▲ CONFIGURE

SET UP OPERATING MODES

Use these commands to set up the operating configuration of your Model 600A/620A Environmental Chamber System Controller.

COMMAND	FUNCTION	REPLY

1 USE THESE COMMANDS TO FIRST SELECT THE 600/620 YOU WISH TO ADDRESS AND PLACE THE SELECTED UNIT UNDER COMPUTER CONTROL:

ADR [cr] ..... read the address of the selected unit ..... nn [lf]
Use this QUERY command if your installation has two or more 600/620s

#nn [cr] ..... select the 600/620 ADDRESS ..... [no reply]

IFS [cr] ..... request INTERFACE STATUS ..... LCL [lf], RMT [lf], or RSR [lf]
Control is either from the Front Panel ("LCL") or from your computer ("RMT" or "RSR")

RMT SELECT [cr] ..... change to REMOTE mode (computer control) ..... ok [lf]
To transfer control back to the 600/620 Front Panel, use the command LCL [cr]

RSR SELECT [cr] ..... change to EXTERNAL RAMP SOAK (computer control) ..... ok [lf]

2 USE THE FOLLOWING COMMANDS TO READ INFORMATION ABOUT THE SELECTED UNIT:

CRM [cr] ..... read CONTROLLER MODE ..... xxx...xxx [lf]
Response to this query command is a character string "xxx...xxx" from one of the following: DUAL; SINGLE; PASSTHRU; FASTRAC

FRE [cr] ..... read FREE MEMORY ..... nnn [lf]
Response to this command "nnn" is the number of STEPS available (200, max)

MOD [cr] ..... read PROGRAMMER MODE ..... xxx [cr]
Response to this command "xxx" is one of the following: STP (stop); RUN; or PAU (Pause)

PFA [cr] ..... read POWER FAIL RECOVERY ACTION ..... xxx...xxx [lf]
Response "xxx...xxx" is one of the following: NO_ACTION; HOLD; or RUN

I8A [cr] ..... read #8 INPUT JUMP CONDITION ..... xxx...xxx [lf]
Response to this query command is a character string "xxx...xxx" from one of the following: NO_ACTION; RUN

STA [cr] ..... read STATUS OF PROGRAMMER ..... xxx [lf]
Response "xxx" is one of the following:
RUN; STP (stop); PAU (Pause); EOP (End of Program); PWF (Power Fail); GS1 (Guaranteed Soak Ch1); GS2

VER [cr] ..... read FIRMWARE VERSION ..... nnn [lf]
Response "nnn" is version n.nn ; ie "156 [lf]" is version 1.56

DAT [cr] ..... read DATE of Firmware Revision ..... mm/dd/yy [lf]

SYN [cr]* ..... read STATUS OF SYNCHRONIZER MODE ..... x [lf]
Response "x" is one of the following: "1" = ON, "0" = OFF

NOTE:

Append a [LF] to the IEEE command not a [CR] as shown in the reference guide.

continued on next page

** Note: Sync must be OFF unless 600A/620A is being used as part of a multi-unit synchronized system!*

Use these commands to set up the operating configuration of your Model 600A/620A Environmental Chamber System Controller.

