



**Datrend  
Systems Inc.**

*ES601pc*

Sentinel<sup>32</sup> Converter

*For the ES601pc Companion Software Package*

Operating Manual



*ES601pc Sentinel32 Converter*  
*For the ES601pc Companion Software Package*  
Operating Manual

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**SENTINEL32 CONVERTER OPERATING MANUAL**

## SENTINEL32 CONVERTER

The Sentinel32 Converter for *ES601pc* imports checkitems, checklists, and equipment control numbers from Sentinel32, and converts this data into Instructions, Test Procedures, and Equipment Records for the ***ES601Plus*** safety analyzer.

### Importing Sentinel32 Data

To load Sentinel32 data into the ***ES601Plus***, you must first create export files for a medTester from within Sentinel32. Sentinel32 designates its medTester export files as MTEXPORT.ITM, MTEXPORT.LST, and MTEXPORT.IDN. To generate these files, select "medTester Serial Interface" from the main menu of the Sentinel32 program. Click the "Medtester Data Selection" button and verify that the radio buttons for Equipment Selection and Checklist Selection are set as you require. Click the "Send Data" tab, then click the button marked "Prepare medTester 5000C Export Files Only". This will cause Sentinel32 to generate medTester data files containing checkitems, checklists, and equipment control numbers. You now have the data you need to port over to the ***ES601Plus***.

Minimize or exit Sentinel32, run *ES601pc*, and then click the "Sentinel Converter" button. When the Sentinel32 Converter runs, the Converter will attempt to find the directory where Sentinel32 is installed. If the directory is found, the path will be shown in the "Sentinel32 Directory" text box (**Figure 1**). The Converter will list all Sentinel32 accounts in the "Account Number" dropdown menu. Sentinel32 accounts start with the letters "DN" and end with a 4 digit number. For example, the first account will be DN0000, and if there is a second account, DN0000 will be followed by DN0001 and so on. If the Converter cannot find a Sentinel32 directory, use the Browse button to manually select the path to the location of Sentinel32.

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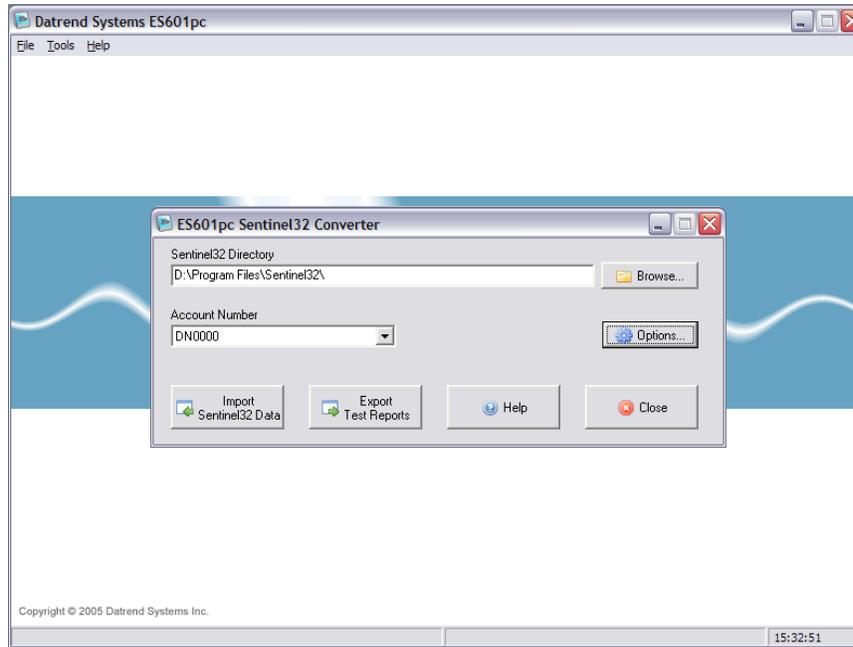


Figure 1

The "Import" button of the Converter will be enabled if the three medTester export files (MTEXPORT.ITM, MTEXPORT.LST and MTEXPORT.IDN) are found in the Sentinel32 directory, under the account you have specified. If the "Import" button is disabled, make sure Sentinel32 has created the medTester export files as described above. Click "Import Sentinel32 Data" to start the import process.

