5 Printing Reports and Labels

About this Section

In this section you will learn how to print documentation using the CableEye software.

You will learn how to setup your printers, generate and print test data reports and labels, customize your out-of-the-box reports, or even create and design your own reports.

You will also learn how to export these reports to PDF files for storage or electronic sharing.

Follow this index to jump quickly to a topic of interest:

5.1 Printing Cable Documentation

Print complete documentation for any cable you test. CableEye offers several report types and templates that you can choose from.

Label printing is also available and CableEye offers a simply easy way to set up your labels.

Our optional add-on Custom Reporting and Labeling Software (item 860) will allow you to create your own custom reports and labels, or edit existing templates if needed.

5.1.1 Printers Setup

Before printing, choose the printer you wish to use from **Printer and Reports** located in the **Preferences** menu. This panel is also accessible from the **File** menu under **Printer, Report and Label Setup.**

Any printer with a compatible windows driver will work with CableEye. It may be connected directly to your computer or attached to your network. You may define different printers for Reports, Labels, and Logs as shown in the image below or use the same one. In the next section, we explain the different types of reports that you can print with CableEye.
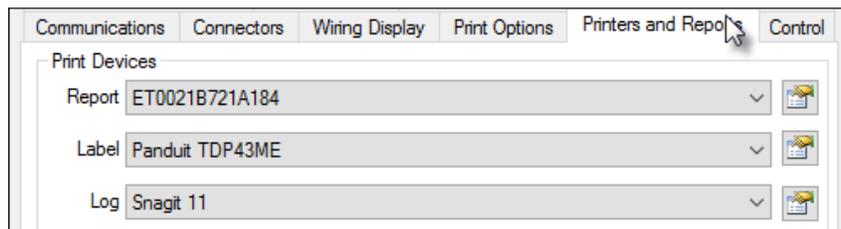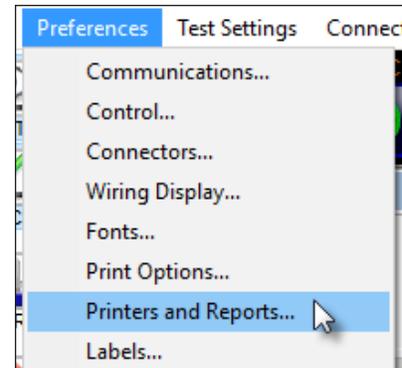
5.1.2 Types of Reports

Test Data Report - This report is intended for a single tested cable. If the tested cable for which you are printing the report was compared against a loaded cable, the report will include the test result in the header of the sheet.

To print this report, you need to test a cable and **click** on the **Print Cable** button in the Test Data window. The report will be printed to the printer defined in the previous step under the Report option.
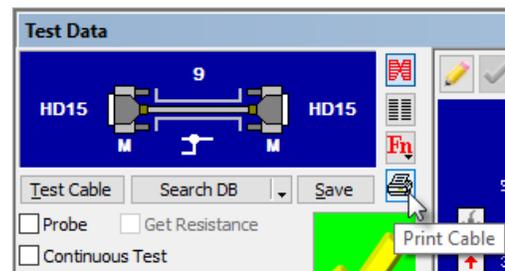
Match Data Report - This report is almost identical to the Test Data Report. The only difference is that this report will not include any test results on the header. You will print this report whenever you need reference to a master cable or any saved cable in the database.

To print this report, you need to **Learn or Load** a cable from the database. Then **click** on the **Print Button** in the **Match Data** window.
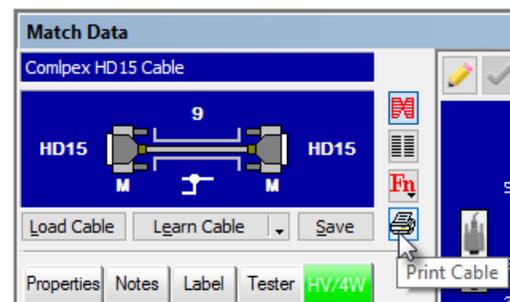
Both the Test Data and Match Data reports include wiring schematics with connectors and pins, the netlist, and any descriptive notes and label text that you stored with the cable as shown in the example in the right.

Two or more pages may be printed for long wire lists or extensive notes.

You may change the orientation of the connectors by clicking the connector view button in the wiring window. Using this button, you may depict the cable's view as a technician would see it while wiring with the hoods off, or as the user would see it looking into the pins. Choose the de sired orientation before printing.

