Quick Start Manual for JVL HMIs

In this short manual you will learn how to create a new HMI project and how to place different "controls" on the operator panel screens.

1. Install the EV 5000 software

- Run the Setup.exe file
- Copy the 3 MAC motor® files into directory

2. Creating a new project

- One HMI and One QuickStep® or MAC motor®
- One HMI and Multiple QuickStep®s or MAC motor®s
- Multiple HMIs and Multiple QuickStep®s or MAC motor®s

3. Placing different Controls on the Screens

- Text
- Number Inputs
- Number Display
- Function Keys

4. Save the Project and Download it to the HMI

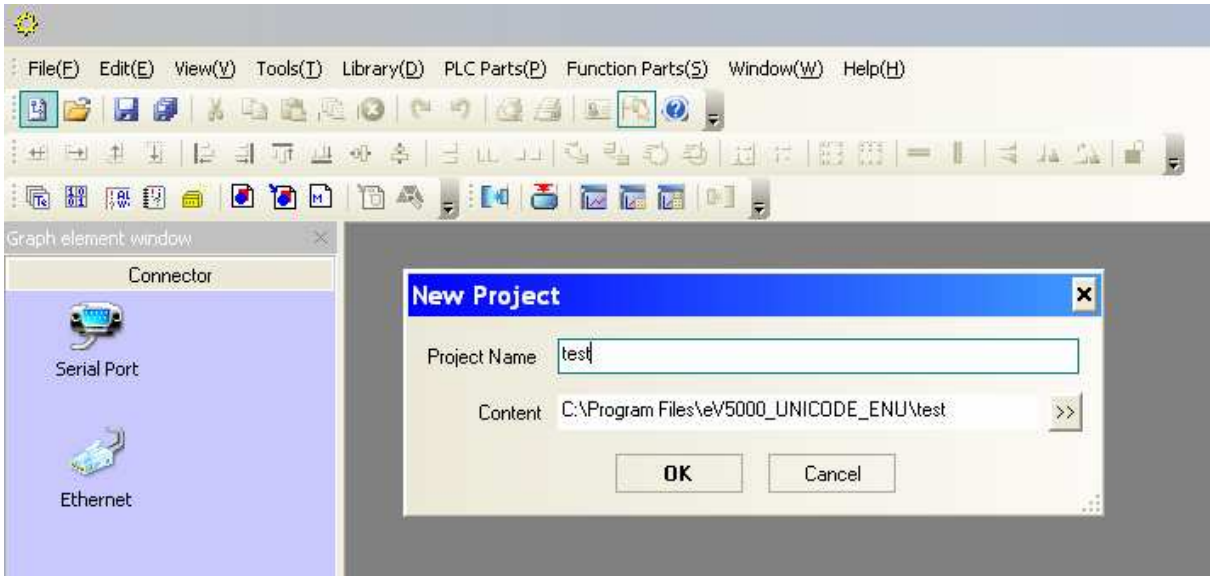
- Save the Project
- Compile the Project
- Simulation
- Download to the HMI

1 Install the EV 5000 software

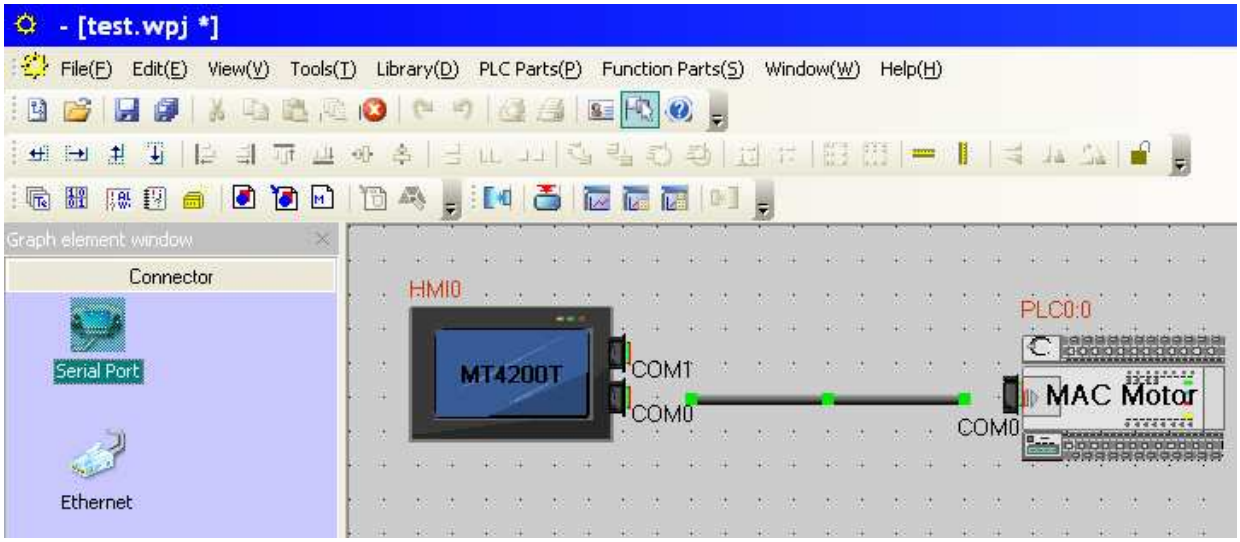
First *un-zip* the "**ev5000_v1.2.3.3_build57_jvl_en.zip"** file.
Then run the installation file **Setup.exe**.

After the EV5000 is installed then *un-zip* the **"MAC Motor 08.11.6.zip"** file.
Copy the three files - "MAC Motor.dll", "MAC Motor.so" and "MAC Motor.ge" - into your EV5000 installation directory \lib\plc (e.g. c:\Program Files\eV5000_UNICODE_ENU\lib\plc\)
and overwrite the same named files.

