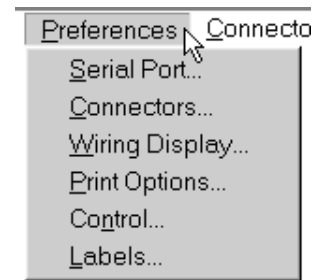
Effect: Choose port assignments, startup defaults, and User-selectable attributes with the *Preferences* function. The *Preferences File*, **PREF.DAT**, should be kept in your CableEye folder and is referred to when the program starts to automatically configure the various options. When you change the settings, the Preferences file will be updated as soon as you click "OK". If the *Preferences* file is not found when the program starts as a result of its being mislocated or missing, a new one is created using standard default settings. CableEye stores certain preferences in the *Windows registry* rather than the Preferences file and these will remain unaffected if **PREF.DAT** is removed or restored.

IMPORTANT:

1 – The CableEye Test Fixture will not respond unless it is connected to the serial port specified in the *Preferences/Serial Port* window at the Baud rate indicated therein.

2 – The "TEST" pushbutton on the CableEye fixture may be *disabled* with an option in the *Preferences/Control* window. The default setting *enables* this pushbutton.

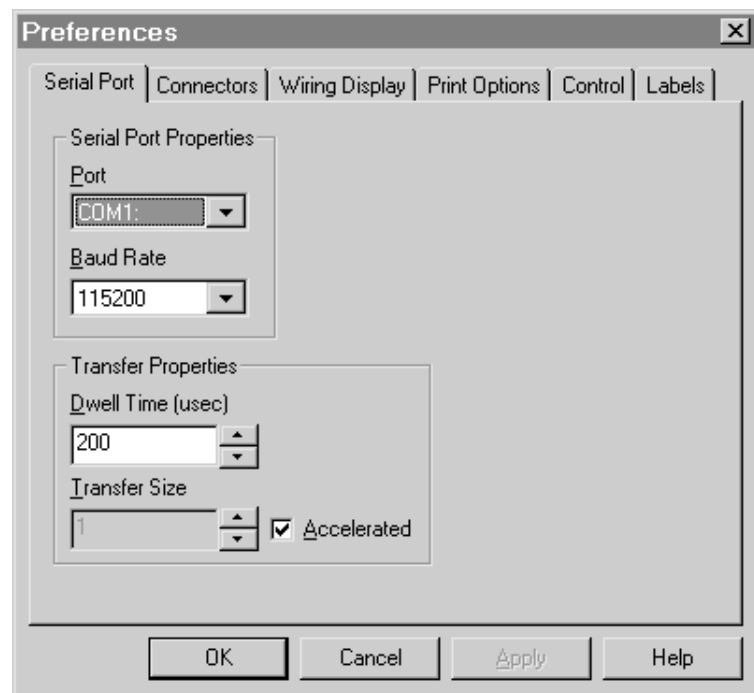
Click the Preferences menu item to reveal six categories of User selections. Choose the item you wish to examine to open the corresponding preference window. When the window opens, make the changes you wish and click *OK* to save them, or *Cancel* to return to the original settings. Any changes you make become effective as soon as you click OK and remain on the **PREF.DAT** file in your CableEye folder for future reference.



12.2 SERIAL PORT

Port – [default setting: COM1]

Connect the CableEye test fixture to the COM port shown here. With COM1 to COM4 you may check the *Accelerated* serial port box shown below. Should you have a USB port expander present, choosing COM5 or higher will require that the more compatible *Unaccelerated* serial port be employed (uncheck the box), which may result in longer data acquisition time from the test fixture. See "Accelerated checkbox" on the next page for more information.



Baud Rate – [default setting: 115,200 Baud] All CableEye M2 fixtures operate at 115,200 Baud. Older CableEye XP1 systems operate at 38.4K Baud, and most of the original 64-point CableEye systems operate at 9600 Baud. The fixture is designed to operate at only one Baud rate, *so this value should never be changed*. The maximum allowable Baud rate with standard PC hardware is 115,200 Baud, although the CableEye test fixture is capable of operating at ten times this rate. We plan a USB interface for future models.

