Bitronics DualBus Switch Kit User Manual



F1U128-KIT

Introduction

Thank you for purchasing the Belkin Components Bitronics DualBus Switch Kit! Now, you and your colleagues can share and select between two different parallel devices from your desktop. And, if you are using Windows[®] 95, 98 or NT[®], you will be able to take advantage of Bitronics Software, which allows you to print automatically even if you have more than one printer!

Features

- Allows four computers to access any two parallel devices simultaneously and independently
- Virtual Port printer driver software allows fully automatic printer selection through Windows* 95/98 and NT*
- File-transfer feature between two PCs compatible with Windows[®] Direct Cable Connection, LapLink[®] and DOS Interlink[™]
- Includes two 6 ft. (1.8m) IEEE 1284-compliant cables to connect the computers
- Includes power adapter
- Adjustable timeout

Package Contents:

| Bitronics DualBus Switch, 4-2 | F1U128 |
|--------------------------------|-----------------|
| Power Adapter, 9VDC, 600mA | F1D065-PWR (US) |
| 2 x IEEE 1284-compliant cables | F2A047-06 |
| User manual | P73045 |
| Registration card | P72009 |

Other Parts Needed (if necessary)

- IEEE 1284 printer cable, Belkin Part# F2A046-XX. You will need this cable to connect a printer to the autoswitch. Your current printer cables may work, but IEEE-compliant cables are recommended.
- IEEE 1284 device cable, Belkin Part# F2A047-XX. You will need this cable to connect a computer to the autoswitch.

NOTE: "XX" is the length in feet.

Technical Specifications

Compatible Standards:

IEEE 1284-1994 Parallel Port Communication Standard Electrical:

| | Input Voltage | 9VDC |
|---------|-----------------------|-----------------|
| | Max Input Current | 600mA |
| | Max Power Consumption | 5.4W |
| | Max Heat Dissipation | 0.31 BTU/min |
| Dimens | ions: | |
| | Width: | 7.0″ (17.8cm) |
| | Height: | 3.75" (9.5cm) |
| | Depth: | 1.25" (3.2cm) |
| Weight | | 7.1 oz. (202 g) |
| Storage | e Temperature: | -10°C to 50°C |
| | | (14°F to 122°F) |
| Operati | ng Temperature: | 0°C to 40°C |
| | | (32°F to 104°F) |
| Humidit | iy: | 0 to 95% |
| | | Non-condensing |
| | | |



3 2 ON is UP. SW4 is not used.

SW2 and SW3: TimeOut Setting

TimeOut is the amount of time the switch remains locked on a PC port after data transfer. Use a longer TimeOut when connecting to scanners, mass storage devices and for large print jobs.

| SW2 | SW3 | TimeOut | |
|-----|-----|------------|-------------|
| ON | ON | 5 seconds | |
| ON | OFF | 10 seconds | Recommended |
| OFF | ON | 20 seconds | |
| OFF | OFF | 40 seconds | |

Manual Mode and Port Monitoring

In manual mode, you can select a port manually through the buttons on the Bitronics switch. You can also use this mode in conjunction with software to see your switch in action!

- Press COMPUTER to select which computer port you wish to configure or monitor. For the computer connected to Port 1, press the COMPUTER button until the LED on Port 1 is lit up either in red or green. •
- Press the PRINTER button until the LED of the appropriate device port you wish to use is lit up. ٠

For example, if you want computer 2 to use the device on port B, press the COMPUTER button until the LED on "2" is lit up. Then, press the PRINTER button until LED "B" is lit up.



Computer button

To use File Transfer mode, press the PRINTER button until the LED on the computer port turns green. When the LED turns green, the port is ready for file transfer mode. For file transfer mode to be successful for both PCs, both computer ports must be set to file transfer mode – which is evident when the LEDs next to 1 and 2 are green. For more information on File Transfer, please see page 25.

Note:

Computer 1 can only file transfer to computer 2, and computer 3 can file transfer to computer 4. If you change the ports manually using the buttons, the changes made will not be reflected in the software.

Choose your operating system

| Windows® 3.x Page 6 | |
|-------------------------------|--|
| MS-DOS Page 7 | |
| Windows® 95/98 and NT® Page 8 | |
| | |

NOTE: When installing software on any operating system, the software must be installed on all the computers connected to the Bitronics switch so that each machine can control the switch properly.

