

## VTV COMMUNICATION COMMAND SET

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 File: VTV COMM CMDS REV G - 1.4.88  
 Date: 8/05/04

Description	Command Root	Command Usages	Command Syntax	Range, Units	Command Example
Setpoint 1	SP1	SP1 Set	= SP1 X.X	Range = R1L - R1H Celsius	= SP1 100.7
Setpoint 1	SP1	SP1 Set	= SP1 X.X	Range = R1L - R1H C / F	= SP1 100.7
		SP1 Query	? SP1	Range = R1L - R1H Celsius	? SP1
		SP1 Query	? SP1	Range = R1L - R1H C / F	? SP1
Setpoint 2	SP2	SP2 Set	= SP2 X.X	Range = R2L - R2H C / %RH	= SP2 75
Setpoint 2	SP2	SP2 Set	= SP2 X.X	Range = R2L - R2H C / F / %RH	= SP2 75
		SP2 Query	? SP2	Range = R2L - R2H C / %RH	? SP2
		SP2 Query	? SP2	Range = R2L - R2H C / F / %RH	? SP2
Setpoint 3	SP3	SP3 Set	= SP3 X.X	Range = R3L - R3H C / %RP	= SP3 Off
Setpoint 3	SP3	SP3 Set	= SP3 X.X	Range = R3L - R3H C / F / %RP	= SP3 Off
		SP3 Query	? SP3	Range = R3L - R3H C / %RP	? SP3
		SP3 Query	? SP3	Range = R3L - R3H C / F / %RP	? SP3
Channel 1 Actual	C1	C1 Query	? C1	Range = R1L - R1H Celsius	? C1
Channel 1 Actual	C1	C1 Query	? C1	Range = R1L - R1H C / F	? C1
Channel 2 Actual	C2	C2 Query	? C2	Range = R2L - R2H C / %RH	? C2
Channel 2 Actual	C2	C2 Query	? C2	Range = R2L - R2H C / F / %RH	? C2
Channel 3 Actual	C3	C3 Query	? C3	Range = R3L - R3H C / %RP	? C3
Channel 3 Actual	C3	C3 Query	? C3	Range = R3L - R3H C / F / %RP	? C3
Chamber On	ON	On Set	= ON	OK	= ON
		On Query	? On	1 if On, 0 if Off	? On
Chamber Off	OFF	OFF Set	= OFF	OK	= OFF
Run Program	RUN	RUN Set	= RUN	OK	= RUN
		Run Query	? RUN	Returns: 0 - Stop 1 - Run 2 - Pause 3 - Steady State	? RUN
Pause Program	HOLD	HOLD Set	= HOLD	OK	= HOLD
Resume Program	RSUM	RSUM Set	= RSUM	OK	= RSUM

Software Revision	*IDN	*IDN Query	*IDN ?	Returns Revision Info: Make, Model, Serial #, Version	*IDN?
Enable/Disable UUT Monitoring constants	UUT	UUT Set	= UUT ARG1 ARG2	ARG1 = UUT # (1 - 8) ARG2 = 0/1 (Enable / Disable)	= UUT 1 1
		UUT Query	? UUT ARG1	Range: ARG1 = UUT # (1 - 8). Response: 0/1 (Enabled / Disabled)	? UUT 1
UUT Readings	UUTR	UUTR Query	? UUT ARG1	Range: ARG1 = UUT # (0 - 7). Response: zero based comma delimited string of raw unscaled voltage readings on the UUT sensors. First number is the select uut ID. Celsius = (# * 500 / 4095) - 100	? UUTR 0
UUT Readings	UUTR	UUTR Query	? UUT ARG1	Range: ARG1 = UUT # (1 - 8). Response: comma delimited string with 8 UUT temperature readings C / F	? UUTR 1
UUT Readings	UUTR	UUTR Query	? UUT ARG1	Range: ARG1 = UUT # (1 - 8). Response: comma delimited string with 8 UUT temperature readings If a sensor is not enabled, all values returned will be 400.0 C or 752.0 F. C / F	? UUTR 1
Olympic Board Version	OVERSION	OVERSION Query	? OVERSION	Olympic board Version and Serial Number	? OVERSION
Digital Input Readings	DI	DI Query	? DI	4 digit hex number for the 16 Digital Input readings	? DI
Machine Input Readings	MI	MI Query	? MI	Comma delimited string of raw unscaled voltage readings of the 8 Machine Input sensors: LP,T,HP,T,LP,T,HP,T LP = (# * 164.7/1024) - 14.7 HP = (# * 500/1024) TEMP = (# * 922*200)-50	? MI
Machine Input Readings	MI	MI Query	? MI	Comma delimited string with the 8 Machine Input Readings LP,T,HP,T,LP,T,HP,T	? MI
Ch1 Cooling Output	1LO	1LO Query	? 1LO	1 - 100 %	? 1LO

