Sprint DUAL Package

Congratulations on purchasing your new Sprint DUAL Package

The DUAL Package$^®$ is a desktop IC Programmer that can accommodate various devices in two removable TOPs.

With different TOPs or Production Adapters the DUAL Package Programmer can support packages DIP, PLCC, LCC, SOIC, TSOP, PGA, QFP, μBGA and others.

The serial number is located on the bottom of the unit.

This guide describes:

- Parts included with the DUAL Package
- Assembly Instructions
- Loading the DIP Socket
- Loading the PLCC Socket
- Replacing a TOP
- Sales and Technical Support
- System Requirements
- Operating Requirements

For more information...

on your Sprint family programmer or using the software, refer to documentation on the "TaskLink™ for Windows$^®$" CD.

Data I/O

Packaged with this unit you will find:

- TaskLink CD-ROM (software and User Manual)
- DUAL base with two TOPs— TOP48DIP and TOP84PLC
- 25 pin, 1:1 parallel cable, 32″ long
- OPTIMA Booster
- Power Cord
- DUAL Power supply
- Calibration tool
- Seven insert plates

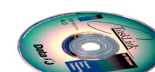Additional TOPs and Production Adapters are boxed separately.

Assembly Instructions

DUAL Power Supply

OPTIMA Booster

Calibration Tool

TaskLink CD

> **WARNING:** *Electrostatic Discharge (ESD) may damage integrated circuits. Do not touch circuit boards on the unit without a suitable grounding strap (not included). A grounding strap should also be worn at all times while programming devices.*

Before you begin, ensure that the power is turned off at both the programmer and your computer.

1. Connect one end of the parallel cable to the port on the back of the programmer. See figure 1.

2. Connect the other end to the parallel port on your computer. Any empty parallel port on your computer may be used.

3. Install the power supply by inserting the small DIN jack of the power supply into the power socket on the back of the programmer. This jack is keyed and cannot be inserted incorrectly. See figure 1.

4. Connect the power cord between the power supply box and a 100-250 Volt, 50-60 Hz AC outlet.

Parallel Cable

Insert Plates

> **WARNING:** *A device may be damaged if it is in a TOP socket during power up. Remove all devices before turning on the power switch.*

You are now ready to install the *TaskLink for Windows* software and begin programming devices. Refer to the *TaskLink for Windows* CD. To install the software see the jewel case front tray liner.

Note: Some parallel ports have hardware characteristics that may cause problems communicating with the programmer. If you see the message "Found slow printer port" during installation, install the OPTIMA Booster supplied with your programmer. Follow the instructions "Installing the OPTIMA Booster for a Slow Printer Port" found on the "TaskLink for Windows" CD.
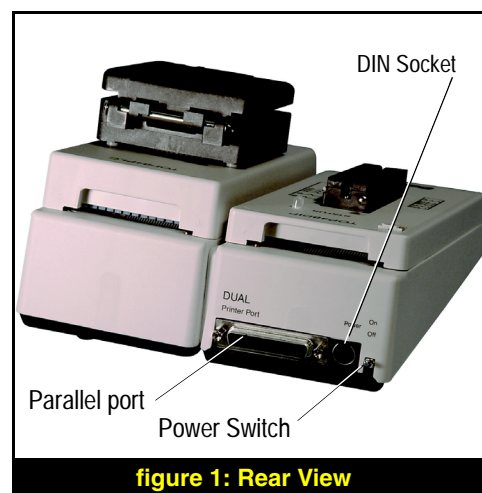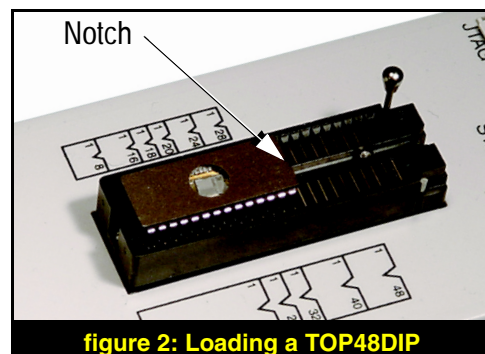
DIN Socket

Parallel port

Power Switch

figure 1: Rear View

Loading a DIP into a TOP48DIP TOP

With the socket unlocked (lever in up position), insert the device with the notch away from you. The socket is bottom justified. Lock the socket. See figure 2.

figure 2: Loading a TOP48DIP

Loading a PLCC into a TOP84PLC TOP

1. Push the latch and open the door.

2. Determine what PLCC you want to load, for example, a 28-pin PLCC. Ensure that the slotted plate (pressure plate) on the inside of the door is positioned **a)** correct side up, and **b)** correct edge adjacent to the hinge, as determined by the text on the plate. For a 28-pin PLCC, the correctly positioned plate will read, "TURN OVER FOR RECT. PLCC," since the 28-pin PLCC is square rather than rectangular. If it is incorrect, pull the plate up and off the locating pins, turn it over, orient it correctly and push until it is seated (flush with the pins). See figure 3.

