	*	<b>27 COBHAM ROAD FERNDOWN DORSET ENGLAND BH21 7PE UK.</b>
	(	<b>Tel: +44 (0) 1202 892777 Fax: +44 (0) 1202 894268</b>
		<b>Email: <a href="mailto:sales@appliedrelaytesting.co.uk">sales@appliedrelaytesting.co.uk</a> Web site: <a href="http://www.appliedrelaytesting.co.uk">www.appliedrelaytesting.co.uk</a></b>

## Application note AN170111: Configuring a Reflex system with a PC parallel port

### PC systems already fitted with a parallel port built on to the motherboard.

Connect this system to the parallel port output of the PC. Start the PC up and enter the system BIOS mode – refer to the PC manual for details on how to enter the BIOS. Ensure that the parallel port mode is set to bi-directional mode if available, otherwise set it to EPP unless your machine is in the following list:

Machine	Set parallel port to mode
Pundit	EPP+ECP
Compaq dx6050	Bidirectional

After editing the BIOS settings make sure to save any changes.

If the parallel port has the default address of 378 (hex) (or can be assigned to this address in the BIOS) the Reflex10 software will work immediately.

If the parallel port is at another address in the range below you will receive the message 'The System Hardware Cannot Be Located etc ...'. When you press the 'Retry Locating Hardware' button, these addresses will be searched and the valid address found.

\$378 (default),  
\$278,  
\$3BC,  
\$268,  
\$26C,  
\$27C

If the hardware cannot be found after testing all possible port addresses, check cables and hardware and verify the parallel port mode in the BIOS settings.

### Configuring the ART PCMCIA parallel port adaptor.

If the ART PCMCIA parallel port adaptor has been fitted to the PC for the first, proceed as follows:

1. Reboot the PC with the adaptor fitted.
2. Right-click on 'My Computer' and select 'Properties'.
3. Click on the 'Device Manager' button.
4. Open 'Ports (COM & LPT)' and double click on 'Quatech SPP-100.....'
5. Click on the 'Resources' tab.
6. Uncheck 'Use Automatic Settings'.

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7. In the 'Settings based on' control change this to 'Override configuration 0001'. The system will be busy for several tens of seconds and the port address will change to 0278.

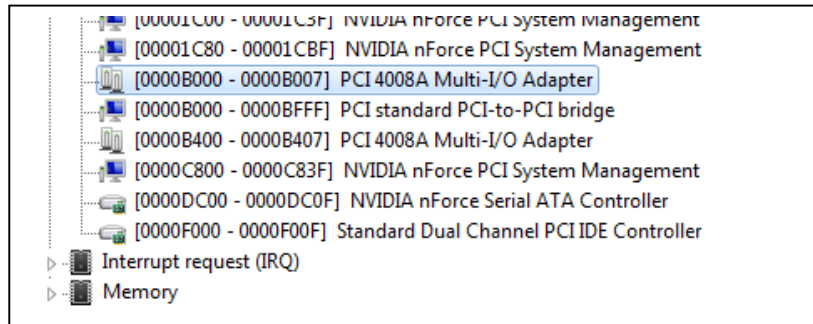
Run the Reflex system software and use the parallel port detection procedure to locate this new parallel port setting.

### Configuring the Reflex10 software for use with an add on PCI parallel port card.

This procedure should be followed when the host PC has been fitted with an add-on PCI parallel port adaptor card. Follow the manufacturers' instructions on installing the card to the PC.

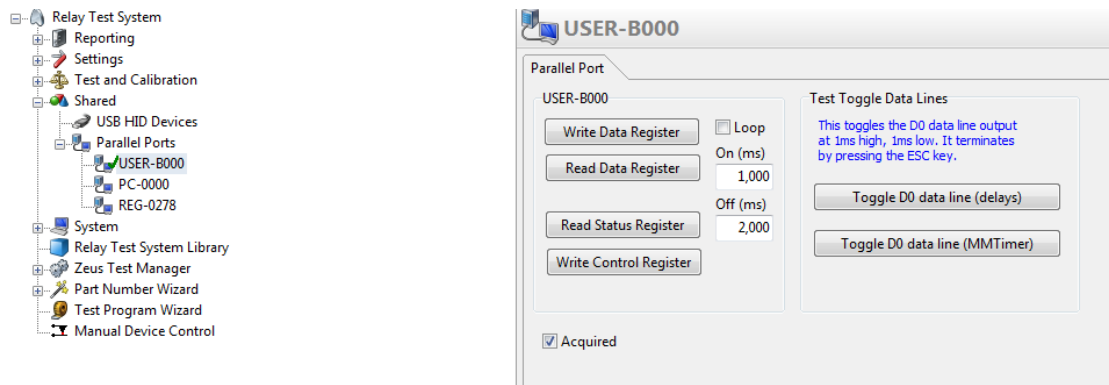
Locate the working start address of the card in Windows Device Manager (select 'View', 'Resources by type'). Note that there will be two addresses. In the example below the PCI parallel port card is called the 'PCI 4008A Multi-I/O Adapter' and is found at address 000B000 and 000B400. Only one of these addresses will work with the Reflex system. Follow the procedure below to add the first start address (in this example 000B000) to the Reflex 10 software. If this does not work add the second address (in this example 000B400).

e.g.:



1. Log on to the Reflex 10 software in Administrator mode.
2. Select the 'Engineering' tab (bottom right of screen and 'Resource explorer').
3. Navigate to 'Relay Test System', 'Shared', 'Parallel Ports' and right click to select 'Structure', 'Create Resource'
4. Type in for example 0B000h to add a port at Hex address B000. This will appear as 'USER-B000'.
5. Now quit the software and restart. The system should now be detected.

e.g.:



### Configuring the Reflex10 software for a special parallel port address.

Use these instructions to configure the Reflex 10 software to use a special parallel port address that is not in the range of allowed parallel port addresses.

1. Right-click the desktop icon 'ART Reflex10 Software' and select 'Properties'.
2. Change the text in the 'target' box to read:

```
"C:\Program Files\ART\Reflex10\Reflex10.exe" /ul=a,none /LPT=$<adr>
```

Where <adr> is the base address see in the I/O range assigned to the card. For example:

```
"C:\Program Files\ART\Reflex10\Reflex10.exe" /ul=a,none /LPT=$FFF8
```

3. Press ENTER to close the properties.
4. Click the desktop icon to launch the Reflex10 software.
5. You will receive a message that the parallel port address is being overridden.
6. The Reflex10 should now operate correctly.
7. If you wish to use any other shortcut icon to launch the Reflex10 software, modify its target in the same way.

For more information please contact Applied Relay Testing Ltd.