Ch1 Heating Output	1HI	1HI Query	? 1HI	1 - 100 %	? 1HI
Ch2 Cooling Output	2LO	2LO Query	? 2LO	1 - 100 %	? 2LO
Ch2 Heating Output	2HI	2HI Query	? 2HI	1 - 100 %	? 2HI
Ch3 Cooling Output	3LO	3LO Query	? 3LO	1 - 100 %	? 3LO
Ch3 Heating Output	3HI	3HI Query	? 3HI	1 - 100 %	? 3HI
Calibration Ch 1	CAL1	CAL1 Set	= CAL1 ARG1	-50 to 50 Celsius	= CAL1 10.0
		CAL1 Query	? CAL1	-50 to 50 Celsius	? CAL1
Calibration Ch 1	CAL1	CAL1 Set	= CAL1 ARG1	-50 to 50 C -90 to 90 F	= CAL1 10.0
		CAL1 Query	? CAL1	-50 to 50 C -90 to 90 F	? CAL1
Low Alarm, Ch 1	A1L	A1L Set	= A1L ARG1	-200 to 500 Celsius	= A1L -200
		A1L Query	? A1L	-200 to 500 Celsius	? A1L
Low Alarm, Ch 1	A1L	A1L Set	= A1L ARG1	-200 to 500 C -326 to 932 F	= A1L -200
		A1L Query	? A1L	-200 to 500 C -326 to 932 F	? A1L
High Alarm, Ch 1	A1H	A1H Set	= A1H ARG1	-200 to 500 Celsius	= A1H 500
		A1H Query	? A1H	-200 to 500 Celsius	? A1H
High Alarm, Ch 1	A1H	A1H Set	= A1H ARG1	-200 to 500 C -326 to 932 F	= A1H 500
		A1H Query	? A1H	-200 to 500 C -326 to 932 F	? A1H
Calibration Ch 2	CAL2	CAL2 Set	= CAL2 ARG1	-50 to 50 C -50 to 50%RH	= CAL2 10.0
		CAL2 Query	? CAL2	-50 to 50 C -50 to 50%RH	? CAL2
Calibration Ch 2	CAL2	CAL2 Set	= CAL2 ARG1	-50 to 50 C -90 to 90 F	= CAL2 10.0
		CAL2 Query	? CAL2	-50 to 50 C -90 to 90 F	? CAL2
				-50 to 50 %RH	
Low Alarm, Ch 2	A2L	A2L Set	= A2L ARG1	- 200 to 500 C -10 to 105	= A2L -10
		A2L Query	? A2L	- 200 to 500 C -10 to 105	? A2L
Low Alarm, Ch 2	A2L	A2L Set	= A2L ARG1	- 200 to 500 C -326 to 932 F	= A2L -10
		A2L Query	? A2L	- 200 to 500 C -326 to 932 F	? A2L
				-10 to 105 %RH	
High Alarm, Ch 2	A2H	A2H Set	= A2H ARG1	- 200 to 500 C -10 to 105	= A2H 104
		A2H Query	? A2H	- 200 to 500 C -10 to 105	? A2H
High Alarm, Ch 2	A2H	A2H Set	= A2H ARG1	- 200 to 500 C -326 to 932 F	= A2H 104
		A2H Query	? A2H	- 200 to 500 C -326 to 932 F	? A2H
				-10 to 105 %RH	
Calibration Ch 3	CAL3	CAL3 Set	= CAL3 ARG1	-50 to 50 %RP	= CAL3 10.0
		CAL3 Query	? CAL3	-50 to 50 %RP	? CAL3

Low Alarm, Ch 3	A3L	A3L Set	= A3L ARG1	0 to 1000 %RP	= A3L -10
		A3L Query	? A3L	0 to 1000 %RP	? A3L
High Alarm, Ch 3	A3H	A3H Set	= A3H ARG1	0 to 1000 %RP	= A3H 110
		A3H Query	? A3H	0 to 1000 %RP	? A3H
Altitude Value	ALT	ALT Set	= ALT ARG1	0 to 5000 %RP	= ALT 10
		ALT Query	? ALT	0 to 5000 %RP	? ALT
Guaranteed Soak	GS	GS Set	= GS ARG1	0 to 50 Celsius	= GS 10
		GS Query	? GS	0 to 50 Celsius	? GS
Guaranteed Soak	GS	GS Set	= GS ARG1	0 to 50 C 0 to 90 F	= GS 10
		GS Query	? GS	0 to 50 C 0 to 90 F	? GS
Prop. Band, Ch 1 Heat	PB1H	PB1H Set	= PB1H ARG1	0 to 50 Celsius	= PB1H 10
		PB1H Query	? PB1H	0 to 50 Celsius	? PB1H
Prop. Band, Ch 1 Heat	PB1H	PB1H Set	= PB1H ARG1	0 to 50 C 0 to 90 F	= PB1H 10
		PB1H Query	? PB1H	0 to 50 C 0 to 90 F	? PB1H
Reset, Ch 1 Heat	RS1H	RS1H Set	= RS1H ARG1	0 - 09.99 Repeats / Minute	= RS1H .02
		RS1H Query	? RS1H	0 - 09.99 Repeats / Minute	? RS1H
Reset, Ch 1 Heat	RS1H	RS1H Set	= RS1H ARG1	0 - 09.999 Repeats / Minute	= RS1H .02
		RS1H Query	? RS1H	0 - 09.999 Repeats / Minute	? RS1H
Rate, Ch 1 Heat	RT1H	RT1H Set	= RT1H ARG1	0 - 09.99 Minutes	= RT1H
		RT1H Query	? RT1H	0 - 09.99 Minutes	? RT1H
Rate, Ch 1 Heat	RT1H	RT1H Set	= RT1H ARG1	0 - 09.999 Minutes	= RT1H
		RT1H Query	? RT1H	0 - 09.999 Minutes	? RT1H
Cycle Time, Ch 1 Heat	CT1H	CT1H Set	= CT1H ARG1	1 - 60 Seconds	= CT1H 5
		CT1H Query	? CT1H	1 - 60 Seconds	? CT1H
Rate Band, Ch 1 Heat	RB1H	RB1H Set	= RB1H ARG1	0 - 7 Seconds	= RB1H 4
		RB1H Query	? RB1H	0 - 7 Seconds	? RB1H
Rate Band, Ch 1 Heat	RB1H	RB1H Set	= RB1H ARG1	0 - 7 Seconds	= RB1H 4
		RB1H Query	? RB1H	0 - 7 Seconds	? RB1H
Dead Band, Ch 1	DB1	DB1 Set	= DB1 ARG1	-25 to 25 Celsius	= DB1 5
		DB1 Query	? DB1	-25 to 25 Celsius	? DB1
Dead Band, Ch 1	DB1	DB1 Set	= DB1 ARG1	-25 to 25 C -45 to 45 F	= DB1 5
		DB1 Query	? DB1	-25 to 25 C -45 to 45 F	? DB1
Prop Band, Ch 1 Cool	PB1C	PB1C Set	= PB1C ARG1	0 to 50 Celsius	= PB1C 10
		PB1C Query	? PB1C	0 to 50 Celsius	? PB1C
Prop Band, Ch 1 Cool	PB1C	PB1C Set	= PB1C ARG1	0 to 50 C 0 to 90 F	= PB1C 10
		PB1C Query	? PB1C	0 to 50 C 0 to 90 F	? PB1C
Reset, Ch 1 Cool	RS1C	RS1C Set	= RS1C ARG1	0 - 09.99 Repeats / Minute	= RS1C .70