This out-of-the-box report can be customized to add personalized text to the header, change its appearance or include more sensitive data to the netlist if required. Read the next topic, 5.1.3 - Print Options for more information.

Cable Differences Report - Print this report when you need a list of differences between your loaded master cable and your measured cable. Because this report can be printed without any errors between the cables, you normally you will only print this report when the test fails.

To be able to print this report, you need to enable any of the *View Differences* buttons located in the of the Test Data window.

You will notice that the *Print Cable* button changes to one with a small printer with a red delta (triangle) symbol, denoting differences.

Click the now labeled **Print Difference List** button and you will get a report similar to the one in the right.

Notice that this report doesn't include any graphics, but just a list of errors or differences between the match and test data. Two main columns divide opens from shorts, or missing connections and extra connections respectively.

Continuous Test Report - This report is very similar to the Test Data Report, but the Header displays the text CONTINUOUS TEST instead of TEST DATA.

This report can only be printed after performing a Continuous test, then clicking the Print Cable button as usual.

Log Report - This report is intended for batch testing reporting. The report will include a summary of all the cables tested in the batch. The example at right shows an example of this kind of report.

To generate this type of report, you will need to use the Automatic Testing Macros to log the results into the report. You can learn more about macros in sections 6 - Automatic Testing and 7 - Data Logging.

The report includes a description of the cable tested in the batch, a list of all the cables tested, along with the count number, test result and time that it was tested. You can customize the report to include custom data, like the serial number of a cable or other sensitive information.

A summary can be added to the report as well, denoting the total number of units tested and total test time.

To print the report, **click** the **Log** button in the left side of the screen and **choose the report** that you want to print.

Macro Report - You can print a macro program in a report, to share it or simply to store a hard copy of your macro. To learn about macros read section 6 - Automatic Testing.

To print this report, **open the Macros** window and **click Edit** at the bottom. A small printer button will appear to the right side of the Save and Cancel buttons. **Click the Printer button** and a report similar to the one in the right will be printed. You can print any macro stored.

Autobuild Report - You can print assembly reports when you use our optional Autobuild software. To learn more about Autobuild and how to print its reports, read section 12 - Guided Assembly Software.

5.1.3 Print Options

As mentioned previously, the out-of-the-box reports can be customized to accommodate more data or slightly change the appearance of the report itself.

To access these options, **click** on the **Preferences** menu and **choose Print Options** from the list as shown in the right.
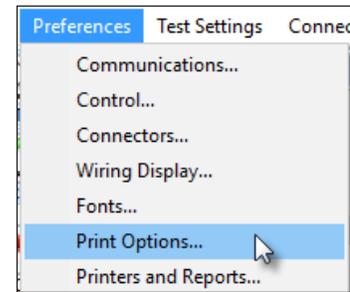
A pop-up window, shown below-right, will be displayed, with several preferences and options to customize your reports.

From the top, *Show Date and Time*, if checked, will display the date and time when the report was printed. You can define the *Date Format* and *Time Format* with the two drop down menus.

Check *Shade Text Boxes* to give the Title Block, Netlist (wire list) and other boxes a gray background, otherwise it will be white.