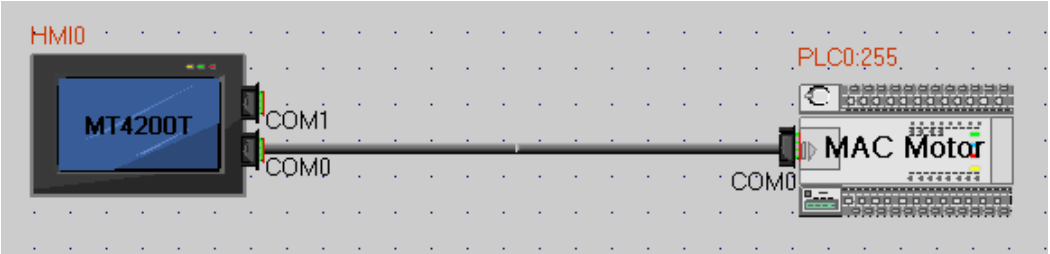
2 Creating a new project



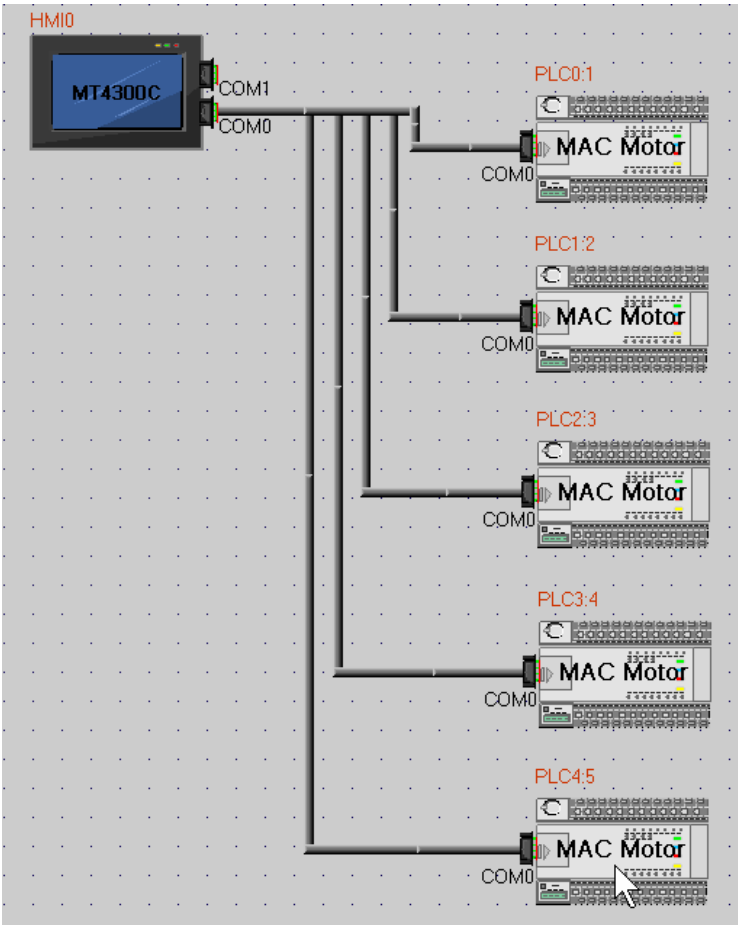
Drag the relevant HMI unit, e.g. MT4200T and the PLC type "MAC Motor" to the grid.
Next drag the Connection to the grid and connect the ends to the HMI Com0 port respectively to the MAC Motor (place holder for MAC motor®, QuickStep® and SMC75).



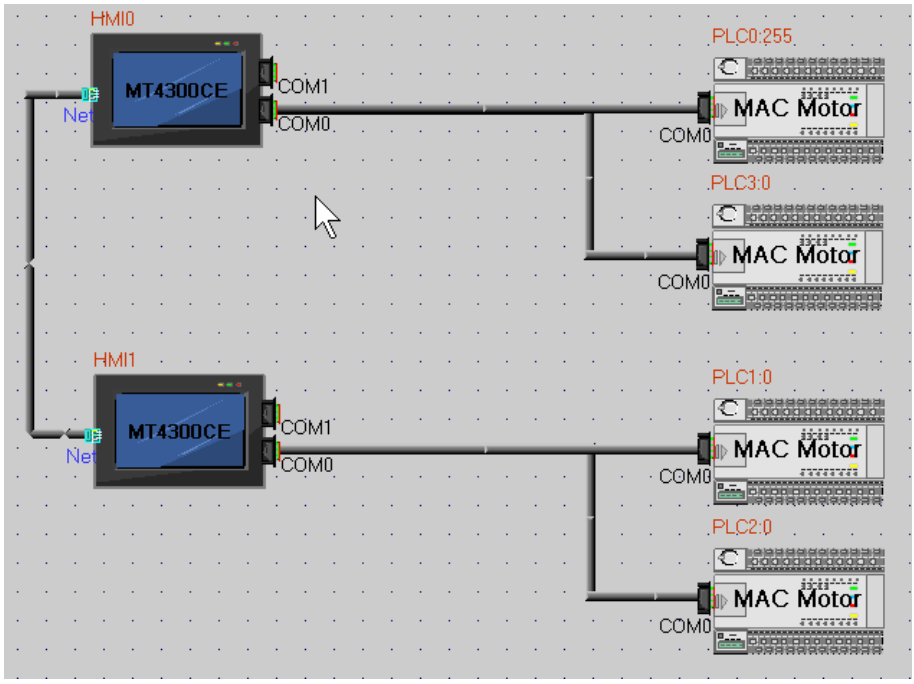
2.1 One HMI and One QuickStep® or SMC75 or MAC motor®



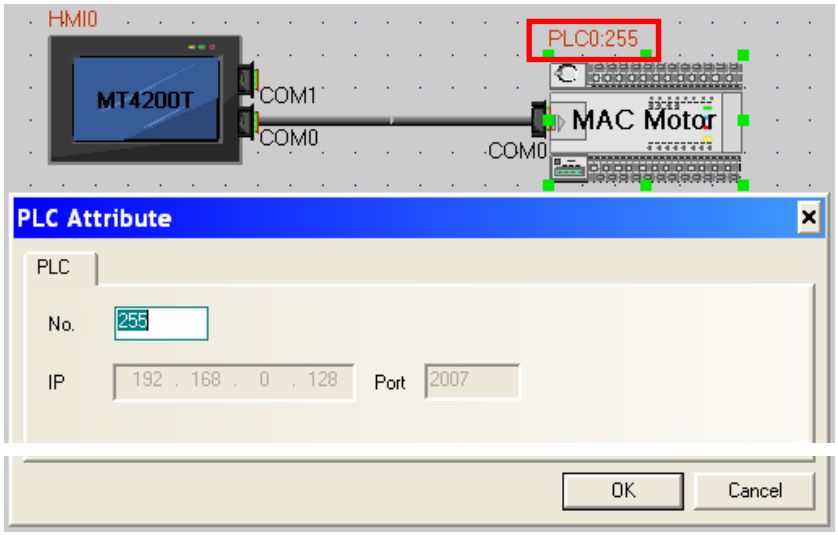
2.2 One HMI and Multiple QuickStep®s or MAC motor®s