		RS1C Query	? RS1C	0 - 09.99 Repeats / Minute	? RS1C
Reset, Ch 1 Cool	RS1C	RS1C Set	= RS1C ARG1	0 - 09.999 Repeats / Minute	= RS1C .700
		RS1C Query	? RS1C	0 - 09.999 Repeats / Minute	? RS1C
Rate, Ch 1 Cool	RT1C	RT1C Set	= RT1C ARG1	0 - 09.99 Minutes	= RT1C 1
		RT1C Query	? RT1C	0 - 09.99 Minutes	? RT1C
Rate, Ch 1 Cool	RT1C	RT1C Set	= RT1C ARG1	0 - 09.999 Minutes	= RT1C 1
		RT1C Query	? RT1C	0 - 09.999 Minutes	? RT1C
Cycle Time, Ch 1 Cool	CT1C	CT1C Set	= CT1C ARG1	1 - 60 Seconds	= CT1C 7
		CT1C Query	? CT1C	1 - 60 Seconds	? CT1C
Rate Band, Ch 1 Cool	RB1C	RB1C Set	= RB1C ARG1	0 - 7 Seconds	= RB1C 4
		RB1C Query	? RB1C	0 - 7 Seconds	? RB1C
Rate Band, Ch 1 Cool	RB1C	RB1C Set	= RB1C ARG1	0 - 7 Seconds	= RB1C 4
		RB1C Query	? RB1C	0 - 7 Seconds	? RB1C
Cascade CH1 Enabled **	CAS1_Enabled		= CAS1_ENABLED ARG1	ARG1: 0 - Disabled 1 - Enabled	= CAS1_ENABLED 1
			? CAS1_ENABLED	0 - Disabled 1 - Enabled	? CAS1_ENABLED
Channel 1 Cascade Sensor **	CSS1	CSS1 Set	= CSS1 ARG1	ARG1 - ID of the Sensor. 100 - 999.	= CSS1 120
		CSS1 Query	? CSS1	See the user manual for numeric codes.	? CSS1
CH 1 Cascade High Limit **	C1HL	C1HL Set	= C1HL ARG1	- 200 to 500 C -326 to 932 F	= C1HL 200
		C1HL Query	? C1HL	- 200 to 500 C -326 to 932 F	? C1HL
CH 1 Cascade Low Limit **	C1LL	C1LL Set	= C1LL ARG1	- 200 to 500 C -326 to 932 F	= C1LL -100
		C1LL Query	? C1LL	- 200 to 500 C -326 to 932 F	? C1LL
CH1 Cascade Prop. Band **	CPB1H	CPB1H Set	= CPB1H ARG1	0 to 400 C 0 to 752 F	= CPB1H 10
		CPB1H Query	? CPB1H	0 to 400 C 0 to 752 F	? CPB1H
CH1 Cascade Reset **	CRS1H	CRS1H Set	= CRS1H ARG1	0 - 09.99 Repeats / Minute	? CRS1H
		CRS1H Query	? CRS1H	0 - 09.99 Repeats / Minute	? CRS1H
CH1 Cascade Rate **	CRT1H	CRT1H Set	= CRT1H ARG1	0 - 09.99 Minutes	= CRT1H 1
		CRT1H Query	? CRT1H	0 - 09.99 Minutes	? CRT1H
CH1 Cascade Rate Band **	CRB1H	CRB1H Set	= CRB1H ARG1	0 - 09.99 Minutes	= CRB1H 4

