VersaTenn V Upgrade Instructions

Tidal Engineering periodically releases software upgrades to the VersaTenn V controller's operating system and application. These upgrades are available by contacting Tidal Engineering (www.tidaleng.com) or TPS (www.thermalproductsolutions.com) and can be installed from a combination of up to four files that are compressed and delivered in a VTV_Installation Zip file.

In the zip file you will find the following:

VTV_OS_4.2.Q_Disk_1.exe
VTV_OS_4.2.Q_Disk_2.exe
VTV_X.X.XX Winimage.exe
VTVClean.exe

In addition, the zip file also includes:

Version_Change_History.txt
VTV App Note14 – VTV Upgrade Instructions Rev E.pdf (this document)

Note: these file names are typical and will change depending on the current versions.

The VersaTenn V Application Version 2.X requires VersaTenn V Operating System 4.2.x. If your controller currently has a Version 1.X application, you will install the upgrade in the six steps described below.

1. Record the controller settings.
2. Prepare the floppy disks.
3. Upgrade the operating system.
4. Clean the controller's data files.
5. Upgrade the application.
6. Configure the controller.

If your controller already has a VersaTenn V Version 2.x application installed then you can skip step 3 when installing the upgrade

Note: VersaTenn V 1.x.x applications will not work with VersaTenn V Operating 4.2.X.

Instructions

WARNING: You will need to re-enter the tuning and configuration parameters after this upgrade. You should note all of the PID settings and any non-default settings on your controller(s) before attempting an upgrade. You should also record your Cascade and Web Server registration keys if your chamber employs those features.

Required Items

1. Windows PC or workstation.
2. Tidal/TPS Supplied OS disks, Clean disk, and VTV Installation disk
3. Four blank floppy disks.
4. PS/2 Keyboard.
5. VGA Monitor (optional)

1. Record the Controller settings

Read and record all of the settings (PID, Special Functions, L-Values, etc) for each controller that you plan to upgrade. See the attached settings list for reference.

Alternatively, you can use Tidal Engineering's free SimpleComm communications application to record the settings via Ethernet or serial communications and restore them after the upgrade.

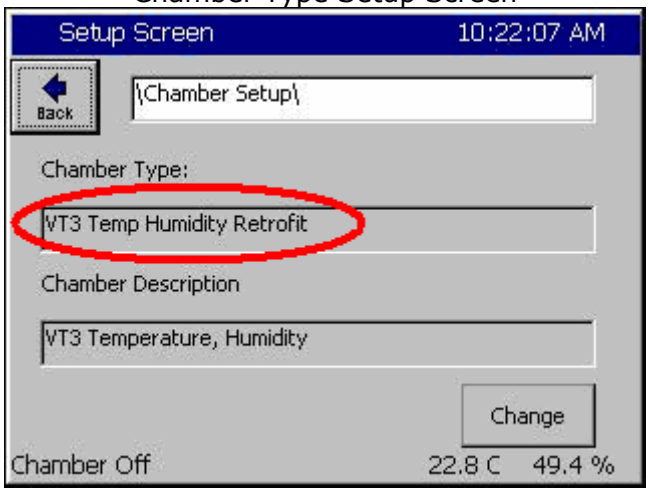
The SimpleComm application is available on the VTV Resource CDROM and on our website at http://www.tidaleng.com/downloads/SimpleComm.zip.

VersaTenn V Application Note 14 on our website includes detailed instructions for the SimpleComm application:

http://www.tidaleng.com/appnotes/VTVAN08-VTVSimpleCommRev4.pdf

Note: SimpleComm does not record the **Chamber Type**, Registration Keys or Communications settings of your controller. They should be recorded manually on the list at the end of this document.

