



DATREND
Systems Inc.



ES601 Plus

Quick Start Guide

Package Contents:

8001-XXX	ES601PLUS (model-specific)
3000-XXX	POWER CORD (model-specific)
3140-403	CABLE, USB A-B MALE, 6'
3140-475	KELVIN CLAMP CABLE
6950-021	DATREND UNIVERSAL PRODUCT USB DRIVE
7006-052	ACCESSORY BAG

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Introduction

This Quick Start Guide will provide basic information about Datrend Systems' ES601 Plus International Automated Electrical Safety Analyzer. Please refer to the Operating Manual on the USB that accompanied this device for more complete instructions. The steps in this guide will refer you to the appropriate section of the Operating Manual, as applicable.

Unpacking and Inspection

Follow standard receiving practices upon receipt of the instrument. Check the shipping carton for damage. If damage is found, stop unpacking the instrument. Notify the freight carrier and ask for an agent to be present while the instrument is unpacked. There are no special unpacking instructions, but be careful not to damage the instrument when unpacking it. Inspect the instrument for physical damage such as bent or broken parts, dents, or scratches, and ensure all accessories are present. If any accessories are missing, immediately contact Datrend Customer Service and provide the ES601 Plus serial number.

Starting Up (Chapter 3, Setup)

Before starting, attach the Power Cord to ES601 and plug in to a power receptacle. Turn the Power Switch to the ON position and observe the Startup Screen on the display. Press System Settings to go to the appropriate screen to set defaults.

STARTUP MODE:

Determines how ES601Plus performs after power is switched on. Press the Startup Mode button to toggle between:

- Select Auto or Manual Mode from Start-up screen (default)
- Wait 3 sec then go to Auto Mode
- Wait 10 sec then go to Auto Mode
- Wait 3 sec then go to Manual Mode
- Wait 10 sec then go to Manual Mode

TEST PAUSE:

Determines the number of seconds ES601Plus will pause after each measurement of a safety test sequence before automatically proceeding with the next step of the sequence.

Press Test Pause to toggle between:

- No pause
- Pause 1, 2, 3, 4 or 5 seconds (default = 2 seconds).

POWER PAUSE:

Determines the number of seconds ES601Plus will pause to allow an operator to manually activate or deactivate the power switch of the Device Under Test (**hereafter DUT**) before automatically continuing with the next step of a safety test sequence. Press Power Pause to toggle between:

- No pause (default)
- Pause 2, 5, 10, 20, or 30 seconds
- Wait for keypress

Press More Settings to move to the Systems Settings Menu 2.

SET CLK:

Allows setting the internal real time clock. Press Set Clk to set the current time and date for the device.

FORMAT:

Select date format for the internal real-time clock. Press Format to toggle between:

- USA (MMM DD YYYY) (default)
- Europe (DD MMM YYYY)
- ISO (YYYY MMM DD)

EDIT ID:

ES601Plus I.D. is set at time of manufacture to "MY ES601", and can be edited using this utility which allows you to assign a unique I.D. to identify ES601Plus within your equipment control system. Pressing Edit ID will activate the QWERTY touch keypad of ES601Plus, allowing the user to type in an I.D. Press Enter on the keypad to save the unique name and return to the Systems Settings Menu.

NETWORK SETUP:

Allows you to input Ethernet settings (IP address, netmask, and gateway) for ES601Plus. Addresses are entered with decimal delimiters. A touch keypad that provides for numerical input only is displayed in response to pressing any of the Change keys.

Pressing Exit returns to the Systems Settings – More Settings Menu.

PASSWORD ENABLED:

If the Password is enabled, it protects the Systems Settings Menu #2. Press Password Enabled to toggle between "YES" and "NO". Default is "NO".

EDIT PASSWORD: When pressed, Edit Password displays the QWERTY keypad for entering a password. The maximum length of the password is 17 characters. By default, the password is set to all-whitespace. The password is shown as it is typed for verification.

Press Escape to return to System Settings Menu #1, and again to return to the Startup Screen.

Power ES601 Plus off for at least 2 seconds, then on to observe that any changes made are now active.

Connections (Chapter 4, Connecting to ES601 Plus)

When using ES601Plus, the operator is expected to be familiar with the particular Electrical Safety Standard to which the DUT is being tested. It is recommended the operator have access to the Standard and refer to the Standard during the test.