		CRB1H Query	? CRB1H	0 - 09.99 Minutes	? CRB1H
Prop. Band, Ch 2 Heat	PB2H	PB2H Set	= PB2H ARG1	0 to 50 %RH	= PB2H 42
		PB2H Query	? PB2H	0 to 50 %RH	? PB2H
Reset, Ch 2 Heat	RS2H	RS2H Set	= RS2H ARG1	0 - 09.99 Repeats / Minute	= RS2H .02
		RS2H Query	? RS2H	0 - 09.99 Repeats / Minute	? RS2H
Reset, Ch 2 Heat	RS2H	RS2H Set	= RS2H ARG1	0 - 09.999 Repeats / Minute	= RS2H .02
		RS2H Query	? RS2H	0 - 09.999 Repeats / Minute	? RS2H
Rate, Ch 2 Heat	RT2H	RT2H Set	= RT2H ARG1	0 - 09.99 Minutes	= RT2H 1
		RT2H Query	? RT2H	0 - 09.99 Minutes	? RT2H
Rate, Ch 2 Heat	RT2H	RT2H Set	= RT2H ARG1	0 - 09.999 Minutes	= RT2H 1
		RT2H Query	? RT2H	0 - 09.999 Minutes	? RT2H
Cycle Time, Ch 2 Heat	CT2H	CT2H Set	= CT2H ARG1	1 - 60 Seconds	= CT2H 1
		CT2H Query	? CT2H	1 - 60 Seconds	? CT2H
Rate Band, Ch 2 Heat	RB2H	RB2H Set	= RB2H ARG1	0 - 7 Seconds	= RB2H 4
		RB2H Query	? RB2H	0 - 7 Seconds	? RB2H
Rate Band, Ch 2 Heat	RB2H	RB2H Set	= RB2H ARG1	0 - 7 Seconds	= RB2H 4
		RB2H Query	? RB2H	0 - 7 Seconds	? RB2H
Dead Band, Ch 2	DB2	DB2 Set	= DB2 ARG1	-25 to 25 %RH	= DB2 5
		DB2 Query	? DB2	-25 to 25 %RH	? DB2
Prop Band, Ch 2 Cool	PB2C	PB2C Set	= PB2C ARG1	0 to 50 %RH	= PB2C 40
		PB2C Query	? PB2C	0 to 50 %RH	? PB2C
Reset, Ch 2 Cool	RS2C	RS2C Set	= RS2C ARG1	0 - 09.99 Repeats / Minute	= RS2C .1
		RS2C Query	? RS2C	0 - 09.99 Repeats / Minute	? RS2C
Reset, Ch 2 Cool	RS2C	RS2C Set	= RS2C ARG1	0 - 09.999 Repeats / Minute	= RS2C .1
		RS2C Query	? RS2C	0 - 09.999 Repeats / Minute	? RS2C
Rate, Ch 2 Cool	RT2C	RT2C Set	= RT2C ARG1	0 - 09.99 Minutes	= RT2C 1
		RT2C Query	? RT2C	0 - 09.99 Minutes	? RT2C
Rate, Ch 2 Cool	RT2C	RT2C Set	= RT2C ARG1	0 - 09.999 Minutes	= RT2C 1
		RT2C Query	? RT2C	0 - 09.999 Minutes	? RT2C
Cycle Time, Ch 2 Cool	CT2C	CT2C Set	= CT2C ARG1	1 - 60 Seconds	= CT2C 1
		CT2C Query	? CT2C	1 - 60 Seconds	? CT2C
Rate Band, Ch 2 Cool	RB2C	RB2C Set	= RB2C ARG1	0 - 7 Seconds	= RB2C 4
		RB2C Query	? RB2C	0 - 7 Seconds	? RB2C
Rate Band, Ch 2 Cool	RB2C	RB2C Set	= RB2C ARG1	0 - 7 Seconds	= RB2C 4
		RB2C Query	? RB2C	0 - 7 Seconds	? RB2C

Cascade CH2 Enabled **	CAS2_		= CAS2_ENABLED	ARG1:	= CAS2_ENABLED 1
	ENABLED		ARG1	0 - Disabled 1 - Enabled	
			? CAS2_ENABLED	0 - Disabled 1 - Enabled	? CAS2_ENABLED
Channel 2 Cascade Sensor **	CSS2	CSS2 Set	= CSS2 ARG1	ARG1 - ID of the Sensor. 100 - 999	= CSS1 120
		CSS2 Query	? CSS2	NA	? CSS2
CH 2 Cascade High Limit **	C2HL	C2HL Set	= C2HL ARG1	NA	= C2HL 200
		C2HL Query	? C2HL	NA	? C2HL
CH 2 Cascade Low Limit **	C2LL	C2LL Set	= C2LL ARG1	NA	= C2LL -100
		C2LL Query	? C2LL	NA	? C2LL
CH2 Cascade Prop. Band **	CPB2H	CPB2H Set	= CPB2H ARG1	NA	= CPB2H 10
		CPB2H Query	? CPB2H	NA	? CPB2H
CH2 Cascade Reset **	CRS2H	CRS2H Set	= CRS2H ARG1	NA	= CRS2H 1
		CRS2H Query	? CRS2H	NA	? CRS2H
CH2 Cascade Rate **	CRT2H	CRT2H Set	= CRT2H ARG1	NA	= CRT2H 1
		CRT2H Query	? CRT2H	NA	? CRT2H
CH2 Cascade Rate Band **	CRB2H	CRB2H Set	= CRB2H ARG1	NA	= CRB2H 4
		CRB2H Query	? CRB2H	NA	? CRB2H
Prop. Band, Ch 3 Heat	PB3H	PB3H Set	= PB3H ARG1	0-0999 %RP	= PB3H 10
		PB3H Query	? PB3H	0-0999 %RP	? PB3H
Reset, Ch 3 Heat	RS3H	RS3H Set	= RS3H ARG1	0 - 09.99 Repeats / Minute	= RS3H .02
		RS3H Query	? RS3H	0 - 09.99 Repeats / Minute	? RS3H
Reset, Ch 3 Heat	RS3H	RS3H Set	= RS3H ARG1	0 - 09.999 Repeats / Minute	= RS3H .02
		RS3H Query	? RS3H	0 - 09.999 Repeats / Minute	? RS3H
Rate, Ch 3 Heat	RT3H	RT3H Set	= RT3H ARG1	0 - 09.99 Minutes	= RT3H 1
		RT3H Query	? RT3H	0 - 09.99 Minutes	? RT3H
Rate, Ch 3 Heat	RT3H	RT3H Set	= RT3H ARG1	0 - 09.999 Minutes	= RT3H 1
		RT3H Query	? RT3H	0 - 09.999 Minutes	? RT3H
Cycle Time, Ch 3 Heat	CT3H	CT3H Set	= CT3H ARG1	1 - 60 Seconds	= CT3H 5
		CT3H Query	? CT3H	1 - 60 Seconds	? CT3H
Rate Band, Ch 3 Heat	RB3H	RB3H Set	= RB3H ARG1	1 - 7 Seconds	= RB3H 4