3. There are seven insert plates each with a number corresponding to the number of pins on the PLCC they accommodate. For a 28-pin PLCC orient the insert plate labeled "28" with the text "28" and "INDEX SIDE" in the front (opposite the hinge) and push it onto the four posts until it is seated. See figure 3.

4. Load your PLCC with leads down and with the notch or chamfered corner oriented as diagrammed on the TOP. See figure 4.

5. Close the door. The latch will snap shut.

figure 3: Socket Module Open and Plates in Place
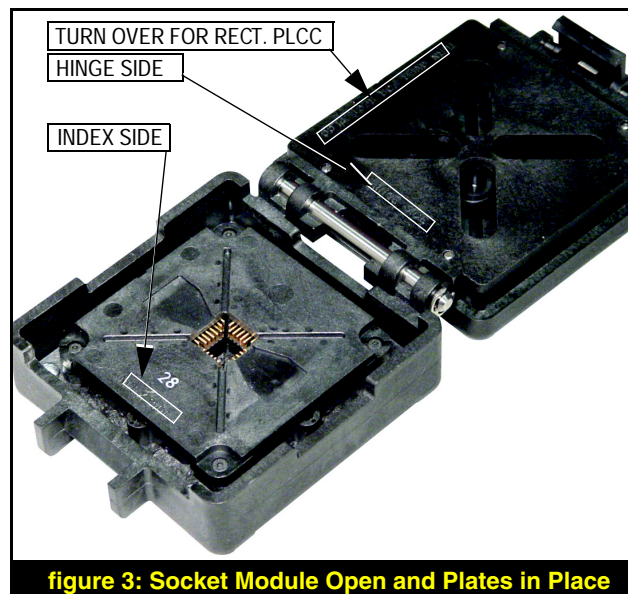
Replacing a TOP

Caution: *Ensure that the programmer power is off, and that the programming application is set to TOP Replacement (if available) or closed down.*

1. Unscrew the two recessed screws on the bottom of the base.

2. Pull the top edge of the TOP up and toward you. Lift it off.

3. Turn the new TOP over and examine the pins to verify that they are straight.

4. Holding the TOP at a 45 degree angle to the base, hook the plastic tab on the TOP into the notch in the base. See figure 5.

figure 4: Device Orientation Diagram

5. Lower the TOP until it rests on the base, rock it gently to ensure it is in place and press down gently.

WARNING: Damage may occur to the connector pins if they are not properly lined up with the pin connector strip on the base. Do not press the TOP if you meet resistance. Remove the TOP and try again.

6. Turn the unit upside-down. Screw the two recessed screws into the TOP.

Your Data I/O programming software will need to be restarted.

figure 5: Installing a TOP
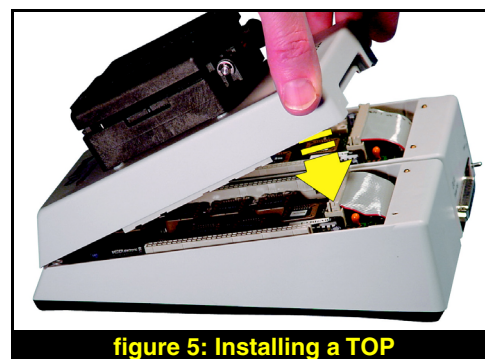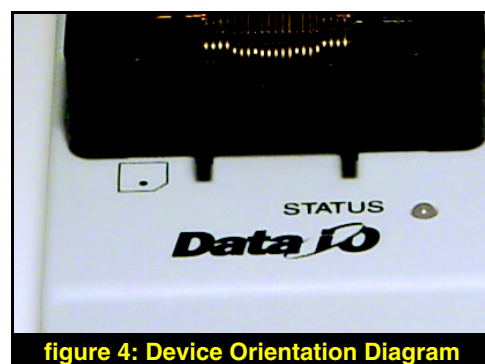
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Contact your local Data I/O representative or see the contacts below. To find your local representative on our Web site go to http://www.dataio.com/RepSearch.asp

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When calling or writing, please provide the following information:

- Serial number
- Interface—"*TaskLink for Windows*" or "*Sprint Windows*"
- Software Version
- Detailed description of the problem you are experiencing
- Error messages (if any)
- Device manufacturer, part number, package style and number of pins (if device-related)
- Name, address and telephone number

On the World Wide Web, contact us at http://www.dataio.com
or at our German Web site at http://www.dataio.de

System Requirements

- Microsoft Windows 95, Windows 98 or Windows NT
- 75MB hard disk space
- CD-ROM drive
- Bus or serial mouse
- Parallel port

Operating Requirements

- Operating voltage: 100-240 V~ ±10%
- Frequency range: 50-60 Hz
- Power consumption: 24 Watts

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