TCPModbusRemote v.02

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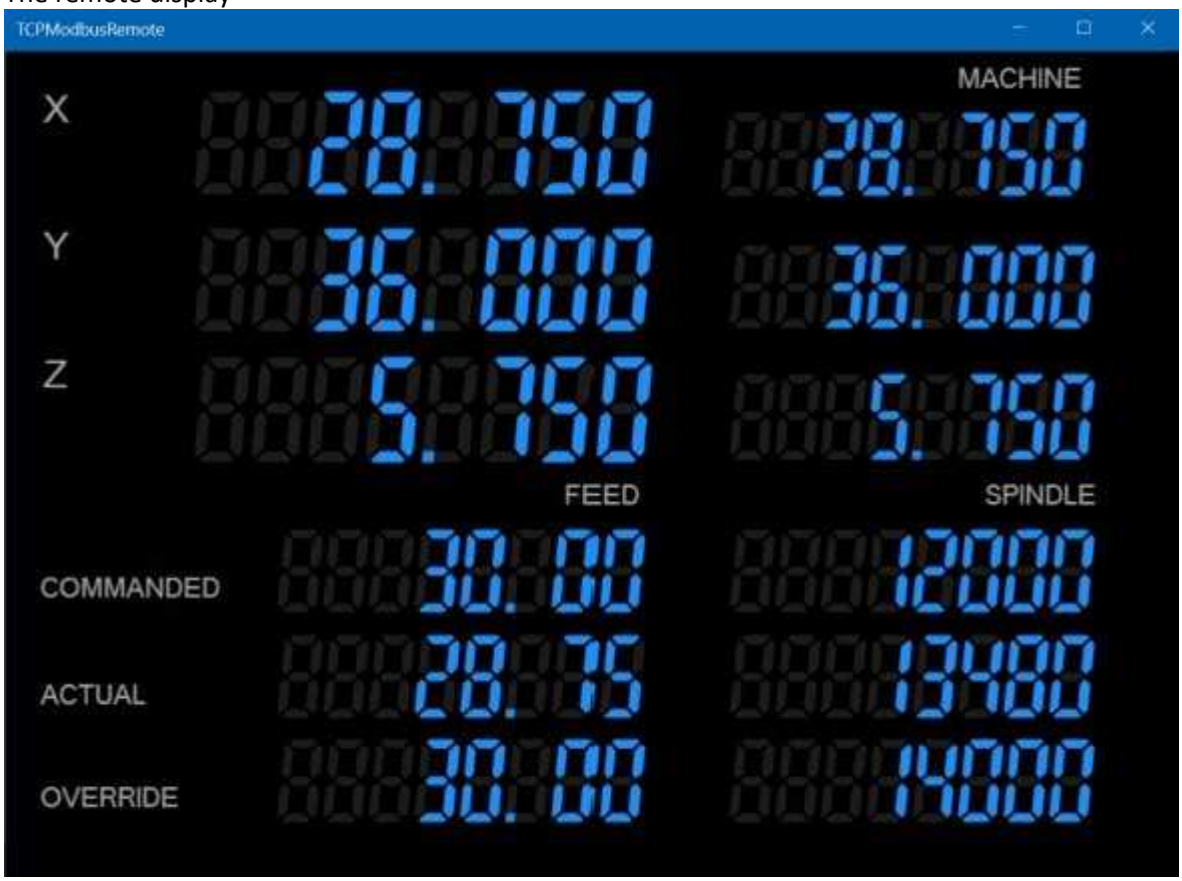
Allows an old tablet or PC to be used as 'wallboard' DRO indicator. This should work very nicely if the remote has a WiFi connection to the same network as the UCCNC PC. This is more of a proof of concept than a completed project, but the functionality provided is complete.

Developed with SharpDevelop 5.1 on Windows 10. Not tested on other Windows versions, but is expected to work.