		RB3H Query	? RB3H	1 - 7 Seconds	? RB3H
Rate Band, Ch 3 Heat	RB3H	RB3H Set	= RB3H ARG1	1 - 7 Seconds	= RB3H 4
		RB3H Query	? RB3H	1 - 7 Seconds	? RB3H
Dead Band, Ch 3	DB3	DB3 Set	= DB3 ARG1	-25 to 25 %RP	= DB3 5
		DB3 Query	? DB3	-25 to 25 %RP	? DB3
Prop Band, Ch 3 Cool	PB3C	PB3C Set	= PB3C ARG1	0-0999 %RP	= PB3C 10
		PB3C Query	? PB3C	0-0999 %RP	? PB3C
Reset, Ch 3 Cool	RS3C	RS3C Set	= RS3C ARG1	0 - 09.99 Repeats / Minute	= RS3C .07
		RS3C Query	? RS3C	0 - 09.99 Repeats / Minute	? RS3C
Reset, Ch 3 Cool	RS3C	RS3C Set	= RS3C ARG1	0 - 09.999 Repeats / Minute	= RS3C .07
		RS3C Query	? RS3C	0 - 09.999 Repeats / Minute	? RS3C
Rate, Ch 3 Cool	RT3C	RT3C Set	= RT3C ARG1	0 - 09.99 Minutes	= RT3C 1
		RT3C Query	? RT3C	0 - 09.99 Minutes	? RT3C
Rate, Ch 3 Cool	RT3C	RT3C Set	= RT3C ARG1	0 - 09.999 Minutes	= RT3C 1
		RT3C Query	? RT3C	0 - 09.999 Minutes	? RT3C
Cycle Time, Ch 3 Cool	CT3C	CT3C Set	= CT3C ARG1	1 - 60 Seconds	= CT3C 7
		CT3C Query	? CT3C	1 - 60 Seconds	? CT3C
Rate Band, Ch 3 Cool	RB3C	RB3C Set	= RB3C ARG1	1 - 60 Seconds	= RB3C 4
		RB3C Query	? RB3C	1 - 60 Seconds	? RB3C
		RB3C Query	? RB3C	1 - 60 Seconds	? RB3C
Celsius / Fahrenheit Temp Display	CF	CF Set	= CF ARG1	ARG1: 0 - Celsius 1 - Fahrenheit	= CF 0
		CF Query	? CF	0 - Celsius 1 - Fahrenheit	? CF
Output 11 Control Type	OT11	OT11 Set	= OT11 ARG1	ARG1: 0 - On / Off Control Mode 1 - Time Prop. Control Mode	= OT11 0
		OT11 Query	? OT11	0 - On / Off Control Mode 1 - Time Prop. Control Mode	? OT11
Output 17 Control Type	OT17	OT17 Set	= OT17 ARG1	ARG1: 0 - Vacuum 1 - Purge	= OT17 1
		OT17 Query	? OT17	0 - Vacuum 1 - Purge	? OT17

Output 18 Control Type	OT18	OT18 Set	= OT18 ARG1	ARG1: 0 - Vent 1 - Boost Cool	= OT18 1
		OT18 Query	? OT18	0 - Vent 1 - Boost Cool	? OT18
Alarm Type	ATYP	ATYP Set	= ATYP ARG1	ARG1: 0 - Process Alarm 1 - Deviate Alarm	= ATYP 1
		ATYP Query	? ATYP	0 - Process Alarm 1 - Deviate Alarm	? ATYP
Low Limit, Ch 1	R1L	R1L Set	= R1L ARG1	- 200 to 500 Celsius	= R1L -200
		R1L Query	? R1L	- 200 to 500 Celsius	? R1L
Low Limit, Ch 1	R1L	R1L Set	= R1L ARG1	- 200 to 500 C -326 to 932 F	= R1L -200
		R1L Query	? R1L	- 200 to 500 C -326 to 932 F	? R1L
High Limit, Ch 1	R1H	R1H Set	= R1H ARG1	- 200 to 500 Celsius	= R1H 500
		R1H Query	? R1H	- 200 to 500 Celsius	? R1H
High Limit, Ch 1	R1H	R1H Set	= R1H ARG1	- 200 to 500 C -326 to 932 F	= R1H 500
		R1H Query	? R1H	- 200 to 500 C -326 to 932 F	? R1H
Low Limit, Ch 2	R2L	R2L Set	= R2L ARG1	- 200 to 500 %RH	= R2L -1
		R2L Query	? R2L	- 200 to 500 %RH	? R2L
High Limit, Ch 2	R2H	R2H Set	= R2H ARG1	- 200 to 500 %RH	= R2H 100
		R2H Query	? R2H	- 200 to 500 %RH	? R2H
RTD Curve	RTD	RTD Set	= RTD ARG1	ARG1: 0 - JIS 1 - DIN	= RTD 0
		RTD Query	? RTD	0 - JIS 1 - DIN	? RTD
Vaisala Compensation	VCMP	VCMP Set	= VCMP ARG1	ARG1: 0 - On 1 - Off	= VCMP 0
		VCMP Query	? VCMP	0 - On 1 - Off	? VCMP
1L1	1L1	1L1 Set	= 1L1 ARG1	0 - 100 %	= 1L1 50
		1L1 Query	? 1L1	0 - 100 %	? 1L1
1L2	1L2	1L2 Set	= 1L2 ARG1	0 - 100 %	= 1L2 20
		1L2 Query	? 1L2	0 - 100 %	? 1L2
1L3	1L3	1L3 Set	= 1L3 ARG1	-100 to 100 Celsius	= 1L3 10

