



# 4944 WiFi Test Kit

Getting Started Manual



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**Ordering information** This guide is issued as part of the **4944 WiFi Test Kit**. The ordering number for a published guide is AG 292 498. The ordering number for the product is AG 248 498.



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# About This Guide

This section contains the following basic information:

- [“Purpose and scope” on page vi](#)
- [“Assumptions” on page vi](#)
- [“Related information” on page vi](#)
- [“Technical assistance” on page vii](#)
- [“Conventions” on page vii](#)

**About This Guide**  
*Purpose and scope*

## **Purpose and scope**

The purpose of this guide is to help you successfully use the 4944 WiFi Test Kit features and capabilities. This guide includes task-based instructions that describe how to install and use the 4944 WiFi Test Kit. Additionally, this guide provides a description of Aeroflex's warranty, services, and repair information, including terms and conditions of the licensing agreement.

## **Assumptions**

This guide is intended for novice and intermediate users who want to use the 4944 WiFi Test Kit effectively and efficiently. We are assuming that you have basic computer experience and are familiar with basic telecommunication concepts and terminology.

## **Related information**

Use this guide in conjunction with the following information:

7310 Lector and Scriptor user's guide, ordering number  
AG 294 309

## Technical assistance

If you need assistance or have questions related to the use of this product call Aeroflex's technical support. You can also contact Aeroflex by e-mail at support-muc@aeroflex.com.

## Conventions

This guide uses naming conventions and symbols, as described in the following tables.

**Table 1**    **Typographical conventions**

| Description   | Example                                     |
|---|---|
| User interface actions appear in this <b>typeface</b> .                       | On the Status bar, click <b>Start</b> .     |
| Buttons or switches that you press on a unit appear in this <b>TYPEFACE</b> . | Press the <b>ON</b> switch.                 |
| Code and output messages appear in this typeface.                             | All results okay                            |
| Text you must type exactly as shown appears in this <b>typeface</b> .         | Type: a:\set.exe in the dialog box.         |
| Variables appear in this <b>&lt;typeface&gt;</b> .                            | Type the new <b>&lt;hostname&gt;</b> .      |
| Book references appear in this <b>typeface</b> .                              | Refer to <b>Newton's Telecom Dictionary</b> |
| A vertical bar   means "or": only one option can appear in a single command.  | platform [a b e]                            |
| Square brackets [] indicate an optional argument.                             | login [platform name]                       |
| Slanted brackets <> group required arguments.                                 | <password>                                  |

**Table 2** Keyboard and menu conventions

| Description   | Example   |
|---|---|
| A plus sign + indicates simultaneous keystrokes.          | Press <b>Ctrl+s</b>                                     |
| A comma indicates consecutive keystrokes.                 | Press <b>Alt+f,s</b>                                    |
| A slanted bracket indicates choosing a submenu from menu. | On the menu bar, click <b>Start &gt; Program Files.</b> |

**Table 3** Symbol conventions



This symbol represents a general hazard.



This symbol represents a risk of electrical shock.



**NOTE**

This symbol represents a Note indicating related information or tip.

**Table 4** Safety definitions



**WARNING**

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



**CAUTION**

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

# Safety Notes

This chapter provides the safety notes for the 4944 WiFi Test Kit. Topics discussed in this chapter include the following:

- [“Safety class” on page x](#)
- [“Safety warnings” on page x](#)

## Safety Notes

### Safety class

## Safety class

The external power supply of the 4944 WiFi Test Kit meets EN55022 Class B and CISPR/FCC Class B, Conducted.

Do not try to open the power supply. There are no serviceable parts inside. If the power supply is defective you can obtain a new one from Aeroflex (order number AG 860 492).

## Safety warnings

This product is designed for indoor use. As exposure to water may damage the instrument it has to be protected against moisture when used outdoors.



### WARNING

Only use a 50  $\Omega$  N-type connector to connect to the **RF TEST DEVICE** and **RF SHIELD** ports of the 4944 WiFi Test Kit. Use of any other connector may result in damage of the instrument.



### WARNING

The maximum input power level at the **RF SHIELD** and **RF TEST DEVICE** connectors is 2 W. Higher input levels may result in serious damage of the instrument.



### WARNING

Do not feed signals or DC voltage into the **RF TEST DEVICE** and **RF SHIELD** ports as it may result in serious damage of the device.



