

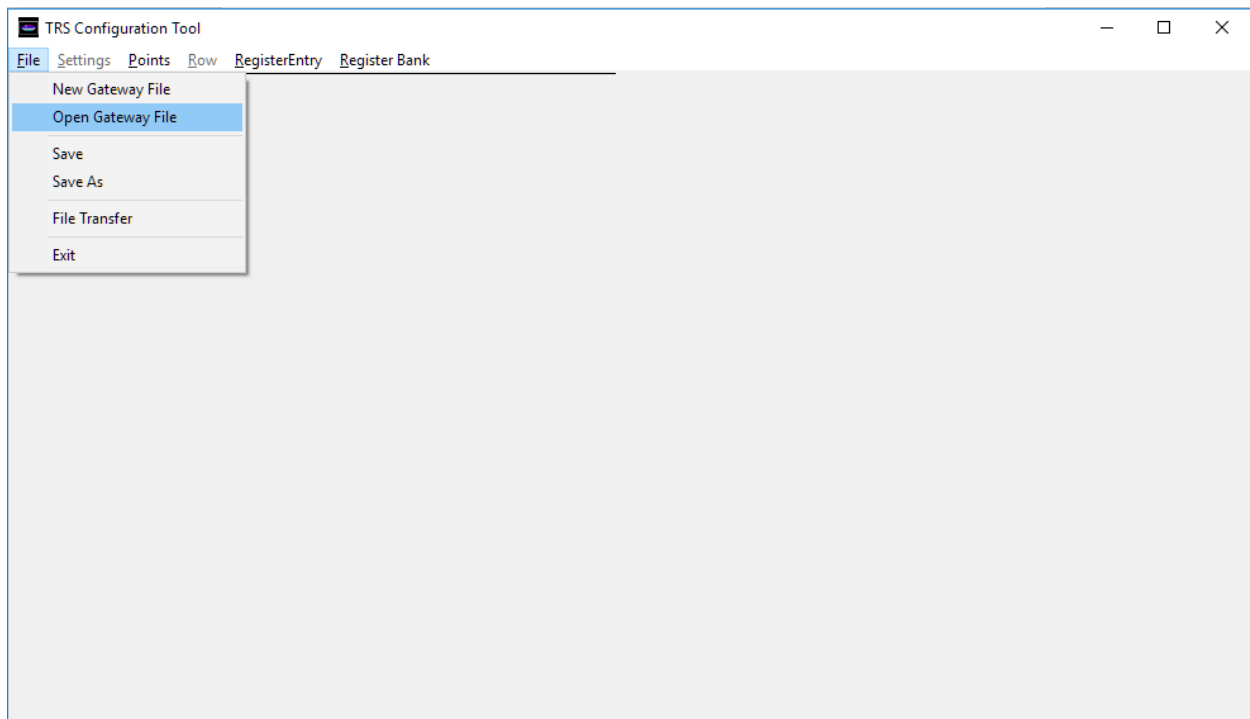
Programming a Wireless Monitoring Site

Run the TRS Configuration Tool:



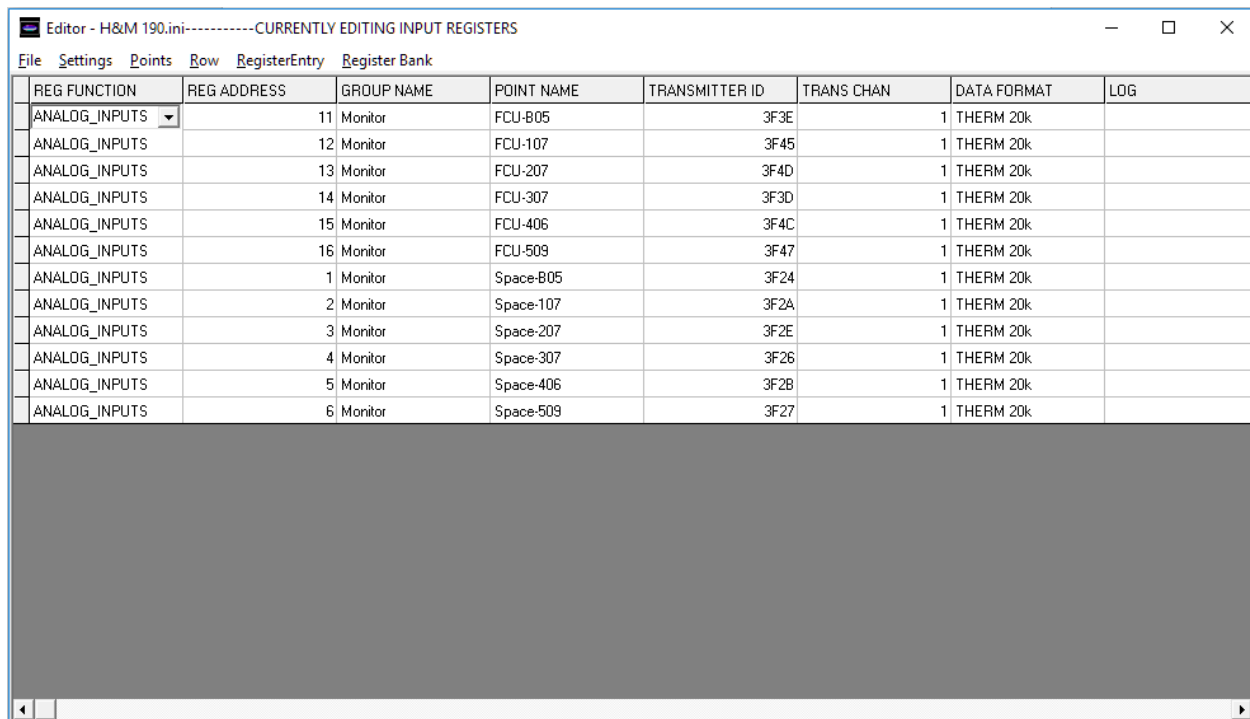
The program will take quite a few seconds to become responsive.

Press File | Open Gateway File:



Copy the most recent project and rename it to the new site.

Open the new file.