Dwell Time – [default setting: 200] This represents the number of microseconds between the application of a stimulus signal to the cable, and the readback of a response. The allowable range is zero to 65,535. The dwell time allows switching transients associated

with the pulse excitation of the cable to subside before a measurement is taken. Insufficient dwell time will most likely result in the error message *Continuity Matrix is Assymetrical* or *Connection Error*. If you test cables longer than 10 feet or cables with tightly twisted wires, you may need to increase the dwell time to avoid measurement errors. You will also encounter errors if capacitors or other filter components are present in the cable, or in the connectors. You should not notice any increase in total measurement time with the dwell time set below 1000 μ S when checking cables of fewer than 75 conductors. However, you may notice even small increases in dwell time when expansion modules are connected (measurement time increases with the *square* of the number of test points).

We recommend the following procedure for finding the proper dwell time:

- 1 – If CableEye reports *Continuity Matrix is Assymetrical* or *Connection Error* when your setup appears to be correct, *double* the currently set dwell time.
- 2 – Repeat the measurement. If the error persists, double the dwell time again.
- 3 – Continue doubling the dwell time until the error message ceases.

If very high values of dwell time (above 30,000) do not stop the error messages, you may have one or more large-value capacitors (greater than 1 μ F) connected between two test points in the cable. In this case, the capacitor(s) should be removed prior to testing to allow normal operation.

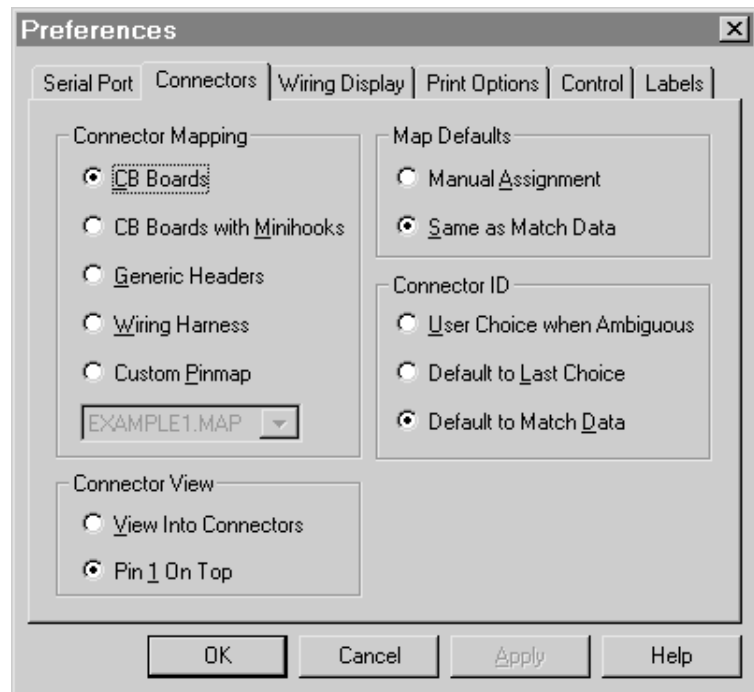
Accelerated checkbox – [*default setting: checked*] With this box checked, CableEye uses a serial port driver designed by CAMI Research rather than the standard Microsoft driver. Our custom driver results in a much faster measurement time, especially when used in Windows NT systems. If the software is unable to communicate with the test fixture after you install CableEye and everything else appears to be set correctly, try unchecking the Accelerated box and trying again. Although the Microsoft serial port driver is painfully slow, it may be more compatible in certain hardware situations.

Transfer Size – When the *Accelerated* box is unchecked, you may set a transfer size. This value determines the number of bytes passed to the serial port buffer at one time. Set this to *Auto* for the most general situation, or experiment with specific values to optimize your hardware. Use this only when you are unable to employ CAMI's accelerated serial port driver with your computer.