### WARNING

Operate the 4944 WiFi Test Kit within the temperature range from 5°C (40°F) to 40°C (104°F) only. Operation outside this range will lead to unpredictable behavior.

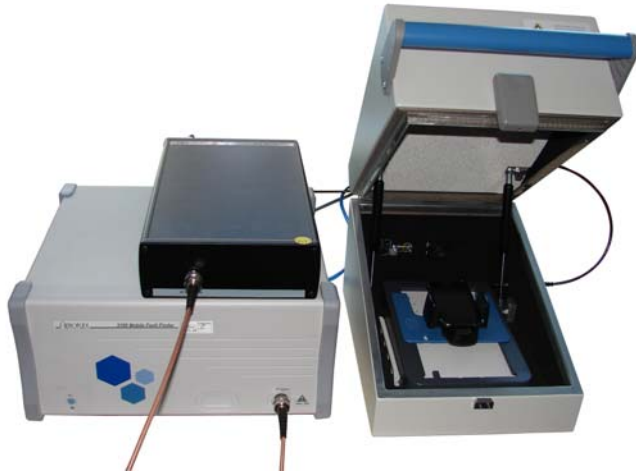
# 4944 WiFi Test Kit Overview

# 1

This chapter provides a general description of the 4944 WiFi Test Kit. Topics discussed in this chapter include the following:

- [“About the 4944 WiFi Test Kit” on page 2](#)
- [“Features and capabilities” on page 3](#)
- [“Physical description” on page 3](#)

## About the 4944 WiFi Test Kit



The 4944 WiFi Test Kit satisfies requirements for Wireless LAN device testing. Service centers use this product for easy Go/NoGo testing of Wi-Fi-enabled devices, including smartphones. Thanks to the built-in Wi-Fi access point, the WiFi Test Kit can even test devices without the ad-hoc network capability.

Wi-Fi-enabled products on the market range from ink-jet printers and mobile phones to DSL modems and routers. The growing number of returned products causes a testability issue in service centers. This Aeroflex product solves the problem with an easy-to-use test package that tells faulty from intact Wi-Fi devices. A test protocol provides adequate documentation of the results.

The associated test software, i.e. either 7312 Lector Enhanced or 7315 Scriptor, guides the user through a simple-to-use connectivity test. Along with a Pass/Fail verdict, it provides additional technical information such as the MAC address and several transmit and receive parameters.

The WiFi Test Kit can be combined with other Aeroflex products for Wi-Fi-only tests or for tests also including the mobile radio capabilities or Bluetooth.

For testing Wi-Fi routers, please refer to the 1491 WiFi Connectivity Test Package.

## Features and capabilities

Tests Wireless LAN-enabled devices such as smartphones, printers and more

Hardware and cables to feed unit under test with Wi-Fi signal for Go/NoGo testing

Can be used for standalone tests or along with test set for mobile phones

Sets up an ad-hoc network or acts as a Wi-Fi base station (with SSID)

For use with Lector or Scriptor software supporting automated testing

Performs Go/NoGo test, providing the receive quality and the MAC address of the unit under test

## Physical description



The 4944 WiFi Test Kit is a black box with connectors at the front and rear.

## Chapter 1 4944 WiFi Test Kit Overview

### *Physical description*

On the rear panel, the 4944 WiFi Test Kit has three connectors:

- The DB-9 connector shall be used to connect the power supply of the WiFi Test Kit. Only use the Aeroflex-provided power supply!
- The USB connector can be used to connect the WiFi Test Kit to a PC for remote control (automated testing).
- The N-Type connector labelled **RF SHIELD** shall be used to connect to the unit under test, typically through an antenna coupler within a shielded RF chamber. Aeroflex recommends the 4916 Antenna Coupler and the 4921 or 4933 RF Shield.

On the front panel, an N-Type connector labelled **RF TEST DEVICE** can be used to connect the WiFi Test Kit to a test set for mobile phones (such as Aeroflex's 2201 ProLock).