Editor - H&M 190.ini-----CURRENTLY EDITING INPUT REGISTERS

File Settings Points Row RegisterEntry Register Bank

REG FUNCTION	REG ADDRESS	GROUP NAME	POINT NAME	TRANSMITTER ID	TRANS CHAN	DATA FORMAT	LOG
ANALOG_INPUTS ▾	11	Monitor	FCU-B05	3F3E	1	THERM 20k	
ANALOG_INPUTS	12	Monitor	FCU-107	3F45	1	THERM 20k	
ANALOG_INPUTS	13	Monitor	FCU-207	3F4D	1	THERM 20k	
ANALOG_INPUTS	14	Monitor	FCU-307	3F3D	1	THERM 20k	
ANALOG_INPUTS	15	Monitor	FCU-406	3F4C	1	THERM 20k	
ANALOG_INPUTS	16	Monitor	FCU-509	3F47	1	THERM 20k	
ANALOG_INPUTS	1	Monitor	Space-B05	3F24	1	THERM 20k	
ANALOG_INPUTS	2	Monitor	Space-107	3F2A	1	THERM 20k	
ANALOG_INPUTS	3	Monitor	Space-207	3F2E	1	THERM 20k	
ANALOG_INPUTS	4	Monitor	Space-307	3F26	1	THERM 20k	
ANALOG_INPUTS	5	Monitor	Space-406	3F2B	1	THERM 20k	
ANALOG_INPUTS	6	Monitor	Space-509	3F27	1	THERM 20k	

We can either delete the rows or delete the information on them.

In this case we need far more rows than the previous project. The Row menu allows us to Insert before, Append after, or Delete the current row.

Point Names and Register Address must be unique. All information other than the name must be input using drop-down menus—which can be inconvenient, especially for the Transmitter ID. UPDATE: type the address and press the down-arrow.

The file created is comma-delimited.

The program will save (and even pretend that it successfully transfers) a file with commas in the point names, but it cannot reopen it! (Fortunately, Notepad++ was able to remedy the situation.)

The expanded file, ready for the Transmitter IDs.

Editor - H&M 190.ini-----CURRENTLY EDITING INPUT REGISTERS

File Settings Points Row RegisterEntry Register Bank

REG FUNCTION	REG ADDRESS	GROUP NAME	POINT NAME	TRANSMITTER ID	TRANS CHAN	DATA FORMAT	LOG
ANALOG_INPUTS		1 Monitor	Space-FPVAV-1	3F3E	1	THERM 20k	
ANALOG_INPUTS		2 Monitor	Space-FPVAV-2	3F45	1	THERM 20k	
ANALOG_INPUTS		3 Monitor	Space-FPVAV-3	3F4D	1	THERM 20k	
ANALOG_INPUTS		4 Monitor	Space-FPVAV-4	3F3D	1	THERM 20k	
ANALOG_INPUTS		5 Monitor	Space-FPVAV-5	3F4C	1	THERM 20k	
ANALOG_INPUTS		6 Monitor	Space-FPVAV-6	3F47	1	THERM 20k	
ANALOG_INPUTS		7 Monitor	Space-FPVAV-7	3F24	1	THERM 20k	
ANALOG_INPUTS		8 Monitor	Space-VAV-1	3F2A	1	THERM 20k	
ANALOG_INPUTS		9 Monitor	Space-VAV-2	3F2E	1	THERM 20k	
ANALOG_INPUTS		10 Monitor	Space-VAV-3	3F26	1	THERM 20k	
ANALOG_INPUTS		11 Monitor	Space-VAV-4	3F2B	1	THERM 20k	
ANALOG_INPUTS		0 Monitor	PRIMARY		1	THERM 20k	
ANALOG_INPUTS		21 Monitor	FPVAV-1		1	THERM 20k	
ANALOG_INPUTS		22 Monitor	FPVAV-2		1	THERM 20k	
ANALOG_INPUTS		23 Monitor	FPVAV-3		1	THERM 20k	
ANALOG_INPUTS		24 Monitor	FPVAV-4		1	THERM 20k	
ANALOG_INPUTS		25 Monitor	FPVAV-5		1	THERM 20k	
ANALOG_INPUTS		26 Monitor	FPVAV-6		1	THERM 20k	
ANALOG_INPUTS		27 Monitor	FPVAV-7		1	THERM 20k	
ANALOG_INPUTS		28 Monitor	VAV-1		1	THERM 20k	
ANALOG_INPUTS		29 Monitor	VAV-2		1	THERM 20k	
ANALOG_INPUTS		30 Monitor	VAV-3		1	THERM 20k	
ANALOG_INPUTS		31 Monitor	VAV-4	3F27	1	THERM 20k	

The finished Gateway File:

Editor - H&M 190.ini *-----CURRENTLY EDITING INPUT REGISTERS

File Settings Points Row RegisterEntry Register Bank

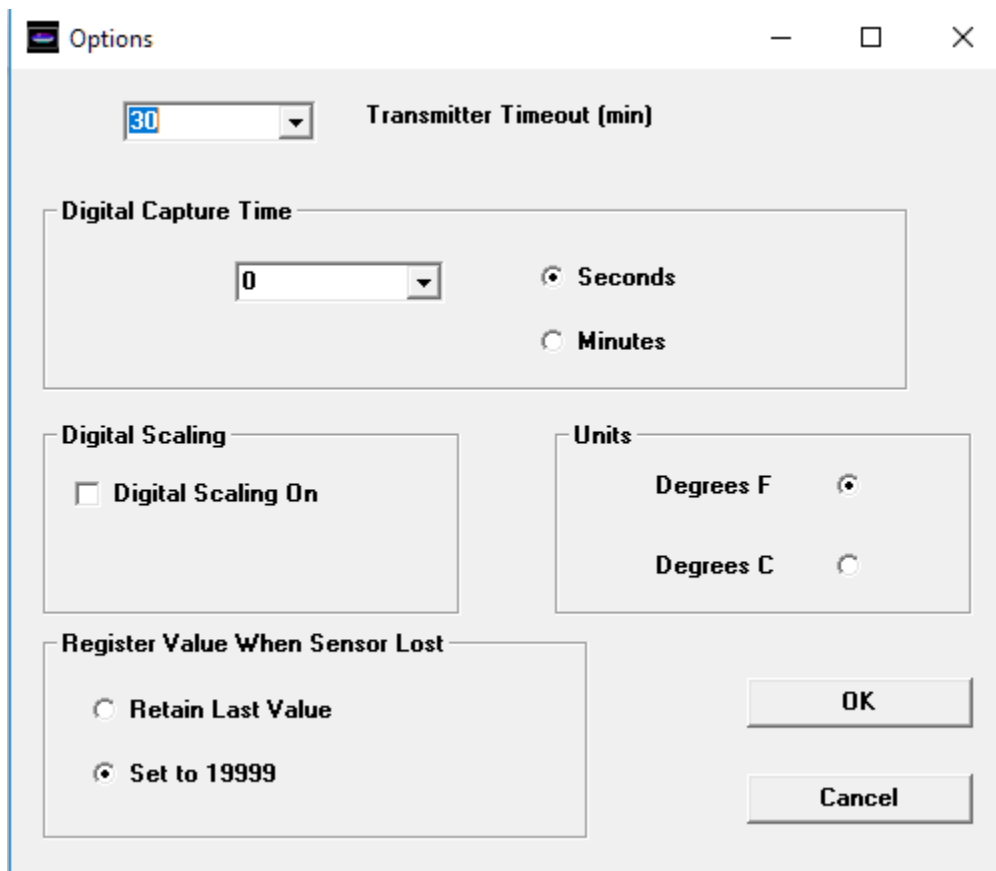
REG FUNCTION	REG ADDRESS	GROUP NAME	POINT NAME	TRANSMITTER ID	TRANS CHAN	DATA FORMAT	LOG
ANALOG_INPUTS		1 Monitor	Space FPVAV-1	402C	1	THERM 20k	
ANALOG_INPUTS		2 Monitor	Space FPVAV-2	4026	1	THERM 20k	
ANALOG_INPUTS		3 Monitor	Space FPVAV-3	3FD5	1	THERM 20k	
ANALOG_INPUTS		4 Monitor	Space FPVAV-4	3FD3	1	THERM 20k	
ANALOG_INPUTS		5 Monitor	Space FPVAV-5	402A	1	THERM 20k	
ANALOG_INPUTS		6 Monitor	Space FPVAV-6	3FD4	1	THERM 20k	
ANALOG_INPUTS		7 Monitor	Space FPVAV-7	402D	1	THERM 20k	
ANALOG_INPUTS		8 Monitor	Space VAV-1	3FD1	1	THERM 20k	
ANALOG_INPUTS		9 Monitor	Space VAV-2	4024	1	THERM 20k	
ANALOG_INPUTS		10 Monitor	Space VAV-3	3FD2	1	THERM 20k	
ANALOG_INPUTS		11 Monitor	Space VAV-4	3F29	1	THERM 20k	
ANALOG_INPUTS		0 Monitor	PRIMARY AIR	3F46	1	THERM 20k	
ANALOG_INPUTS		21 Monitor	FPVAV-1	3F44	1	THERM 20k	
ANALOG_INPUTS		22 Monitor	FPVAV-2	3F4E	1	THERM 20k	
ANALOG_INPUTS		23 Monitor	FPVAV-3	3F4A	1	THERM 20k	
ANALOG_INPUTS		24 Monitor	FPVAV-4	3F3B	1	THERM 20k	
ANALOG_INPUTS		25 Monitor	FPVAV-5	3F35	1	THERM 20k	
ANALOG_INPUTS		26 Monitor	FPVAV-6	3F48	1	THERM 20k	
ANALOG_INPUTS		27 Monitor	FPVAV-7	3F31	1	THERM 20k	
ANALOG_INPUTS		28 Monitor	VAV-1	3F3F	1	THERM 20k	
ANALOG_INPUTS		29 Monitor	VAV-2	3F41	1	THERM 20k	
ANALOG_INPUTS		30 Monitor	VAV-3	3F3C	1	THERM 20k	
ANALOG_INPUTS		31 Monitor	VAV-4	3F32	1	THERM 20k	

LABEL EACH SENSOR IMMEDIATELY!



AND LABEL THE BOXES FOR EACH SENSOR!

In Settings | Miscellaneous, set the Units and Register Value When Sensor Lost:

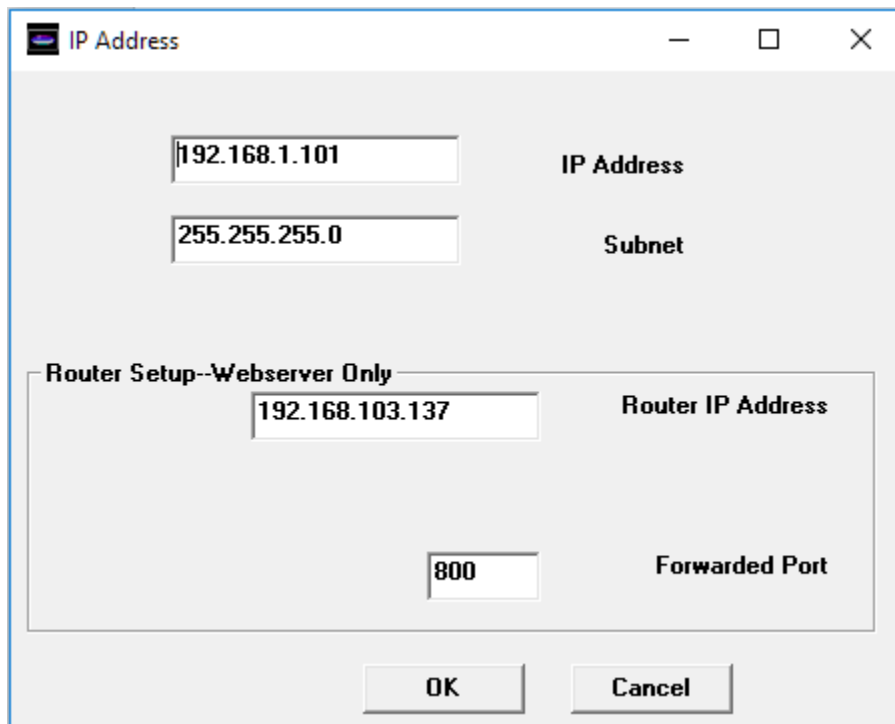


The image shows a software window titled "Options" with standard Windows window controls (minimize, maximize, close). The window contains several configuration sections:

- Transmitter Timeout (min)**: A dropdown menu currently showing the value "30".
- Digital Capture Time**: A section containing a dropdown menu set to "0" and two radio buttons: "Seconds" (which is selected) and "Minutes".
- Digital Scaling**: A section with a checkbox labeled "Digital Scaling On", which is currently unchecked.
- Units**: A section with two radio buttons: "Degrees F" (selected) and "Degrees C".
- Register Value When Sensor Lost**: A section with two radio buttons: "Retain Last Value" and "Set to 19999" (selected).

At the bottom right of the dialog are two buttons: "OK" and "Cancel".

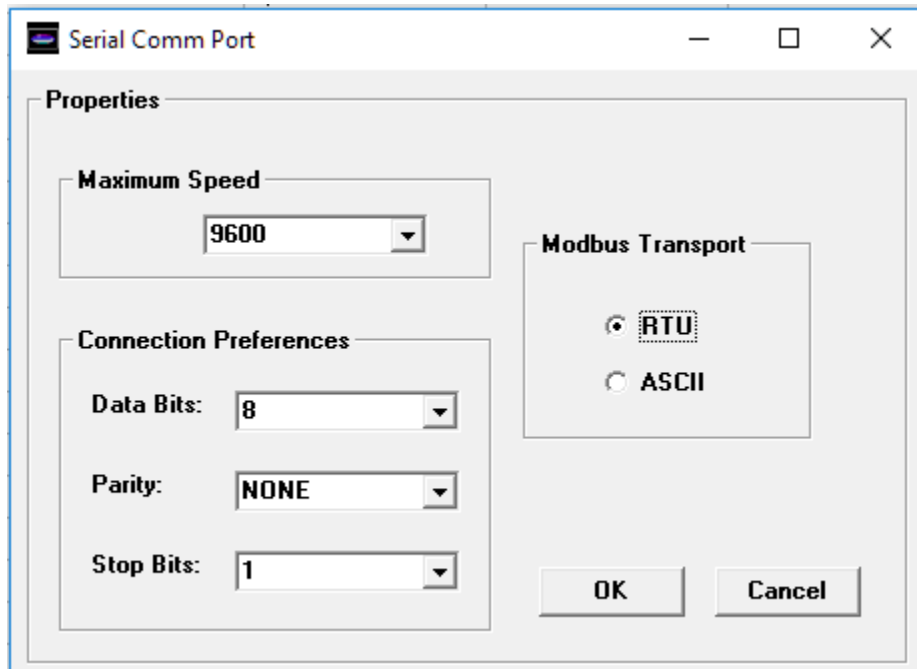
Settings | TCP/IP Transport, set the desired IP Address and Subnet:



The 'IP Address' dialog box contains the following fields and labels:

- IP Address:** A text field containing '192.168.1.101'.
- Subnet:** A text field containing '255.255.255.0'.
- Router Setup--Webserver Only:** A section header for a sub-dialog.
- Router IP Address:** A text field containing '192.168.103.137'.
- Forwarded Port:** A text field containing '800'.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom.

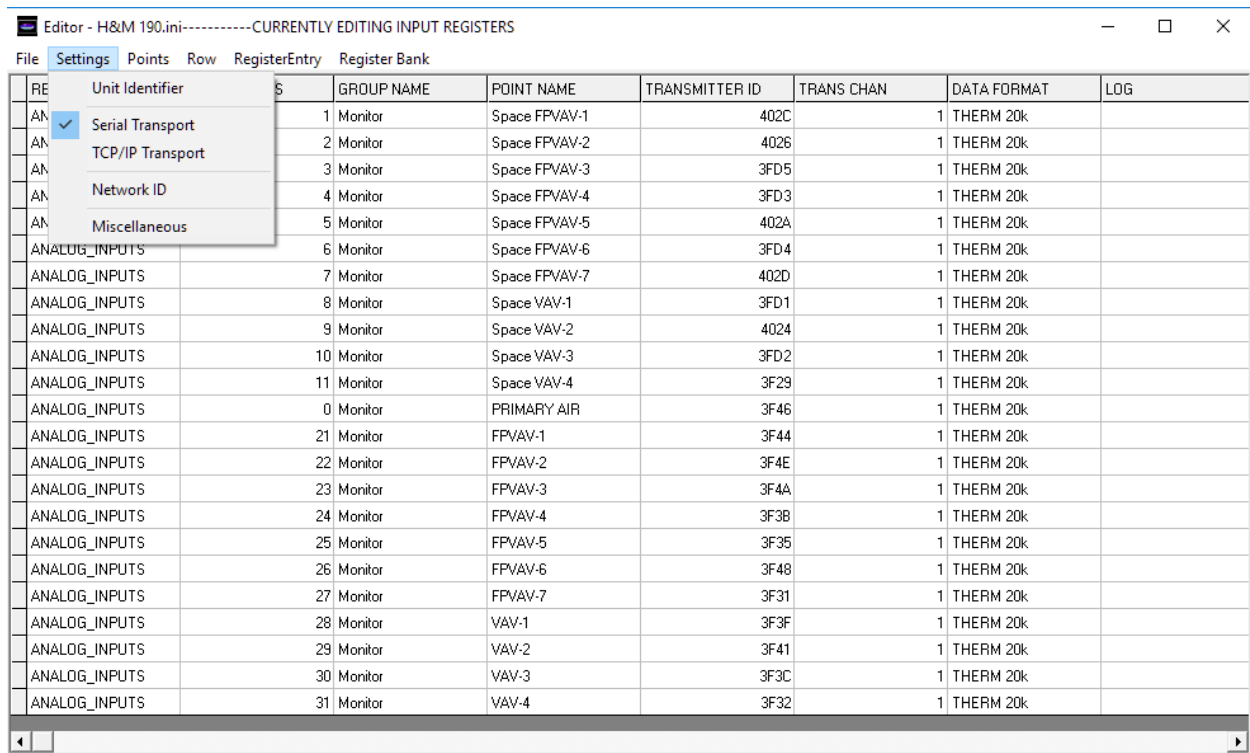
In Settings | Serial Transport, select RTU Modbus Transport:



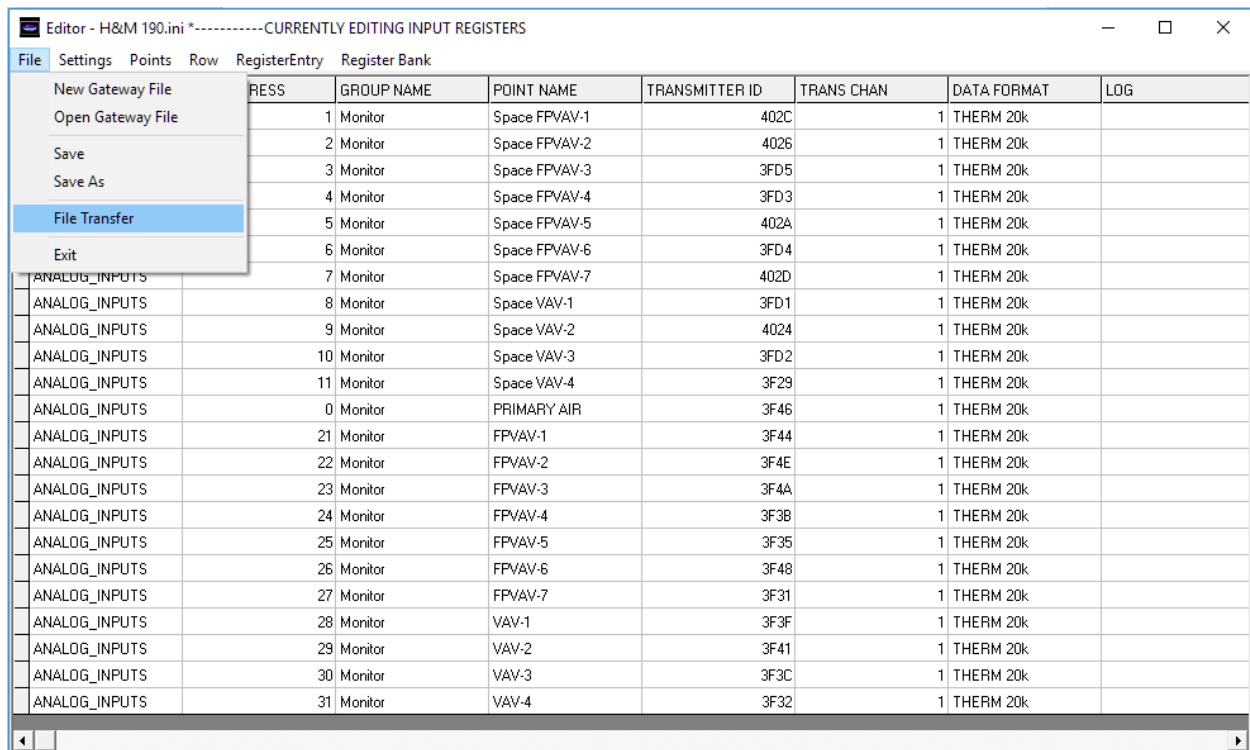
The 'Serial Comm Port' dialog box contains the following fields and labels:

- Properties:** A section header for the main configuration area.
- Maximum Speed:** A dropdown menu set to '9600'.
- Connection Preferences:** A section header for communication parameters.
- Data Bits:** A dropdown menu set to '8'.
- Parity:** A dropdown menu set to 'NONE'.
- Stop Bits:** A dropdown menu set to '1'.
- Modbus Transport:** A section with two radio buttons: 'RTU' (selected) and 'ASCII'.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom.

Serial Transport will now be checked in the Settings menu:



Save the configuration file and select File | Transfer to send it to the wireless receiver:

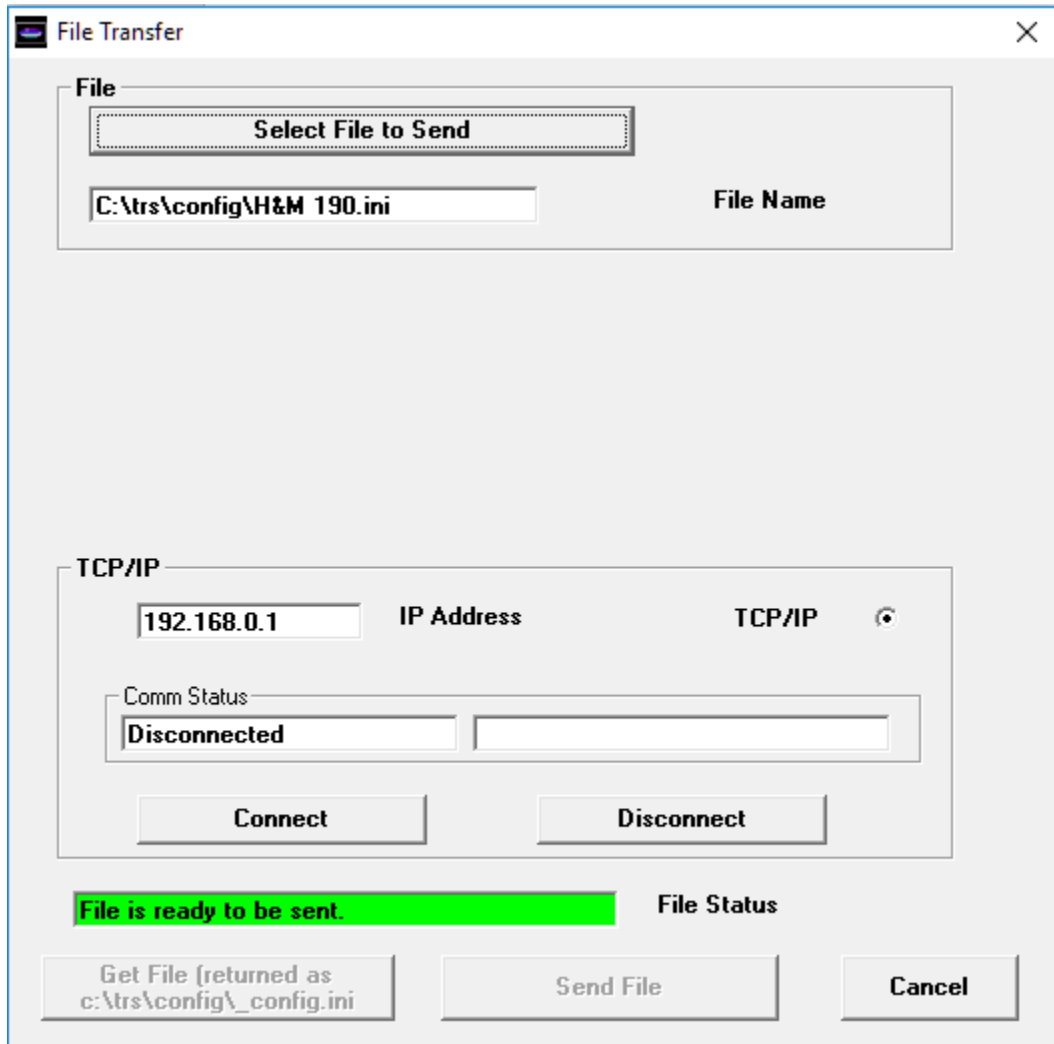


The wireless transceiver has an initial IP address of 192.168.0.1 and subnet 255.255.255.0.

The computer's Ethernet port needs to be configured accordingly.

Select the correct file to send. Set the receiver's IP address.

(Note: if the file has already been transferred and now updates have been made, then the transceiver's IP address will no longer be 192.168.0.1; use the address entered in Settings | TCP/IP.)