There are two sections in the header of the report where you can enter custom text, like the name of your company or the operator's name. Check the *Header Text* box and enter your custom text in the Left and Right Side Header Text boxes. The location of this text is shown in the image of the bottom.
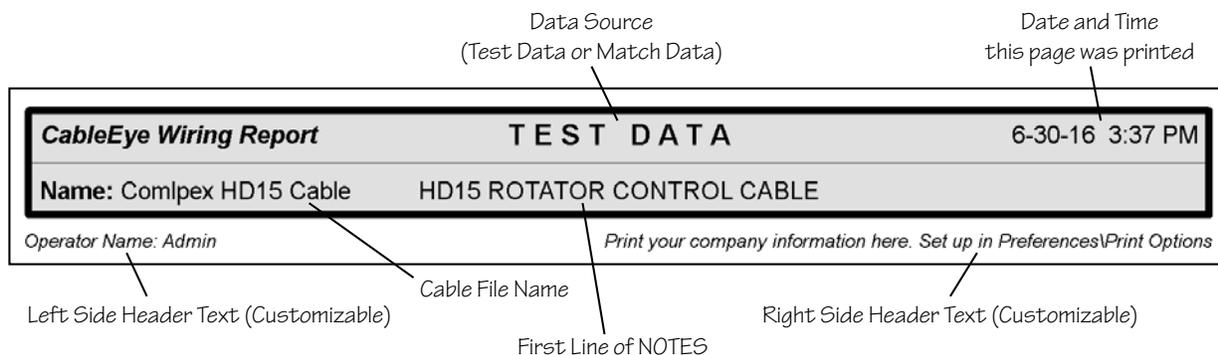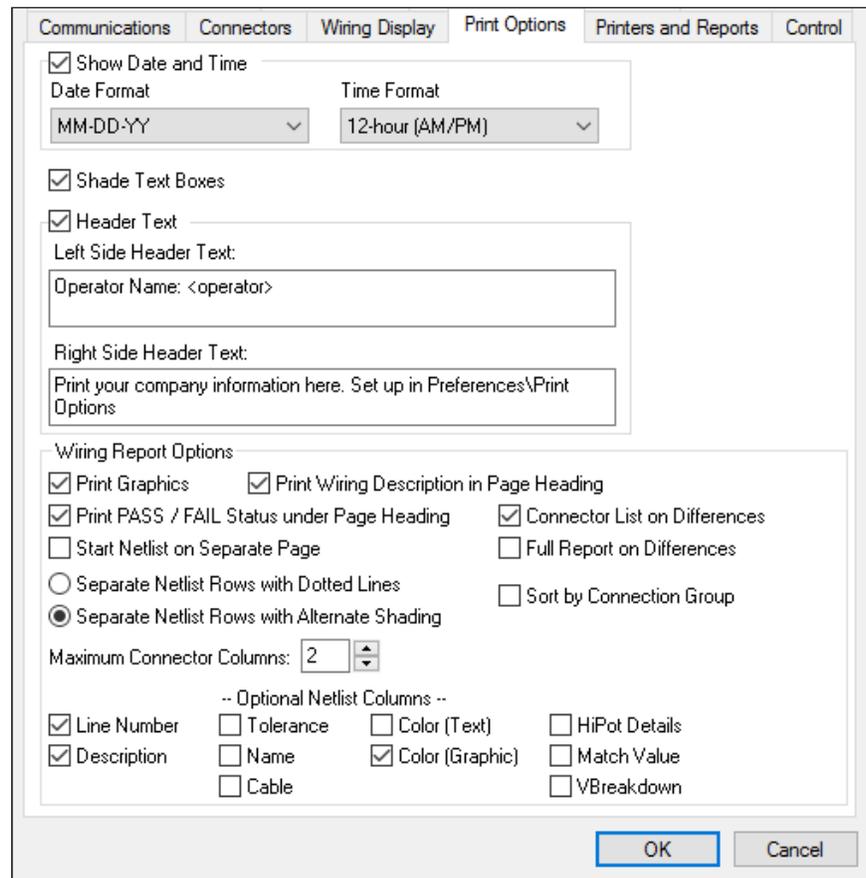
Under **Wiring Report Options** there are several options to modify the *Data Report.*

Enable *Print Graphics* to show the wiring diagram in the report. The graphics will always be on the top if enabled.

Print Wiring Description in Page Heading, if enabled, will display an automatic description of the cable in the header, however, if you saved notes with your cable, it will display the first line of text in your notes instead.

Print PASS / FAIL Status under Page Heading will display the test result under the header. (Only applies for the Test Data Report).

Connector List on Differences will display a list of the connectors in the cable. (Only applies to the Cable Differences Report)

Start Netlist in a Separate Page, if enabled, will force the netlist to be printed in a separate page, regardless of the available space in the first page. This option not only includes the netlist, but also any notes and label saved with the cable will be printed in the next page. The purpose of this option, is to dedicate the entire first page to the graphics only.

Full Report on Differences will print a standard Test Data Report, even if any of the differences buttons if enabled. This is useful when you want to see the differences in the screen but you still want to print a full report.