Software installation: Windows[®] 3.x

Insert the diskette labeled P27236 in your floppy drive. In the Program Manager, click on File then click Run. In the space, type in "a:\setup.exe".

| n Run | |
|-----------------------|--------|
| Command Line: | OK |
| a:\setup.exe | Cancel |
| Bun <u>M</u> inimized | Browse |
| | Help |

Follow the installation instruction prompts. After the setup program is done, simply double-click on the correct icon to run the port selection program.



Software installation: MS-DOS

To switch port, simply click on the port letter of your choice, and your computer will be connected to the device on the port chosen.

| Parallel Part Software | | |
|------------------------|--------|--|
| Port A | LPT1 ± | |
| O Part B | 0.11 | |
| O File Transfer | Gen | |

Software-Installation: MS-DOS

Enter the following at the DOS prompt and press ENTER:

Copy a:\dos\swport.com c:\SWPORT.com

SWPORT.com is a command-line executable. Please follow the syntax for proper operation:

| SYNTAX: SWPORT < | (LPTx) (connand) |
|------------------|-------------------------------------|
| (LPTx): LF | T1(default) , LPT2, LPT3 |
| (command) M | tany PCs one DEUICE (SW1 = OFF) |
| | I enable file transfer |
| T I |) I enable automatic device sharing |
| (connand) P | tany DEVICEs one PC (SW1 = ON) |
| | : select port A |
| | : select port B |
| e | : select port C (4 ports only) |
| d | 1 : select port D (4 ports only) |

File Transfer in DOS and WINDOWS[®] 3.x:

The file transfer feature of the Bitronics switch allows both computers to connect a if there was a file transfer cable connected between them.

The LED of the corresponding computer port on the Bitronics switch will turn green. This LED represents the computer you are on now, and is set for file transfer mode.

The LED of the corresponding computer port on the Bitronics switch will turn green. This LED represents the computer you are on now is set for file transfer mode. Note that PC1 can only file transfer to PC2, and PC3 can only file transfer to PC4. When both sets of PC LEDs on the Bitronics switch are green, then the computers are ready for file transfer. At this point, the cables and the Bitronics switch act as if it was a file transfer cable. You can now run programs such as Windows, Direct Cable Connection, or LapLink[®]. Please refer to their user manuals or websites for information on how to configure their software. Just remember that your Bitronics switch setup mimics the file transfer cable requirement.

Windows[®] 95 / 98 and NT[®]

BEFORE YOU INSTALL THE BELKIN BITRONICS SOFTWARE, YOU MUST FIRST MAKE SURE THAT EACH DEVICE WORKS PROPERLY ON ITS OWN WITH EACH COMPUTER. DO NOT CONNECT THE BITRONICS SWITCH TO THE COMPUTERS OR INSTALL THE SOFTWARE UNTIL INSTRUCTED BY THIS PROCEDURE!

 Make sure that the printer port on your computer is set to ECP mode. To do this, you must go into your computer's BIOS or CMOS setup. Instructions on how to do this differs from one computer to the next. Please consult your computer manufacturer's manual, tech support, or website for information on how to do this. Please do not call Belkin Tech Support regarding this because each computer's BIOS setup routine is different. Refer to the Appendices at the end of this manual for information on several models of computers.

The BIOS setup routine prompt is displayed a few seconds after you turn on your computer and hear its first beeps. Again, this varies from PC to PC. Please consult the Appendices and/or your computer manufacturer's manual or their tech support for information on how to do this properly. Usually you will see a message that reads PRESS DEL TO ENTER SETUP or PRESS F2 TO ENTER SETUP. When in the setup program, there may be a selection for "Integrated Peripherals", or "Peripheral Setup". Then, look for "Parallel Port Type" or "LPT port type". Change that setting to say "ECP" or "ECP/EPP". Save your settings then exit. When Windows[®] restarts, it may find new hardware, and it may ask you for the Windows[®] CD. Be prepared to insert the CD into the computer.

2. Make sure that the software and drivers for the devices to be shared are properly installed on all computers.

For instance, if you are sharing a Zip[®] Drive and a printer between 2 computers, you will need to first connect and install the Zip[®] Drive drivers on the first PC. Make sure that the Zip[®] Drive works perfectly on it, then repeat the same installation process for the second PC. Then, you will need to do the same installing the printer's driver on both PCs as well. This way, all the PCs have the drivers properly loaded so each one can access either device without any problems, as if they were connected to the computer individually.

