OPERATOR'S MANUAL

PPP-1150
Parallel Printer Interface
MICROBITS PERIPHERAL PRODUCTS
Albany, Oregon USA
INTRODUCTION

Congratulations on your purchase of the MPP—1150 Parallel Printer Interface. You have wisely chosen a printer interface incorporating the latest state-of-the-art technology to enhance the use of your Atari computer. The MPP—1150 is designed to be compatible with the Atari 400, 800, 600XL, and 800XL computers. Atari 1200XL owners need to purchase the MPP—1151 Interface which is modified to work with that computer. Both interfaces are software compatible with the Atari 850(tm) Interface Module and work with most printers.
CONNECTING THE MPP—1150

1) Plug the MPP—1150 into your computer's peripheral connector (where the cassette or disk drive plugs in).

2) Plug the next peripheral on the chain into the connector on the side of the MPP—1150.

3) Turn your printer off. Now connect the MPP—1150 by plugging the long ribbon cable into your printer's parallel connector.

The MPP—1150 should be plugged directly into the computer. If it is installed further on the chain of peripherals, the interface may not receive sufficient power to operate.
CONFIGURING YOUR PRINTER

Most printers have DIP switches that allow you to set certain options on the printer. Typically, these switches allow use of different character sets, form length, and other print options. The most common switch that needs changing is one that tells the printer to advance the paper (LF — linefeed) every time it prints the end of a line (CR — carriage return). If the printer prints everything on the same line, then you want to switch it so it does a CR + LF. There may also be other switches that need setting for correct operation. The usual settings are:

1) Parallel Interface
2) 8 Bit Data
3) CR+LF (Linefeed after every carriage return)
4) Correct character font (English, German, Spanish, etc.)

Refer to your printer manual for more information.

You should always turn your printer off before changing the switches. After setting them correctly, turn the printer back on. If you do not follow this procedure, the printer may not recognize the change.

USING THE MPP—1150 FROM BASIC

To use the MPP—1150 with Atari BASIC you simply type:

LPRINT "This is a test of the MPP—1150"

If you want to print from a BASIC program, insert a line number before the command:

10 LPRINT "I love it !"

See your BASIC reference manual for more information on using a printer with BASIC.
SERIAL PRINTER OPTION

The MPP—1150 has the capability to work with some RS—232 serial printers. This requires the MPP—1156 serial adaptor cable. To order, contact your dealer or Microbits.

Your printer must have the following specifications to work with the MPP—1156 serial adaptor:

- 150, 300, 600, 1200, 2400, 84800, or 9600 Baud
- 1 start bit
- 8 data bits
- 2 stop bits
- No parity
- RDY/BSY data protocol system using DTR to indicate status
- Printer must accept TTL (0—5 volt) signal levels

SOFTWARE COMPATIBILITY

The MPP—1150 works with all software written to use a parallel printer connected to an Atari 850 Interface Module. If your software doesn't seem to work correctly with your printer, there is probably a compatibility problem between the software and the printer. Usually the software is not sending the correct codes for your printer.
HARDWARE COMPATIBILITY

The MPP-1150 is designed to interface with parallel printers using the 36-pin Centronics standard. In theory, all manufacturers should use this standard in exactly the same way. In practice, most adhere to the standard closely enough that their printers work fine with our interface. However, occasionally a manufacturer will deviate from the standard enough to cause significant problems.* To be absolutely sure your printer is compatible with the MPP-1150, compare the pin-out diagram provided here with the pin-out diagram in your printer manual.