Separate Netlist Rows with Dotted Lines or Alternate shading will change the appearance of the netlist. The two options are shown below:

Line	HD15 Male HD15M-1	HD15 Male HD15M-2
1	SH	SH
2	1	1
3	2	2
4	3, 13	

With Dotted Lines

Line	HD15 Male HD15M-1	HD15 Male HD15M-2
1	SH	SH
2	1	1
3	2	2
4	3, 13	

With Alternate Shading

Maximum Connector Columns controls how many connectors will be displayed in the netlist table, before putting all the connectors in a single column with a From-To notation. In the example below, we set the Maximum Connector Columns to 3, and the netlist reports for cables of 3 and 4 connectors is shown below:

Line	HD15 Male HD15M-1	HD15 Male HD15M-2	1394b Female J3
1	SH	SH	
2	1		1
3	2		2
4	3		3
5	5	5	

Cable with 3 Connectors

Line	Connections
1	HD15M-1:SH, HD15M-2:SH
2	HD15M-1:1, J3:1
3	HD15M-1:2, J3:2
4	HD15M-1:3, J3:3
5	HD15M-1:5, HD15M-2:5

Cable with 4 Connectors

Optional netlist Columns - The check boxes located at the bottom of the panel, control which columns are to be displayed in the netlist table. Enable any columns that you want to be printed.

Once all your options are selected, click OK and your settings will be saved for all reports.

5.2 Printing Labels

Any label printer with a compatible windows driver will work with CableEye. It may be connected directly to your computer or attached to your network. Section 5.1.1 shows how to choose your label printer in CableEye.

5.2.1 Label Setup

From the **Preferences** menu, select **Labels** as shown in the image in the right. This will open the Labels panel shown below.
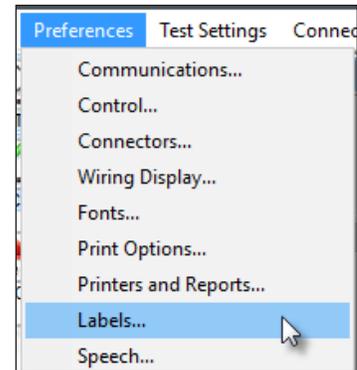
In this panel you can define the Label Printer as well. **Click** on the **Device drop down** menu and choose the desired printer. You can click the button to the right of the drop down menu and this will open the properties for the selected printer.

CableEye offers 3 styles of labels depending on your requirements.

Built-In CableEye Label Format - This is the default option and most used by CableEye users.

The content of this label is defined by the text entered in the Labels field of the loaded or learned cable.
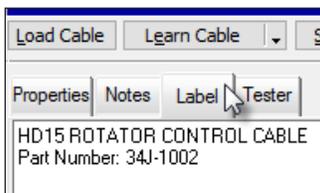
You can define the Text Size, left Margin and Top Margin of this type of label to align it correctly with your label size.

If you need to print multiple labels, you can set the number of columns and rows accordingly to the labels in your sheet, and define the distance between labels using the Horizontal and Vertical spacing options.
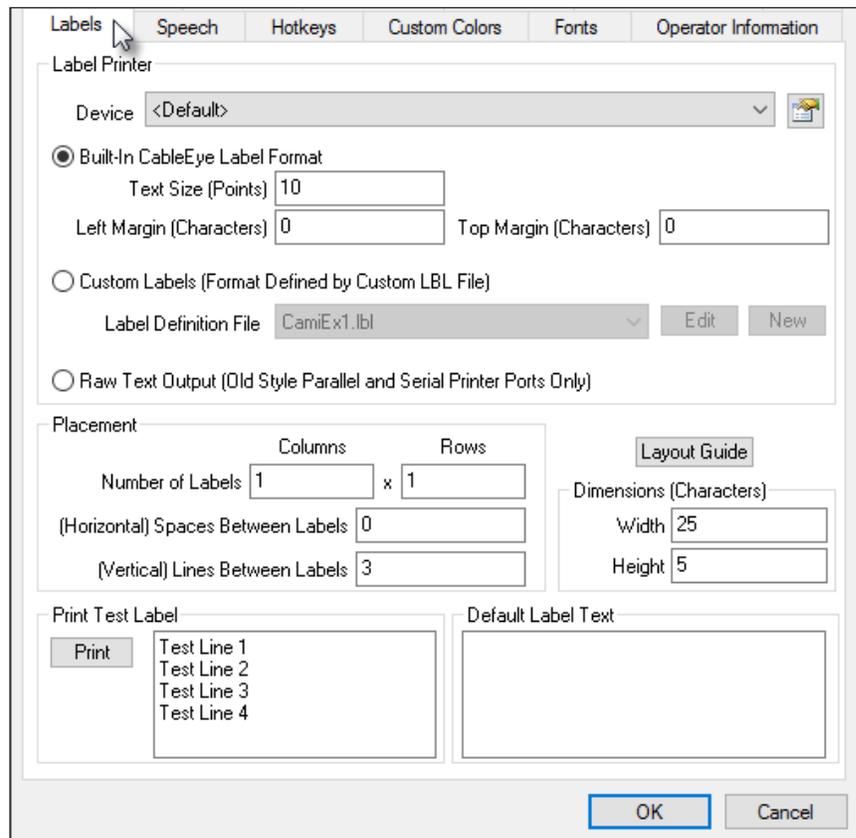
You can set the Dimensions for the label changing the Width and Height fields in number of characters. The default is 25 x 5 characters. At the bottom of the page you can click on the Print button to print a test label with the text entered in the field box next to it.