3. Connect four computers and the devices to be shared to the Bitronics Switch as shown below. Two cables that connect computers to the Bitronics switch are included. Take note of which port each device is connected to:



Connect the power adapter to the power jack on the side of the switch, and plug it into an outlet. The example shown has a Zip[®] Drive connected to Port A and an InkJet printer on Port B of the switch.

- 4. In order for all computers to properly share the devices, the software must be installed on all four computers.
 - 4.1. Insert the disk into your floppy drive. Click on Start, then click Run. Enter a:\BITRONIX.exe, then click OK.



4.2. You will see the following window. Click Setup.



4.3. Close all other running applications so that the software installation can proceed quickly and smoothly. Click Next.



4.4. Select the model of the Bitronics Switch you have, which is the F1U127 / F1U128. Click Next.



4.5. Select Destination Folder. The default folder is recommended. Click Next.



4.6. Select Program Folder. The default, Belkin Bitronics Switch, is the recommended. Click Next.



4.7. When done installing, the program will ask you to restart your computer. You must restart in order to activate the software properly. Click Finish.



Don't forget to remove the disk from your floppy drive before restarting your computer!

5. Once your computer has rebooted, the Bitronics icon will appear in your system tray. This is how you can easily control and configure the Bitronics Switch.

| | 0 |
|--------|---|
| #Start | |

6. Double-click on the icon to open up the setup program:

| 🚟 Belkin Bitronics Softwar | e 🛛 🗙 |
|--|----------------|
| BELKIN BITRONICS AUTO SWITCH | onics Software |
| Auto Switch Port C A. Port A C B. Port B C File Transfer | |
| Select the correct LPT port the Bitronics switch is connected to. If you only have ONE parallel port (usually that is the case), leave this in LPT1. | OK |

7. Click on Settings. This is where you tell the software what devices are connected to each port:



Device Type gives you a pull-down menu showing the types of printers installed on your computer and other possible parallel device types as well. Here, you must select the correct type for the device connected to that port.

- If you are using a device which adds a drive letter to your system (like a The Deliver CD POINT 12 of the March Control o
- Zip[®] Drive, CD-ROM, LS-120, etc...), use the Mass Storage Device setting.
- If you are using a printer, use the printer driver used for that particular printer on that port of the Bitronics switch. If it does not show up in this menu, that means the printer drivers have not been installed. (In that case, reinstall the printer drivers and repeat this step after rebooting your computer.) If you have more than one printer installed, make sure that the correct driver is used for the printer connected to that port on the Bitronics switch.
- For any other parallel device, just use Scanner, and change the Display Name accordingly. For example, if you have a parallel tape drive, use Scanner for Device Type, then enter Tape Drive in Display Name.



In our example, we have a Zip^{\circ} drive on Port A, so we chose Mass Storage Device for Port A. And in Port B, we have the Epson printer installed, so we chose that driver in the Device Type for Port B.

Click OK when finished.

8. Change printer port from LPT1 to AutoSwitch port:

If one or both of the devices being shared is a printer, you must follow the procedure below to reconfigure the port connected to the printer. If both devices are printers, then this must be done for both printers. If neither device is a printer, then you can skip this step.

- 8.1. Click on Start, select Settings, and double-click on Printers.
- 8.2. Right-click on the printer installed on the Bitronics switch, and click on Properties:



Windows® 95 / 98 and NT® (continued)

- 8.3. Click on the Details tab. In the pull-down menu Print to the following port:, select the correct port this printer is connected to on the Bitronics switch:
 - LPx1 PA (autoswitch) Select this if the printer is connected to Port A of the Bitronics switch.
 - LPx1 PB (autoswitch) Select this if the printer is connected to Port B of the Bitronics switch.

| EPSON Stylus Photo 700 Properties 🛛 🖬 🖾 |
|---|
| Cal Paper Cit Layout Cit Utility General Details Sharing Cal Main |
| Paint to the following port Note: Information: Part (Communication: Part) Add Part VLavet1'srift Plete Part DOM3: (Communication: Part) Plete Part PLE: (Contasts at the ordisk) Plete Part Part Part (Contasts at the ordisk) Plete Part Part (Contasts at the ordisk) Plete Part Part (Contasts at the ordisk) Plete Part Part (Contasts at the ordisk) Plete Part Part (Part Part Part) Plete Part Part (Part Part Part Part) Plete Part Transmission peter Spool Setings. Spool Setings. Part Setings. |
| DK Cancel Assign History |

In the image above, the printer is connected to Port B of the Bitronics switch. Therefore, LPx1 – PB (autoswitch) is selected. When finished, click OK.

