

# **Pass-Through Tool**

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## **Instruction Manual**

**IDEC CORPORATION**

# Introduction

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This instruction manual explains the operation and handling of the “Pass-Through Tool instruction manual”.

Before using the software, read this manual thoroughly to familiarize yourself with this product's function and performance, and to ensure correct operation.

## Publication history

December 2008: First Edition	(Pass-Through Tool Ver.1.00)
September 2009: Second Edition	(Pass-Through Tool Ver.1.10)
March 2010: Third Edition	(Pass-Through Tool Ver.1.10)
July 2010: Fourth Edition	(Pass-Through Tool Ver.1.20)
February 2011: Fifth Edition	(Pass-Through Tool Ver.1.30)
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# 1 Function of Pass-Through Tool

## 1-1 Overview

The Pass-Through function enables the MICRO/I to relay communications between the PLC programming software on the PC and the PLC. Therefore, connecting to the PC can perform communication with both of the MICRO/I and PLC.

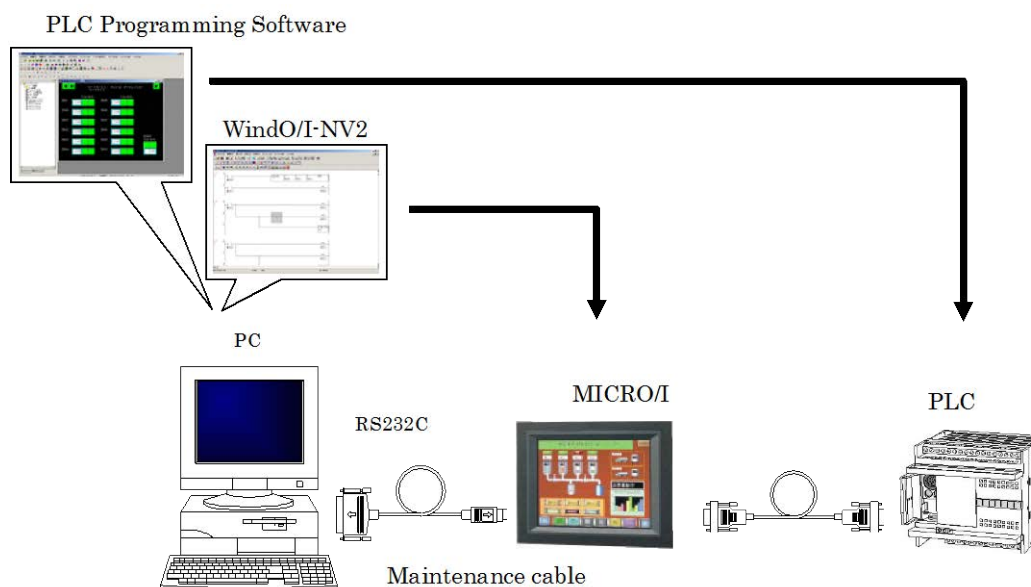
### Features of the Pass-Through function

- Communication with both of the MICRO/I and PLC can be performed by simply connecting the PC to the MICRO/I using a maintenance cable. It is not required to replace the cable connected to the PLC.
- Communication between the programming software on the PC and PLC can be performed without interrupting the operations of the MICRO/I.

### Operating Conditions for the Pass-Through Function

The Pass-Through function operates under the following conditions:

- The MICRO/I is in the Run Mode or Debug Mode.
- A host I/F driver that supports the Pass-Through operation.
- The Pass-Through function has to be enabled.



When you communicate with the competitor's PLC via HG2G/3G using the Pass-Through function, use the Pass-Through Tool software to enable communication. For more information, see the Chapter 27 "Pass-Through Function" in WindO/I- NV2 User's Manual.

## 2 Hardware Requirements

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The hardware requirements are as follows.

Item	Specifications
OS	Windows 10/8/7
Computer	PC-AT or compatible
CPU	1GHz processor or faster
Memory	512 MB of installed RAM (1 GB recommended)
Hard Disk	800 MB of available hard disk space
Graphics	XGA (1024 x 768) or higher screen resolution
Users	Administrator privilege required

## 3 Operations

The following steps explain how to use Pass-Through Tool. These instructions describe how to use the Pass-Through Tool with WindLDR Ver. 5.\*\*.

### [Note]

Pass-Through Tool is unnecessary when WindLDR Ver.6.10 communicates with PLC via MICRO/I serial port. For details, see WindLDR online help.

In case of the following cases, Pass-Through Tool is needed:

- WindLDR Ver.5.0\* through Ver.6.0\* or PLC programming software from the third party is used.

## 3-1 Before using Pass-Through

To start the Pass-Through, do the following steps.