Finally, you can enter Default Label Text that all your cables can use when you print labels. Normally every cable will have it's own label text, but if you need all of them to be the same, this is where to set it up.

Custom Labels (Format Defined by Custom LBL File) - This option uses a custom label created with the optional *Custom Reporting and Labeling Software* (Item 861). Read section 5.4 for more information about Custom Reports and Labels.

Once you have created a custom label using the optional software, the label will be available from the drop down menu. You can create as many labels as you want, and choose one of them from the list whenever you need to print it.

5.2.2 Printing the Labels

Now that the label preferences have been set, you can start printing labels. CableEye offers two different methods to print labels, manually or automatically.

Manual Method - To manually print a label, you first need to load or learn a cable and enter the desired text in the Label field (if you are printing a Built-*in CableEye Label* as explained in the previous section).

If you are printing a Custom Label, you don't need to enter any text in the Label field. The contents of the Label are printed from the Custom Label Template.

Finally print the label by clicking the LABEL button in the left side of the screen. This will print a single label based on your preferences set on the previous section. You would need to manually press this button every time a new cable is tested. Some applications require you to print 2 or more labels for a single cable. If this is the case, you can click the button as many times as you need to print multiple labels for the same cable.

NOTE: When printing on label sheets that are more than one label across, the software will print one full row of labels each time you click the "Print Label" button. Example: if you set the "Number of Labels Across" to be "4", four labels would be printed by clicking the button once.

Automatic Method - Labels can also be printed using the Automatic Testing Macros and Javascript, which will be explained in the next topic 5.3 and in more detail in Section 6.

An example could be to print many labels at once in a large batch, by making a simple endless loop Macro (see right). When you've printed enough labels and wish to stop the endless loop Macro, click the "Stop" button.
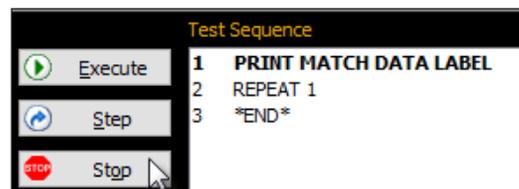
Be sure to read section 6 - Automatic Testing, where many more examples will be described.

5.3 Automatic Printing and Batch Reporting

As mentioned several times before, Macros and Javascript allow you to automate your testing process. Your process might involve printing documentation, labels and batch reports. To learn more about Automatic Testing, refer to Section 6.

Macros is CableEye's proprietary scripting language, which consists of simple one line "macro" instructions. Multiple macro instructions create a script. Macros is very simple to use and doesn't require any previous programming experience.

5.3.1 Automatic Printing

There are several macro instructions that can be used to print a report or a label. By simply typing the word "print" in the command list, several options are listed automatically as shown in the right.
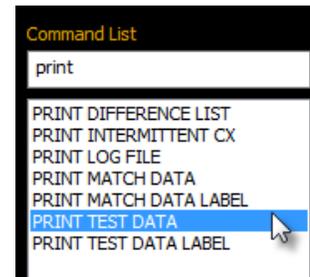
You can double click any of these options to insert the instruction in the script. The names of the instructions are self explanatory. Just choose what you want to print and add it to your program.

