

# RUNMODE

## S7 I/O TEST ASSISTANT

for SIEMENS SIMATIC S7-300 and S7-400 PLC



A VIRTUAL ASSISTANT WHO HELPS YOU IN  
TESTING DIGITAL INPUTS AND OUTPUTS

Last revised: March 31, 2004

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## Requirements

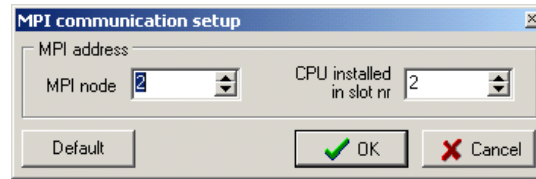
- Runmode S7 I/O Test Assistant is a 32 bit application for Microsoft Windows 95/98/ME/NT/2000/XP.
- Runmode S7 I/O Test Assistant relies on Siemens Prodrive MPI additional package to communicate with the PLC.
- Supported versions of Prodrive MPI: v3.0 and higher.
- Prodrive Mini is not supported.
- Siemens Prodrive MPI works with standard interfaces commonly used by Siemens Step7 programming package, such as CP5511, CP5512, CP5611, RS232/MPI converter, USB/MPI converter, etc.  
Third party interfaces and OPC are not supported by Prodrive
- Siemens Prodrive MPI is a Siemens product, it is not shipped with Runmode S7 I/O Test Assistant.

## Installation of S7 I/O Test Assistant

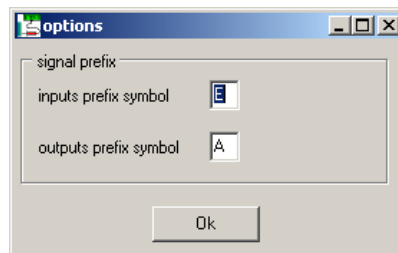
The S7 I/O Test Assistant does not need installation, just copy all the files to a folder of your choice.

## Configuring S7 I/O Test Assistant

Once you ran `S7iotestassistant.exe`, from **OPTIONS** menu select **MPI COMMUNICATION** and set proper MPI communication parameters.



From **OPTIONS** menu select **I/O prefix** and set the desired prefix character for inputs and outputs. Normally German mnemonics use **E** for inputs and **A** for outputs, English mnemonics use **I** for inputs and **Q** for outputs. You can assign any character of your choice.

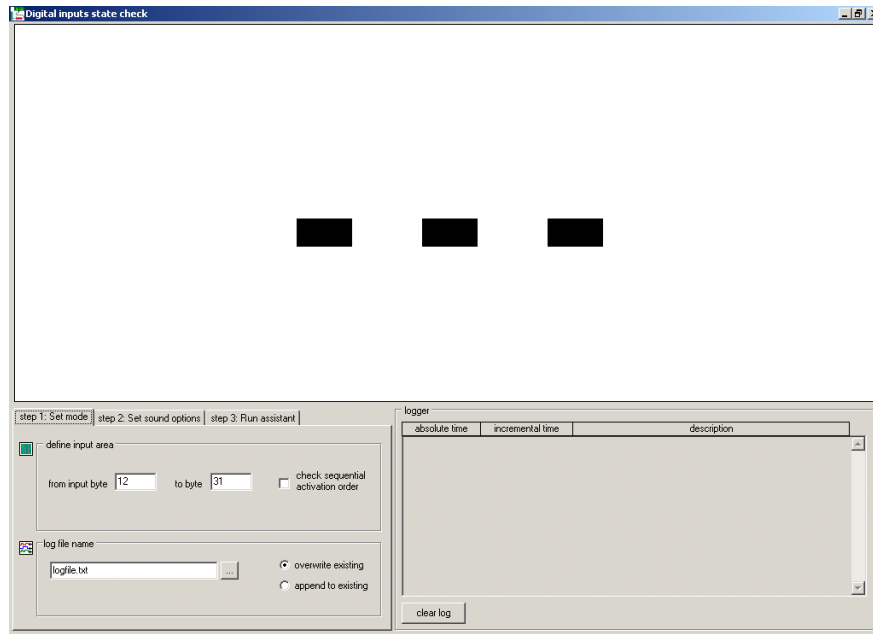


## Testing digital inputs

### WARNING

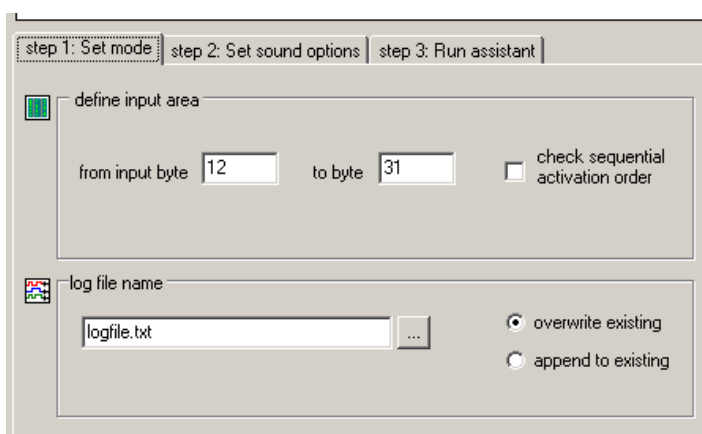
PLC must be in RUN state, presence or absence of PLC user program is not relevant.