- ① Follow the procedure below;

- Windows 10

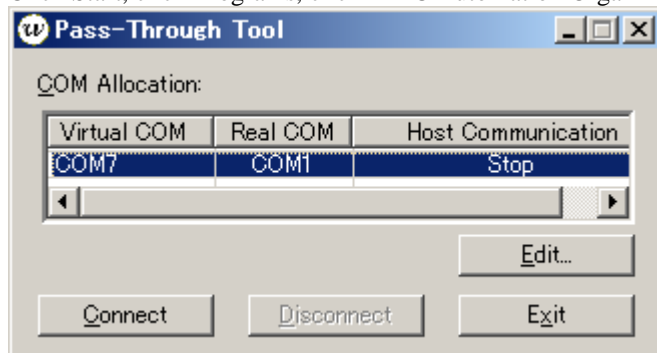
Click Start, click All Apps, click IEC Automation Organizer, and then click Pass-Through Tool.

- Windows 8

On the Start screen tiles, click Pass-Through Tool.

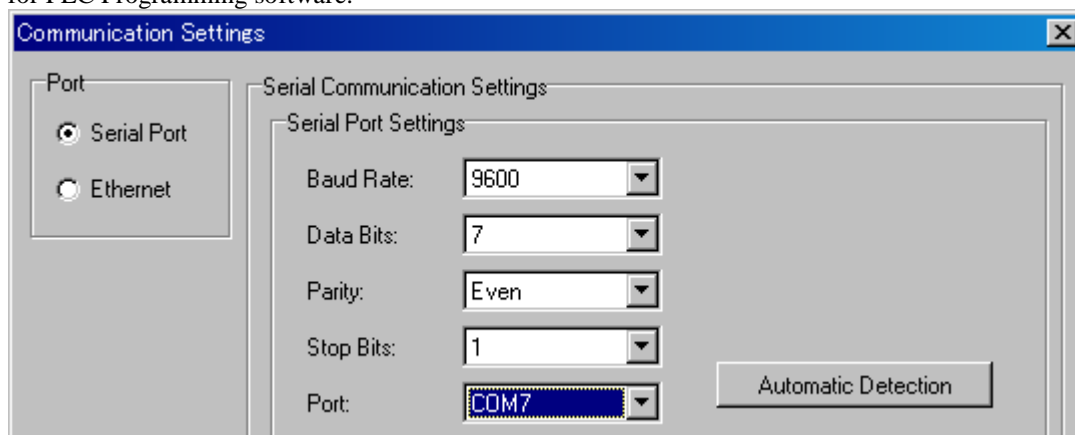
- Windows 7

Click Start, click Programs, click IEC Automation Organizer, and then click Pass-Through Tool.



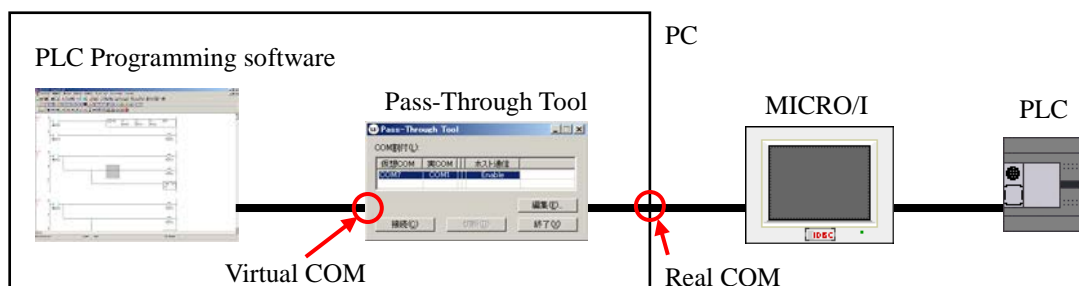
- ② Confirm Virtual COM which PLC Programming software uses at Pass-Through.

In case of the above example, COM7 is Virtual COM. Set the port to Port of Communication Settings for PLC Programming software.



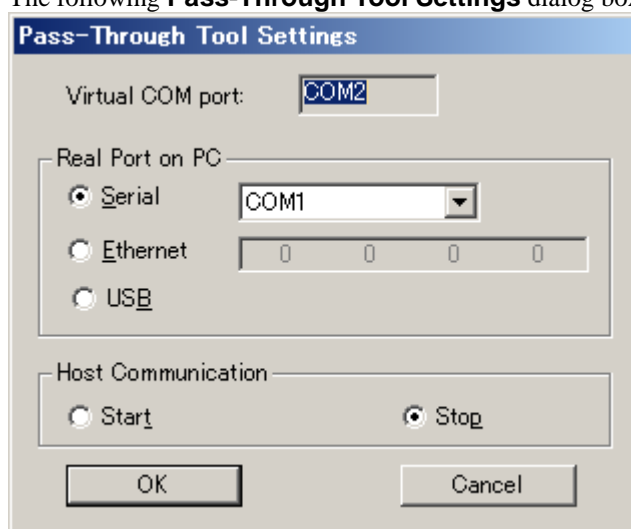
- ③ Select Real COM which this Pass-Through Tool uses at Pass-Through.  
If you don't know the port number of the Real COM, go to **Start** menu > **Control Panel** > **System** > **Hardware** > **Device Manager**, and then double-click **Ports (COM & LPT)** to check the settings.