The basic macro script example in the right will **learn** a master cable connected to the tester and **wait for the push button**. At this point the operator removes the master cable and connects a production test cable. When the test push button is pressed, it will **test the cable** and **compare it** with the master one.
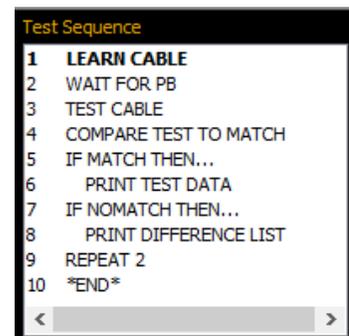
If the cables match (pass), the script will **print the Test Data** report automatically, but **if the cables do not match** (fails), it will **print the Difference List** report.

Finally the script will **repeat** step 2, to test the next cable.
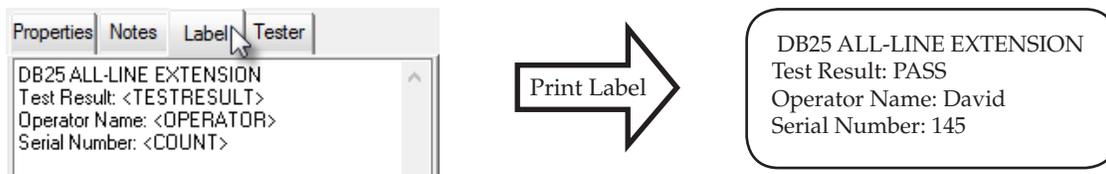
Variables Substitution

You can use variables in your templates to substitute their value when a report is printed. There are several sections in the report where you can enter "free text" and variables, for example the left and right side headers, notes and label fields.

CableEye offers built-in variables that contain important information about the test. Some examples include "cablename", "date", "time" and "operator". This variables can be used in any report or label at any time, but there are other variables that can only be used with macros, like "count" and "testresult".

To learn more about all the built-in CableEye variables read section 6.1.5, page 6-15.

You can also define your own variables, using the macro instruction Wait for Scan, which allows you to create the variable and then let the operator scan the value, either by typing or scanning it when the macro is running. Some good examples could be "serial" and "workorder".

To insert a variable in the report or label, you need to include the name in angle brackets as shown below:

Notice how the 3 variables defined in the Label field where substituted by their current value when the label was printed.

Note that you can insert a variable anywhere in the text, like this: Serial Number: GB15<COUNT>-310a. This will result in the following when the label is printed: Serial Number: GB15145310a.

You may use the same count, testresult and operator placeholders in the Notes text. In this way, faulty cables can be tagged with a serialized label, and corresponding error reports printed with the same serial number to coordinate the physical item with its error report. Note that any text, including placeholders that you type in the first line of the notes text field, will appear in the Title Block of both the standard print documentation, and the Difference List Report.

5.3.2 Batch Reporting

As mentioned in section 5.1.2, there is a special type of report called *LOG Report*, which is used for Batch Testing.

This report can be customized with the options found in the **Preferences | Batch Reporting** menu.
To learn more about batch reporting and logging test results, read section 7 - Data Logging.

5.4 Custom Reporting - Add-On Option

So far, we have shown you how to print Built-in reports included out of the box with your CableEye software. For most applications, these reports will be more than enough for ISO requirements. However, if you need to customize a report, either by editing an existing one, or creating a completely new one, you can use the optional add-on Custom Reporting and Labeling (CRL) software (Item 860) if you ordered it.

This optional software is a third party application called **List and Labels** which we embed in the CableEye Software for your use.

With the CRL software, you can design and create your own reports and labels. You can add images, logos, text in any language, variables, bar-codes, change the position of tables and graphics and many more things.

5.4.1 Creating or Editing a Report Template

To create or edit a report you need to click on the **Preferences** menu and select **Printers and Reports**. This will open the same panel that we used to choose the printers in section 5.1.1.

In the Custom Reports section, locate the Report type that you want to modify or create, and

change the Type column from Built-In to Custom. Then, to edit an existing report, choose it from the File column as shown above and the **click** the **Edit** button.
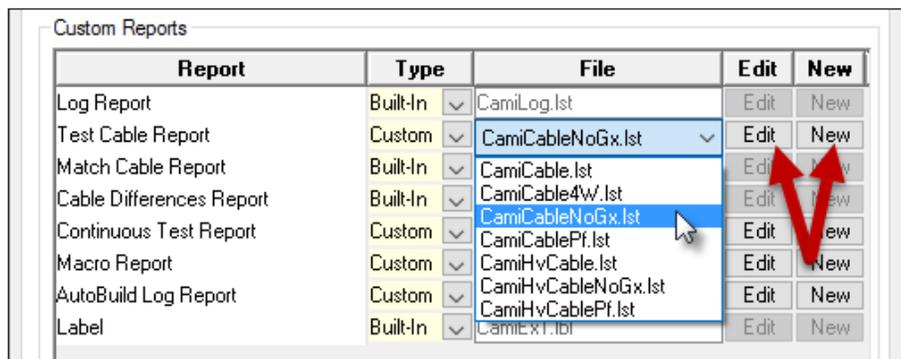
To create a new report, just click the **New** button for the type of reporting that you are interested on.