If you want to monitor digital inputs state, from FILE menu select CHECK INPUTS to open the inputs monitoring window



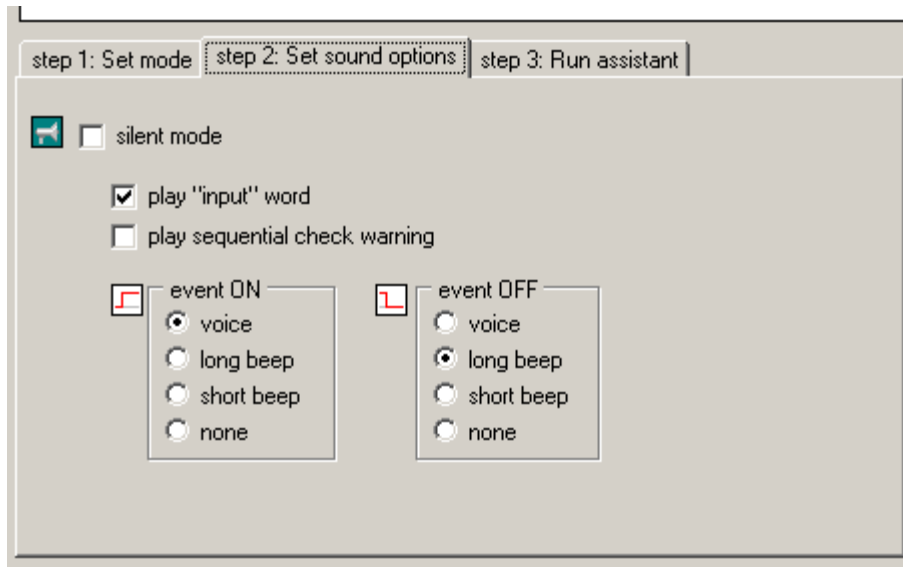
As first step you must assign the input area parameters.

- Select *Check Sequential Order* checkbox if you are about to test thoroughly the selected inputs area from the first to the last input in sequential order and you want to be alerted if you skip a bit.
- You can also assign the *log file name*, in case the file already exists you can specify whether the log information are to be appended to the existing file or will simply replace the file.



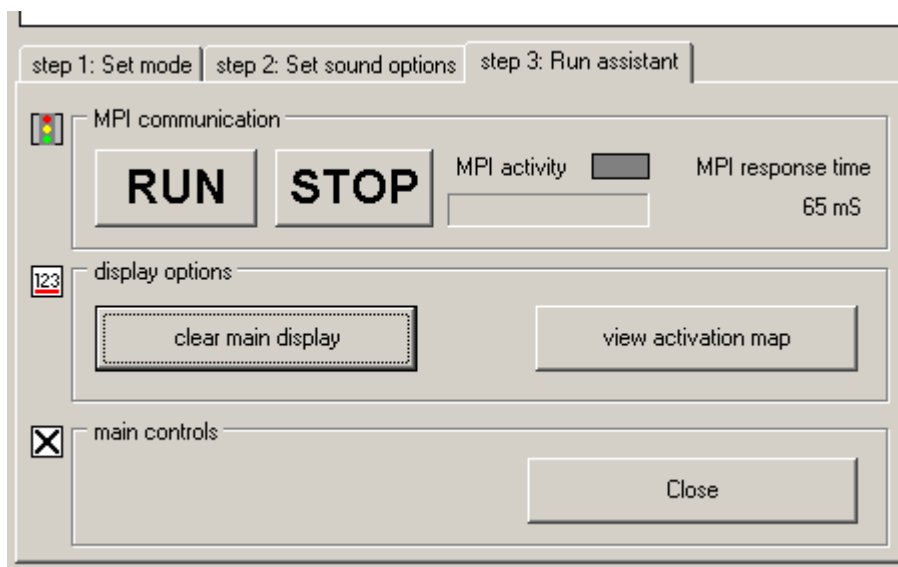
In the next tab you can select the sound options.

- *Silent Mode* turns on and off sounds
- *Play Sequential Check Warning* plays a specific sound if a bit is skip in activation order. Obviously the Sequential check mode must have been previously activated in the Mode tab
- *Event On/Off* sounds allows a choice for both ON and OFF events.



In the last tab you can start the monitoring

- *Run* and *Stop* buttons will start and stop the communication polling to the PLC
- *Clear Main Display* button clears the upper display area in the window
- *View Activation Map* shows a list of all input bits that changed their state, you can detect at a glance if you missed a point.



### Practical note

S7 I/O Test Assistant is not a data logger, it is meant to test one bit at a time, letting the application to display and speak the input address.

Do not to overload the application with many state changes at the same time, events will be queued but result will be useless to the user.

## Testing digital outputs

If you want to monitor digital outputs state, from FILE menu select CHECK OUTPUTS to open the outputs command window

### WARNING

PLC must be in RUN state, outputs must not be processed by the PLC program.

In case there is no program in the PLC, just switch it to RUNmode.

In case the PLC contains a valid program you can either delete the program or skip program processing by adding a BEU (BEA in German mnemonics) instruction at the very beginning of OB1 block. In this way the PLC program is not processed anymore and you can quickly re-enable program execution by removing the BEU instruction.

### CAUTION

**Personnel must be aware of consequences when activating or deactivating digital outputs.**

**Direct command of outputs state may cause damages or injuries.**

**Ensure that proper interlocks and limit switches control is provided at hardware level.**



## Version history

Version 1.00    First commercial release

## Author's notes

Please report any bug or suggestion to the author:

Luca Gallina

Via Cantarane, 6/R

I-31040 Volpago del Montello (TV) - Italy

Web site: <http://www.runmode.com>