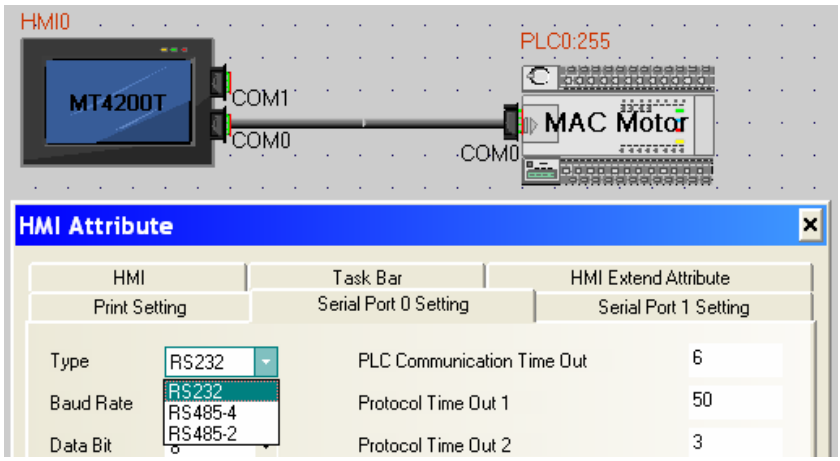
2.3 Multiple HMIs and Multiple QuickStep®s or MAC motor®s



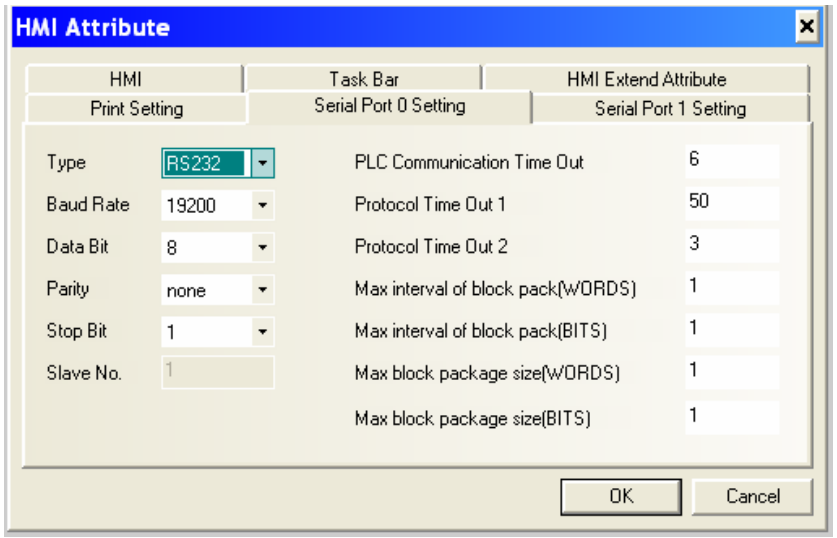
After creating the project – first check that the PLC and the MAC Motor have different addresses!!!
MAC motor = "PLC" must have an Address No. in the range 1...255 (i.e. NOT 0 = zero).



Next set the "Serial Port 0 Setting" Type to either RS232 or RS485-2.
For QuickStep® and SMC75 you have to select **only RS485-2**.
Using the WI0060 cable provided by JVL (HMI RS485 Cable 5m, MAC-R4 +MIS +SMC75) you have to select **RS485-2**.

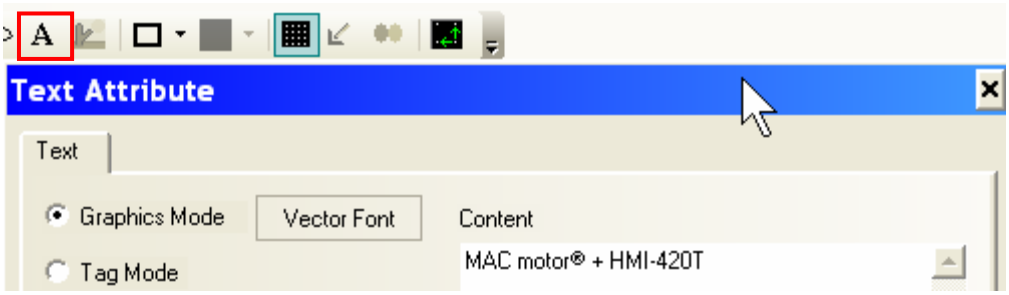


Keep values for 'Baud Rate' (19'200), 'Data Bit' (8), 'Parity' (none) and 'Stop Bit' (1), and leave all other values un-changed unless you have a specific reason to change them.