This action will open the CRL software. If you are editing an existing template, we recommend you to use "Save As..." immediately, to rename your template, and keep the original one safe while you learn how to use this software.

The details and use of the CRL software go beyond the scope of this manual, and you should refer to List and Labels own user's manual, located in the top right corner when you open the software.

Below you will see a partial screenshot of the CRL software and the location of the help system.
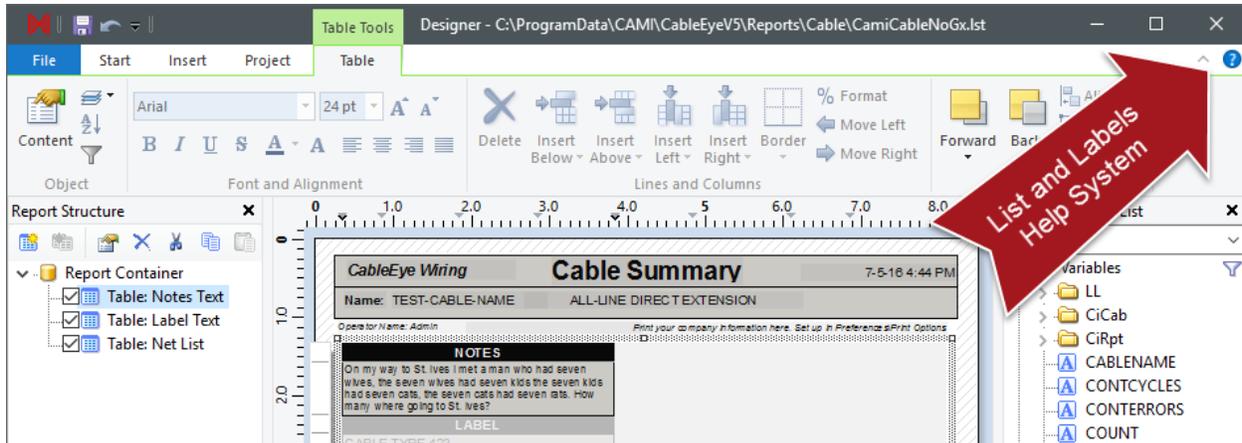
5.4.2 Printing a Custom Report

If you refer to the image in the previous page, you will notice that you can choose between Built-In or Custom from the Type column.

If you want to print a custom report, you need to **set the Type column to Custom** for the report that you want. Under an specific Report, you might have several templates saved, so you will need to **choose the desired template from the File column**.

Once you have made your selection, you will be able to print your custom report in any of the different ways already explained in previous sections.

Another way to select the report that you want to print is from the Match and Test data windows. Right-click the printer button as shown in the image in the right and new menu will appear.

Select Custom from the list and then right-click again to select the desired report.

Finally left-click the printer button and the selected custom report should be printed.

Note that this method only works for Test and Match Data reports.
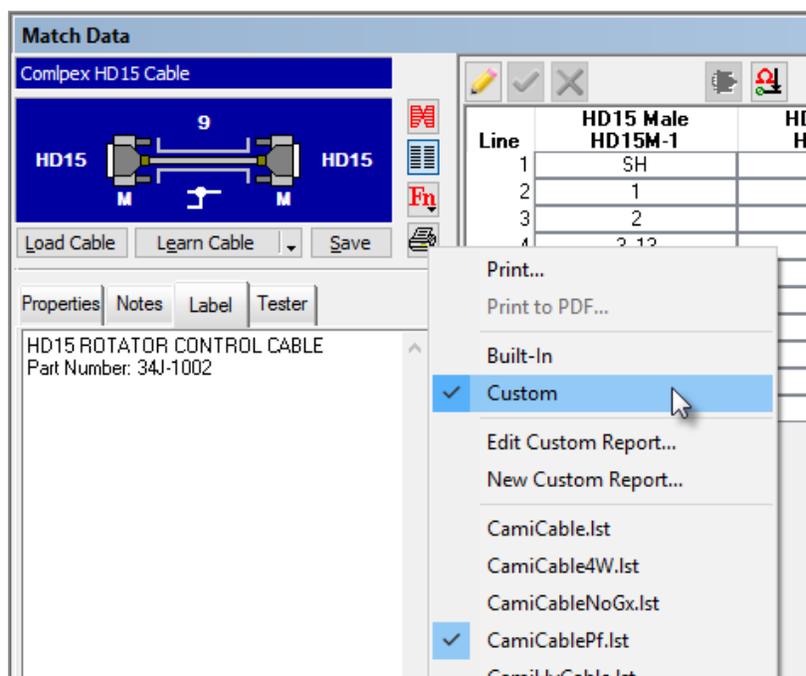
5.4.3 Custom Report Directory