# Installation

## 2

This chapter describes how to set up the 4944 WiFi Test Kit. The topics discussed in this chapter are as follows:

- “Scope of delivery” on page 6
- “Typical test setups” on page 6
- “Hardware requirements” on page 7
- “Software requirements” on page 7
- “Setting up the software” on page 8
- “Setting up the hardware” on page 8

## Chapter 2 Installation

### Scope of delivery

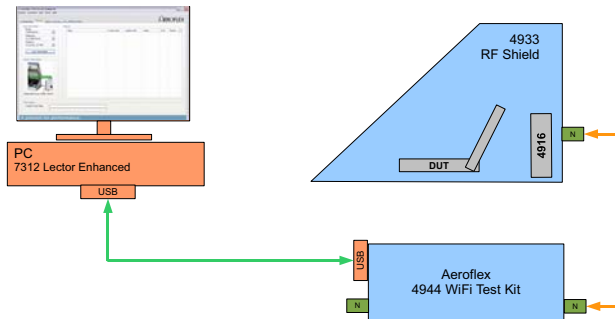
## Scope of delivery

The 4944 WiFi Test Kit delivery includes the following items:

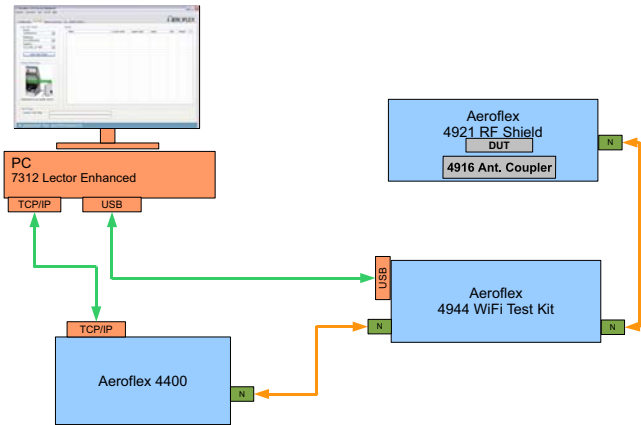
- the WiFi Test Kit itself
- a power supply
- a power cord, 2.5 m
- an RF cable N to N, 0.5 m
- a USB cable Type A (male) to Type A (male), 1.8 m
- the 4944 WiFi Test Kit Manual Pack including this getting started manual

## Typical test setups

### Standalone Wi-Fi test



## Combined Wi-Fi and RF test



## Hardware requirements

In order to connect the 4944 WiFi Test Kit to a PC you will need a free USB connector on your PC.

If you want to connect the 4944 WiFi Test Kit to an RF test set, you will need a double-shielded RF cable with an N-type connector at one end and the appropriate connector for the test set at the other end.

## Software requirements

In order to run tests you will also need a PC running the following software.

- Microsoft Windows operating system
- Aeroflex’s 7312 Lector Enhanced or 7315 Scriptor version 6.30 or later (the SiLabs USB driver and the ASIX USB to Ethernet driver should be installed as part of the software setup procedure)
- 7363 WiFi Connectivity Test License

### Setting up the software

Before connecting the 4944 WiFi Test Kit to a PC, make sure that the SiLabs USB driver and the ASIX USB to Ethernet driver are both installed. The drivers can be found on the Lector and Scriptor software CD and are also part of the installation software for Lector and Scriptor that can be found on Aeroflex's website. If you are not sure whether the drivers are already installed, re-install the Lector and Scriptor software using the latest version.

### Setting up the hardware

- 1 Connect the unit under test to the **RF SHIELD** connector at the rear of the 4944 WiFi Test Kit. Typically the unit under test will be mounted on an antenna coupler inside the 4921 or 4933 RF Shield. In this case, use the N–N RF cable that is included in the delivery.
- 2 After installing the USB driver (see [“Setting up the software” on page 8](#)), connect the **USB** connector at the 4944 WiFi Test Kit to the PC using the USB cable that is included in the delivery.

#### Note

If the 4944 WiFi Test Kit is connected to the PC for the first time, the driver installation will be completed at this time. User interaction is not required typically.

- 3 Connect the 9-pin D-sub plug of the DC cable at the power supply with the appropriate socket at the rear of the 4944 WiFi Test Kit, and connect the AC connector of the power supply to a mains outlet.
- 4 If you are going to use an RF test set for additional measurements, connect the **RF TEST DEVICE** socket at the front of the 4944 WiFi Test Kit to the test set using the N–N cable included in the delivery.

# Getting Started

## 3

This chapter describes the functionality of the instrument. Topics discussed in this chapter are as follows:

- “Connecting the 4944 WiFi Test Kit” on page 10
- “Powering the unit” on page 10
- “Operating the 4944 WiFi Test Kit” on page 10
- “Changing the name of the Wi-Fi network (SSID)” on page 11

## Chapter 3 Getting Started

### *Connecting the 4944 WiFi Test Kit*

## Connecting the 4944 WiFi Test Kit

For installation instructions please see “[Setting up the hardware](#)” on page 8.