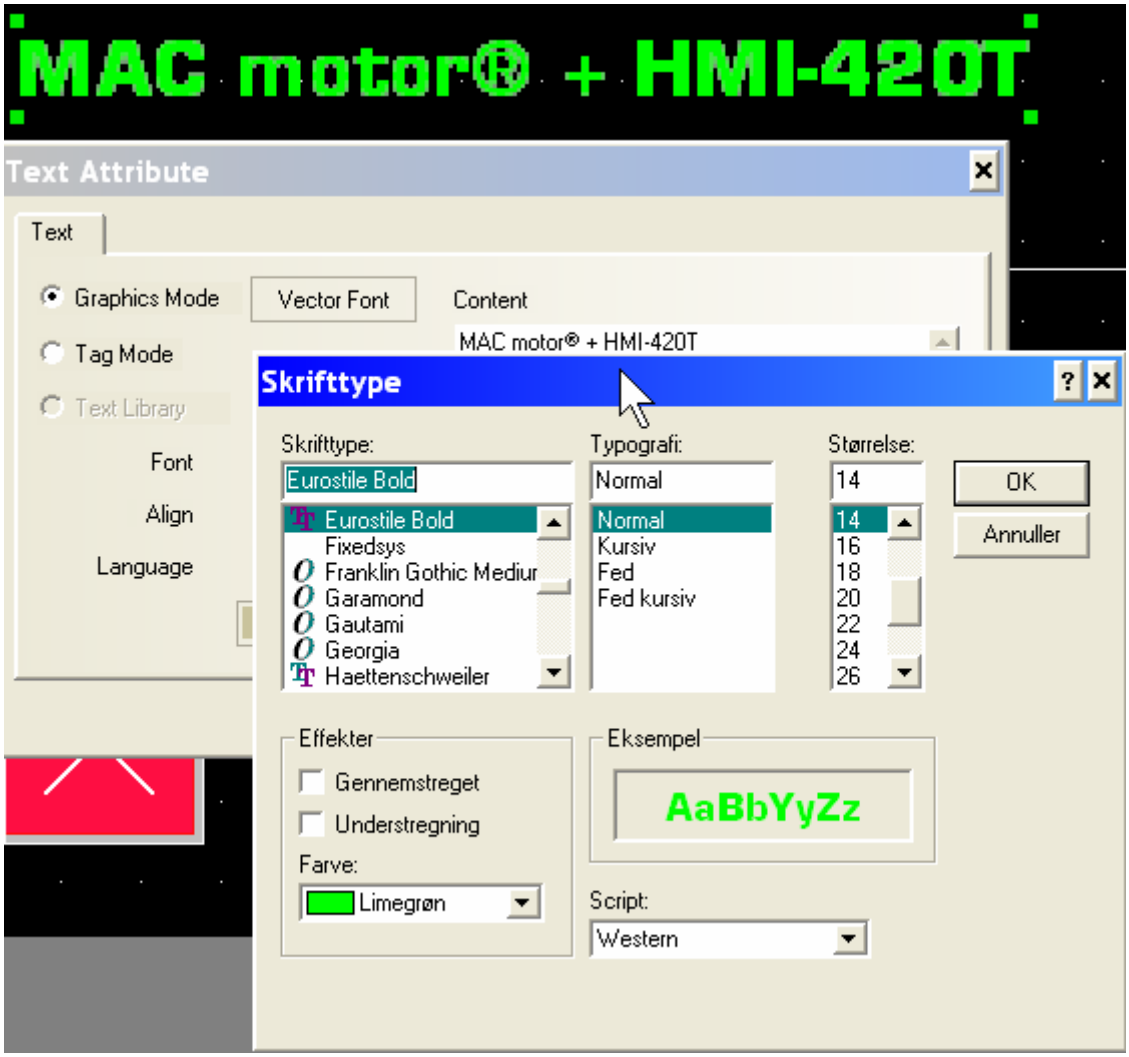


3 Placing different Controls on the Screens

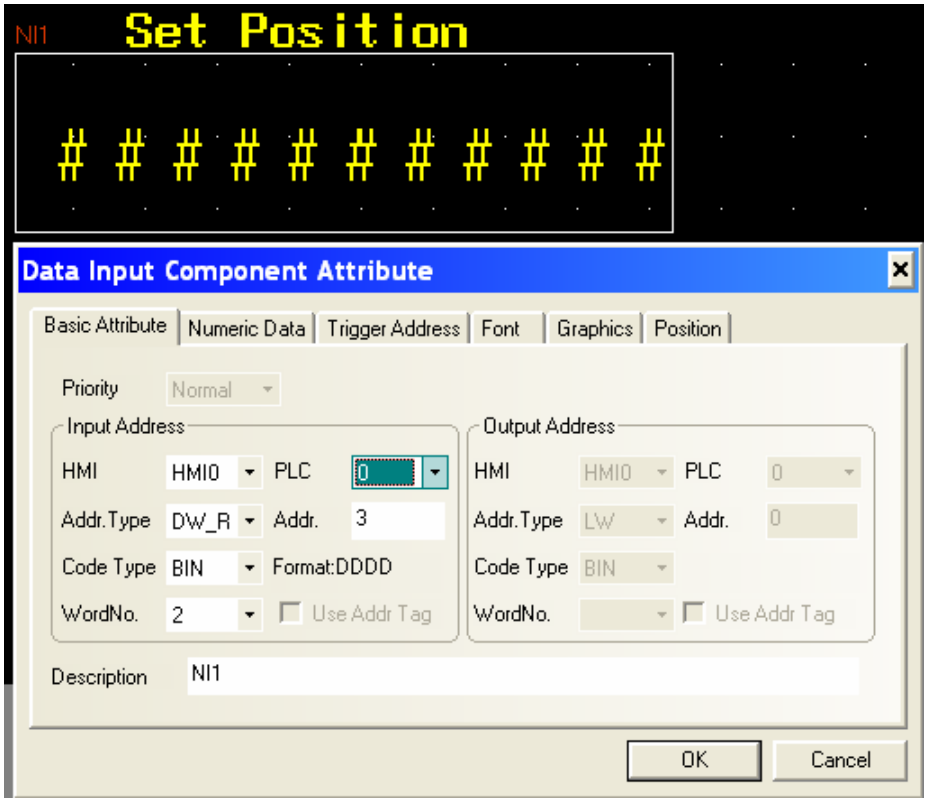
First place a headline on the screen, using the Text tool ("A") keying in the desired text:

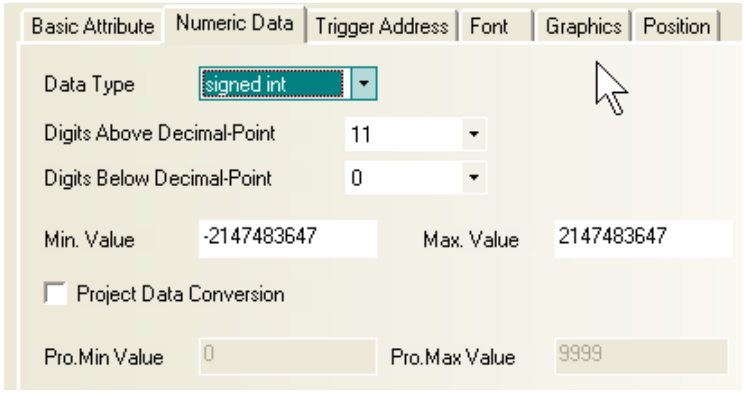


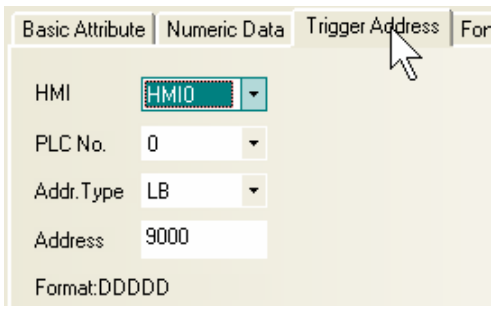
Choosing "Graphics Mode" and "Vector Font" you can specify the Font, color and size etc:

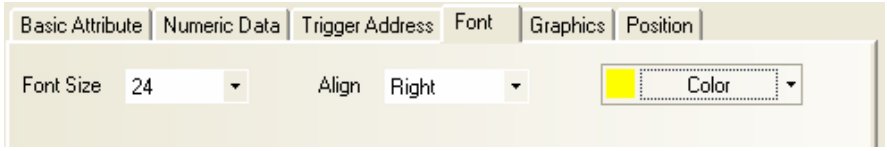


Now place a Number Input on the screen – in this example the Set/Required/Commanded Position:

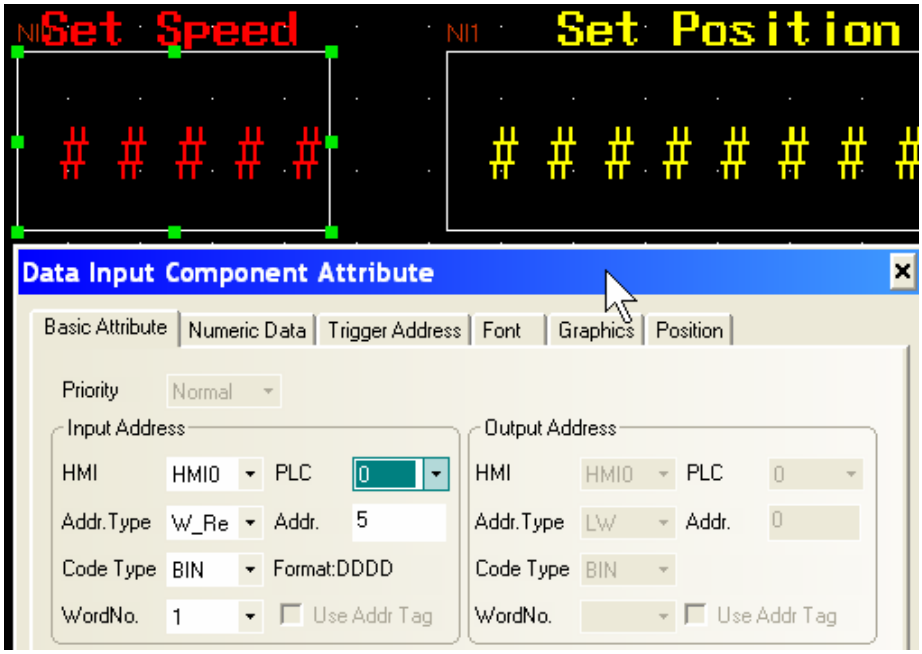


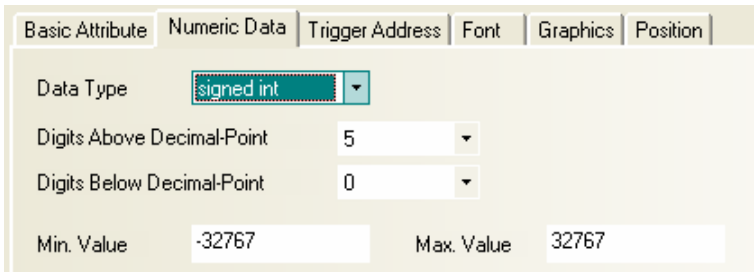




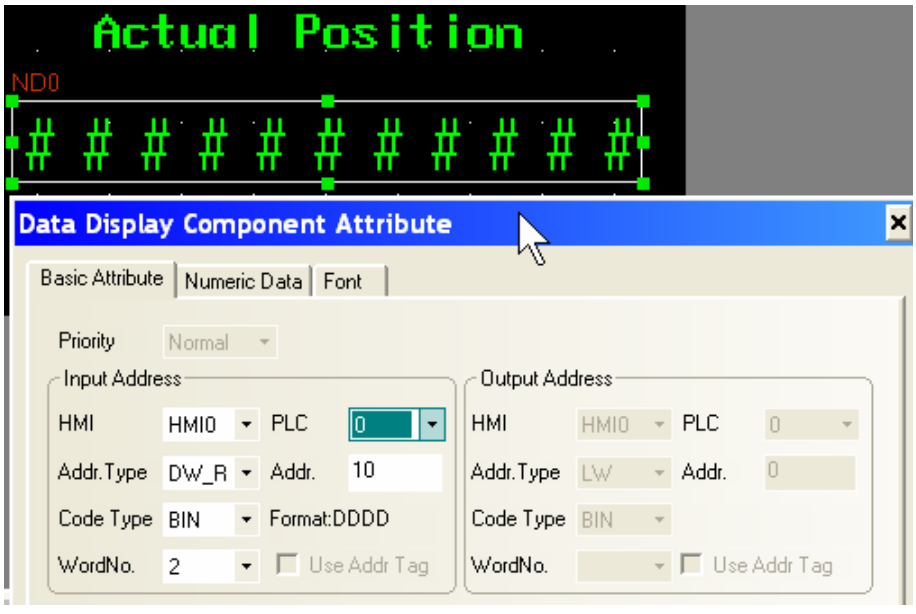


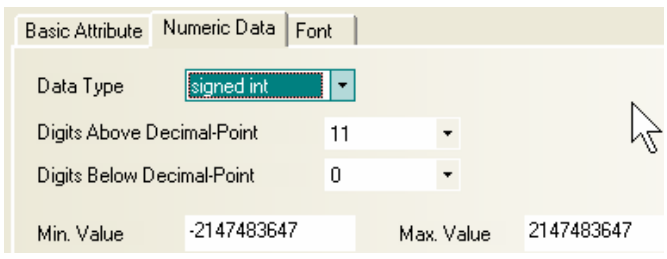
Then place another Number Input on the screen – in this example the Set (/Required/Commanded) Velocity:



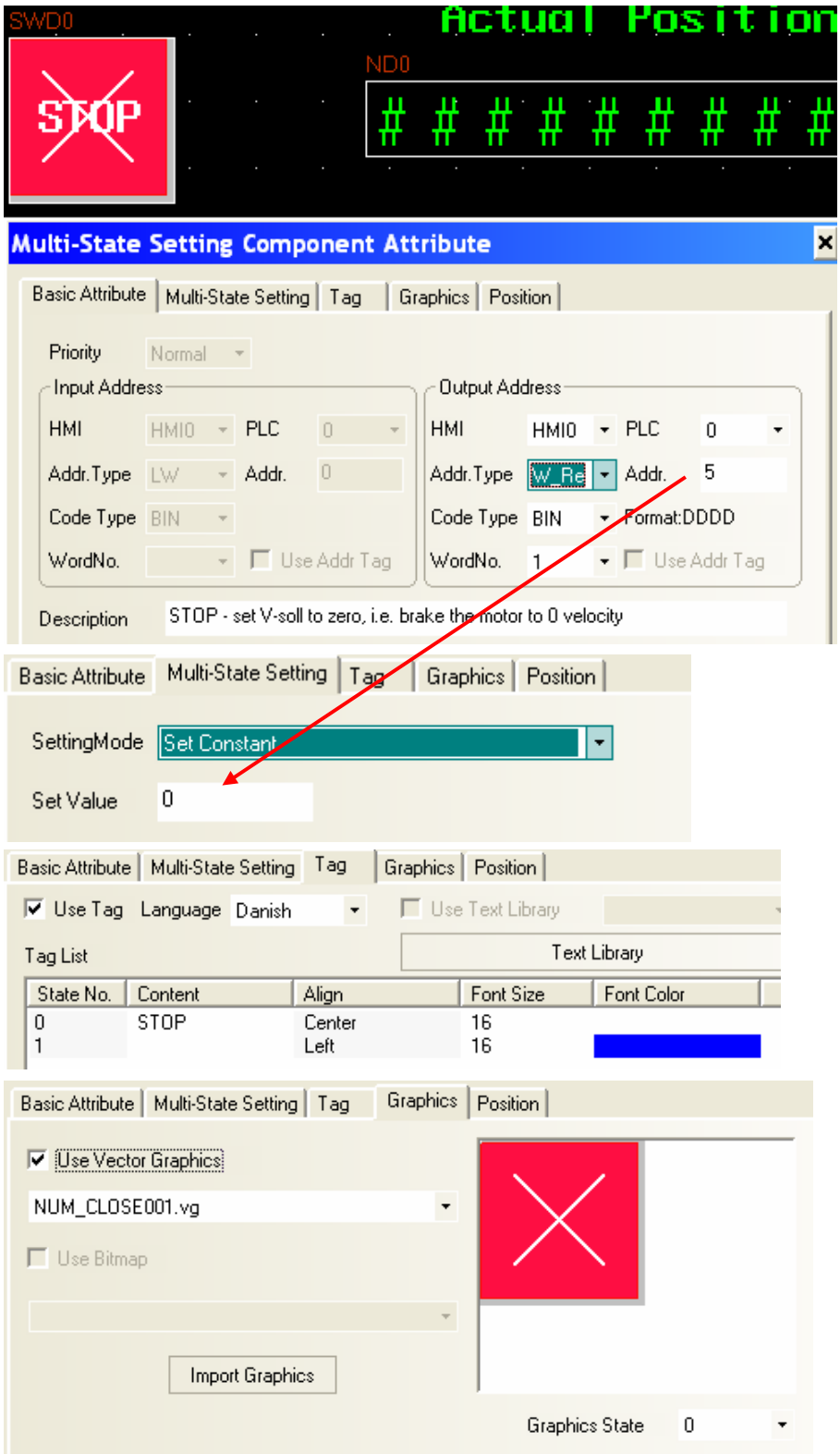


Next place a Number Display on the screen – in this example the Actual Position:

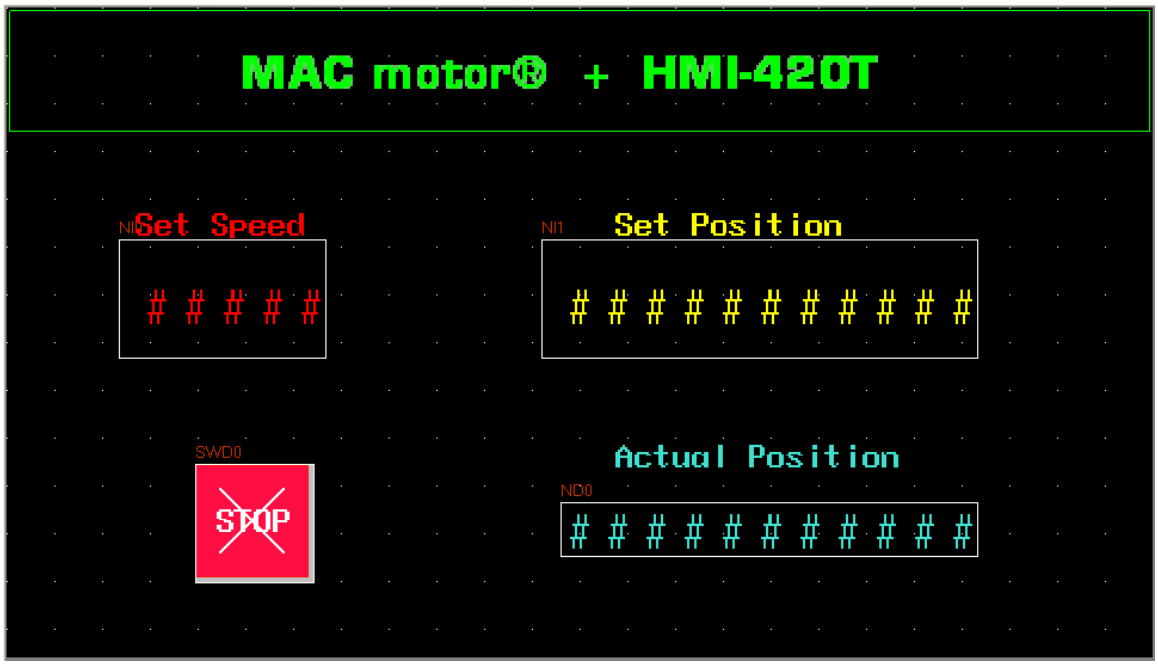




Finally place a Function Key on the screen – in this example a STOP key used for stopping a running motor (by loading the Velocity register (# 5) with 0):