COMMAND	FUNCTION	REPLY

3 USE THESE COMMANDS TO CONFIGURE THE SELECTED UNIT: (NOTE: SEND COMMAND W/O DATA TO READ CURRENT VALUE)

ALT nnnn [cr]	select SITE ELEVATION (altitude, in feet)	ok [lf]
CH1 M [cr]	select MANUAL MODE for Channel 1 *Use "CH2 M" to select Manual Mode for Channel 2*	ok [lf]
CH1 P [cr]	select PROGRAMMER MODE for Channel 1 *Use "CH2 P" to select Programmer Mode for Channel 2*	ok [lf]
FTH nnn [cr]	set the FastTRAC HI TEMP setpoint limit *This value establishes the upper setpoint for chamber air temperature*	ok [lf]
FTL nnn [cr]	set the FastTRAC LO TEMP setpoint limit *This value establishes the lower setpoint for chamber air temperature*	ok [lf]
HL1 nnn [cr]	set HI PROCESS LIMIT for Channel 1 *Use "HL2 nnn" to set Hi Process Limit for Channel 2*	ok [lf]
HS1 nnn [cr]	set HI SPAN LIMIT for Channel 1 *Use "HS2 nnn" to set Hi Span Limit for Channel 2*	ok [lf]
I8A N [cr]	set #8 Input Jump Condition to NO ACTION *This is the Normal (default) condition*	ok [lf]
I8A R [cr]	set Input #8 Jump Condition to RUN *Follow this with command defining Program to be run (see next)*	ok [lf]
I8P nn [cr]	set PROGRAM NUMBER to run if Jump is executed *Follow this with command defining Step of Program (see next)*	ok [lf]
I8S nnn [cr]	set STARTING STEP in Selected Program if Jump is executed	ok [lf]
LL1 nnn [cr]	set LOWER PROCESS LIMIT for Channel 1 *Use "LL2 nnn" command to set Lower Process Limit for Channel 2*	ok [lf]
LP1 nn [cr]	set LOW PASS FILTER for Channel 1 *"nn" is Tau value in seconds; use "LP2 nn" command to set Low Pass Filter for Channel 2*	ok [lf]
LS1 nnn [cr]	set LOW SPAN LIMIT for Channel 1 *Use "LS2 nnn" to set Low Span Limit for Channel 2*	ok [lf]
PF1 nnn [cr]	set the POWER FAIL Process Change Limit for Channel 1 *Use "PF2 nnn" command to set the Power Fail Process Change Limit for Channel 2*	ok [lf]
PFP nn [cr]	set POWER FAILURE PROGRAM Number	ok [lf]
PFS nnn [cr]	set STARTING STEP in Selected Power Fail Program	ok [lf]
UN1 nnn [cr]	set UNITS for Channel 1 *"nnn" is one of the following:F-Degrees-F;C-Degrees-C; RH-RH/WB; LIN-Linear* *Use "UN2 nnn" command to set Units for Channel 2*	ok [lf]
SYN n [cr]*	set SYNCHRONIZER MODE *Use "SYN 1" to turn ON the Synchronizaer mode* *Use "SYN 0" to turn OFF the Synchronizaer mode*	ok [lf]

NOTE:

Append a [LF] to the IEEE command not a [CR] as shown in the reference guide.

** Note: Sync must be OFF unless 600A/620A is being used as part of a multi-unit synchronized system!*

▲ EDIT

CREATE AND/OR MODIFY OR REVIEW PROGRAMS

Use these commands to Create, Modify or Review programs stored in your 600A/620A Environmental Chamber System Controller.

COMMAND	FUNCTION	REPLY

1 USE THESE COMMANDS TO FIRST SELECT THE 600/620 YOU WISH TO ADDRESS AND PLACE THE SELECTED UNIT UNDER COMPUTER CONTROL:

ADR [cr]	read the address of the selected unit	nn [lf]
	Use this QUERY command if your installation has two or more 600/620s	
#nn [cr]	select the 600/620 ADDRESS	[no reply]
IFS [cr]	request INTERFACE STATUS	LCL [lf] or RMT [lf]
	Control is either from the Front Panel ("LCL") or from your computer ("RMT")	
RMT SELECT [cr]	change to REMOTE mode (computer control)	ok [lf]
	To transfer control back to the 600/620 Front Panel, use the command LCL [cr]	

2 IF YOU ARE GENERATING A NEW PROGRAM, START WITH THIS COMMAND AND THEN GO TO ITEM 4 BELOW:

FRS nn [cr]	insert the FIRST STEP of a new program	ok [lf]
	"nn" is the number of the new program	

3 IF YOU WISH TO EDIT AN EXISTING PROGRAM, START BY SELECTING THE DESIRED PROGRAM AND STEP THEN GO TO ITEM 4 BELOW:

PRN nn [cr]	select PROGRAM number	ok [lf]
	To READ the current program number, just enter PRN [cr]	*nn [cr]*
STN nnn [cr]	choose the STEP number in the selected program	ok [lf]
	To READ the current STEP number, just enter STN [cr]	*nnn [lf]*