12.3 CONNECTORS

Connector Mapping (also **Connectors** in the main menu) –

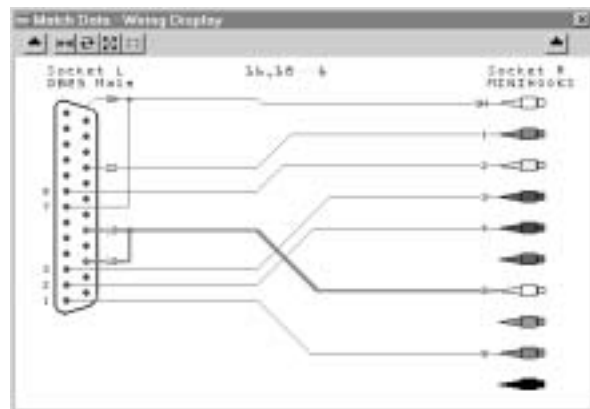
CableEye needs a pin assignment table (also known as a "pin map") to determine how the test points on the front of the tester are related to the pin numbers on connector graphics; test point 1 does not necessarily correspond to pin 1 on the screen graphic. The five choices offered here activate different map and connector graphic options.



CB Boards [default setting]

includes pin maps for all CAMI CB boards. The file **CABLEEYE.MAP** holds the needed pin assignment data and should reside in your CableEye folder.

CB Boards with Minihooks functions exactly like **CB Boards** but substitutes special graphics to represent the Minihook cables (Catalog Item 710) when these cables are attached to the CB15 connector board. The image on the right shows the minihook leads clipped to the bare wires of a one-sided DB25 cable. If you had not chosen **CB Boards with Minihooks**, you would see a DB9 female connector instead of the minihooks graphic.



Generic Headers bypasses all maps and displays the pin numbers and wiring exactly as measured on the 64-pin dual row headers along the front of the tester. Note that the pin numbers shown in this mode represent the test points as numbered on the front of the tester. Use this when you wish to display wiring as seen *directly* from the bank headers. Because the Generic Headers option deactivates all connector selection logic, you will never get the *Connection Error* message and will read

exactly the connections seen on the active test points. This option functions only if you have 192 or fewer active test points; for a larger number of test points, use the *Wiring Harness* option described below. The pin numbers on the left side of the screen represent *absolute* test point numbers, and on the right side of the screen begin counting over from "1"; to obtain absolute test point numbers for the right, simply add the number of pins active on the left to the pin number value shown for the right (*example*: if you have 128 active test points, the headers would be numbered 1-64 on both sides, so pin 1 on the right is actually test point 65).

Wiring Harness operates like *Generic Headers*, but shows *multiple* ganged 64-pin headers on each side of the screen, depending on how many active banks are detected. Software version 3.0 allows up to 1024 test points to be active (16 banks of 64 pins each), obtained by interconnecting M2 modules. Choose *Wiring Harness* when you are working with a multi-headed cable (more than two connectors), or a wiring harness. Refer to Section 9, "Adapting to Custom Fixtures and Wiring Harnesses", starting on page 9-1, for further information.

When you use the *Wiring Harness* option, we suppress all graphic wiring due to the resulting complexity when realistic harnesses are used. Instead, connection pointers appear in the diagram showing the pin to which a given wire joins. For wiring harnesses, the Net List (wire list) will generally be more useful in studying how wiring is interconnected in the harness.

Custom Connectors lets you activate a custom "Map" file created with the optional PinMap software (Item 708). Choose the desired Map from the pop-up menu (click on the triangle). Map files define the relationship between the test points on the front of the tester to the connectors mounted on the CB connector boards. For efficiency of design and increased board density, and also to benefit automatic connector graphic selection when testing, the connectors on our CB boards are not wired in a one-to-one relationship to the test points. The Map file is necessary to define that relationship. The *Connection Error* message appears when CableEye reads connections on unassigned pins or detects an illegal combination of wiring based on the currently active Map file. Remember that if you get this message while you are developing a custom Map file, you may use *Generic Headers* or *Wiring Harness* to read the absolute test points and where the missing or ambiguous connections are located.