The relation between Virtual COM and Real COM is as follows.



If you want to change the Real COM, click **Edit** button.

The following **Pass-Through Tool Settings** dialog box is opened.



- If you want to use a serial port as Real COM, select **Serial Port** and then select the COM port number to be used.
- If you want to use an Ethernet port as Real COM, select **Ethernet**, and then type the IP address of the destination MICRO/I.
- If you want to use USB port as Real COM, select **USB**.

- ④ After completing the settings, click **OK** button on **Pass-Through Tool Settings** dialog box.

#### [Note]

If PLC Programming software is communicating with the PLC using the Pass-Through function, you can start or stop the host communication between the MICRO/I and the PLC with the **Host Communication**.

Prior to using the Pass-Through function, be aware of the following:

- Select **Stop** in the **Host Communication** when using the Pass-Through function to download or upload the programs.
- Select **Start** in the **Host Communication** when using the Pass-Through function to monitor the program.

## 3-2 Enable Pass-Through

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The following steps explain how to enable Pass-Through function when using the Pass-Through Tool.

- ① Click **Connect** button on **Pass-Through Tool** window.
- ② When **Connect** button is masked, you can communicate between PLC Programming software and PLC by Pass-Through. At that time, other application software except this Pass-Through Tool can't use COM port set as Real COM for Pass-Through Tool.

## 3-3 Change the settings of Pass-Through Tool

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If you want to change the settings of Pass-Through Tool, click Edit button on Pass-Through Tool window. Or double-click the Host Communication cell in the COM Allocation list box.

If you double-click Stop or Start displayed on Host Communication cell, you can change the setting.

### [Warning]

You can't change the settings while communicating by Pass-Through. After clicking **Disconnect** button, change the settings.

## 3-4 Disconnect Pass-Through

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If you want to disable the Pass-Through function, follow the steps below.

- ① Click **Disconnect** button on Pass-Through Tool window.
- ② When **Disconnect** button is masked, you can't communicate between PLC Programming software and PLC by Pass-Through. At that time, other application software except this Pass-Through Tool can use COM port set as Real COM for Pass-Through Tool.

## 3-5 Exit Pass-Through

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If you want to quit the Pass-Through Tool, follow the steps below.

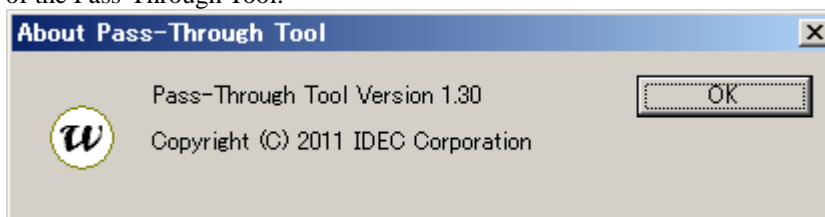
Click **Exit** button on Pass-Through Tool window.

## 3-6 Pass-Through Tool version number

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The following steps explain how to check the Pass-Through Tool version number.

- ① Click  on **Pass-Through Tool**.
- ② Select **About Pass-Through Tool** in the **System** menu.  
The **About Pass-Through Tool** dialog box will appear, and displays the current version number of the Pass-Through Tool.





## 3-7 Operation Example

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The operation flow of Monitor, Download or Upload etc on PLC Programming software is as follows.

- ① Make sure Port No. of Virtual COM displayed on Pass-Through Tool then set the same Port No. to Communication Settings on PLC Programming software.
- ② If you want to do Monitor, select **Start** to Host Communication on Pass-Through Tool.  
In case of Download or Upload etc **except** Monitor, select **Stop**.
- ③ Click **Connect** button on Pass-Through Tool.
- ④ Execute the online operation such **as** Monitor, Download or Upload etc on PLC Programming software.
- ⑤ After completing the online operation on PLC Programming software, click **Disconnect** button on Pass-Through Tool.

## 3-8 Restrictions and Precautions

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- The communication with Pass-Through Tool might become slower than the communication between PLC and PLC Programming software without Pass-Through Tool according to PLC Programming software.
- If the communication via Pass-through fails, change the settings such as Baud Rate, Timeout, Transfer Mode etc on PLC Programming software.
- When Host Communication was stopped by Pass-Through Tool, the Host Communication Error on MICRO/I isn't recovered unless starting by Pass-Through Tool or resetting MICRO/I.
- If the communication cable is pulled when monitoring the PLC in the serial communication, recover the communication according to the following procedures.
  - Insert communication cable.
  - Disconnect Pass-Through and connect Pass-Through with Pass-Through Tool.
  - Quit the monitor and start the monitor with PLC Programming software.