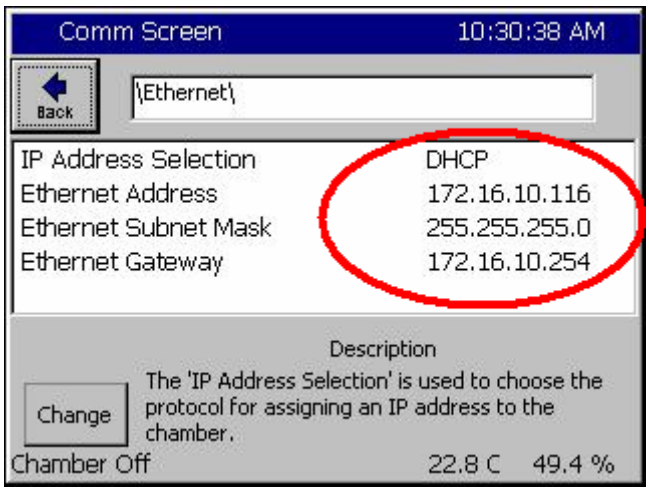
Chamber Type Setup Screen

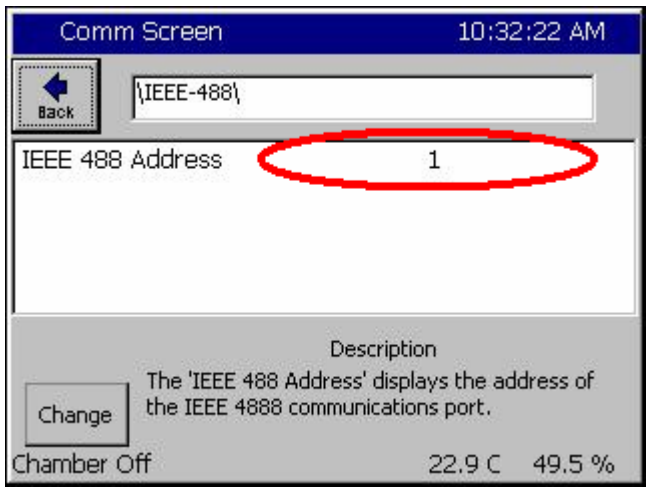


Web Server Registration

Ethernet Setup

IEEE-488 Address

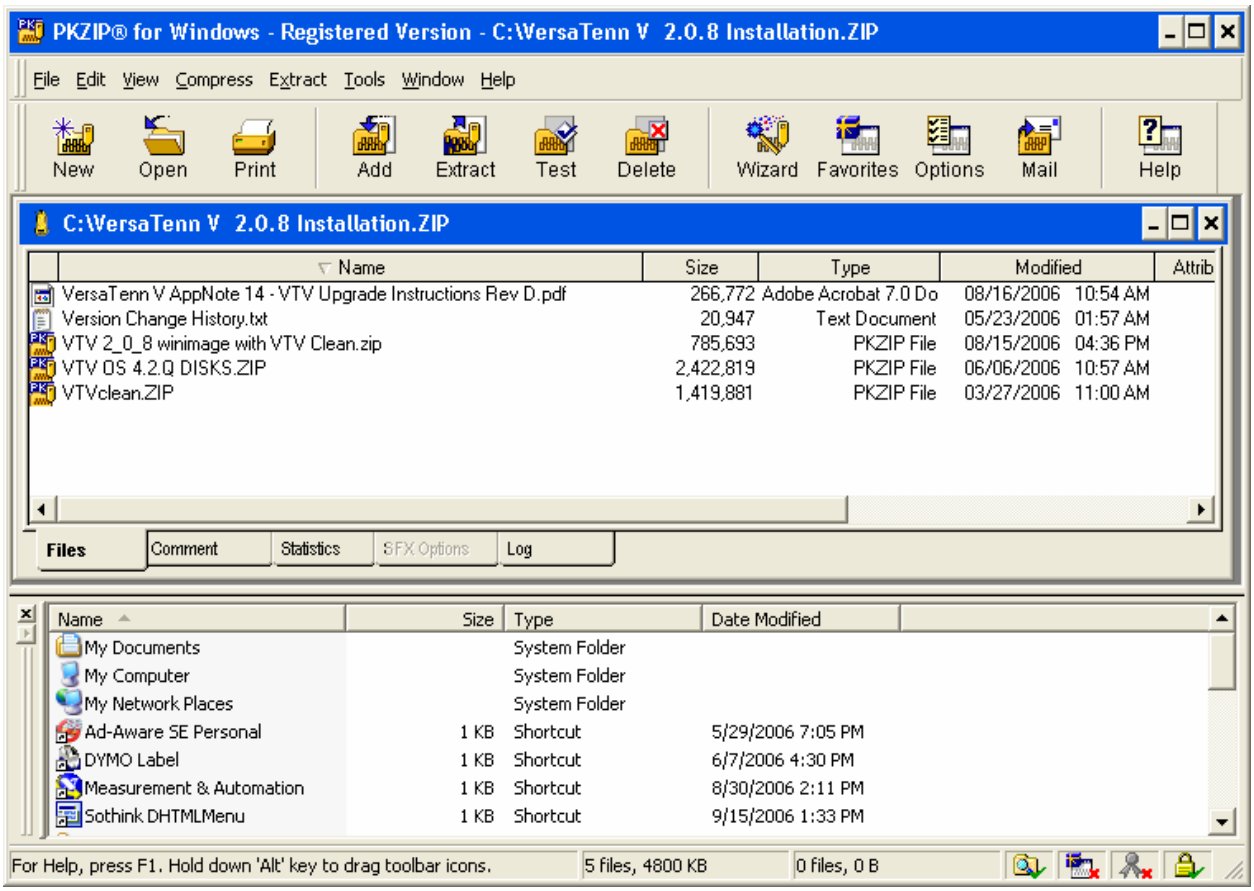

Comm Screen
10:30:38 AM
Back
\Ethernet\
IP Address Selection
DHCP
Ethernet Address
172.16.10.116
Ethernet Subnet Mask
255.255.255.0
Ethernet Gateway
172.16.10.254
Description
Change
The 'IP Address Selection' is used to choose the protocol for assigning an IP address to the chamber.
Chamber Off
22.8 C
49.4 %


Comm Screen
10:32:22 AM
Back
\IEEE-488\
IEEE 488 Address
1
Description
Change
The 'IEEE 488 Address' displays the address of the IEEE 4888 communications port.
Chamber Off
22.9 C
49.5 %