4 USE THESE COMMANDS TO EDIT THE TYPE OF THE SELECTED STEP, THEN GO TO ITEM 5 BELOW:

TYP [cr]	QUERY type of selected step	TYP [lf]
	Response will be one of the following: STD, EOP, LOP, GTO, GTI or PAU	
TYP S [cr]	define selected step as STD (Standard = RAMP/SOAK)	ok [lf]
TYP E [cr]	define selected step as EOP (End of Program)	ok [if]
	If your program calls for multiple cycles, follow this command with the LOP command (see below)	
TYP L [cr]	define selected step as LOOP	ok [lf]
	Immediately follow this command with the LOP command (see next)	
LOP cccc sss [cr]	LOOP from the selected step, a total of cccc cycles back to step sss	ok [lf]
TYP G [cr]	define selected step as GTO (Go To - Unconditional)	ok [lf]
	Immediately follow this command with the GTO command (see next)	
GTO pp sss [cr]	directs the controller to JUMP to Program "pp", Step "sss"	ok [lf]
TYP I [cr]	define selected step as GTI (Go To -IF)	ok [lf]
	Immediately follow this command with the GTI command (see next)	
GTI pp sss x [cr]	directs the controller to JUMP to Program "pp", Step "sss" IF "x" is true	ok [lf]
	"x" may be any event ("1" thru" 8" or "A "thru" H") or "0" for Input #4	
TYP P [cr]	define selected step as PAUSE	ok [lf]

NOTE:

Append a [LF] to the IEEE command not a [CR] as shown in the reference guide.

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IEEE488 OPTIONS

Refer to the back cover of this guide for a listing of additional IEEE488 instructions.

Use these commands to Create, Modify or Review programs stored in your 600A/620A Environmental Chamber System Controller.

COMMAND	FUNCTION	REPLY

5 USE THESE COMMANDS TO COMPLETE THE DETAILS FOR THE SELECTED STEP. (NOTE: SEND COMMAND W/O DATA TO READ CURRENT VALUE)

AL1 nn [cr]	set DEVIATION ALARM for Channel 1 (use "AL2" for Ch2)	ok [lf]
DEP [cr]	DELETE the selected PROGRAM	ok [lf]
DES [cr]	DELETE the selected STEP	ok [lf]
CL1 [cr]	CLEAR the Channel 1 SETPOINT for the selected step (use "CL2" for Ch2)	ok [lf]
EVC [cr]	CLEAR all the EVENTS for the selected step	ok [lf]
EVD [cr]	set ALL the EVENTS for the selected step to DON'T CARE state	ok [lf]
EVF n n [cr]	set selected EVENTS to OFF (e.g. EVF 1 3 A H [cr])	ok [lf]
EVN n n [cr]	set selected EVENTS to ON (e.g. EVN 2 4 B G [cr])	ok [lf]
EVS 1•3••6••A••D•X•H [cr]	EVENT STATUS (read or store image)	ok [lf]
EVX n n [cr]	set selected EVENTS to DON'T CARE (e.g. EVX 2 5 C [cr])	ok [lf]
GS1 nn [cr]	set GUARANTEED SOAK for ch1 (use "GS2" for ch2)	ok [lf]
SS1 nnn.n [cr]	establish SETPOINT for Channel 1 (use "SS2" for Ch2)	ok [lf]
STM hh mm ss [cr]	set TIME for step	ok [lf]
	Enter hours as "00" if time less than 1 hr; You may also enter this command as STM hh:mm:ss [cr]	
TBD nn [cr]	set thermal boost decrease	ok [lf]
TBI nn [cr]	set thermal boost increase	ok [lf]

6 IF YOU ARE CREATING A NEW PROGRAM OR ADDING STEPS TO AN EXISTING PROGRAM, USE THIS COMMAND THEN RETURN TO ITEM 4 ABOVE:

INS [cr]	INSERT a BLANK STEP immediately following the selected step	ok [lf]
	All subsequent commands will apply to the NEW step	

7 USE THIS COMMAND TO RETURN THE SELECTED 600/620 CONTROLLER TO FRONT PANEL OPERATION:

LCL [cr]	place selected unit under LOCAL control (front panel)	ok [lf]

NOTE:

Append a [LF] to the IEEE command not a [CR] as shown in the reference guide.