8.4. Click on Spool Settings and click on Start printing after last page is spooled.

| | g after jast page is spooled g after first page is spooled | |
|--------------------------------------|---|---|
| Print directly to the start planting | | |
| Spool data <u>f</u> ormat: | RAW | ٣ |
| | ional support for this printer | |

- 8.5. If NOT grayed out, click on Disable bi-directional support for this printer. Otherwise, ignore.
- 8.6. Click OK in the Spool Settings window. Click OK again in the main properties window.

Using the Bitronics Software

Example: Two Printers Shared Between Two Computers

The Bitronics Software automatically handles printing chores by directing your print jobs to the correct port on the Bitronics switch based on the settings you set in the Printer Properties and the Settings in step 7 previously. When you print something in any Windows[®] application (like MS Word or Excel), you simply select the printer you wish to print to, and the Bitronics software handles the switching duties. IT IS FULLY AUTOMATIC!

Windows® 95 / 98 and NT® (continued)

How does it work?

With the Bitronics Software loaded and the ports properly configured for the printers as shown in step 8 above, when you print in Windows[®], the print job goes to the Bitronics software first. There, the Bitronics software adds a command in the beginning of the print job telling the Bitronics Switch which port to send the print job to.

In the example below, the Epson Printer is connected to Port B, as described in the Where: line. When printing, the Bitronics software tells the Bitronics switch to switch to Port B first, then allows the print job to go through the switch, out to Port B, and to the Epson printer.

| Print | | | 2 X |
|------------------------------|--|------------------|-----------------|
| -Printer Name: Status: | Call ESSON Stylus Photo 700 | | Properties |
| Type: Where: Comment: | EPSON Stylus Photo 700 LPx1- PB (auto switch) | | F Print to file |
| | page C Selection I numbers and/or page ranges by commas. For example, 1,3,5 | -12 | es: I 🚔 |
| Print what: | Document | ▼ Print: All pag | es in range 💌 |
| Options | | | OK Close |

Then if you wish to print to the second printer, let's say a LaserJet[™] for example, all you have to do is select that particular printer in the Print dialog box. Click OK, and the print job is automatically sent to the LaserJet[™] printer on Port A of the Bitronics switch.

All you have to do is pick your printer, and the software does everything else. But remember, ALL THE SETTINGS MUST BE CORRECT, otherwise you may print garbage out of the wrong printer!

Below, the user has chosen the LaserJet[™] printer. Here, this printer is connected to Port A of the AutoSwitch. When the print job is sent, the Bitronics software tells the Bitronics switch to switch to Port A, then lets the print job go through to the LaserJet[™].

| Print | | | 2 🛛 |
|--------------------|---|--------------------------|---------------|
| Printer | | | |
| Name: | Tech Laser Jet 4000 Series PS | | Properties |
| Status: | Ide | | |
| Type: | HP Laser3et 4000 Series PS | | |
| Where: Comment: | LPx1- PA (auto switch) | | Print to File |
| Page range | | Copies | |
| θIJ | | Number of gapies: | 1 🏯 |
| C Current | page C Selection | | |
| C Pages: | | | P Collage |
| | numbers and/or page ranges y commas. For example, 1,3,5-12 | P P | |
| Print what: | Document | Print: All pages in rang | ~ * |
| Options | | OK | Close |

EXAMPLE: Sharing One Printer and a Zip[®] drive (or any other mass storage device)

When dealing with a mass storage device (devices that add a drive letter to your system like E:) such as a Zip[®] drive, the Bitronics Software in the system tray must be configured so that the Bitronics switch is defaulted to the Port attached to the Zip[®] Drive. It is necessary for the switch to always remain connected to the Zip[®] Drive so that any time you access that drive, you will always be connected, and not receive error messages:

 Make sure that the port that connects to the Zip[®] drive is set to Mass Storage Device in Settings. See Step 7 above for more info. The image below shows the Zip[®] drive is connected to Port A, and that the device type is Mass Storage Device. Type anything you want in Display Name. Click OK when finished.

| Setting | | × |
|------------------------------------|--------------|--------------------|
| GELKI BITRONI A U T SWITC | os | |
| Port | Display Name | Device Type |
| A. Port A | Zip Drive | Mass Storage Devic |
| B. Port B | EPSON SMIL | EPSON Stylus Phot |
| | C | к |

2. Click on the port that has the mass storage device connected. In this case, it is a Zip[®] Drive on Port A. As you can see, the Display Name entered above appears below as you had entered it. Click OK.

| Belkin Bitroni BELKIN | cs Software Belkin Bitronics Software |
|--------------------------|--|
| WITCH | LPT1 |
| Auto Swite | |
| | SON Stylus Photo 700 |
| C File Tr | ransfer |
| | Settings |
| | ОК |

Now, the Bitronics switch will always keep your computer connected to the Zip[®] Drive. That way, anytime you access it, you will not get any strange errors. Then, when you print to the Ink Jet Printer on Port B (as shown above), the Bitronics switch will switch to Port B temporarily to send the print job, then switch back to Port A to keep communication with the Zip[®] Drive.