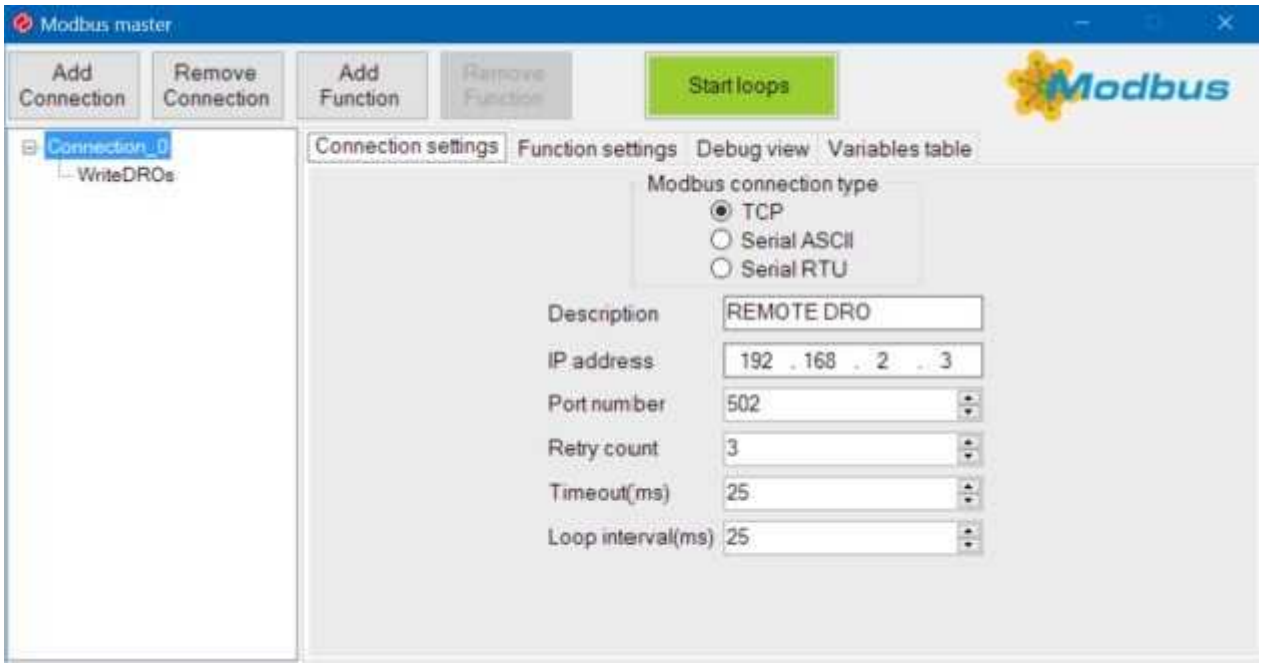
Prerequisites:

.NET framework 2.0 runtime on the remote.