		1L3 Query	? 1L3	-100 to 100 Celsius	? 1L3
1L3	1L3	1L3 Set	= 1L3 ARG1	-100 to 100 C -148 to 212 F	= 1L3 10
		1L3 Query	? 1L3	-100 to 100 C -148 to 212 F	? 1L3
1CTY	1CTY	1CTY Set	= 1CTY ARG1	ARG1: 0 - CAP - Tube System 1 - Agree Logic 2 - Burn In Logic 3 - Standard XV Sys Logic	= 1CTY 1
		1CTY Query	? 1CTY	0 - CAP - Tube System 1 - Agree Logic 2 - Burn In Logic 3 - Standard XV Sys Logic	? 1CTY
2L1	2L1	2L1 Set	= 2L1 ARG1	-100 - 100 %	= 2L1 50
		2L1 Query	? 2L1	-100 - 100 %	? 2L1
2L2	2L2	2L2 Set	= 2L2 ARG1	-100 - 100 %	= 2L2 20
		2L2 Query	? 2L2	-100 - 100 %	? 2L2
2L3	2L3	2L3 Set	= 2L3 ARG1	-100 to 100 Celsius	= 2L3 10
		2L3 Query	? 2L3	-100 to 100 Celsius	? 2L3
2L3	2L3	2L3 Set	= 2L3 ARG1	-100 to 100 C -148 to 212 F	= 2L3 10
		2L3 Query	? 2L3	-100 to 100 C -148 to 212 F	? 2L3
2CTY	2CTY	2CTY Set	= 2CTY ARG1	ARG1: 0 - CAP - Tube System 1 - Agree Logic 2 - Burn In Logic 3 - Standard XV Sys Logic	= 2CTY 1
		2CTY Query	? 2CTY	0 - CAP - Tube System 1 - Agree Logic 2 - Burn In Logic 3 - Standard XV Sys Logic	? 2CTY
L3	L3	L3 Set	= L3 ARG1	0 - 100 %	= L3 20
		L3 Query	? L3	0 - 100 %	? L3
L4	L4	L4 Set	= L4 ARG1	0 - 100 %	= L4 20
		L4 Query	? L4	0 - 100 %	? L4
L6	L6	L6 Set	= L6 ARG1	-100 to 100 Celsius	= L6 20
		L6 Query	? L6	-100 to 100 Celsius	? L6
		L6 Query	? L6	-100 to 100 C -148 to 212 F	? L6
L6	L6	L6 Set	= L6 ARG1	-100 to 100 C -148 to 212 F	= L6 20

L7	L7	L7 Set	= L7 ARG1	0 - 100 %	= L7 10
		L7 Query	? L7	0 - 100 %	? L7
L8	L8	L8 Set	= L8 ARG1	0 - 100 %	= L8 80
		L8 Query	? L8	0 - 100 %	? L8
L9	L9	L9 Set	= L9 ARG1	-100 to 100 Celsius	= L9 50
		L9 Query	? L9	-100 to 100 Celsius	? L9
L9	L9	L9 Set	= L9 ARG1	-100 to 100 C -148 to 212 F	= L9 50
		L9 Query	? L9	-100 to 100 C -148 to 212 F	? L9
L11	L11	L11 Set	= L11 ARG1	0 - 100 %	= L11 20
		L11 Query	? L11	0 - 100 %	? L11
L12	L12	L12 Set	= L12 ARG1	0 - 100 %	= L12 10
		L12 Query	? L12	0 - 100 Seconds	? L12
L14	L14	L14 Set	= L14 ARG1	0 - 60 Seconds	= L14 10
		L14 Query	? L14	0 - 60 %	? L14
L15	L15	L15 Set	= L15 ARG1	0 - 5 Minutes	= L15 2
		L15 Query	? L15	0 - 5 Minutes	? L15
LEV1	LEV1	LEV1 Set	= LEV1	ARG1: 0 - Dehumidify Coil 1 - Drier	=LEV1 1
		LEV1 Query	? LEV1	ARG1: 0 - Dehumidify Coil 1 - Drier	? LEV1
Enable Logging	LOGGING_ ENABLED	LOGGING_ENAB LED Set	= LOGGING_ ENABLED ARG1	ARG1: 0 - Disabled 1 - Enabled	= LOGGING_ ENABLED 1
		LOGGING_ENAB LED Query	? LOGGING_ ENABLED	0 - Disabled 1 - Enabled	? LOGGING_ ENABLED
Logging Interval	LOGGING_ INTERVAL	LOGGING_INTER VAL Set	= LOGGING_ INTERVAL ARG1	0 to 3600 Seconds	= LOGGING_ INTERVAL 60
		LOGGING_INTER VAL Query	? LOGGING_ INTERVAL	0 to 3600 Seconds	? LOGGING_ INTERVAL
Log File Size	LOG_FILE_ SIZE	LOG_FILE_SIZE Set	= LOG_FILE_SIZE ARG1	0.25 - 5 MB	= LOG_FILE_SIZE 1.4
		LOG_FILE_SIZE Query	? LOG_FILE_SIZE	0.25 - 5 MB	? LOG_FILE_SIZE