When you click "Import Sentinel32 Data", the Converter will warn you that *ES601pc* Test Procedures, Equipment Records, and all Instructions of category type 'Z' will be overwritten with the imported data. Sentinel32 checkitems will be assigned to the 'Z' Instruction category, which will be given the category name "Sentinel32". Before starting the import, *ES601pc* will automatically make a backup of its current data, including all Test Procedures, AutoSequences, Instructions and other configuration-related data. If desired, this data can be restored later using the "Backup And Restore" feature provided by the *ES601pc* main menu.

Before the import starts, a communications selector will appear (**Figure 2**). Choose to communicate via USB, Ethernet, or Serial Port, and then press "Connect". If the connection is via ethernet, enter the IP address assigned to the **ES601Plus** (note this IP address is displayed on the LCD of the ES601 when the analyzer is operating in "Ethernet Mode"). If the connection is via serial port, choose the COM port to which the **ES601Plus** is connected.

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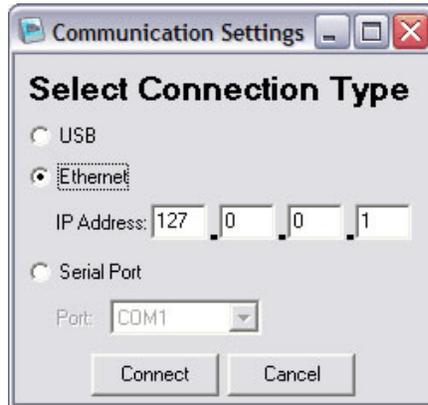


Figure 2

Once the communication options have been set, the Converter will then start the conversion and transmission of Sentinel32 data to the **ES601Plus** analyzer (**Figure 3**). The process involves converting the imported data into ES601-compatible format, backing up the existing data of **ES601pc**, saving the newly-converted Sentinel32 data to disk, and then uploading the information into the non-volatile memory of the **ES601Plus**.

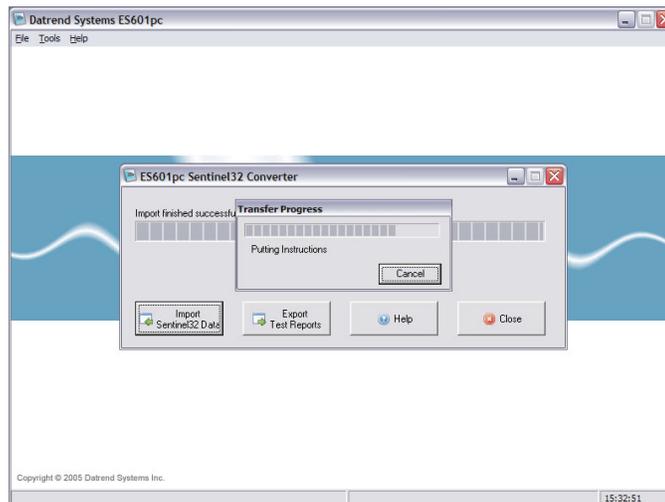


Figure 3

## Exporting Test Reports

The Sentinel32 Converter allows test results from the **ES601Plus** to be exported to Sentinel32, by converting the results into a medTester-style "MUP" file. Sentinel32 can then be used to read this "MUP" file into its Work Order system.

To begin the export process, click the "Export Test Reports" button of the Converter (**Figure 1**).

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The communications selector will appear (**Figure 2**). After choosing a communications method, a "Save File" dialog will appear (**Figure 4**). Select the directory and filename for the "MUP" file produced by the Converter. The default directory is the directory specified in the "Sentinel32 Directory" text box, and the default filename will follow the medTester's naming convention of month, day, hour, and minutes (each specified as 2-digit numbers), followed by a ".MUP" file extension (e.g.: 02171432.MUP, corresponding to Feb. 17, 14:32).