## Powering the unit

The 4944 WiFi Test Kit is connected and running as long as it is connected to mains power.

In order to avoid any unnecessary power consumption while not being used, disconnect the mains cable from the power supply.

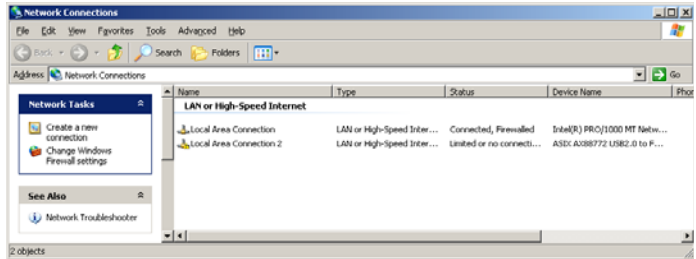
## Operating the 4944 WiFi Test Kit

Once connected to the unit under test, the PC and optionally to an RF test set, the WiFi Test Kit is operated through the Lector and Scriptor software. See the user’s guide for 7310 Lector and Scriptor for more information.

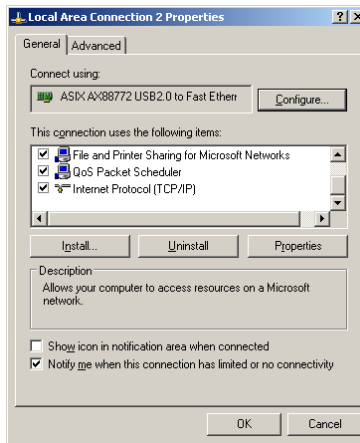
## Changing the name of the Wi-Fi network (SSID)

Changing the network name (or SSID) is usually not required unless you are working in an environment with several test stations interfering with each other. If you need to change the SSID, please proceed as follows:

- 1 In the Windows Control Panel, open the Network Tasks application.  
The Network Connections window appears.



- 2 Select the Local Area Connection with the ASIX AX88772 device, open the context menu (right-click on this Local Area Connection) and select **Properties**.  
The Properties menu for this connection appears.



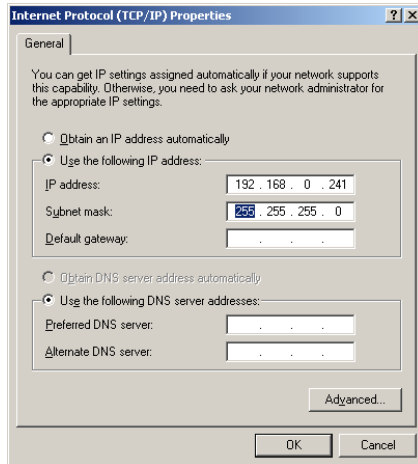
## Chapter 3 Getting Started

### Changing the name of the Wi-Fi network (SSID)

#### Note

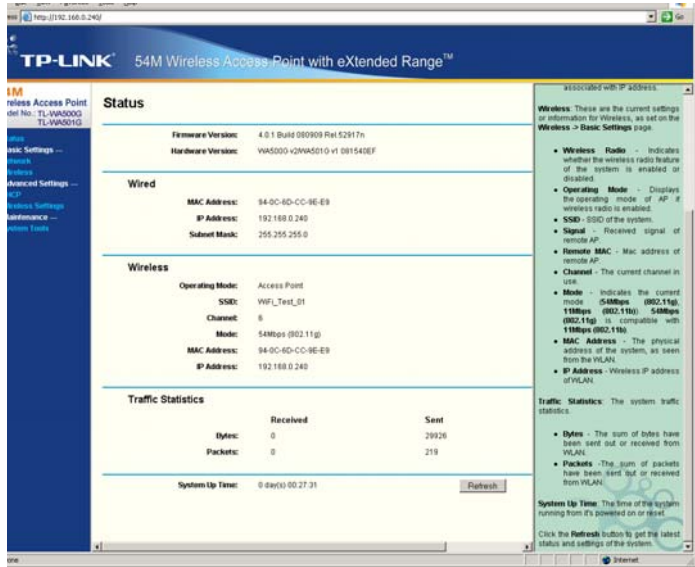
If there is no Local Area Connection with the ASIX AX88772 device in the Connections menu, you will need to install the driver (USB to Fast Ethernet Adapter) from the Lector and Scriptor disk, or just re-install Lector and Scriptor completely, including this driver.