IMPORTANT: For your convenience, *Connectors* and *Maps* appear as menu items also, allowing quick changes while you are working. *Changing a menu item has exactly the same effect as changing the preferences window!*

Map Defaults – This option helps to automate the process of choosing custom Map files. Whenever you save a new cable in the database, the name of any custom Map file that may be active at that time is saved too. Thus, in the future when you reload this as Match Data, CableEye knows if a custom MAP file is necessary, and which one it is.

Manual Assignment requires that you manually select the map file for a custom fixture every time you use a new fixture, changing your *Connectors* menu from *CB boards* to *Custom Pinmap*, regardless of what map name is stored with the Match Data.

Same as Match Data [default setting] automatically activates any custom map file when you load Match Data from the database. Thus, you are immediately ready to measure a cable using a custom fixture, eliminating the need to manually choose the appropriate Map file from the Maps menu.

IMPORTANT: Only the *name* of the map file is stored in the database, not the map file itself. Thus, if you subsequently remove or rename the actual map file, CableEye will be unable to find it when you use *Load Cable* and an error message will appear.

IMPORTANT: Place all of your custom map files in the *Maps* folder within your CableEye folder. Any maps outside of this folder will not be recognized. The CAMI map file **CABLEEYE.MAP** contains maps for all of our standard CB boards and must remain outside of the Maps folder; only custom maps belong in the Maps folder.

Connector ID – CableEye must choose a connector graphic when you measure a new cable. Normally, it relies on the CB board's ID strap, and can uniquely identify the connector if at least one test point is unique to that connector (such as the shield). If CableEye cannot identify the connector by this means, the *Connector ID* option determines how ambiguities are resolved. Refer to page 3-22 for a detailed explanation.

User Choice when Ambiguous activates a "connector selection window" that offers a list of possible connectors (usually a very short list); you must choose the connectors for left and right.

Default to Last Choice selects the graphic you used the *last time* you measured a cable if it would be a possible choice given the measured wiring. It does this automatically. If the currently measured wiring logically excludes the previously measured connector, the "connector selection window" will appear and you must choose.

Default to Match Data [default setting] selects the graphic used in the currently loaded Match Data if it would be a possible choice given the measured wiring. It does this automatically. If the currently measured wiring logically excludes the Match Data connectors, the "connector selection window" will appear and you must choose. In general, *Default to Match Data* is the best choice.

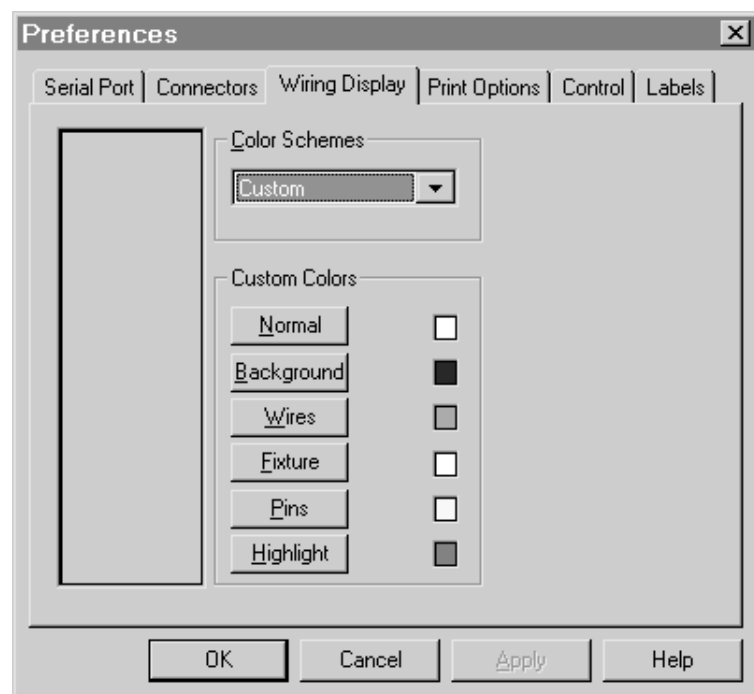
Connector View – This option lets you choose the default connector orientation during display and printing.