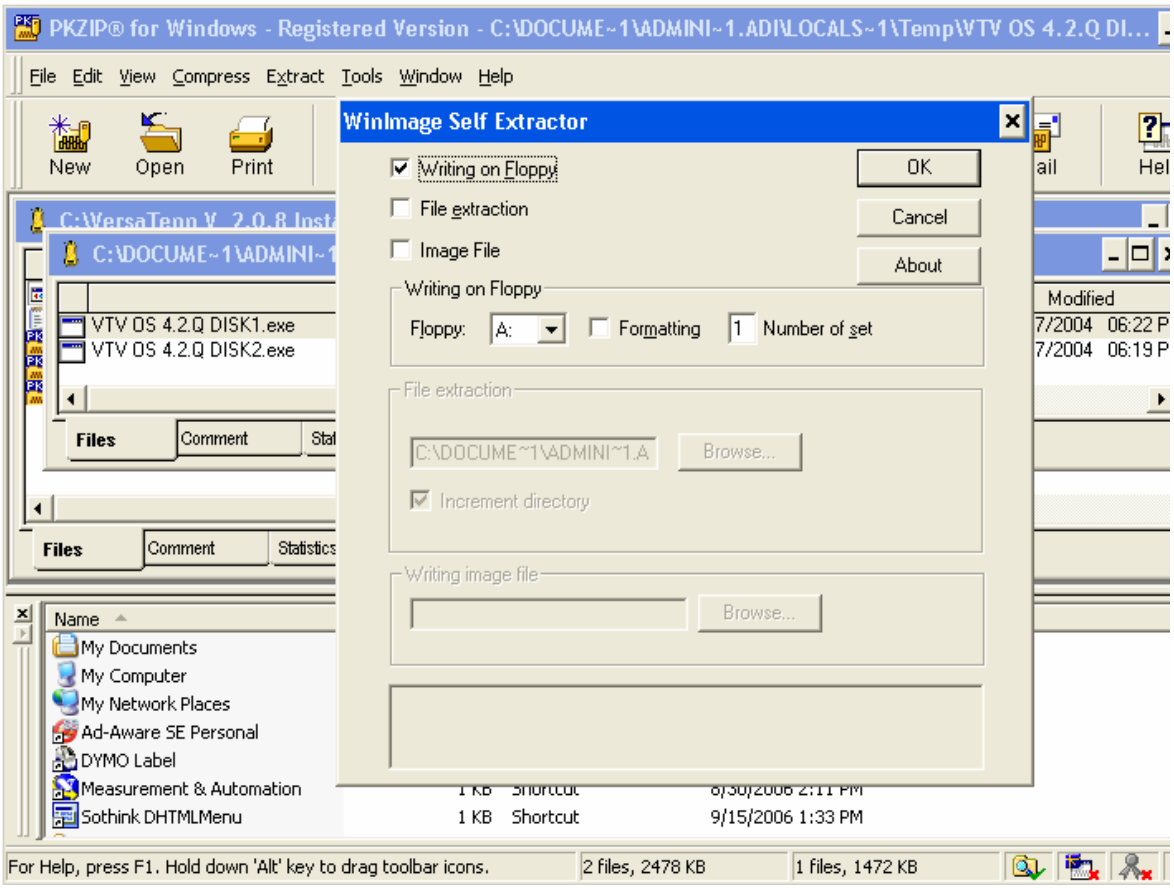
2. Disk Preparation

a. Open the Installation Zip File and extract the exe files. The exe files may be zipped inside other zip files as shown below. i.e. VTVclean.zip. Up to four floppy disks may be required for an upgrade; Operating System Disk1, Operating System Disk2, VTV Clean disk, and the VTV Application Installation disk.

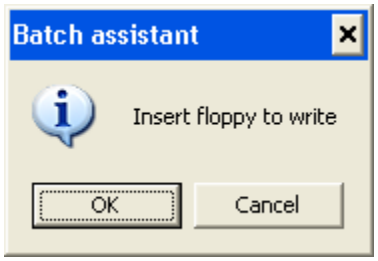
Note: Some compression programs may be capable of executing the required programs without extracting them.



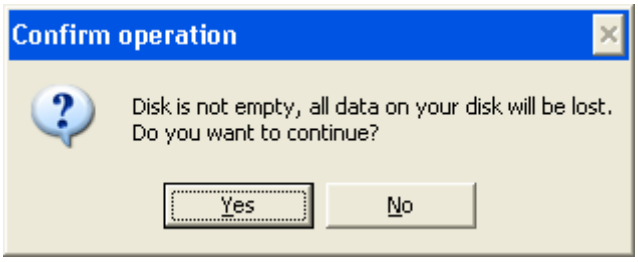
b. Double click on each exe file. A Winimage Self Extractor window will appear as shown below. Click OK to continue.