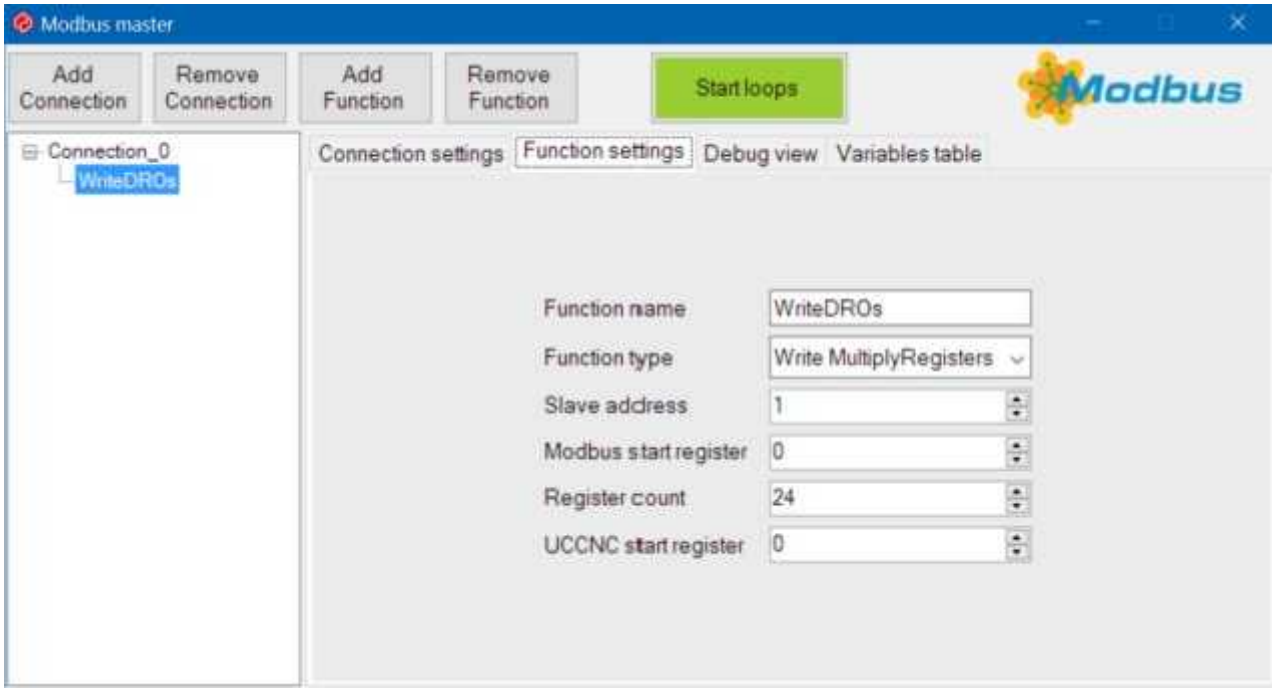
The remote display



Set the IP address to the machine running the remote DRO software. It can also be on the the same machine running UCCNC for testing. Run 'cmd' and type 'ipconfig /all' if you don't know the machine's address.

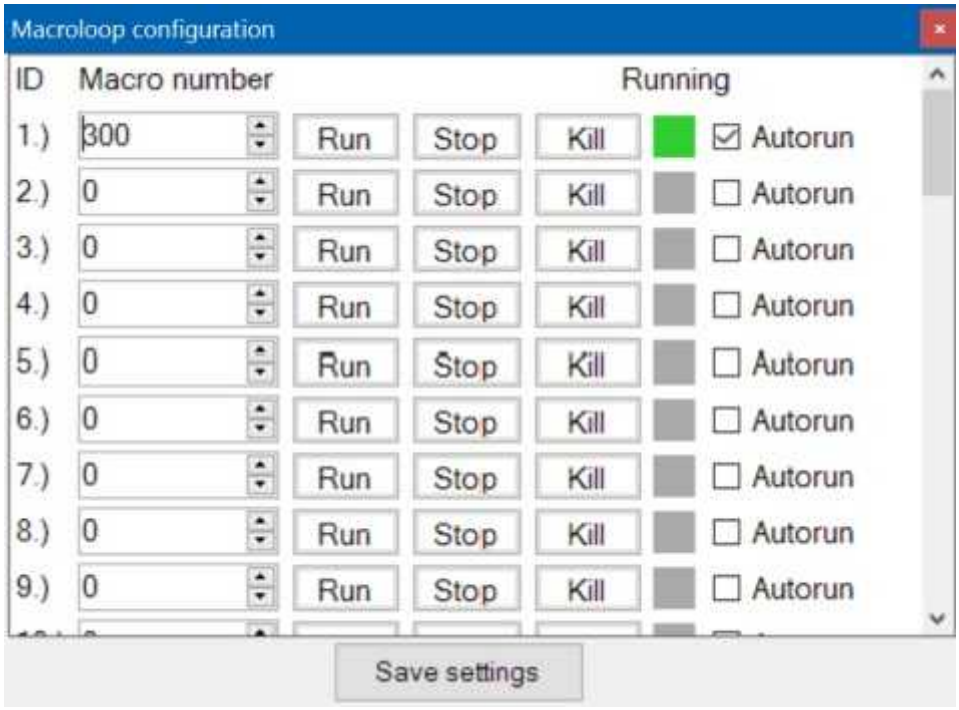


A function to write the values must be created. Register count must be 24 for the current macro



The M300.txt macro needs copied your default profile (The number 300 was arbitrary and could be changed)

Check the autorun if desired, once testing is complete.



TECHNICAL DETAILS

The EasyModbus DLL takes care of all the heavy lifting. The only tricky part is transmitting floating point numbers to the remote. Modbus can only work with a maximum of 16 bit unsigned integers. Floats are converted to integers in the macro, transmitted and converted back to floats in the remote. The BitConvertor class helps here.

In the remote, the Modbus class runs in a separate thread, so the Invoke method is used to communicate values to the GUI thread.

CREDITS

EasyModbusTCP/UDP/RTU .NET from sourceforge.net -Using this package made the remote C# programming a cinch!

Liu Xia for the LED display on codeproject

CNCDrive for a great product - UCCNC

SharpDevelop 5.1