Log Ch1 Actual	LOG_CH1_ ACT	LOG_CH1_ACT Set	= LOG_CH1_ACT ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CH1_ACT 1
		LOG_CH1_ACT Query	? LOG_CH1_ACT	0 - Don't Log 1 - Log	? LOG_CH1_ACT
Log Ch2 Actual	LOG_CH2_ ACT	LOG_CH2_ACT Set	= LOG_CH2_ACT ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CH2_ACT 1
		LOG_CH2_ACT Query	? LOG_CH2_ACT	0 - Don't Log 1 - Log	? LOG_CH2_ACT
Log Ch3 Actual	LOG_CH3_ ACT	LOG_CH3_ACT Set	= LOG_CH3_ACT ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CH3_SP 1
		LOG_CH3_ACT Query	? LOG_CH3_ACT	0 - Don't Log 1 - Log	? LOG_CH3_SP
Log Ch1 Setpoint	LOG_CH1_ SP	LOG_CH1_SP Set	= LOG_CH1_SP ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CH1_SP 1
		LOG_CH1_SP Query	? LOG_CH1_SP	0 - Don't Log 1 - Log	? LOG_CH1_SP
Log Ch2 Setpoint	LOG_CH2_ SP	LOG_CH2_SP Set	#NAME?	ARG1: 0 - Don't Log 1 - Log	= LOG_CH2_SP 1
		LOG_CH2_SP Query	? LOG_CH2_SP	0 - Don't Log 1 - Log	? LOG_CH2_SP
Log Ch3 Setpoint	LOG_CH3_ SP	LOG_CH3_SP Set	= LOG_CH3_SP ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CH3_SP 1
		LOG_CH3_SP Query	? LOG_CH3_SP	0 - Don't Log 1 - Log	? LOG_CH3_SP
Log CH1 Cascade Act **	LOG_CAS_ CH1_ACT	LOG_CAS_CH1_ ACT Set	= LOG_CAS_CH1_ACT ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CAS_CH1_ACT 1
		LOG_CAS_CH1_ ACT Query	? LOG_CAS_CH1_ACT	0 - Don't Log 1 - Log	? LOG_CAS_CH1_ACT

Log CH2 Cascade Act **	LOG_CAS_ CH2_ACT	LOG_CAS_CH2_ ACT Set	= LOG_CAS_CH2_ACT ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CAS_CH2_ACT 1
		LOG_CAS_CH2_ ACT Query	? LOG_CAS_CH2_ACT	0 - Don't Log 1 - Log	? LOG_CAS_CH2_ACT
Log CH1 Cascade SP **	LOG_CAS_ CH1_SP	LOG_CAS_CH1_ SP Set	= LOG_CAS_CH1_SP ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CAS_CH1_SP 1
		LOG_CAS_CH1_ SP Query	? LOG_CAS_CH1_SP	0 - Don't Log 1 - Log	? LOG_CAS_CH1_SP
Log CH2 Cascade SP **	LOG_CAS_ CH2_SP	LOG_CAS_CH2_ SP Set	= LOG_CAS_CH2_SP ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CAS_CH2_SP 1
		LOG_CAS_CH2_ SP Query	? LOG_CAS_CH2_SP	0 - Don't Log 1 - Log	? LOG_CAS_CH2_SP
Log CH1 Cascade PID **	LOG_CAS_ CH1_PID	LOG_CAS_CH1_ PID Set	= LOG_CAS_CH1_PID ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CAS_CH1_PID 1
		LOG_CAS_CH1_ PID Query	? LOG_CAS_CH1_PID	0 - Don't Log 1 - Log	? LOG_CAS_CH1_PID
Log CH2 Cascade PID **	LOG_CAS_ CH2_PID	LOG_CAS_CH2_ PID Set	= LOG_CAS_CH2_PID ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CAS_CH2_PID 1
		LOG_CAS_CH2_ PID Query	? LOG_CAS_CH2_PID	0 - Don't Log 1 - Log	? LOG_CAS_CH2_PID
Log Ch 1 Heat PID	LOG_CH1_ HEAT	LOG_CH1_ HEAT Set	= LOG_CH1_HEAT ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CH1_HEAT 1
		LOG_CH1_ HEAT Query	? LOG_CH1_HEAT	0 - Don't Log 1 - Log	? LOG_CH1_HEAT
Log Ch 1 Cool PID	LOG_CH1_ Cool	LOG_CH1_ Cool Set	= LOG_CH1_Cool ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CH1_COOL 1
		LOG_CH1_ Cool Query	? LOG_CH1_Cool	0 - Don't Log 1 - Log	? LOG_CH1_COOL

Log Ch 2 Heat PID	LOG_CH2_ HEAT	LOG_CH2_ HEAT Set	= LOG_CH2_HEAT ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CH2_HEAT 1
		LOG_CH2_ HEAT Query	? LOG_CH2_HEAT	0 - Don't Log 1 - Log	? LOG_CH2_HEAT
Log Ch 2 Cool PID	LOG_CH2_ Cool	LOG_CH2_ Cool Set	= LOG_CH2_Cool ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CH2_COOL 1
		LOG_CH2_ Cool Query	? LOG_CH2_Cool	0 - Don't Log 1 - Log	? LOG_CH2_COOL
Log Ch 3 Heat PID	LOG_CH3_ HEAT	LOG_CH3_ HEAT Set	= LOG_CH3_HEAT ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CH3_HEAT 1
		LOG_CH3_ HEAT Query	? LOG_CH3_HEAT	0 - Don't Log 1 - Log	? LOG_CH3_HEAT
Log Ch 3 Cool PID	LOG_CH3_ Cool	LOG_CH3_ Cool Set	= LOG_CH3_Cool ARG1	ARG1: 0 - Don't Log 1 - Log	= LOG_CH3_COOL 1
		LOG_CH3_ Cool Query	? LOG_CH3_Cool	0 - Don't Log 1 - Log	? LOG_CH3_COOL
PID Channel 1 Heat *	PID1H	PID1H Query	? PID1H	1 - 100 %	? PID1H
PID Channel 1 Cool *	PID1C	PID1C Query	? PID1C	1 - 100 %	? PID1C
PID Channel 2 Heat *	PID2H	PID2H Query	? PID2H	1 - 100 %	? PID2H
PID Channel 2 Cool *	PID2C	PID2C Query	? PID2C	1 - 100 %	? PID2C
PID Channel 3 Heat *	PID3H	PID3H Query	? PID3H	1 - 100 %	? PID3H
PID Channel 3 Cool *	PID3C	PID3C Query	? PID3C	1 - 100 %	? PID3C
Acknowledge All Alarms *	ACKALM	ACKALM Set	= ACKALM ARG1	ARG1 - Always 1 to reset the alarms Number of active alarms, 32 bit hex number representing types of alarms.	= ACKALM 1
Show Active Alarms *	SHOWACT ALM	SHOWACTALM Query	? SHOWACTALM	Shows all active alarms. Number of active alarms, 32 bit hex number representing types of alarms.	? SHOWACTALM