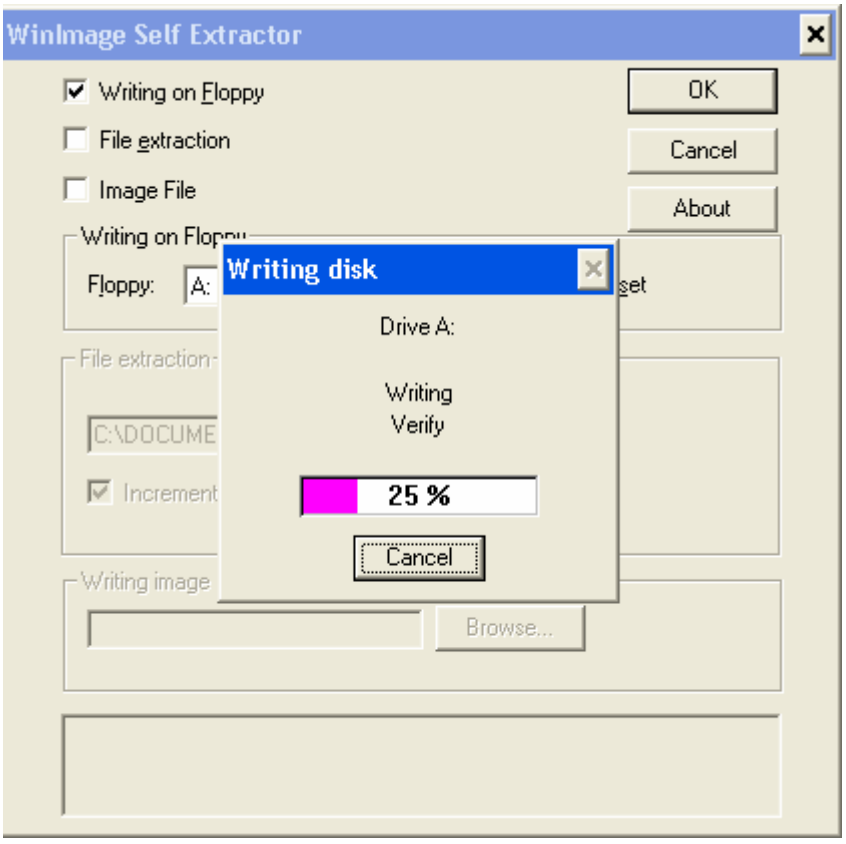
c. Insert the blank floppy disk and click OK to continue..



d. You may see the warning below if the disk is not empty.



e. The Winimage Self Extractor program will display its progress as it writes to the disk. The window will close when the disk is finished.



IMPORTANT: Do not copy the winimage executables or the zip files to the floppy directly.

3. Install the Operating System (Skip this step if your OS is already 4.2.X)

1. Power off the Chamber.
2. Attach an IBM keyboard to the PS/2 port on the side of the VersaTenn V.
3. Put Operating System Disk1 in the VersaTenn floppy drive and turn on the Chamber. The VT V will boot and the screen will say "Updating VTV CE Image".
4. When the drive light goes out, remove Operating System Disk1 and put in Operating System Disk2.
5. Press Enter Key.
6. Wait for the beep and insert Operating System Disk1
7. Press Enter Key.
8. Wait for the beep and insert Operating System Disk2.
9. Press Enter Key.
10. When the disk drive stops and the drive light goes off, remove Operating System Disk2 and insert Operating System Disk1.
11. Press Enter Key.
12. When the screen says Upgrade Complete, remove the floppy disk from the drive.

4. VTV Clean Directions

WARNING: The VTV Clean disk will reset all your settings to their default values.

Note: the VersaTenn V controller profiles on the Controller are not affected by the VersaTenn V clean procedure.

1. Place the VTV Clean disk into the floppy drive on your chamber.
2. Either reset the controller or cycle the power on the chamber.
3. Press "y" and press enter 3 times to acknowledge the clean.
4. When complete, and the floppy light stays off, remove the floppy from the drive.