View Into Connectors orients the connectors with pins facing *towards you*. Using this option with cables that have male-to-male or female-to-female connectors makes it necessary to click the Direction of View button to show straight-through wiring as straight.

Pin 1 on Top [default setting] ensures that the pin numbering of both connectors advances in the same direction, so the wiring of straight-through cables always appears as straight lines. This option is especially useful if you are doing printing from within a Macro where you do not necessarily have a chance to orient the display before issuing the print command.

12.4 WIRING DISPLAY

Choose a wiring and connector color scheme you find pleasing with this option. The default selection is *Blue and White*. With this and all other options, make your selection and click OK to save it, or *Cancel* to exit without storing any changes. Note that these color preferences are stored in the Windows *Registry*, not the `PREF.DAT` file.



12.5 PRINT OPTIONS

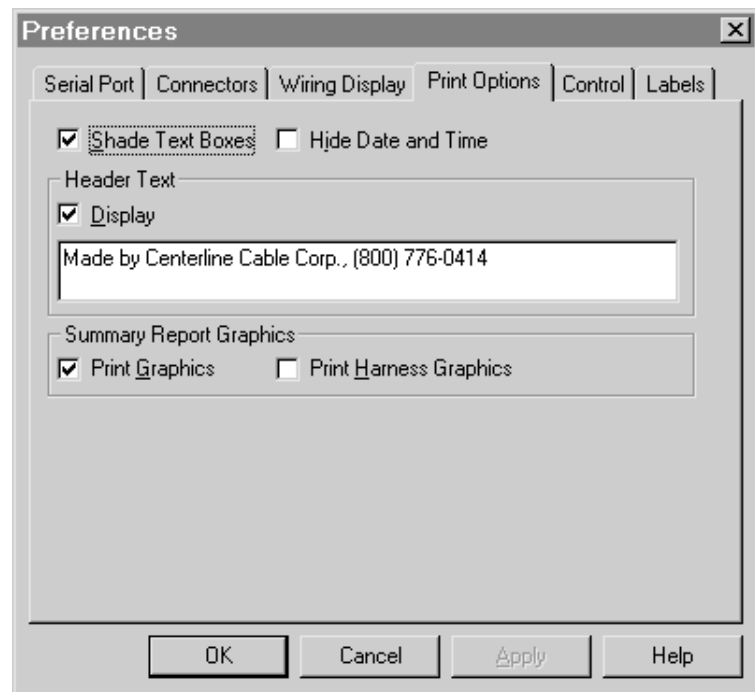
Shade Text Boxes determines if the title block, netlist block, notes block, and label blocks have a gray background when printed. If you plan to fax your cable drawing or need to conserve toner, turn this option off.

Hide Date and Time suppresses the printing of the date and time on printed output.

Header Text represents the one-line message that appears under the title block of all printed output (first pages only of multi-page output). Uncheck this box to suppress the indicated text without erasing it. This text can be very helpful in identifying your company or the test operator, or providing other information that associates you with the cable documentation. If you include your phone number in this text, your customers, or other Users, will know whom to call if additional cables are needed or if questions arise. In some cases, your customers may specify the text they want included here.

Print Graphics enables the printing of wiring schematics on hard copy output. Should this be unchecked, wiring schematics will be suppressed, but everything else will be printed. Unchecking this box will greatly speed the printing of reports when using older, slower printers.