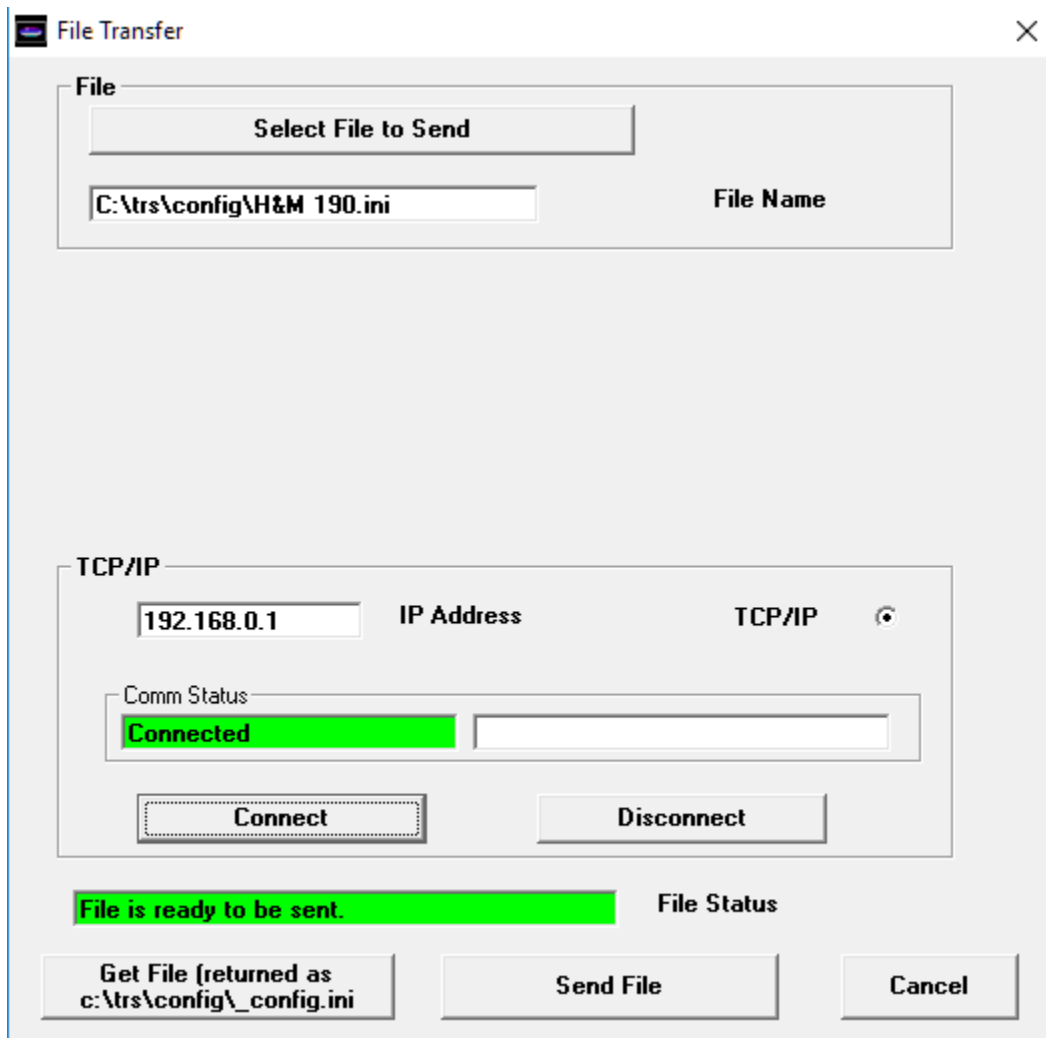
The image shows a 'File Transfer' dialog box with a title bar containing a close button. The dialog is divided into several sections. The 'File' section at the top contains a button labeled 'Select File to Send' and a text field showing the file path 'C:\trs\config\H&M 190.ini' with the label 'File Name' to its right. Below this is the 'TCP/IP' section, which includes an 'IP Address' field containing '192.168.0.1' and a radio button labeled 'TCP/IP' that is currently selected. Underneath the IP settings is a 'Comm Status' section with a text field displaying 'Disconnected' and an empty adjacent field. Below the status field are two buttons: 'Connect' and 'Disconnect'. At the bottom of the dialog is a 'File Status' section featuring a green bar with the text 'File is ready to be sent.' and three buttons: 'Get File (returned as c:\trs\config_config.ini)', 'Send File', and 'Cancel'.

File	
Select File to Send	
C:\trs\config\H&M 190.ini	File Name

TCP/IP	
192.168.0.1	IP Address
TCP/IP	<input checked="" type="radio"/>
Comm Status	
Disconnected	
Connect	Disconnect

File Status
File is ready to be sent.
Get File (returned as c:\trs\config_config.ini)
Send File
Cancel

Press Connect.



The image shows a 'File Transfer' dialog box with a title bar containing a close button (X) and the text 'File Transfer'. The dialog is divided into several sections. The 'File' section at the top contains a 'Select File to Send' button and a text field with the path 'C:\trs\config\H&M 190.ini', with the label 'File Name' to its right. Below this is the 'TCP/IP' section, which includes an IP address field containing '192.168.0.1' with the label 'IP Address' to its right, and a radio button labeled 'TCP/IP'. Underneath the IP address is a 'Comm Status' section with a green bar displaying 'Connected' and an empty text field to its right. At the bottom of the TCP/IP section are 'Connect' and 'Disconnect' buttons. Below the TCP/IP section is a 'File Status' section with a green bar displaying 'File is ready to be sent.' and the label 'File Status' to its right. At the very bottom of the dialog are three buttons: 'Get File (returned as c:\trs\config_config.ini)', 'Send File', and 'Cancel'.