Visual Feedback – How do I know what port I am on?

When the Bitronics switch is in its normal scanning mode, the LEDs are moving back and forth across the computer ports. To see the software in action, simply press the COMPUTER button so you can see a computer port's connection. Press the COMPUTER port until the LEDs around 1 are lit up, and you will see which device port it is currently connected to. If it is in File Transfer mode, the computer port LEDs are green, and neither device port LEDs will be lit. Then, click on the Bitronics software icon in the taskbar and change ports. You will see the LED of the Bitronics switch to the port you chose.

Using any other parallel device (not printers or mass storage devices) with a printer

When dealing with other parallel port devices, they are set as Scanners in the Settings (step 7 above). Examples of these are scanners, parallel port cameras, and tape drives. When you need access to this device, simply single-click on the Bitronics system tray icon, and select the device you wish to use. A check mark will appear showing which device is connected. For example, we have a scanner and a printer on the Bitronics switch:

| ✓ Scanner | | |
|-----------------|------|----------|
| Ink Jet Printer | | |
| 100 B | -005 | 12:05 PM |

You will be connected to the scanner device indefinitely. But let us say you wish to print to the InkJet printer, the software will again automatically switch to the port that has the printer and send the print job. However, the switch will remain connected to the printer - it will not change back to the Scanner, unlike the mass storage device mentioned previously. This means that you have to use this method to switch to the scanner each time you need to use it.

If no printers are installed

If no printers are installed, the Settings type (see step 7) for each device must be set either for Mass Storage Device (if the device adds a drive letter to your system), or Scanner (for all other types of devices).

The Bitronics software may not function properly in some systems if there is no Default Printer set. To do this, add a printer using the Add Printer Wizard (click Start, select Settings, double-click on Printers), and just use the Generic/Text Only driver. Remember to use Local Printer and LPT1 when the wizard asks you. This will then be set as your default printer, so that the Bitronics software can work properly.

Removing and Adding the Bitronics Switch Icon from the System Tray

- To remove the icon, simply right click on it, and answer Yes to the prompt.
- To reload the icon back into the system tray, click on Start, select Programs, select Belkin Bitronics Switch and select AutoSwitch-Multi PCs.

ADVANCED USER TIP:

If you are using devices with pass-through ports (like Zip[®] Drives and Scanners), you can connect a printer to the pass-through port and use the other device port on the Bitronics switch to connect to another device. Just be sure that the printer driver has its Port set to the correct device port. For example, if you wish to share 2 printers, 1 Zip[®] Drive and 1 scanner between 2 computers, connect the Zip[®] Drive to Port A, the Scanner to Port B, the first printer to the pass-through of the Zip[®] Drive, and the second printer to the pass-through of the Scanner. In the Bitronics software, set Port A to Mass Storage Device, and Port B to Scanner. Then in the Printer Properties/ details, set the Print to the following Port to LPx1- PA (auto switch) for the first printer, and LPx1- PB (auto switch) for the second printer. In general, only printers can be connected to pass-through ports.

Using the File Transfer Feature

The file transfer feature of the Bitronics switch allows both computers to connect as if there were a file transfer cable connected between them. To do this, double-click on the Bitronics switch system tray icon, click on File Transfer, and click OK. The LED of the corresponding computer port on the Bitronics switch will turn green. This LED represents the computer you are on now is set for file transfer mode.



Next, the second PC must also perform the same operation. When both sets of PC LEDs on the Bitronics switch are green, then the computers are ready for file transfer. At this point, the cables and the Bitronics switch act as if it were a file transfer cable. You can now run programs such as Windows[®] Direct Cable Connection, or LapLink[®]. Please refer to their user manuals or websites for information on how to configure their software. Just remember that your Bitronics switch setup mimics the file transfer cable requirement.

NOTE: Computer 1 can only file transfer to computer 2, and computer 3 can file transfer to computer 4. If you change the ports manually using the buttons, the changes made will not be reflected in the software.