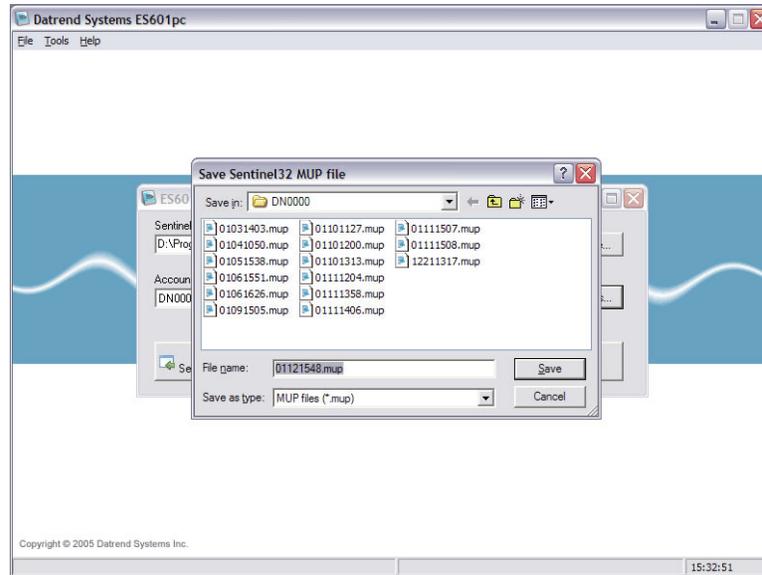


Figure 4

After selecting the default or entering an alternative name for the exported file, the Sentinel32 Converter will then begin to download Test Report data from the **ES601Plus**. The Test Reports will then be converted into medTester "MUP" format, and will be saved to the location specified earlier.

Once the "MUP" file has been generated by the Converter, you may then read this file into Sentinel32 in exactly the same way as if the file had been produced by a medTester. To import a "MUP" file, select "medTester Serial Interface" from the main menu of the Sentinel32 program. Click the "Receive Data" tab, then click the button marked "Update Sentinel From Existing medTester File". Sentinel32 will display an "Open File" dialog from which you can select the "MUP" file created by the Sentinel32 Converter.

## Modifying Options

The Sentinel32 Converter provides user-selectable options that determine how certain Sentinel32 checkitems are converted into ES601-compatible data (**Figure 5**). To open the Options window of the Converter, click the "Options" button on the Converter's main window.

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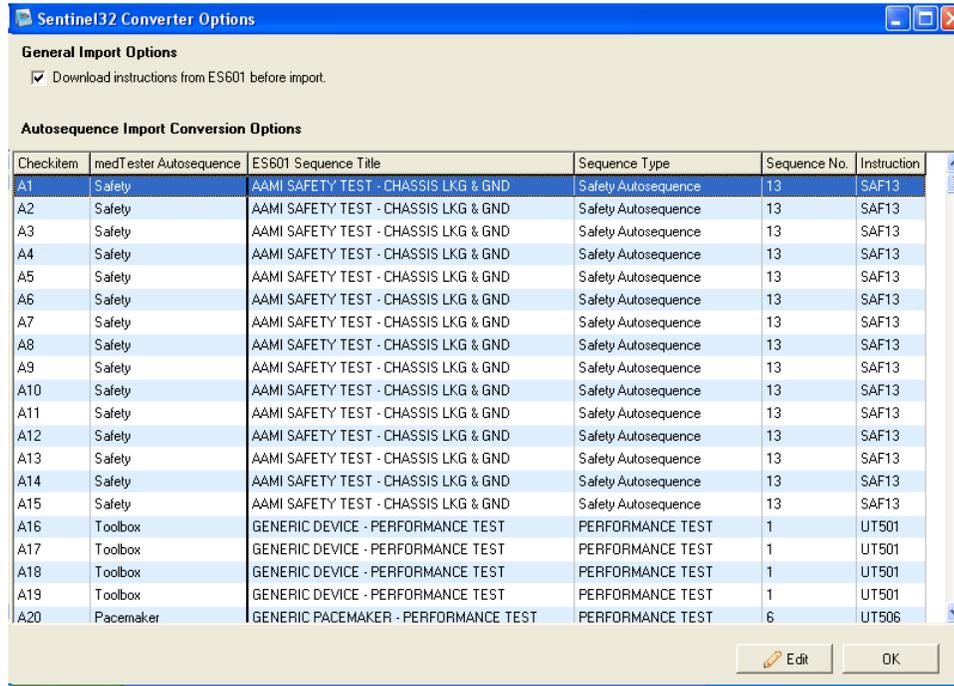


