



## EMP-21 UNIVERSAL DEVICE PROGRAMMER

The EMP-21 was the world's first universal device programmer to use both USB and Parallel Port interfaces. With a wide range of devices supported and Windows based EMPWin software the EMP-21 is a versatile and easy to use programmer. The EMP-21 offers the "automated one touch" system. This allows you to blank check, erase, program, verify or any combination of these functions with the ease of just pushing a button. The low profile, lightweight design of the EMP-21 makes it ideal for any desktop or briefcase, proving useful for programming devices in the field. The EMP-21 also supports in-system-programming, via an adapter, on a number of devices.

- **Windows support**
- **Parallel and USB connections**
- **Low voltage capability**
- **Special features of devices supported**
- **Package support includes but not limited to PLCC, SOIC, TSOP, SSOP, PSOP, BGA, DIMM, SIMM, TQFP, NTSOP, VQFP, PQFP and WSON**
- **Device support includes but not limited to EPROM, EEPROM, Flash Memory, Microcontroller's, PLD's, CPLD's, and serial EPROM's**
- **In System programming support**
- **Low Cost**

## SYSTEM REQUIREMENTS

To use the EMP-21, you must have the following:

|                          |  |
|--------------------------|--|
| <u>Operating System:</u> | <u>For USB: An IBM-Compatible PC, Windows XP</u> |
| <u>Memory:</u>           | <u>128MB of RAM Minimum</u>                      |
| <u>Hard Drive Space:</u> | <u>At least 40MB of free space</u>               |
| <u>Interface:</u>        | <u>Parallel Port or USB 1.1 or greater</u>       |
| <u>Power:</u>            | <u>12-16 Volts @ 1 Amp, AC or DC</u>             |

## INCLUDED ITEMS

- A standard Parallel and USB cable
- A 48 pin Ziff Socket
- An AC 110V transformer ( a 220V transformer at additional cost is available upon request)
- Numbers 201-220 Family modules are included with the EMP-21, in a small carrying wallet

## STABILITY

- The EMP-21 carries a 1 year warranty on all parts and labor, and a 30 day money-back guarantee (restocking fee may apply).
- The EMP-21 is static-protected at the Ziff Socket, Family Module socket, Parallel port, USB port, and power connector.
- CE Compliant, for sale in the European Community.

## HARDWARE

- 4 Individual power supplies available.
- Relays provide superior isolation
- Logic voltage range from 2.2V to 5.5V
- High Voltage up to 25V
- Static protection on all socket pins
- Parallel port and USB connection

## SOFTWARE

- Supports device special features
- Automatic file type detection
- Algorithms approved or certified by device manufacturer
- Regular software updates

Needham's Electronics Inc.  
4630 Beloit Dr. Suite 20, Sacramento CA. 95838  
Ph:916 924 8037 Fax:916 924 8065  
[www.needhams.com](http://www.needhams.com)