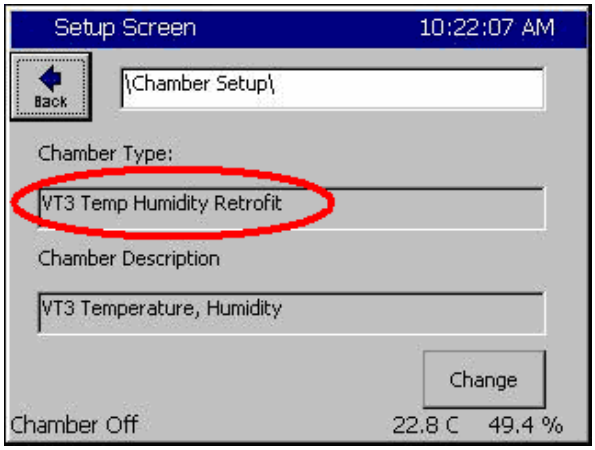
5. VTV Application Installation Directions

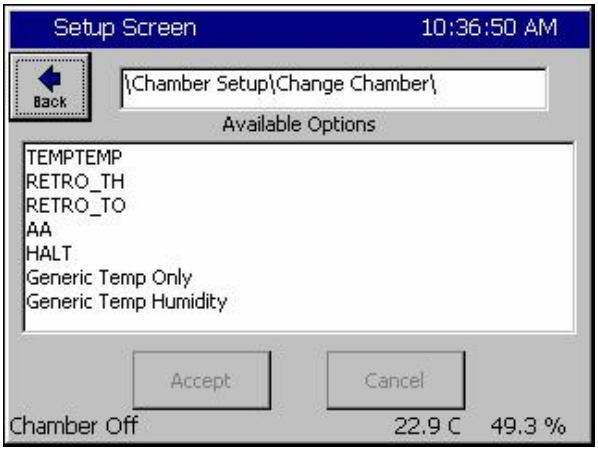
1. Insert the VTV Application Installation disk into the floppy drive on your chamber.
2. Either reset the controller or cycle the power on the chamber.
3. The floppy installation disk will automatically install all the necessary files.
4. When the screen says "Update Complete", remove the floppy from the drive.
5. To continue the installation, either reset the controller or cycle the power on the chamber.

6. Configure the Controller

1. When the chamber restarts, the controller will tell you that the current chamber type differs from the last chamber type. This is OK. Press OK to acknowledge that message. You will then be asked if you would like to discard the old settings and load the current settings. Press YES on this window