IEEE488 OPTIONS

Refer to the back cover of this guide for a listing of additional IEEE488 instructions.

▲ MONITOR

READ CURRENT VALUES & STATUS WHILE THE PROGRAM IS RUNNING

Use these commands to monitor the current information in your Model 600A/620A Environmental Chamber System Controller.

COMMAND	FUNCTION	REPLY

1 USE THESE COMMANDS TO FIRST SELECT THE 600/620 YOU WISH TO ADDRESS:

ADR [cr] ..... read the address of the selected unit ..... nn [lf]
Use this QUERY command if your installation has two or more 600/620s

#nn [cr] ..... select the 600/620 ADDRESS ..... [no reply]

2 USE THESE COMMANDS TO REQUEST SET UP INFORMATION FROM THE SELECTED 600/620 CONTROLLER:

IFS [cr] ..... request INTERFACE STATUS ..... LCL [lf] or RMT [lf]
Response will be "LCL" if selected unit is under front panel control; "RMT" if under computer control

CH1 [cr] ..... request Channel 1 CONTROLLER MODE ..... PRG [lf] or MAN [lf]
Response will be "PRG" if Ch1 setpoint is under programmer control; "MAN" if under manual control
Use command "CH2" to request Channel 2 Controller Mode

UN1 [cr] ..... read UNITS of Channel 1 Configuration ..... xxx...xxx [lf]
Response is character string defining units of measure from one of the following:
Degrees-C; Degrees-F; RH/WB; or Linear
Use command "UN2" to request Units of Channel 2 Configuration

3 USE THESE COMMANDS TO REQUEST CONTROL LOOP INFORMATION FROM THE SELECTED 600/620:

PR1 [cr] ..... read PROCESS VALUE for Channel 1 ..... xxx.x [lf]
Use command "PR2" to request Channel 2 Process Value

PW1 [cr] ..... read POWER OUTPUT for Channel 1 ..... xx.xx [lf]
Response is as percentage of maximum
Use command "PW2" to request Channel 2 Power Output

SP1 [cr] ..... read SETPOINT VALUE for Channel 1 ..... xxx.x [lf]
Use command "SP2" to request Channel 2 Setpoint Value

4 USE THESE COMMANDS TO REQUEST ALARM AND EVENT INFORMATION FROM THE SELECTED 600/620:

AEV [cr] ..... EVENT STATUS Request ..... 1•••5•7•.A•••E••H [lf]
Events that are "ON" are noted by identifying character; events that are "OFF" are noted by "•"

ALM [cr] ..... ALARM STATUS Request ..... xxxxxxxx [lf]
The response to this request is a character string that defines alarm status in the following order:
S1: Channel 1 Setpoint Alarm; L1: Channel 1 Deviation Alarm
S2: Channel 2 Setpoint Alarm; L2: Channel 2 Deviation Alarm
When alarm condition is not in effect, the respective characters are replaced by "-"; e.g. S1 - - - - L2

CPI [cr] ..... read LATCHED inputs (on TB-5) and RESET ..... 1••••••8 [lf]
Example response shows events "1" and "8" were "ON". After reading, both were reset

RDI [cr] ..... read STATUS OF INPUTS at TB-6 ..... 1••••••8 [lf]
Example response shows inputs "1" and "8" are "ON"

NOTE:

Append a [LF] to the IEEE command not a [CR] as shown in the reference guide.

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IEEE488 OPTIONS

Refer to the back cover of this guide for a listing of additional IEEE488 instructions.

READ CURRENT VALUES & STATUS WHILE THE PROGRAM IS RUNNING

Use these commands to monitor the current information in your Model 600A/620A Environmental Chamber System Controller.

COMMAND	FUNCTION	REPLY

5 USE THESE COMMANDS TO REQUEST PROGRAMMER INFORMATION FROM THE SELECTED 600/620:

CPN [cr] ..... read Current PROGRAM Number ..... nn [lf]

CSN [cr] ..... read Current STEP Number ..... nnn [lf]

MOD [cr] ..... identify MODE OF PROGRAMMER ..... xxx [lf]

Response "xxx" is "RUN" (Run Mode) or "STP" (Stop Mode)

CTG [cr] ..... read CYCLES TO GO ..... nnnn [lf]

Response to this command will be "----" if EOP has not been reached

LTG [cr] ..... read LOOPS TO GO ..... nnnn [lf]

Response will show "----" if LOOP step has not been reached

TIM [cr] ..... read TIME REMAINING in Current Step.....hh:mm:ss [lf]

NOTE:

Append a [LF] to the IEEE command not a [CR] as shown in the reference guide.