Usage in Windows NT[®]

In Windows NT[®], you can perform the same installation as in the Windows[®] 95/ 98 procedure above. Make sure the power supply is connected to the Bitronics switch, otherwise, there may be a significant delay in the processing of requests from NT[®]-based machines.

The Printer properties in Windows NT[®] is slightly different. After installing the software and restarting the computer, go to the printer properties and select the Ports tab. To find the correct ports to be used with the Bitronics switch, you must scroll down the list until the LPx1: PA (autoswitch) comes up. Put a checkmark on the port that connects to the printer. In this case, it is Port A on the Bitronics switch:

| ~ | us COLOR ESC/P 2 | aint to the first free |
|-----------------------------------|------------------|------------------------|
| Port | Description | Pinter * |
| LPT3: | Local Port | |
| COM1: | Local Port | |
| COM2: | Local Port | |
| COM3: | Local Port | |
| COM4: | Local Port | |
| FILE: | Local Port | |
| LPT1: PA (auto LPT1: PB (auto | | Epson Stylus COL. |
| C LFTT: FB (850) | | Epson stylus cor |
| Add Part | Delete Port | Configure Port. |
| Entrie bidrecto | | |
| EUROCOOLECTO | | |

To set the spool settings correctly, click on the SCHEDULING tab. Make sure "Start printing after last page is spooled" is selected. Also, set "Priority" to highest:

| 🥩 Epson Stylu | z COLOR ESC/P 2 Propertiez | ? X |
|-----------------------------------|---|-----|
| General Ports | Scheduling Sharing Security Device Settings | |
| | C Eron 12:00 AM - Io 12:00 AM - | |
| Elionity Lowest Current Pri | J Highest | |
| C Start p | documents to program finishes printing faster inting after Jast page is spooled inting jmmediately by to the printer | |
| F Hold mism | Hold mismatched documents Print spooled documents first Seep documents after they have printed | |
| | OK Care | :el |

Click OK when done.

Windows® 95 / 98 and NT® (continued)

If you are still having problems using the BITRONIX.exe software in Windows® NT:

First UNINSTALL the Bitronics software. You can do this by right-clicking on the taskbar icon and answering YES to the prompt. Then, click on START, PROGRAMS, BELKIN BITRONICS SWITCH, then UNINSTALLSHIELD.

After restarting your computer, you can install the older NT version of the software located in the second disk (part# P72736). During the installation, it will ask you the model number. Please select "Auto Switch 2-2 / 4-2":

| Model Setting | × |
|---------------|---|
| | Select the Auto Switch Model |
| | Auto Switch 2:1 Auto Switch 2:2 / 4:2 Auto Switch 4:1 |
| 20 | Description Auto Switch 2:2 / 4:2 |
| | < <u>B</u> ack <u>N</u> ext> Cancel |

This version of the software is not fully automatic in printer selection. It requires the user to select ports each time through the taskbar icon.

Appendix

Changing your PC's parallel port mode to ECP

Changing your computer's parallel port mode to ECP increases speed and reliability of data transfers with the Bitronics Switches. Below are the steps on changing the settings on certain computers. Do this on all the computers connected to the switch. If your computer is not listed here, please check their website, or call their technical support. Please do not call Belkin Tech Support on this particular issue.

ACER

- While the computer is booting, follow the directions on the screen: To enter Setup, press CTRL+ALT+ESC. 1.
- Follow the legend on how to scroll through the options. When you reach the option Parallel Port Mode, choose ECP. Follow the legend directions to save the setting and exit Setup. 2.
- 3. 4.

AST

- While the computer is booting, follow the directions on the screen: To enter Setup, press CTRL+ALT+ESC. (If you have a 486 computer, the directions might 1. say press CTRL+ALT+DEL). 2.
- Follow the legend directions on how to scroll through the options.
- When you reach the Parallel Port Mode option, choose the mode with the highest performance (e.g. ECP). Follow the legend directions to save the setting and exit. 3. 4.

Generic clone computer

- 1
- 2
- Restart the computer and press F1 during the startup. Use an arrow key to select the Advance menu item. Use an arrow key to select the parallel port setting and the mode field. 3. 4.
 - Press ENTER to get the mode list.
- Select the mode with the highest performance (e.g. ECP) and then press ENTER. Press F10 to save the BIOS (basic input/output system) changes. Press ENTER to close the BIOS settings window. 5.
- 6.
- 7.