Show Alarm Status *	ALM	ALM Query	? ALM	Shows alarm states Returns 3 values: %i, %i, %8.8X First: Number of Alarms, both active & inactive Second: Number of active alarms Third: 32 bit hex number with each bit representing a different alarm	? ALM
				Bit 1 - Comm Port / Olympic board unavailable Bit 2 - Bad Sensor connect 1 Bit 3 - Bad Sensor connect 2 Bit 4 - Bad Sensor connect 3 Bit 5 - Bad Sensor connect 4 Bit 6 - Bad Sensor connect 5 Bit 7 - Bad Sensor connect 6	
				Bit 8 - Olympic Board Reset Bit 9 - Storage Space Low Bit 10 - Program Memory Low Bit 11 - Watlow Alarm Bit 12 - CH1 High Alarm Bit 13 - CH1 Low Alarm Bit 14 - CH2 High Alarm Bit 15 - CH2 Low Alarm Bit 16 - CH3 High Alarm Bit 17 - CH3 Low Alarm	
				Bit 18 - PID Thread Crashed Bit 19 - Bad Sensor Reading	
Events	EVENTS	EVENTS Set	= EVENTS	ARG1: Event # (1-8) ARG2: 0 - Disabled 1 - Enabled	= EVENTS 1 1

		EVENTS Query	? EVENTS	Returns a 32 Bit hex number. Each bit represents an event Bit 1 = Event 1 Bit 2 = Event 2 Bit 3 = Event 3 Bit 4 = Event 4 Bit 5 = Event 5 Bit 6 = Event 6 Bit 23 = Relay 1 Bit 24 = Relay 2	? EVENTS
		EVENTS Query	? EVENTS	ARG1: Event # (1-8)	? EVENTS 1
Storage Card Info *	SCINFO	SCINFO Query	? SCINFO	returns storage card free	? SCINFO
RAM Info	VTVMEMIN FO	VTVMEMINFO Query	? VTVMEMINFO	Returns total system RAM and available RAM	? VTVMEMINFO
Create a New File	FILENEW	FILENEW Set	= FILENEW	No Arguments	= FILENEW
Saves a downloaded file	FILESAVE	FILESAVE Set	= FILESAVE	ARG1 = Filename to save to	= FILESAVE MyProfile
Sets information regarding the profile being downloaded. Used immediately after a FILENEW command	VTVINFO	VTVINFO Set	= VTVINFO ARG1 ARG2 ARG3 ARG4 This is only for use in saved files.	ARG1 - Major Version # of file. Is 1 ARG2 - Minor Version # of file. Is 0 ARG3 - Revision Version # of file. Is 0 ARG4: 0 - File is saved in C 1 - File is saved in F	= VTVINFO 1 0 0 0
Program Step	STP	STP	= STP File # Step # STEPTYPE ARG4 ARGn		= STP 1 1 0
FILE #	N/A	See Program Step	N/A	Range: Anything	N/A
STEP #	N/A	See Program Step	N/A	Range 1-255	N/A
STEPTYPE	N/A	See Program Step	N/A	0 = Setpoint 1 = Jumploop 2 = Waitfor 3 = Autostart 4 = Stop 5 = Link	

SETPOINT	N/A	See Steptype	ARG4 ARG5 ... ARG30	ARG4 = CH1 SP ARG5 = CH2 SP ARG6 = Ramp Hours ARG7 = Ramp Minutes ARG8 = Ramp Seconds ARG9 - 14 = Event 1 - 6 ARG15 - 16 = 0 ARG17 = CH3 SP ARG18 - 27 = 0 ARG28 = LEV1 ARG29 = LEV2 ARG30 = OT11
JUMLOOP	N/A	See Steptype	ARG4 ARG5	ARG4 = Jump Step ARG5 = Jump Count
WAITFOR	N/A	See Steptype	ARG4 ARG5 ... ARG26	ARG4 = Wait CH1 Actual ARG5 = Wait CH2 Actual ARG6 = Wait Hours ARG7 = Wait Minutes ARG8 = Wait External Event ARG9 = Wait CH3 Actual ARG10 = Wait Seconds ARG11 - 26 = Wait on Input 1-16
AUTOSTART	N/A	See Steptype	ARG4 ARG5 ARG6 ARG7 ARG8	ARG4 = AutoStart Day ARG5 = AutoStart Hour ARG6 = AutoStart Minute ARG7 = AutoStart Month ARG7 = AutoStart Year
STOP	N/A	See Steptype	ARG4	ARG4: 0 - Outputs Off 1 - Outputs On