Sometimes you might want direct access to your custom report templates to share them between computers or back them up. You can access these files from the following directory:

Program Files\CableEyeV5\Software\Data\Reports

Inside the *Reports* folder you will find a corresponding folder for each one of the report types that CableEye offers.

You can design your templates and share them between all your CableEye testers or back them up easily from this location if needed.
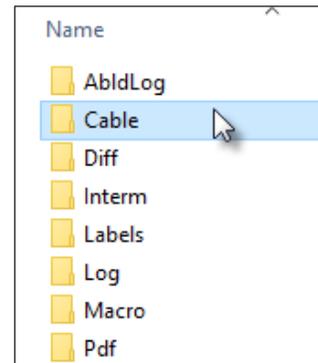
5.5 Exporting Reports to PDF

Not all companies print their testing documentation anymore. Many customers prefer to work with digital files instead, which can be shared electronically in many different ways.

CableEye is capable of "Printing" or "Exporting" to a PDF file, which you can then store, share with your customers or even print at a later step only if required.

Everything that has been explained about printing reports to paper, applies in the same way to Print to PDF.

You can print to PDF in two different ways, manually or automatically.

To manually create a PDF, you need to **right-click** the **printer** in the Match or Test Data windows, and then select **Print to PDF...** as shown in the image in the right.

This will open a popup window, asking you for the name of the file and where do you want to save it.
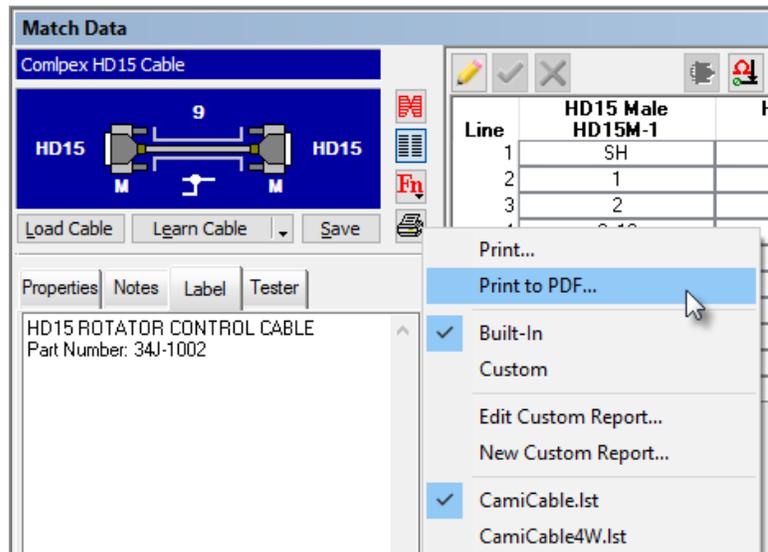
To automatically print (export) a PDF file, you need to use macros. Simply type in the word export in the command list field, and you will see the different reports that you can export to PDF.

When you insert an Export to PDF macro instruction, you need to define the name of the file in advance. In the example shown below right, we use the variables <cablename> and <count> separated by "-". This will ensure that every report has a unique name, consisting of the name of the cable being tested and the sequence number.
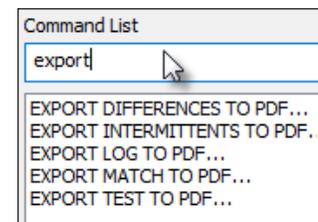
To learn more about macros and exporting to PDF, read section 6 - Automatic Testing.