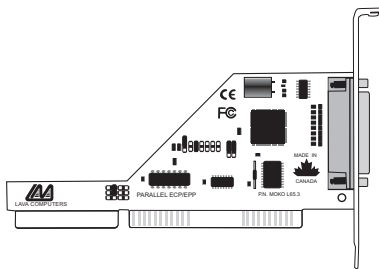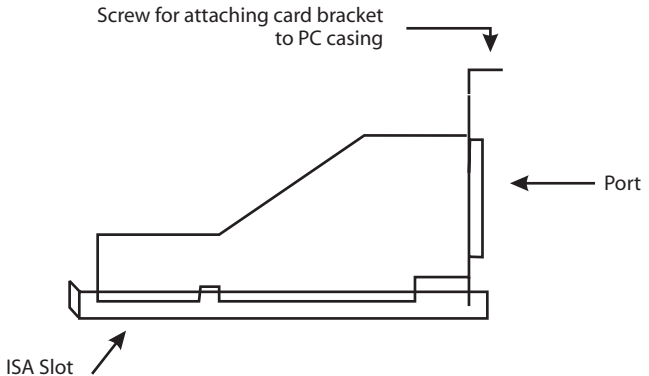# Lava Parallel-ECP/EPP Installation Manual

Rev. B00

Windows Hardware and Driver Installation

1. Before opening the casing of your computer, make sure that all power is off.

2. Locate an unused ISA slot and insert the Parallel-ECP/EPP card into it. Ensure that the card is well seated.

3. Screw the metal bracket of the Parallel-ECP/EPP card to your PC's casing and replace the machine's cover.

4. Connect your parallel (printer) cable to the port on the Parallel-ECP/EPP card and turn the PC on.

Screw for attaching card bracket to PC casing

Port

ISA Slot

<u>Parallel Configuration</u>

NOTE: The Lava Parallel-ECP/EPP is not a plug and play card.

<u>Standard LPT Assignments</u>

The Parallel ECP/EPP fully supports "standard" LPT settings represented by addresses 03BCh, 0378h, & 0278h. The system will check those hexadecimal address at boot-time and assign them incrementally to be LPT 1, LPT 2, or LPT 3.

If you already have an LPT 1 on your system, using 0378h, then configure the Parallel ECP/EPP for address 0278h. It will be recognized as LPT 2.

If you already have an LPT 1 and an LPT 2, using 0378h and 0278h, respectively, configure the Parallel ECP/EPP for address 03BCh. It will be recognized as LPT 1 and the other ports will be recognized as LPT 2 and LPT 3, respectively.

Note: 03BCh uses a polled interrupt, i.e. no IRQ jumper is required. 0378h typically uses IRQ 7, and 0278h typically uses IRQ 5.

Non-Standard LPT Assignments in Windows

1. When adding an extra printer port, double-click on the Add New Hardware icon in the Windows Control Panel. We recommend against using the autodetect feature. Rather, answer "NO" to the first question ("Do you want Windows to search for your new hardware?").

2. Choose "Ports (COM & LPT)." Select the type of port you wish to add (either "Printer Port," or "ECP Printer Port"). Complete the installation procedure. When Windows asks that you restart the computer, choose "NO."

3. Start the Windows Device Manager (found by double-clicking on the System icon in Control Panel). Choose "Ports (COM & LPT)," then double-click on whichever LPT you just added (numbered 1 through 6). Choose the Resources page for that port.

4. If Windows failed to automatically detect the required Port address, you may alter it by choosing the appropriate Basic Configuration. This may only be accessed by un-checking the box next to "Use Automatic Settings."

5. Choose BASIC CONFIGURATION as follows:

STANDARD PRINTER PORT (SPP):

0   Allows for STANDARD ADDRESSES & polled interrupts (Microsoft default)
1   Allows for STANDARD ADDRESSES & interrupt-driven printing (faster)
2   Allows for non-STANDARD ADDRESSES & polled interrupts
3   Allows for non-STANDARD ADDRESSES & interrupt-driven printing

ENHANCED CAPABILITIES PORT (ECP):

0   Allows for STANDARD ADDRESSES & polled interrupts, no DMA channels
1   Allows for STANDARD ADDRESSES & interrupt-driven printing, no DMA channels
2   Allows for STANDARD ADDRESSES & interrupt-driven printing, DMA channel selectable
3   Allows for non-STANDARD ADDRESSES & polled interrupts, no DMA channels
4   Allows for non-STANDARD ADDRESSES & interrupt-driven printing, DMA channel selectable

The beginning and ending hexadecimal address must be configured as follows:

> **03BC - 03BF 0238 - 023F**
> **0378 - 037F 02B8 - 02BF**
> **0278 - 027F 0338 - 033F**

Note: If you elect to enter the data, without scrolling through the list, the spaces that appear on either side of the hyphen are critical.

6.   You may now restart Windows.

Hardware Set-Up

Parallel Port Addressing

Specifies 03BC (hex) Port Address

Specifies 0378 (hex) Port Address

Specifies 0278 (hex) Port Address

Specifies 0238 (hex) Port Address

Specifies 02B8 (hex) Port Address

Specifies 0338 (hex) Port Address

Note: When using 03BC (hex) address, 03BC
ENABLE/DISABLE jumper must be ENABLED.
When using all other addresses, 03BC
ENABLE/DISABLE jumper must be DISABLED.

DMA Configuration

DMA Request/Acknowledge

1   3   None

Note: When using Enhanced
Capabilities Port (ECP)
mode, DMA channels
must be set up
according to mode
specified by peripheral
device driver. Check the
documentation
accompanying your
peripheral to see what
mode(s) it supports. Both
jumpers should be
moved together!

Parallel Port IRQ Setup

Remove jumper if using
POLLED interrupt request

Specifies
IRQ 7

Specifies
IRQ 10

Specifies
IRQ 11

Specifies
IRQ 12

Specifies
IRQ 4

Specifies
IRQ 5

Specifies
IRQ 2

Specifies
IRQ 3

Lava
Technical Support

9:00 am to 5:30 pm Monday to Friday (Eastern Time)

Tel: +416 674-5942
Fax: + 416 674-8262

E-mail: tech@lavalink.com
Internet: www.lavalink.com

Lava Computer MFG Inc.