

# Connect to a Modbus Master (supporting only 4 digit addressing)

Monitouch HMI Technical Note TN-MH-0018a

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### 1. Introduction

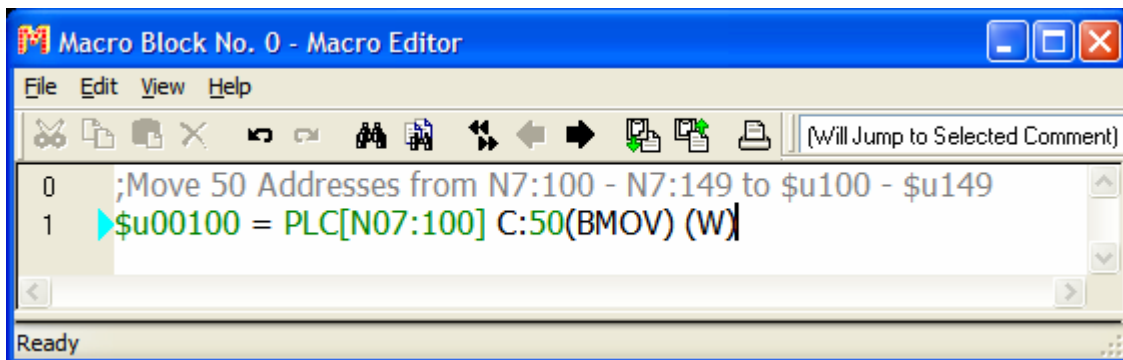
This document describes how to connect to a Modbus master (typically a SCADA system) that supports only 4 digit Modbus addressing. Typical Modbus masters support 5 digit addressing, e.g. 4xxxxx where x = 1 to 65535. Some older Modbus devices only support 4xxxx where x = 1 to 9999. Because the Monitouch typically maps free addresses (PLC, Temperature Controller, \$L, etc) starting at 32769, this can cause problems. This tech note will describe ways to remap the data to the lower addresses. This applies to Modbus RTU or TCP/IP communications.

### 2. Requirements

- 1) V-SFT programming software.
- 2) Any Monitouch panel that supports Modbus slave (all V6/V7 units).
- 3) A Modbus master.

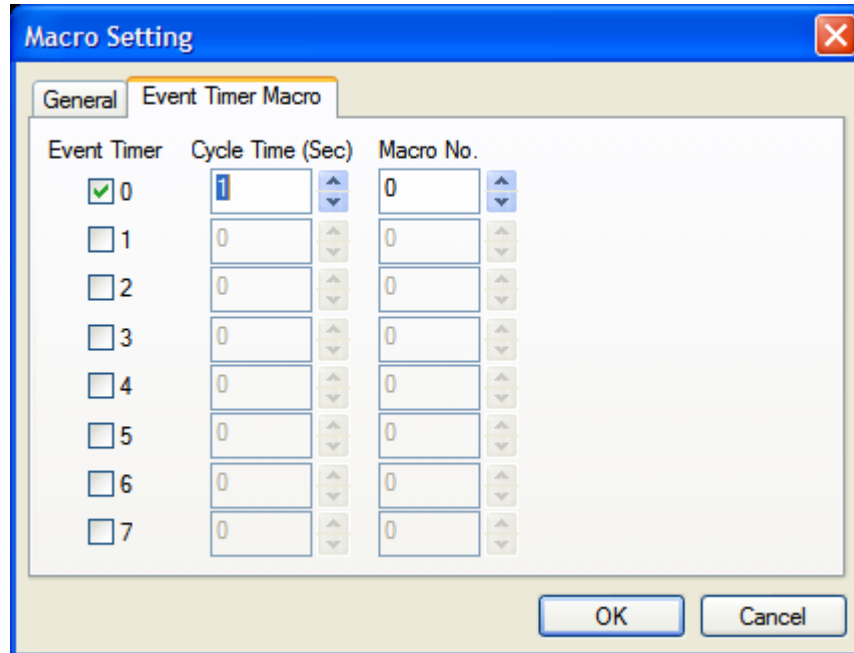
### 3. Configure the Monitouch

- 1) Configure Communication Settings:
  - In V-SFT, click System Setting – Extended Communication – Modbus Slave – Communication Settings.
  - Select the Protocol used, the port used (for RTU) and the communication settings.
  - You will not be using the Memory Table, since that starts at 8000H (32768 DEC).
- 2) Create a macro to remap the data:
  - Click Registration Item – Macro Block. Select an unused Macro Block and click OK
  - Enter a BMOV macro to move a block of PLC addresses to internal memory (less than \$u9999)



- Make sure that the memory addresses are not used elsewhere in the application.
- Close the Editor (File – Close).

- 3) Configure a Global Cycle macro:
- Click System Setting – Macro Setting.
  - Click the Event Timer Macro tab.



- Check the box for one of the timers. Set the Macro number to the macro created above in Step 2.
- Set the cycle time to the frequency you want to run the macro (0 means every scan).

#### 4. Notes

- 1) The Modbus slave function will remap the internal memory automatically.
- 2) There is an offset of 1 between the Modbus address and the internal Monitouch address, so \$u100 = 40100.
- 3) With 4 digit Modbus addressing, the highest allowable address is 49999, so make sure that the internal addressing is no higher than \$u9998.

#### 5. For More Information

1. Information on Modbus: <http://www.modbus.org>
2. Monitouch Tech Note TN-MH-0003b (Modbus Communication between V Series Panels)