- 3 Select **Internet Protocol (TCP/IP)** and click **Properties**. The Internet Protocol Properties menu appears.



- 4 Select **Use the following IP address** and set the parameters as follows:
  - IP Address: 192.168.0.241
  - Subnet mask: 255.255.255.0
  - Standard Gateway: You can leave this field empty
- 5 Press **OK** to close the IP Properties menu.
- 6 In the Local Area Connection Properties menu, click **Close**.
- 7 Launch a web browser and type in:  
**http://192.168.0.240/**  
A username and password are requested.

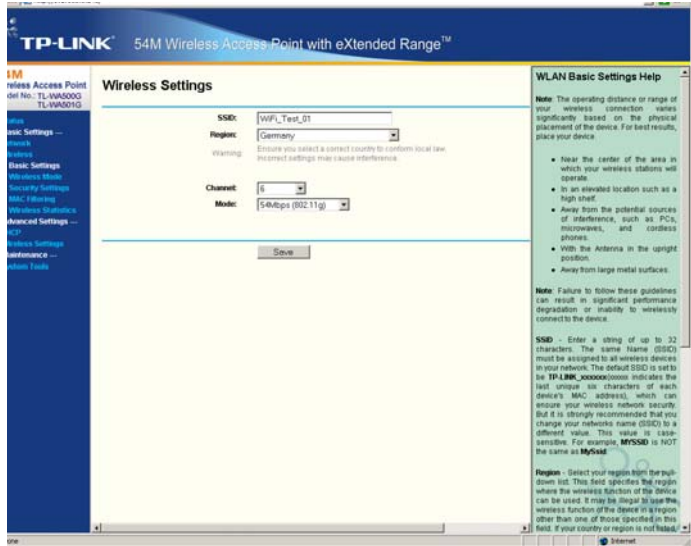
- 8 Log in to the Admin page with the following information:  
Username: **WiFi\_Admin**  
Password: **Flex\_WiFi\_Test**  
After successful login, the Status page is displayed.



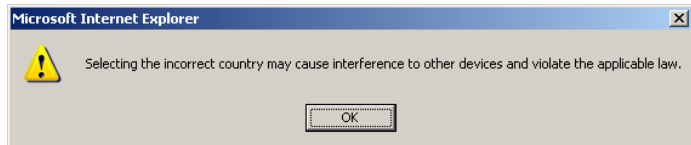
- 9 In the navigation on the left-hand side, click on **Wireless**, then **Basic Settings**.  
The Wireless Settings menu appears.

## Chapter 3 Getting Started

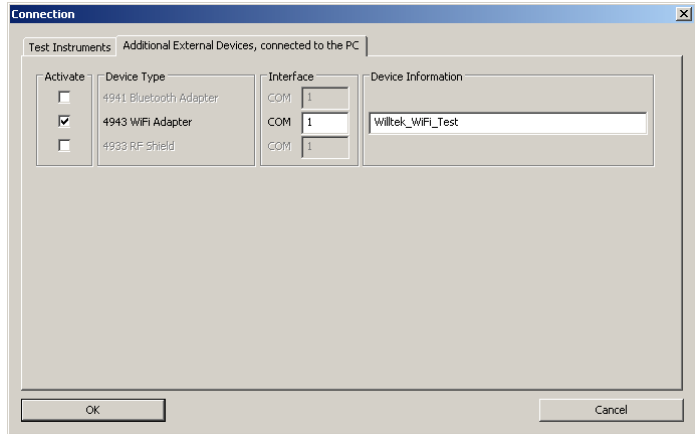
### Changing the name of the Wi-Fi network (SSID)



- 10 Change the SSID to the desired string and confirm by clicking **Save**.  
An error message appears.



- 11 Accept the warning message with a click on **OK**.  
When the new settings are active, the Status page will appear.
- 12 In Lector or Scriptor, select **Connection > Define Interface...** and click on the **Additional External Devices, connected to the PC** tab.



- 13 Check the box in front of 4944 WiFi Test Kit, select the COM port (same as in **Control Panel > System > Hardware** tab > **Device Manager > Ports (COM / LPT)**) and enter the same SSID string as in [step 10](#).
- 14 Confirm with **OK**.  
The test setup is now ready and using the new SSID.