File Transfer

File

Select File to Send

C:\trs\config\H&M 190.ini File Name

TCP/IP

192.168.0.1 IP Address TCP/IP

Comm Status

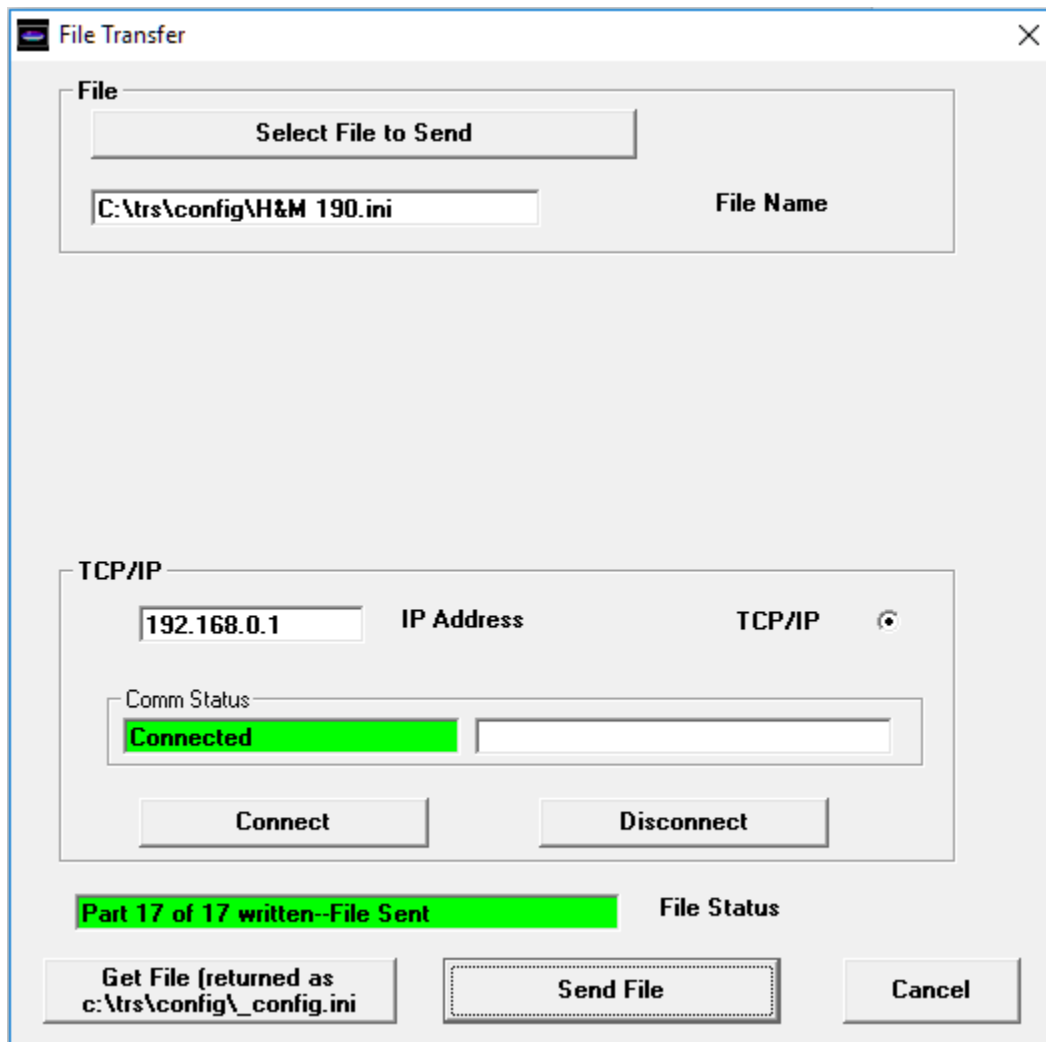
Connected

Connect Disconnect

File is ready to be sent. File Status

Get File (returned as c:\trs\config_config.ini) Send File Cancel

Press Send File.



The image shows a 'File Transfer' dialog box with a title bar containing a small icon and a close button. The dialog is divided into several sections. The 'File' section at the top has a 'Select File to Send' button and a text field containing 'C:\trs\config\H&M 190.ini', with a 'File Name' label to its right. Below this is the 'TCP/IP' section, which includes an IP address field set to '192.168.0.1', a 'TCP/IP' label with a small circular icon, and a 'Comm Status' section. The 'Comm Status' section has a green bar with the text 'Connected' and an empty text field next to it. Below the status bar are 'Connect' and 'Disconnect' buttons. At the bottom of the dialog is a 'File Status' section with a green bar displaying 'Part 17 of 17 written--File Sent'. Below this status bar are three buttons: 'Get File (returned as c:\trs\config_config.ini)', 'Send File' (which is highlighted with a dashed border), and 'Cancel'.

File Transfer

File

Select File to Send

C:\trs\config\H&M 190.ini File Name

TCP/IP

192.168.0.1 IP Address TCP/IP

Comm Status

Connected

Connect Disconnect

Part 17 of 17 written--File Sent File Status

Get File (returned as c:\trs\config_config.ini) Send File Cancel

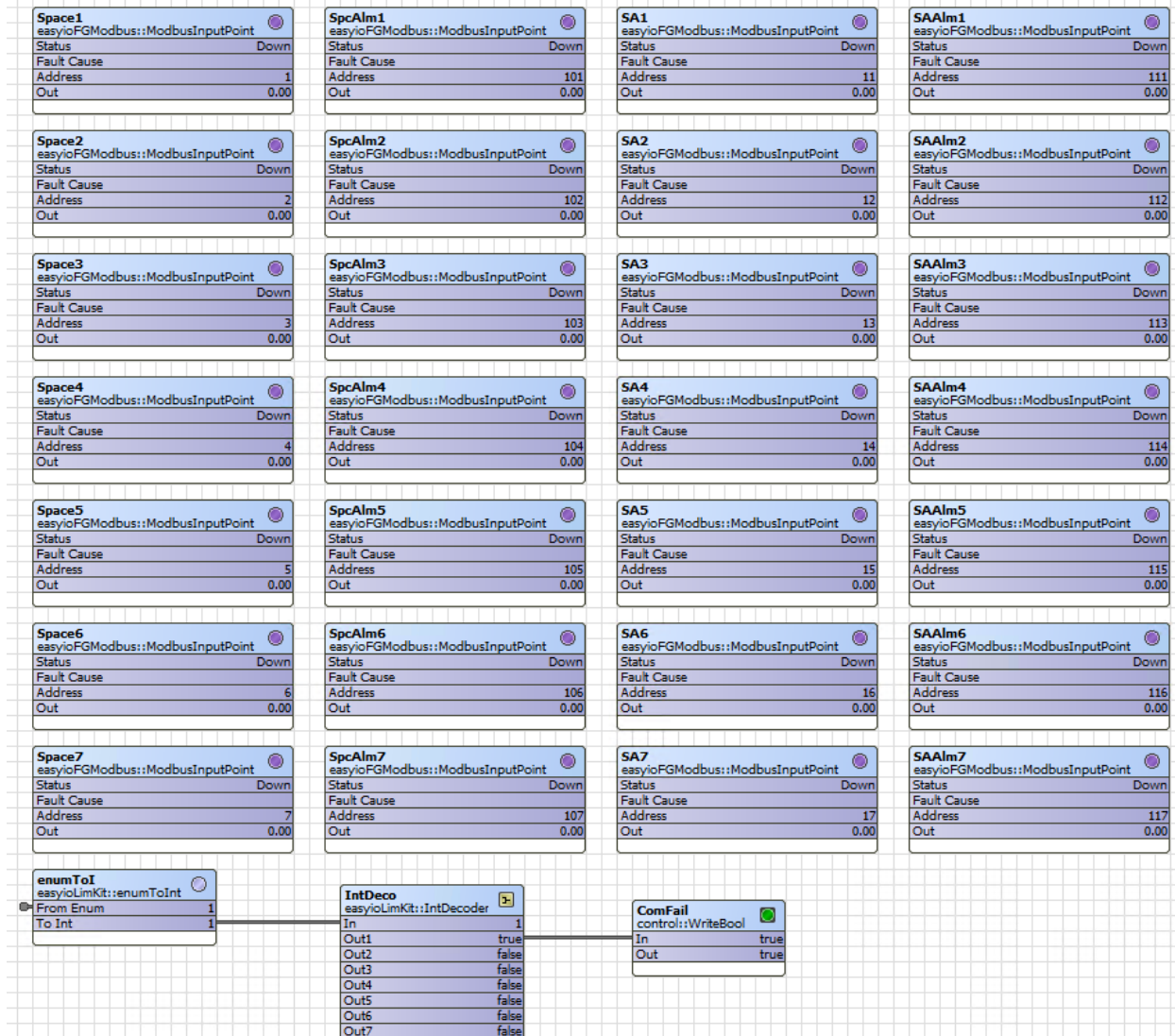
Press Disconnect and Cancel.

The station template name is “HandMWirelessMonitoringTemplateNov112017” (the date may be later).

Setup the station as usual except for the central controller app.

For the central controller restore the file “HMLightingACIWirelessMonitoringNov222017” (or later).