Dell

- 1.
- While the computer is booting, follow the directions on the screen: To enter Setup, press DEL. (If you have a 486 computer, the directions might say press F2.) Press ALT+P and choose Parallel Mode. There should be a list of modes available. Choose the mode with the highest
- 2. 3.
- performance (e.g. ECP).
- 4. Follow the legend directions to save the setting and exit Setup.

Gateway 2000

- While the computer is booting, follow the directions on the screen: To enter 1. Setup, press F1.
- Select Advanced from the menu bar. 2.
- 3.
- Select Integrated Peripherals. Following the legend directions, select ECP as the parallel port mode. Follow the legend directions to save the setting and exit Setup. 4. 5.

Hewlett-Packard

Steps for HP Pavillion PC Models

- 1.
- 2. 3.
- At the HP Blue Screen, press F1 to enter Setup. Select Advanced from the menu bar. Following the legend directions, select Peripheral Configuration and then use the arrow-down key to move to Parallel Port Mode.
- 4.
- Select the mode with the highest performance (e.g. ECP)
- Follow the legend directions to save the setting and exit Setup. 5.
- Steps for HP Vectra PC Series
- While the computer is booting, follow the directions on the screen: Press F2 to Enter Setup. This is displayed at the bottom of the Hewlett Packard System Hardware Test screen. 1.
- Use the arrow keys to highlight Parallel Port Mode. 2.
- Follow the legend directions on how to change the options. 3.
- 4. Set the port mode with the highest performance (e.g. ECP).
- Follow the legend directions to save the setting and exit Setup. 5

Steps for HP Vectra 500 PC Series

- While the computer is booting, follow the directions on the screen: Press F2 to Enter Setup. This is displayed at the bottom of the Hewlett Packard System 1. Hardware Test screen.
- Use the arrow keys to highlight Parallel Port Mode. 2.
- 3.
- 4.
- Follow the legend directions on how to change the options. Set the port mode with the highest performance (e.g. ECP). Follow the legend directions to save the setting and exit Setup. 5.
- Steps for HP OmniBook 5000 and 5500 PCs
- While the computer is booting, follow the directions on the screen: Press F2 to Enter Setup. This is displayed at the bottom of the Hewlett Packard System 1. Hardware Test screen.
- 2
- Use the arrow keys to highlight Parallel Port Mode. Follow the legend directions on how to change the options while selecting the parallel port mode with the highest performance (e.g. ECP). Follow the legend directions to save the setting and exit Setup. 3.
- 4.
- Add the Ecpon.com program to the computer's Autoexec.bat file. You can find this file on the compact disc or on Disk 1 of the disk set. 5.

IBM Aptiva

General Steps

- While the computer is booting, follow the directions on the screen: Press F1 to 1.
- enter Setup. Follow the legend on how to scroll through the Setup options until you reach 2.
- Input/Output Ports.
- Choose the mode with the highest performance (e.g. ECP). 3.
- 4. Follow the legend directions to save and exit Setup

Steps for IBM Aptiva 2176-C33, IBM BIOS v BSTUS4B

- NOTE: The steps for this computer are not included in the document received in the box. 1. While the computer is booting, follow the directions on the screen: Press F1 to enter Setup.
- 2. Follow the legend on how to scroll through the Setup options until you reach
- Input/Output Ports 3. Select Parallel Port Mode.
- Select ECP. 4.
- 5. Press ESC twice.
- Press ENTER to save the setting and exit Setup. 6.

Micron

General Steps

- While the computer is booting, follow the directions on the screen: Press F2 to 1 enter Setup.
- 2.
- 3.
- 4.
- enter Setup. Select Advanced from the menu bar. Follow the legend directions to select Integrated Peripherals. Use the arrow-down key to select LPT Mode. Select the parallel port mode with the highest performance (e.g. ECP). Follow the legend directions to save the setting and exit Setup. 5. 6.

Steps for the Millennium, Phoenix BIOS v 4.05

- NOTE: The steps for this computer are not included in the document received in the box. 1. While the computer is booting, follow the directions on the screen: Press F2 to
 - enter Setup. Go to Connectivity.
- 2.
- Change Port from AT to ECP. Select PS/2.
- 3. 4.