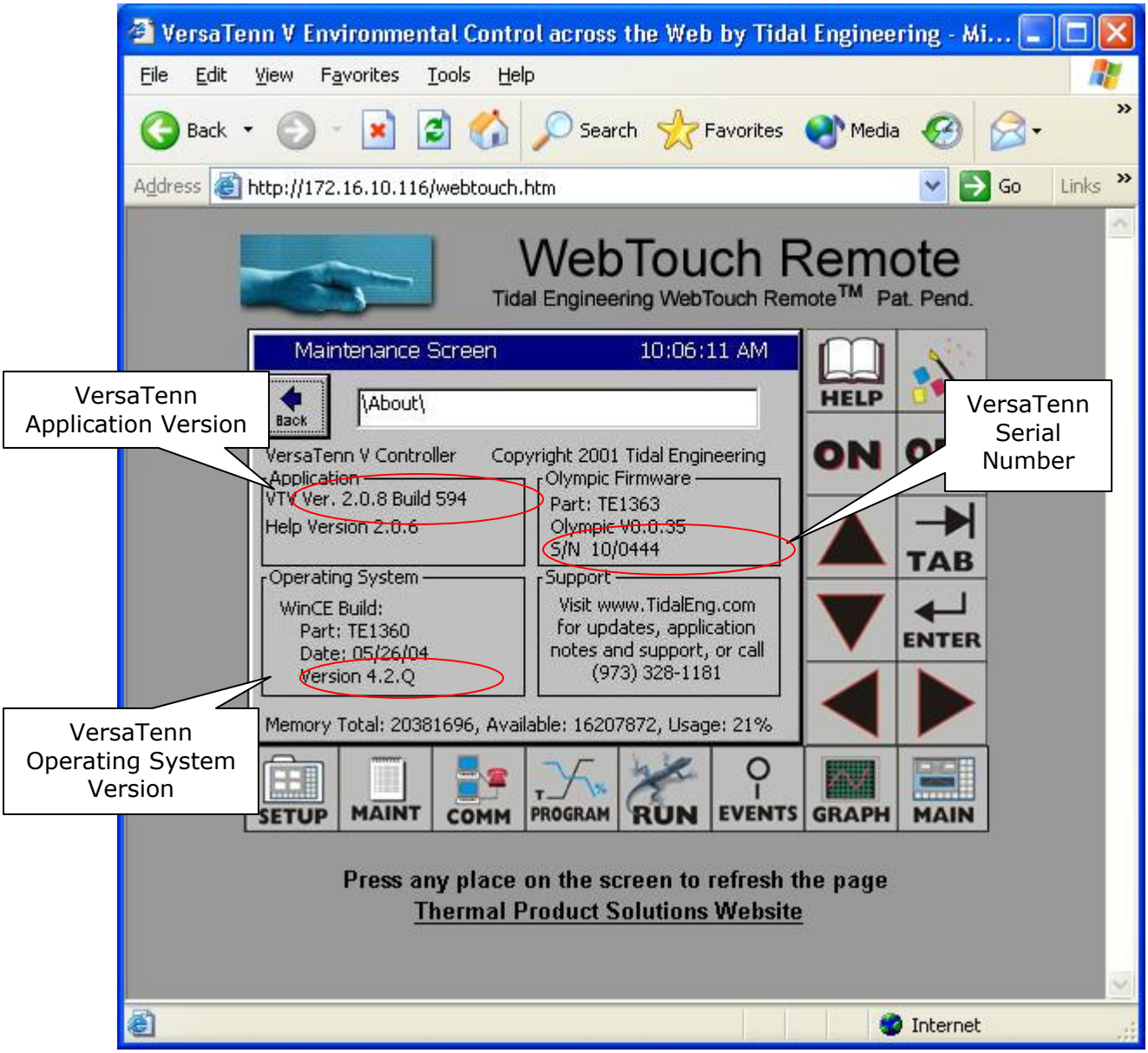
2. Then Go to the Setup Screen and open the Chamber Setup Folder. Press *Change* and select the Chamber Option from the list. Then press *Accept*





3. Next, Reset the Controller or Cycle power. When the chamber restarts, the controller may tell you that the current chamber type differs from the last chamber type. This is OK. Press OK to acknowledge that message.

4. Once the procedures above have been completed, the About Menu under the Maintenance Screen will report the current version of the application and the operating system.



5. Enter the tuning settings, configuration parameters and registration keys recorded earlier.

6. The VersaTenn V application upgrade is now complete. Thank you for using the VersaTenn V controller.

VersaTenn V Settings List

Description	Command	Value
Calibration		
Channel 1		
Ch1 Calibration	CAL1	
Ch1 Alarm Low Limit	A1L	
Ch1 Alarm High Limit	A1H	
Channel 2		
Ch2 Calibration	CAL2	
Ch2 Alarm Low Limit	A2L	
Ch2 Alarm High Limit	A2H	
Altitude	ALT	
Guaranteed Soak	GS	
PID Values		
Channel 1		
Proportional Band, Ch1 Heating	PB1H	
Reset, Ch1 Heating	RS1H	
Rate, Ch1 Heating	RT1H	
Cycle Time, Ch1 Heating	CT1H	
Rate Band, Ch1 Heating	RB1H	
Dead Band, Ch1	DB1	
Proportional Band, Ch1 Cooling	PB1C	
Reset, Ch1 Cooling	RS1C	
Rate, Ch1 Cooling	RT1C	
Cycle Time, Ch1 Cooling	CT1C	
Rate Band, Ch1 Cooling	RB1C	
Channel 2		
Proportional Band, Ch2 Heating	PB2H	
Reset, Ch2 Heating	RS2H	
Rate, Ch2 Heating	RT2H	
Cycle Time, Ch2 Heating	CT2H	
Rate Band, Ch2 Heating	RB2H	
Dead Band, Ch2	DB2	
Proportional Band, Ch2 Cooling	PB2C	
Reset, Ch2 Cooling	RS2C	
Rate, Ch2 Cooling	RT2C	
Cycle Time, Ch2 Cooling	CT2C	
Rate Band, Ch2 Cooling	RB2C	