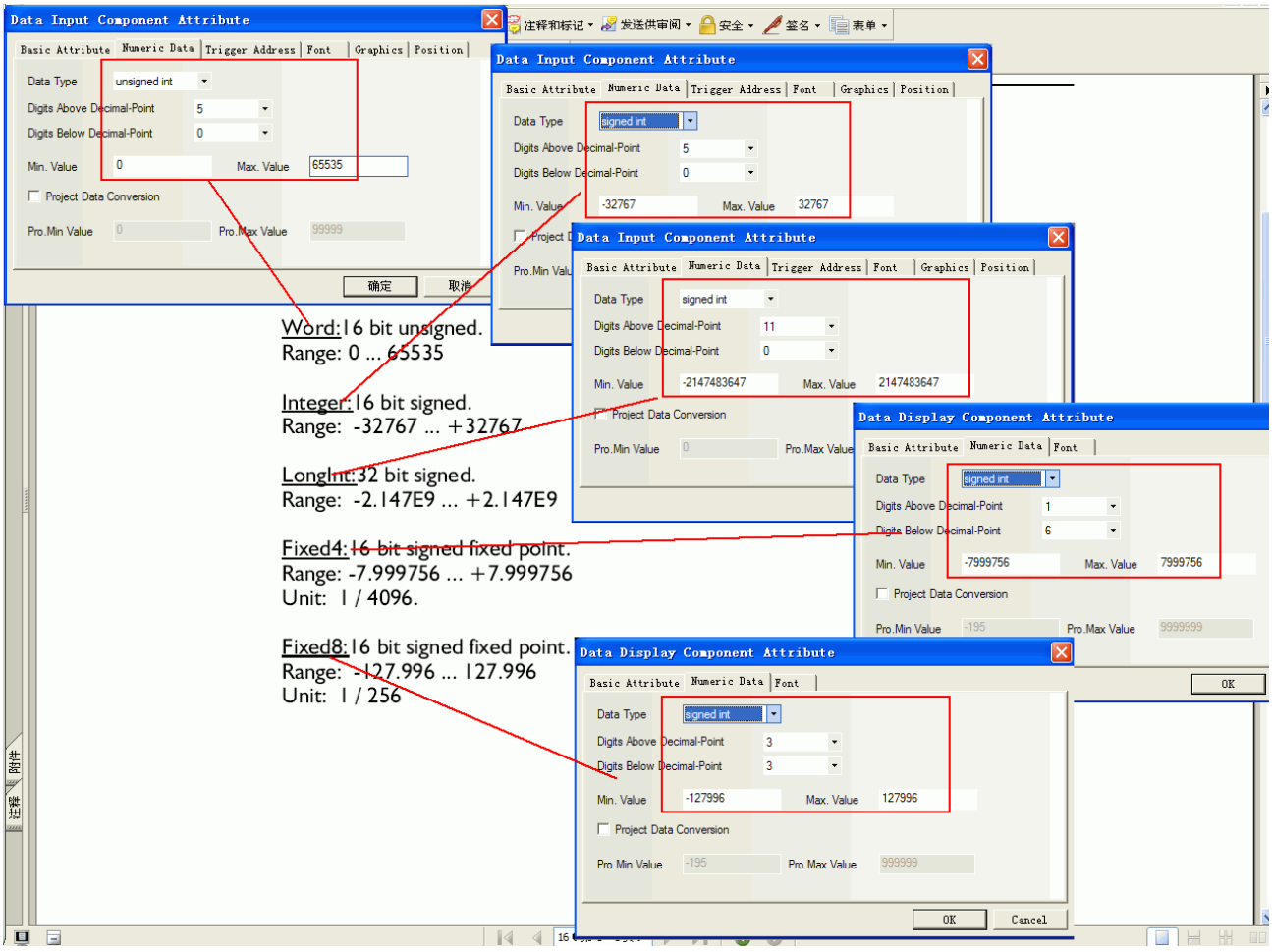


On next page you will see the final result...



Register Types in the HMI vs in the MMs MAC050..141 and MAC400..800, QS and SMC75 controllers can be seen in the attachment "MAC-and-MIS_RegisterOverview_v1.0a".

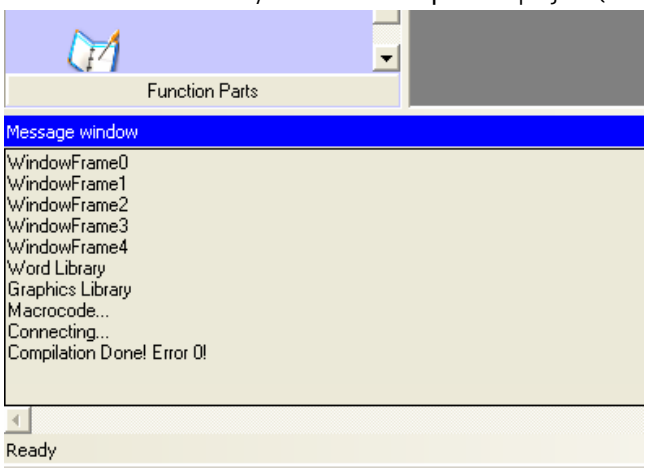
Whenever it is necessary you can limit the register values to either the full range shown below (taken from the MAC motor manual) or to lower values thus preventing the operator to key in values that leads to mechanical failure.



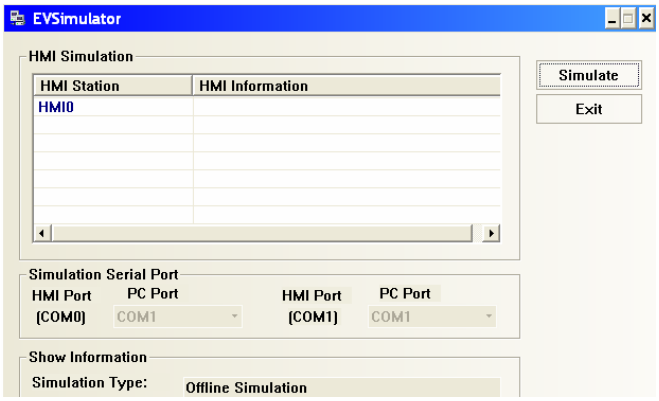
Save the Project and Download it to the HMI

In the File menu choose **Save All**.