Packard Bell

General Steps

- While the computer is booting, follow the directions on the screen: Press F2 to 1 Enter Setup. (It might be F1 on some models.)
- 2. Select Advanced from the menu bar.
- Follow the legend directions to select Integrated Peripherals (or Peripheral Configuration on some models). Choose the parallel port mode with the highest performance (e.g. ECP). 3.
- 4. 5. Follow the legend directions to save the setting and exit Setup.
- Steps for the Force 443 CD, AMBIOS BIOS v 1.00.12.13130e
- While the computer is booting, follow the directions on the screen: Press F1 to 1
- 2 3.
- Enter Setup. Select Advanced from the menu bar. Use the down-arrow key to select Peripheral Config and then press ENTER. Use the down-arrow key to select Parallel Port Mode and then press ENTER. 4.
- 5. Use the down-arrow key to select Extended (originally Compatible) and then
 - press ENTER. Press F10 to save the setting.
- 6.

Sony

Models PCV-70/90/100/120:

- Restart your computer. During the first black and white Sony screen, press F3 to enter the boot screen. Press F1 to enter the BIOS Setup. Use right arrow to reach the Advanced menu. 1.
- 2. 3.
- 4.
- 5.
- Scroll down and highlight Peripheral Configuration and press ENTER. Scroll down and highlight Parallel Port Type. The default setting is Compatible. 6.
- 7.
- 8.
- Press ENTER. Select ECP and press ENTER. Press ESC twice to get to the Exit screen. Press ENTER twice to Exit Saving Changes. The system will restart into Windows[®]. 9.

Models PCV-130/150:

- 1. Restart your computer.
- During the first black and white Sony screen, press F3 to enter the boot screen. Press F1 to enter the BIOS Setup. Use right arrow to reach the Advanced menu. Scroll down and highlight Peripheral Configuration and press ENTER. Scroll down and highlight Mode. The default setting is ECP. Press ENTER. Select ECP. Press ENTER. Secoll to Parallel Port and press ENTER. 2.
- 3.
- 4.
- 5.
- 6. 7.
- Scroll to Parallel Port and press ENTER. 8.
- 9
- Select Enabled and press ENTER. Press ESC twice to get to the Exit screen. Press ENTER twice to Exit Saving Changes. The system will restart into Windows[®]. 10.
- 11.
- Models PCV-200/210/220/230/240:
- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9
- els PCV-200/210/220/230/240: Restart your computer. During the first black and white Sony screen, press F3 to enter the boot screen. Press F1 to enter the BIOS Setup. Use right arrow to reach the Advanced menu. Scroll down and highlight Peripheral Configuration and press ENTER. Scroll down and highlight Mode. The default setting is ECP. Press ENTER. Select either ECP. Press ENTER. Scroll to Parallel Port and press ENTER. Select Enabled and press ENTER. Press F10 to save these changes, confirm and exit. The system will restart into Windows[®]. PCG-705/707/717/719 Notebooks: 10.
- Sony PCG-705/707/717/719 Notebooks:
- 1.
- 2.
- 3.
- 4. 5.
- 6.
- In Windows[®] 95, open the Start Menu. Select Sony Folder. Select Sony Utilities. Select Sony Notebook Setup. Select the Printer/FDD tab. Make sure Use as printer connector is selected and choose the desired port mode required by the printer. There are three options available on this screen:

- Normal (Output only)
 Bi-directional (default)
 ECP (requires IEEE 1284 printer/parallel cable)
 Select ECP and click OK to save results and close the window.
 Click Yes to restart the computer.
 NOTE: Changes made in the Sony Notebook Utility are also made in the BIOS.

- Sony PCG-729:

 In Windows® 95, open the Start Menu.
 Select Tool Center.
 Select Sony Notebook Setup.
 Select the Printer/FDD tab.

 Make sure Use as printer connector is selected and choose the desired port mode required by the printer. There are three options available on this screen:

 Normal (Output only)
 Bi-directional (default)
 ECP (requires IEEE 1284 printer/parallel cable)

 Select ECP and click OK to save results and close the window.
 Click Yes to restart the computer.
 NOTE: Changes made in the Sony Notebook Utility are also made in the BIOS.

Information

FCC Statement

DECLARATION OF CONFORMITY WITH FCC RULES FOR ELECTROMAGNETIC COMPATIBILITY

We, Belkin Components, of 501 West Walnut Street, Compton CA 90220, declare under our sole responsibility that the product: F1U128-KIT

to which this declaration relates:

Complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CE Declaration of Conformity

We, Belkin Components, declare under our sole responsibility that the F1U128-KIT, to which this declaration relates, is in conformity with Generic Emissions Standard EN50081-1 and with Generic Immunity Standard EN50082-1 1992.

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