Description	Command	Value
PID Values (cont)		
Cascade		
Cascade CH1 Enabled	CAS1_ENABLED	
Channel 1 Cascade Sensor	CSS1	
CH 1 Cascade High Limit	C1HL	
CH 1 Cascade Low Limit	C1LL	
CH1 Cascade Prop. Band	CPB1H	
CH1 Cascade Reset	CRS1H	
CH1 Cascade Rate	CRT1H	
CH1 Cascade Rate Band	CRB1H	
L-Values		
1L1 Ch1 Main Cooling Turn-On	1L1	
1L2 Ch1 Main Cooling Turn-Off	1L2	
1L3 Ch1 Setpoint Transfer Setting	1L3	
1CTY Ch1 Chamber Type	1CTY	
2L1 Ch2 Main Cooling Turn-On	2L1	
2L2 Ch2 Main Cooling Turn-Off	2L2	
2L3 Ch2 Setpoint Transfer Setting	2L3	
2CTY Ch2 Chamber Type	2CTY	
L3 Ch1 Main Cooling Turn-On	L3	
L4 Ch1 Main Cooling Turn-Off	L4	
L6 Ch1 Full Cooling Switch Over	L6	
L7 Ambient Cooling Turn-On	L7	
L8 Heat Ambient Cooling Turn-Off	L8	
L9 Ramp-Up Cooling	L9	
L11 Dehumidify / Vent On	L11	
L12 Dehumidify / Vent Off	L12	
L14 Time Delay Boost Cool	L14	
L15 Compressor Turn-Off Delay	L15	
LEV1	LEV1	

Description	Command	Value
Special Functions		
Celsius / Fahrenheit	CF	
Output 11 Control Type	OT11	
Output 17 Control Type	OT17	
Output 18 Control Type	OT18	
Ch1 Low Range	R1L	
Ch1 High Range	R1H	
Ch2 Low Range	R2L	
Ch2 High Range	R2H	
Ch 1 RTD Type	RTD	
Vaisala Compensation Enabled	VCMP	
Analog Retransmit 1	OUT_420_1	
Analog Retransmit 2	OUT_420_2	
Registration Keys (optional)		
Web Server Registration Key		
Cascade Registration Key		
*Note: The alphanumeric keys were provided when your chamber was delivered. If you do not have them, they are available from your service representative.		
Communications (optional)		
RS-485		
RS-485 Mode		
Station Address		
Number of UUTs		
*Note: The RS-485 settings are important if using the cascade feature.		
IEEE-488		
IEEE 488 Address		
Ethernet		
IP Address Selection		
Ethernet Address		
Ethernet Subnet Mask		
Ethernet Gateway		
Web Server		
Web Server On/Off		
Web Server Login Name		
Web Server Password		
Web Server Address		
TCP/IP Server		
TCP/IP Server On/Off		

About Tidal Engineering
Headquartered in Randolph, NJ, Tidal Engineering Corporation has been designing and building award-winning embedded hardware and software for test and measurement and data acquisition applications since 1992. The company further provides product development services together with engineering support, and is recognized for technical expertise in such areas as Embedded IEEE 488, and turnkey SCADA (Supervisory Control and Data Acquisition) systems. Tidal's products are available exclusively through ADI American Distributors Inc., an ISO-9002 certified distributor of electronic and electromechanical components and assemblies.

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