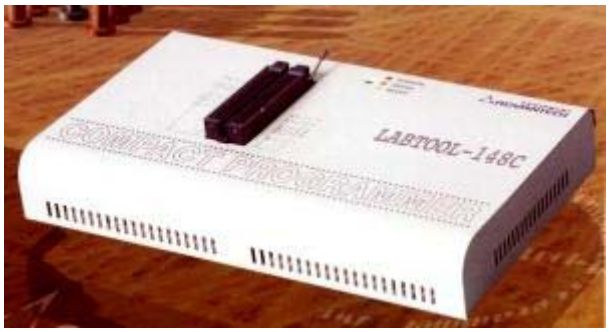
LabTool-148C Compact Programmer



Features

- **Printer-port interface with auto-switch power adapter**
- **Support 5V and 3.3V low voltage devices**
- **Fastest EPROM/ Flash programming speed on the market**
- **48 pin DIL zero insertion force socket**
- **Auto-sense/ Self programming with statistical report**
- **Device insertion /continuity check**
- **Universal adapter for 44-pin PLCC/ QFP/ SOP and 40/48 TSOP**
- **Supports Windows 95/98/Me/2000 and Windows NT**
- **Affordable price**
- **Project file save / load function**
- **User-selectable verify Vcc with one or two-pass verify voltage**
- **Automatic file format detection and conversion**
- **User-changeable programming parameters**
- **One years warranty**
- **Software updates via web**

Introduction

The LabTool-148C is a low cost PC based device programmer, which works through your PC's parallel port. It features a 48-pin pin driver over 2300 different devices including EPROM, FLASH, EEPROM, GALS and popular Microprocessor .

Unbeatable programming speed

The LabTool-148C's on-board intelligence reduces system overhead to a minimum. The LabTool-148C can program an 8-Mbit Flash in less than 30 seconds. The LabTool-148C is much faster than its competitors, making it much more productive with today's high density, multi-megabit memory devices.

Device	Blank check	Program	Verify	Total(B+P+V)
28F800B3 (8M)	6.8sec	43 sec	30.5sec	80.3 sec
28F160B3B(16M)	13.6sec	86sec	60.6sec	160.2sec

Device insertion and contact checks--No mistakes!

The LabTool-148C performs device insertion and contact checks before it programs each device. It can detect poor pin contact and devices inserted upside down or in the wrong position. This function protects your pocketbook by preventing expensive chip damage due to operator error.

Auto-sensing and self-programming

To meet mass-production requirements the LabTool-148C has implemented new patented technology in both its hardware and software. After entering the Mass-production Mode, the production line operator inserts a device into the ZIF socket. An LED on the LabTool-148C indicates the device is ready and the operator simply removes it

and replaces it with a new one. No formal training is necessary adding flexibility and saving time and money. In addition, the LabTool-48's auto-sensing feature ensures the device has been inserted correctly and then automatically programs the device. Furthermore, in the mass-production mode the system keyboard is automatically disabled preventing the operator from making any inadvertent mistakes.

Project file save and load

You can save a configuration project file which contains the device select, the buffer data and all the programming set-up options, this file can be called upon at any time for future use without having to go through the setting up procedure again, your design file can easily pass to production department without mistake.

User-selectable verify voltage, one or two-pass verification

The LabTool-148C lets you select the verify voltage after you have programmed the device, e.g., Vcc, Vcc ±5%, Vcc ±10%. The Vcc voltage can be 2.0V to 6.5V. This feature ensures that your device has been programmed properly, preventing failures due to programming errors and ensuring data retention.

Non-DIL device support through versatile converters

The LabTool-148C's pin driver capability lets it program all 48-pin DIL devices, including all single-chip micro-controllers. Advantech offers many choices besides DIL devices, such as PLCC(20 pin to 44 pin), SOP(8 pin to 28 pin), TSOP(28 to 48 pin), We have developed over 70 different converters to support these special-package devices.

1 Year warranty and software update via web

The LabTool-148C has additional safety features such as a built-in current limit and pin continuity check function. This prevents damage from faulty chips during the programming cycle. As a result we have provided a 1 year warranty on parts and labor for the LabTool-148C (limited 50,000-cycle warranty on ZIF socket). Free software updates are also available via web.

Universal 48 -pin TSOP adapter for all 48 TSOP Flash

The special assignment of pin driver on the LabTool-148C enables you to support all 48-pin Flash memory chip in 48TSOP package with only one 48 TSOP universal adapter, this features will applied to the 44 pin PLCC (MCU and EPROM), 44 pin SOP (Flash and EPROM), 40 pin TSOP (Flash and EPROM), 32 pin TSOP(Flash and EPROM) and 32 pin PLCC (Flash and EPROM) which eliminates the need to buy multiple adapters and saves money.

Pin swapping table-Build the adapter yourself

The LabTool-148C provides all adapter pin swapping tables you need (no active components) via its on-line help. You can simply download the relevant table and build the adapter yourself if necessary. You do not need to order an adapter and wait for it to arrive saving valuable time and money.

Low voltage chip support

The LabTool-148C logic driver support 5V, 3V , 2.7V logic level output and input chips.

Specifications

1. **48-pin DIL/ ZIF socket with receptacle for 8-pin to 48-pin 300/ 600-mil devices.**
2. **Four DACs for Vcc, Vpp1, Vpp2 and Vpp3 with 8-bit resolution. Software controllable rises time and current limit protection.**
3. **Logic driver supports pull-up/ pull-down or tri-state on all 48 pins with 2.7V-5V level.**

Device support >Detailed Device List

1. **Memory : EPROM, EEPROM, FLASH, Serial PROM**
2. **Logic: low density GAL and CE PAL.**
3. **Micro-Processor: popular MCU**

Device operation command

Read, blank check, device insertion/ contact check, verify, checksum, EPROM ID check, compare, erase chip, function test, program, memory protect, device configuration setting, device search, edit buffer, mass production mode, modify vector, buffer search.

PLD vector tester

1. **Accepts JEDEC test vectors up to 48 pins**
2. **2500V/usec. rise time**

File format conversion

JEDEC, POF, Binary, Intel HEX, Intel EXT HEX, Motorola S, HP 64000ABS, Straight Hex and TEKTRONIC Hex, Automatic detection and conversion.

PC System requirements

- **Operating system: WIN 95/98/Me/2000, Win NT 4.0**
- **Processor: 486 and above**
- **16 MB RAM minimum, 32MB recommended (win 98)**
- **Hard disk with 8 MB free space**
- **Parallel port : Standard Parallel port , ECP**

General

- **Power: 100 to 240 VAC, auto-switching**
- **Frequent range : 47 to 63 Hz**
- **Power consumption : 15 W**
- **Operating temperature: 5 to 45 (41 to 113)**
- **CE & LVD certified**
- **Weight 1.5KG**