Connection instructions for AC-powered DUT:

- Whenever connecting or disconnecting a DUT or peripheral devices to ES601Plus, the power switches of all equipment should be OFF.
- Connect the DUT power cable to ES601 Plus Test Socket.
- Connect the Kelvin Cable to a grounded terminal on the enclosure of the DUT.
- AUX1 connects to electrically isolated input/output signals. Typically this connection would be for testing a transformer-isolated data communications interface on the DUT, such as an Ethernet Port. Review DUT documentation or check with the DUT manufacturer before making this connection, or performing tests of isolated input/output signals.
- AUX2 connects to any exposed ungrounded metal on the DUT. (Note AUX1 and AUX2 connections are optional depending on the characteristics of the DUT and the requirements of the testing standard.)
- DUT patient leads (or "applied parts"), if any, are connected to ES601Plus jacks AP1 through AP10 as required.

See **Figure 6 - Connecting to a line-powered DUT**, page 26 of the Operating Manual for the connection diagram.

Connection instructions for battery-powered DUT:

- Whenever connecting or disconnecting a DUT or peripheral devices to ES601Plus, the power switches of all equipment should be OFF.
- The "TO DUT CASE" jack of ES601Plus connects to the enclosure of the DUT, or alternatively, to aluminum foil which is wrapped over the DUT if the enclosure is made of plastic.
- As required, AUX1 may connect to electrically isolated input/output signals. Most typically, this connection would be for testing a transformer-isolated data communications interface on the DUT, such as an Ethernet Port.
- Note the Test Socket and the Kevin Cable are not used for testing internally-powered devices.

See **Figure 7 - Connecting for battery-powered DUT**, page 27 of the Operating Manual for the connection diagram.

Connection instructions for Peripheral Devices:

Input connections are located on the left side of ES601 Plus. Input connections for data entry during tests are optional. Data can always be entered via the on-screen QWERTY keyboard.

- Connect a PS/2 keyboard or barcode scanner to the PS/2 input.
- Connect an RS-232 barcode scanner (DB9F) to the BARCODE input.
- Peripheral testing devices, if used, should be connected to the RS-232 TESTER PORTS before powering up ES601 Plus. RJ-12 serial cables (PN: 3140-429) and adapters (PN: 3140-710 or 3140-711).
- Connect a Centronix printer cable for direct printing.
- Connect an RS-232 to a serial printer or PC for outputting test record data via a terminal program (HyperTerminal or equivalent).

Testing with ES601 Plus (Chapters 5 & 6)

Manual and Automated Testing are discussed in detail in Chapters 5 and 6, respectively, of the Operating Manual.

ES601pc Software (Chapter 7)

Installation

Place the ES601PC CDROM into your computer's CDROM drive and close the drive. The installation application will begin automatically unless your computer is set to ignore autorun applications. If the installation does not start automatically, use the file explorer utility on your computer to locate the CDROM drive and browse to locate the file called *ES601PCInstaller.exe*. Execute this file and the installer will guide you through the installation process.

At the end of the short installation process, you will be presented with a notification the software has been installed, at which time you may either select or deselect the checkbox which asks if you would like to run ES601PC upon closing the dialogue box. The computer does not have to be restarted before running ES601PC.

Installing USB Drivers

When installation is complete, connect ES601Plus to your PC using the USB cable provided. When ES601Plus is connected to the PC for the first time, Windows should detect the connection and automatically launch the New Hardware Wizard which will prompt you for the USB driver.

The USB drivers for ES601 are provided on the Datrend Product USB If the Hardware Wizard asks for the files, direct the Hardware Wizard to your USB drive. Direct the Wizard to the ES601 CDM v2.08.28 Certified USB Driver WinXP-7-8 folder for your system and the required driver files should then be installed by Windows.

Running ES601PC

When ES601PC is executed, you will be presented with the ES601PC startup screen. The screen displays the three standard utilities (Safety AutoSequence Editor, ECG AutoSequence Editor and Test Report Generator) along with optional plug-in modules (Autosequence Editor, Sentinel32 Converter and Test Procedure Editor).

Please See Chapter 7 of the Operating Manual for detailed information about running ES601pc.

Manual Contents:

	Page:
Table of Contents	v
Abbreviations and Definitions	ix
Symbol Definitions	xi
1 - Specifications	1
2 - Overview	9
3 - Setup	17
4 - Connecting to ES601Plus	25
5 - Manual Testing	29
6 - Automated Testing	65
7 - ES601PC Software	87
8 - Calibration and Maintenance	119

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