## Chapter 3 Getting Started

*Changing the name of the Wi-Fi network (SSID)*

# Warranty and Repair



This chapter describes the customer services available through Aeroflex. Topics discussed in this chapter include the following:

- [“Warranty information” on page 18](#)
- [“Equipment return instructions” on page 19](#)

## **Warranty information**

Aeroflex warrants that all of its products conform to Aeroflex's published specifications and are free from defects in materials and workmanship for a period of one year from the date of delivery to the original buyer, when used under normal operating conditions and within the service conditions for which they were designed. This warranty is not transferable and does not apply to used or demonstration products.

In case of a warranty claim, Aeroflex's obligation shall be limited to repairing, or at its option, replacing without charge, any assembly or component (except batteries) which in Aeroflex's sole opinion proves to be defective within the scope of the warranty. In the event Aeroflex is not able to modify, repair or replace nonconforming defective parts or components to a condition as warranted within a reasonable time after receipt thereof, the buyer shall receive credit in the amount of the original invoiced price of the product.

It is the buyer's responsibility to notify Aeroflex in writing of the defect or nonconformity within the warranty period and to return the affected product to Aeroflex's factory, designated service provider, or authorized service center within thirty (30) days after discovery of such defect or nonconformity. The buyer shall prepay shipping charges and insurance for products returned to Aeroflex or its designated service provider for warranty service. Aeroflex or its designated service provider shall pay costs for return of products to the buyer.

Aeroflex's obligation and the customer's sole remedy under this hardware warranty is limited to the repair or replacement, at Aeroflex's option, of the defective product. Aeroflex shall have no obligation to remedy any such defect if it can be shown: (a) that the product was altered, repaired, or reworked by any party other than Aeroflex without Aeroflex's written consent; (b) that such defects were the result of customer's improper storage, mishandling, abuse, or misuse of the product; (c) that such defects were the result of customer's use of the product in conjunction with equipment electronically or mechanically incompatible or of an inferior quality; or (d) that the defect was the result of damage by fire, explosion, power failure, or any act of nature.

The warranty described above is the buyer's sole and exclusive remedy and no other warranty, whether written or oral, expressed or implied by statute or course of dealing shall apply. Aeroflex specifically disclaims the implied warranties of merchantability and fitness for a particular purpose. No statement, representation, agreement, or understanding, oral or written, made by an agent, distributor, or employee of Aeroflex, which is not contained in the foregoing warranty will be binding upon Aeroflex, unless made in writing and executed by an authorized representative of Aeroflex. Under no circumstances shall Aeroflex be liable for any direct, indirect, special, incidental, or consequential damages, expenses, or losses, including loss of profits, based on contract, tort, or any other legal theory.

## Equipment return instructions

Please contact your local service center for Aeroflex products via telephone or web site for return or reference authorization to accompany your equipment. For each piece of equipment returned for repair, attach a tag that includes the following information:

- Owner's name, address, and telephone number.
- Serial number, product type, and model.
- Warranty status. (If you are unsure of the warranty status of your instrument, include a copy of the invoice or delivery note.)
- Detailed description of the problem or service requested.
- Name and telephone number of the person to contact regarding questions about the repair.
- Return authorization (RA) number (US customers), or reference number (European customers).

If possible, return the equipment using the original shipping container and material. Additional Aeroflex shipping containers are available from Aeroflex on request. If the original container is not available, the unit should be carefully packed so that it will not be damaged in transit. Aeroflex is not liable for any damage that may occur during shipping. The customer should clearly mark the Aeroflex-issued RA or reference number on the outside of the package and ship it prepaid and insured to Aeroflex.

**Appendix A Warranty and Repair**

*Equipment return instructions*

# **End-User License Agreement**

## **B**

This appendix describes the conditions for using the software.

## Appendix B End-User License Agreement

All copyrights in and to the software product are owned by Aero-flex or its licensors. The software is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties.

This end-user license agreement grants you the right to use the software contained in this product subject to the following restrictions. You may not:

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- (ii) copy the software, except for archive purposes consistent with your standard archive procedures;
- (iii) transfer the software to a third party apart from the entire product;
- (iv) modify, decompile, disassemble, reverse engineer or otherwise attempt to derive the source code of the software;
- (v) export the software in contravention of applicable export laws and regulations of the country of purchase;
- (vi) use the software other than in connection with operation of the product.

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# Publication History

| Revision   | Changes   |
|------------|---|
| 1012-000-A | First version, for serial number LX763001 and higher. |

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