Figure 5

## AutoSequence Conversion Options

In addition to Autosequences for electrical safety testing, the medTester 5000C may optionally provide autosequences that facilitate RS232 interface with the Impulse 4000 Defib Analyzer, the CuffLink NIBP Analyzer, the IDA-4 IV Pump Analyzer, the ESU454A ESU Analyzer, and the CardioSat 100 SPO2 Simulator. In Sentinel32, these Analyzer-specific autosequences are designated by 'A' checkitems. Via the Options dialog of the Sentinel32 Converter, you can select one or more AutoSequences provided by the **ES601Plus** to serve as substitutes for these medTester autosequences. In addition to the Analyzer-specific autosequences, the Options dialog of the Converter also allows you to configure how electrical safety autosequences of the medTester 5000C are converted into Safety AutoSequences of the **ES601Plus**.

When the Sentinel32 Converter is run for the first time, the autosequence conversion options are set to defaults. The default assignments have been chosen to suit the demonstration performance test sequences that are supplied with the AutoSequence Editor accessory of **ES601pc**, as follows:

medTester Autosequence	ES601Plus Performance Test
Defib (for Impulse 4000)	Generic Defib (User Tester #5, Auto #2)
IV Pump (for IDA-4)	Generic IV Pump (User Tester #5, Auto #3)

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ESU (for ESU 454A)	Generic ESU (User Tester #5, Auto #4)
SPO2 (for CardioSat 100)	Generic Pulse Ox (User Tester #5, Auto #5)
NIBP (for CuffLink)	Generic BP Monitor (User Tester #5, Auto #7)
Pacer (for Impulse 4000)	Generic Pacemaker (User Tester #5, Auto #6)
medTester Toolbox	Generic Device (User Tester #5, Auto #1)

The demonstration performance tests are generic and rely on user data input via the QWERTY touch keypad of the **ES601Plus**, rather than automatic control of a specific Analyzer via RS232. The Options dialog of the Converter allows you to change the default autosequence assignments from generic performance tests to true AutoSequences that allow **ES601Plus** to automatically interface with an external Analyzer or Tester, such as Infutest 2000 or Oxitest+7, via one of the RS232 Tester Ports located on the left side panel of the safety analyzer. Via the Options dialog, you can map a specific medTester autosequence to a specific **ES601Plus** AutoSequence, or, you can map an entire range of medTester autosequences to one specific **ES601Plus** AutoSequence. Changing a conversion option from the default test to a true Tester AutoSequence requires you to have the corresponding optional firmware accessory for that Tester installed in your **ES601Plus**, and in addition, the accessory plugin module for for that Tester for the *ES601pc* software package.

### **Safety Test Conversion Options**

The Options dialog also determines how electrical safety autosequences of the medTester are mapped to **ES601Plus** Safety AutoSequences. By default, the Converter maps all medTester safety autosequences to Safety AutoSequence #13 of the **ES601Plus**. Unless you have already changed Safety AutoSequence #13 via the Safety AutoSequence Editor of *ES601pc*, this AutoSequence corresponds to a basic electrical safety test under the AAMI ES1 standard, incorporating chassis and ground leakage measurements and a grounding resistance test. Via the Options dialog, you can map a specific medTester safety autosequence to a specific **ES601Plus** Safety AutoSequence, or, you can map an entire range of medTester autosequences to one specific **ES601Plus** Safety AutoSequence.

### **Download Instructions Option**

The Options dialog provides a "Download instructions from ES601 before import" checkbox. If this box is checked, the Converter will download the list of Instructions currently stored in the memory of the **ES601Plus**, immediately before it begins to import data from Sentinel32. The purpose of this option is to make sure that certain AutoSequence data stored in the safety analyzer is correctly preserved before the import process modifies the Instruction list. As such data preservation is essential to successful conversion, the safest option is to always leave this box checked. The consequence is that the conversion process will require a few seconds longer to complete due to the download time. If you are already certain that AutoSequence-related Instructions in the **ES601Plus** are synchronized with *ES601pc*, then the Instruction download operation is unnecessary and this box can then be unchecked.

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