Print Harness Graphics enables the printing of multiple 64-pin wiring harness connectors and wiring on reports. Unchecking this box will suppress harness graphics only and defer to the Print Graphics selection box for other graphics. Because the wiring harness display can be exceedingly complex, clarity is not served well by displaying harness graphics. Suppress harness graphics to show only the title block, wirelist, notes, and label text, while saving paper and improving clarity.



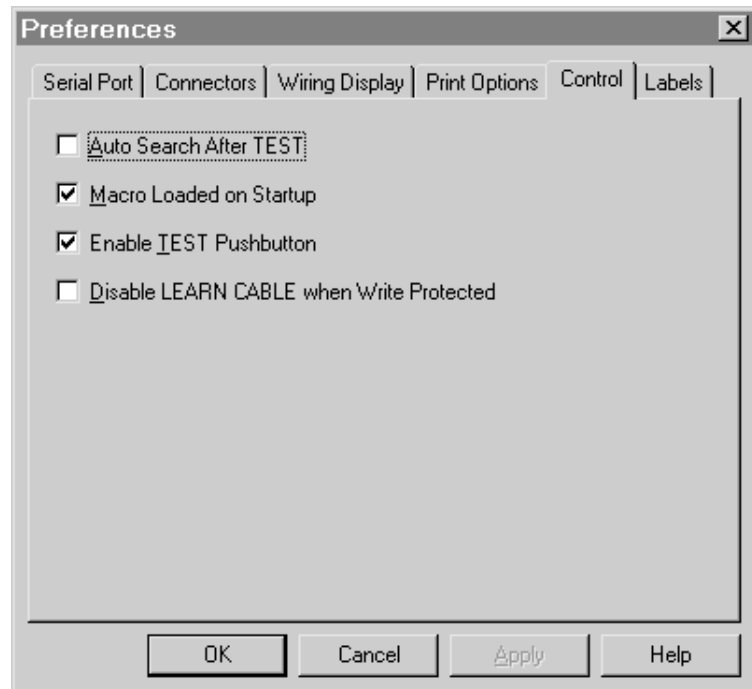
12.6 CONTROL

Auto Search After Test causes Search Database to execute *automatically and silently* after you click *Test Cable*. If CableEye finds an exact match in the database, it loads as Match Data instantly. If it finds multiple exact matches, it loads the first one. If there is not an exact match, no action is taken.

Enable TEST Pushbutton permits an external stimulus, namely the TEST pushbutton or footswitch option, to trigger *Test Cable* or the next Macro cycle.

By unchecking this box you require clicking on-screen buttons to trigger these operations.

Disable LEARN CABLE when Write Protected grays out the *Learn Cable* button on the screen when the software is write-protected, preventing test operators from learning a defective cable inadvertently. Write-protect your system by removing the **WREN.DAT** file in the CableEye folder. Doing so prevents unauthorized changes to the CableEye database and Macros. See page 3-27 about *Write-Protecting Your Cable Data, Macros, and Preferences* for more information.



12.7 LABELS

With this option, you may specify all features of a label's size and position on the paper, as well as the number of labels across. You may define the following characteristics:

Number of Labels – the number of labels across on one label sheet. If you set this value to "4", for example, the label stock in the printer should be four labels wide. CableEye would print four identical labels each time you click the *Print Label* button.

(Horizontal) Space Between Labels

– the number of spaces horizontally from the end of one label to the beginning of the next label.

(Vertical) Lines Between Labels – the number of lines vertically from the bottom of one label to the top of the next label.

Width – the width of each label, measured in characters.

Height – the height of each label, measured in lines.

You may enter positive integers for each of these values, where each value is in either *spaces* or *lines*. If you manually set your printer for condensed text or other than 6 lines per inch before you start printing, you can accommodate almost any kind of tractor-feed label. Click the *Layout Guide* button for a graphical representation of the label layout.

Label layout data is retained in your **PREF.DAT** file and loads automatically the next time you start CableEye. Refer to Page 5-6 for more details about label printing.