The Wire Sheet of App / EasyIO / ModbusS / Gateway will look initially like this:

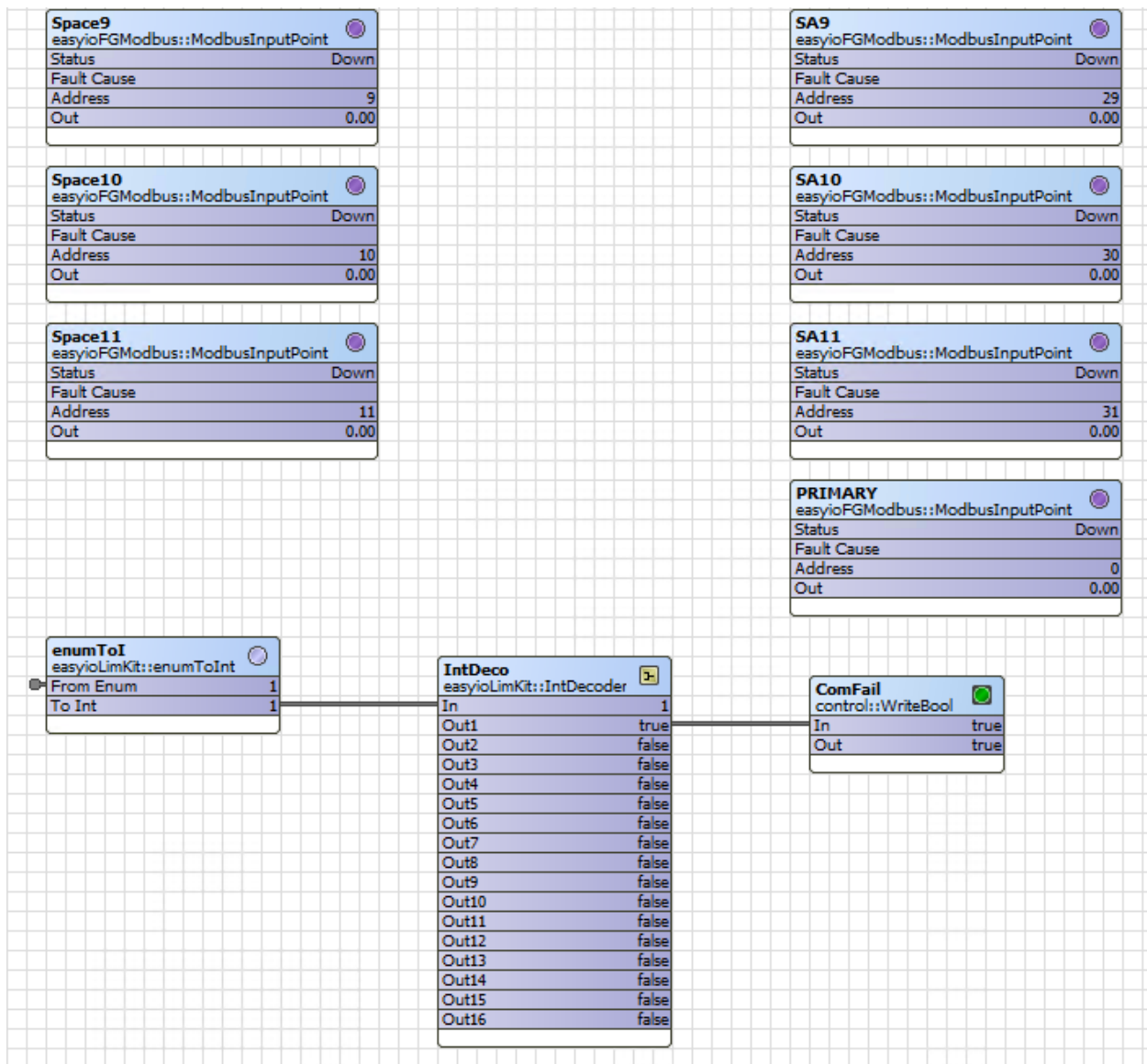


The controller is limited to 32 points, and with enough sensors there is no way to use the space and supply alarms. For that reason they were deleted from this site.

(The alarm points are automatically generated ... see the manual included with the transceiver.)

This is the wire sheet of the Gateway after editing it for a specific site and removing the alarm points:

Space1 easyioFGModbus::ModbusInputPoint Status Down Fault Cause Address 1 Out 0.00	SA1 easyioFGModbus::ModbusInputPoint Status Down Fault Cause Address 21 Out 0.00
Space2 easyioFGModbus::ModbusInputPoint Status Down Fault Cause Address 2 Out 0.00	SA2 easyioFGModbus::ModbusInputPoint Status Down Fault Cause Address 22 Out 0.00
Space3 easyioFGModbus::ModbusInputPoint Status Down Fault Cause Address 3 Out 0.00	SA3 easyioFGModbus::ModbusInputPoint Status Down Fault Cause Address 23 Out 0.00
Space4 easyioFGModbus::ModbusInputPoint Status Down Fault Cause Address 4 Out 0.00	SA4 easyioFGModbus::ModbusInputPoint Status Down Fault Cause Address 24 Out 0.00
Space5 easyioFGModbus::ModbusInputPoint Status Down Fault Cause Address 5 Out 0.00	SA5 easyioFGModbus::ModbusInputPoint Status Down Fault Cause Address 25 Out 0.00
Space6 easyioFGModbus::ModbusInputPoint Status Down Fault Cause Address 6 Out 0.00	SA6 easyioFGModbus::ModbusInputPoint Status Down Fault Cause Address 26 Out 0.00
Space7 easyioFGModbus::ModbusInputPoint Status Down Fault Cause Address 7 Out 0.00	SA7 easyioFGModbus::ModbusInputPoint Status Down Fault Cause Address 27 Out 0.00
Space8 easyioFGModbus::ModbusInputPoint Status Down Fault Cause Address 8 Out 0.00	SA8 easyioFGModbus::ModbusInputPoint Status Down Fault Cause Address 28 Out 0.00



BACKUP THE CENTRAL CONTROLLER when all the points are defined and time zone is set.

In the station, the addresses need to match the central controller's app.

Health points can be deleted if unused.

<div> about.html Platform HP01 </div>						
Database						
Name	Type	Out	Address	Access	Tuning Policy Name	Fault Cause
SaTemp	Numeric Point	0.0 °F {down,stale}	12.12	readOnly	COV	
SpaceTemp	Numeric Point	0.0 °F {down,stale}	18.12	readOnly	COV	
SpcHealth	Numeric Point	0.0 {down,stale}	20.12	readOnly	FastPoll	
SAHealth	Numeric Point	0.0 {down,stale}	16.12	readOnly	FastPoll	

If there are no health points then two histories will need to be pruned:



If the central controller has V2.0b50a or higher, kits will need to be upgraded before the backup.

Otherwise all values will be zero.

This can be tedious because of dependencies.