Then in the Tools menu you need to **Compile** the project (Ctrl + F7) – check if there are no errors:

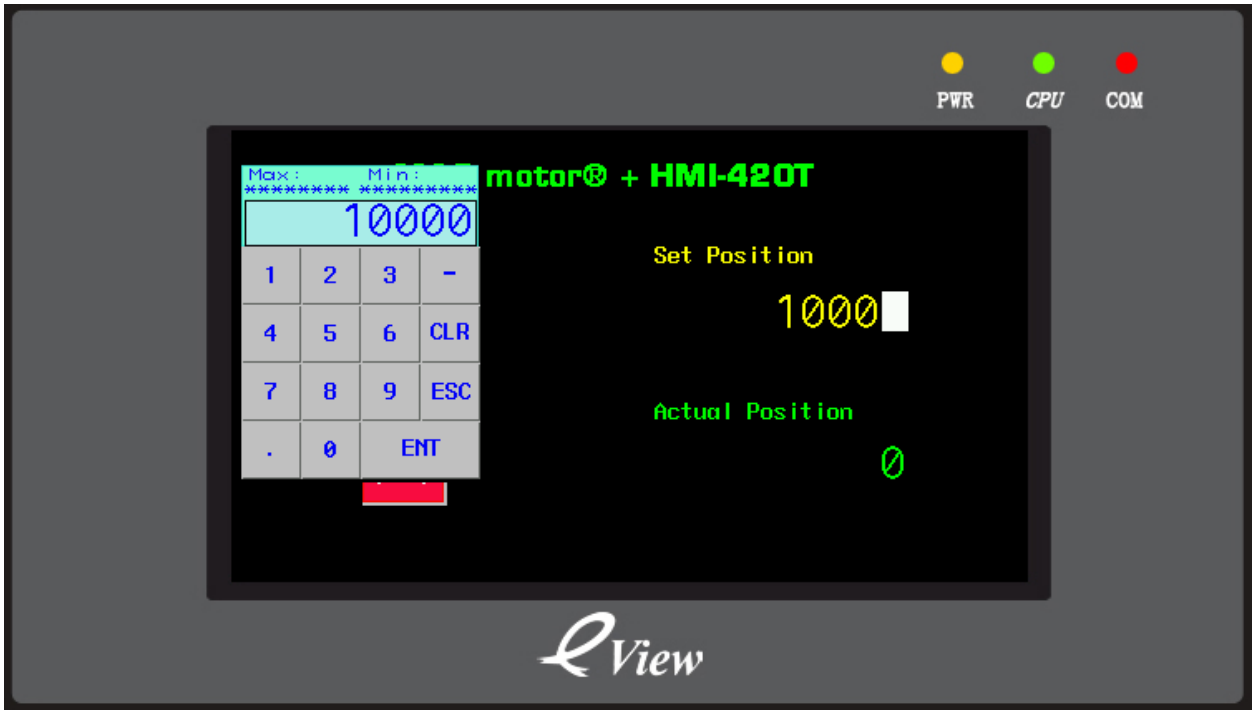


If you wish you can choose the **Offline Simulation** (F5 in the Tools menu), then click "Simulate":

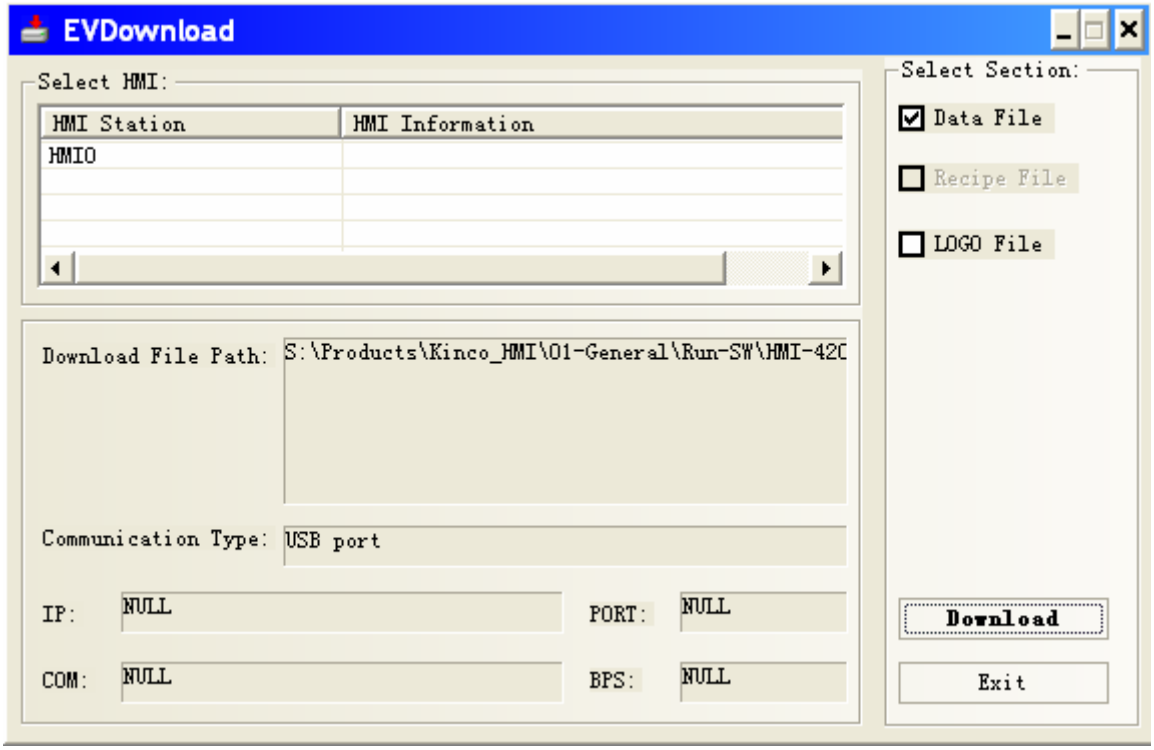




Test values can be keyed in using the mouse. Click the desired value and a keypad similar to the real pop-up keypad in the HMI will appear and you can now use the mouse to click the number buttons and finally clicking ENT (Enter):



Finally you just need to **Download** the project to the HMI from the Tools menu (Ctrl + D), then click the Download button and watch the HMI screen.



CONGRATULATIONS - YOU HAVE NOW FINISHED YOUR FIRST PROJECT !