<table>
<thead>
<tr>
<th>PIN</th>
<th>SIGNAL</th>
<th>PIN</th>
<th>SIGNAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strobe</td>
<td>19</td>
<td>Ground [Strobe]</td>
</tr>
<tr>
<td>2</td>
<td>Data bit 1</td>
<td>20</td>
<td>Ground [Data bit 1]</td>
</tr>
<tr>
<td>3</td>
<td>Data bit 2</td>
<td>21</td>
<td>Ground [Data bit 2]</td>
</tr>
<tr>
<td>4</td>
<td>Data bit 3</td>
<td>22</td>
<td>Ground [Data bit 3]</td>
</tr>
<tr>
<td>5</td>
<td>Data bit 4</td>
<td>23</td>
<td>Ground [Data bit 4]</td>
</tr>
<tr>
<td>6</td>
<td>Data bit 5</td>
<td>24</td>
<td>Ground [Data bit 5]</td>
</tr>
<tr>
<td>7</td>
<td>Data bit 6</td>
<td>25</td>
<td>Ground [Data bit 6]</td>
</tr>
<tr>
<td>8</td>
<td>Data bit 7</td>
<td>26</td>
<td>Ground [Data bit 7]</td>
</tr>
<tr>
<td>9</td>
<td>Data bit 8</td>
<td>27</td>
<td>Ground [Data bit 8]</td>
</tr>
<tr>
<td>10</td>
<td>Not connected</td>
<td>28</td>
<td>Ground</td>
</tr>
<tr>
<td>11</td>
<td>Busy</td>
<td>29</td>
<td>Ground [Busy]</td>
</tr>
<tr>
<td>12</td>
<td>Not connected</td>
<td>30</td>
<td>Ground</td>
</tr>
<tr>
<td>13</td>
<td>Select</td>
<td>31</td>
<td>Not connected</td>
</tr>
<tr>
<td>14</td>
<td>Not connected</td>
<td>32</td>
<td>Not connected</td>
</tr>
<tr>
<td>15</td>
<td>Not connected</td>
<td>33</td>
<td>Not connected</td>
</tr>
<tr>
<td>16</td>
<td>Ground</td>
<td>34</td>
<td>Not connected</td>
</tr>
<tr>
<td>17</td>
<td>Not connected</td>
<td>35</td>
<td>Not connected</td>
</tr>
<tr>
<td>18</td>
<td>Not connected</td>
<td>36</td>
<td>Not connected</td>
</tr>
</tbody>
</table>

*As of this printing, the 1150 must be modified to be used with some of the Okidata Microline series of printers. DO NOT attempt to use the 1150 with these printers without first assuring that they are compatible. Check with our customer service department for more information.
TROUBLESHOOTING

If you have a problem getting the MPP—1150 interface to work correctly, check the following items:

1) Computer will not operate the MPP—1150 plugged in. * Your MPP—1150 is defective. See service instructions.

2) Disk drive or cassette will not work when plugged into MPP—1150. *Your MPP—1150 is defective. See service instructions.

3) ERROR—138. Is MPP—1150 connected properly to computer and printer? Is printer on and selected?

4) ERROR—140. You probably turned your computer off and on too quickly. The MPP—1150 needs a couple of seconds to properly reset. If you get this error repeatedly then you may have a defective MPP—1150. See service instructions.

5) Everything seems to work fine but the printer does not print.

   Is MPP—1150 connected to printer properly?
   Are the printer's DIP switches set correctly?

   If this doesn't work, you should try the MPP—1150 with another printer that is known to work correctly. If it still doesn't work, the MPP—1150 is probably defective and should be returned. If it does work, you probably have a problem with your printer.

SERVICE

If you believe that your MPP—1150 is defective, you should call our service department at (503) 967—9075 to get service instructions. If the MPP—1150 needs repair, a return authorization number must be obtained before returning any merchandise directly to us.
WARRANTY

Microbits Peripheral Products, Inc. warrants the MPP–1150 Interface to be free from defects in material and workmanship and to meet all published specifications. If any part of this equipment fails within the warranty period for any reason other than misuser, this equipment shall be repaired or replaced at no cost to you. This warranty shall not apply to equipment that has been altered, modified, or repaired by anyone other than Microbits Peripheral Products, Inc. This warranty replaces warranty period expressed in manual. Repairs that are not covered by this warranty. Repairs that are not covered by this warranty will be billed at current shop charges.

Microbits Peripheral Products, Inc. does not assume any liability for any consequential damages caused by the use of the MPP–1150 Interface.
Expand Your Atari
...with peripherals from MOP

MicroStuffer™
PrinterBuffer™

- Works with any computer
- Works with any standard Centronics parallel interface

64K

- Reset button
- Auto diagnostics
- Multiple copy repeat function
- Self test
- Serial output (optional)

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