IEEE488 OPTIONS

Refer to the back cover of this guide for a listing of additional IEEE488 instructions.

▲ PID TUNING

CHANGE TUNING PARAMETERS IN REAL TIME

Use these commands to set or modify the PID tuning parameters of your Model 600A/620A Environmental Chamber System Controller.

COMMAND	FUNCTION	REPLY

1 USE THESE COMMANDS TO FIRST SELECT THE 600/620 YOU WISH TO ADDRESS AND PLACE THE SELECTED UNIT UNDER COMPUTER CONTROL:

ADR [cr]	read the ADDRESS of the selected unit	nn [lf]
	Use this QUERY command if your installation has two or more 600/620s	
#nn [cr]	select the 600/620 ADDRESS	[no reply]
IFS [cr]	request INTERFACE STATUS	LCL [lf] or RMT [lf]
	Control is either from the Front Panel ("LCL") or from your computer ("RMT")	
RMT SELECT [cr]	change to REMOTE mode (computer control)	ok [lf]
	To transfer control back to the 600/620 Front Panel, use the command LCL [cr]	

2 USE THESE COMMANDS TO ADDRESS (OR READ) A GROUP OF PID PARAMETERS:

PID nnn [cr]	ADDRESS PID parameters	ok [lf]
	"nnn" is a three-character code as follows: *1st Character: the CHANNEL NUMBER (either "1" or "2")* *2nd Character: HEATING or COOLING action (either "H" or "C")* *3rd Character: UNSTAGED or STAGED GROUP (either "U" or "S")* *as illustrated in the following example:* *PID 1HU [cr] Select PID Channel 1, Heating Action, Unstaged Parameters*	
PID [cr]	READ the active PID parameter selection	nnn [lf]
	"nnn" is a three character code as described above	

3 USE THESE COMMANDS TO SET THE PID PARAMETERS WITHIN THE SELECTED GROUP: (note: for a query, simply omit the "n" from the command)

CTM n [cr]	set CYCLE TIME	ok [lf]
PBN n [cr]	set PROPORTIONAL BAND	ok [lf]
	"n" is numerical value in current units	
PGN n [cr]	set PROPORTIONAL GAIN	ok [lf]
INT n [cr]	set Integral (RESET) action	ok [lf]
	"n" is RESET value in repeats per minute	
RWI n [cr]	set RESET WINDUP INHIBIT	ok [lf]
	"n" is reset windup inhibit value as a percentage of proportional band	
UWF n [cr]	set UNWIND FACTOR	ok [lf]
	"n" is the UNWIND FACTOR (de-integration accelerator)	
ICP n [cr]	set INTEGRAL CLIP	ok [lf]
	"n" is integral clip value as percentage of stored integral to cut	
DER n [cr]	set DERIVATIVE action	ok [lf]
	"n" is the derivative action in minutes	
IDB n [cr]	set ID BAND	ok [lf]
	"n" is the dead band value with active rate and reset	
MNO n [cr]	set MINIMUM OUTPUT POWER	ok [lf]
	"n" is the minimum power output (ALWAYS ON) as a percentage of full power	
MXO n [cr]	set MAXIMUM OUTPUT POWER	ok [lf]
	"n" is the maximum power output as a percentage of full power	

4 USE THIS COMMAND TO RETURN THE SELECTED 600/620 CONTROLLER TO FRONT PANEL OPERATION:

LCL [cr]	place selected unit under LOCAL control (Front Panel)	ok [lf]

▲ MANUAL CONTROL

DIRECT EXTERNAL CONTROL OF SETPOINTS AND EVENTS

Use these commands to execute real-time control of setpoints and event outputs of your Model 600A/620A Environmental Chamber System Controller.

COMMAND	FUNCTION	REPLY

1 USE THESE COMMANDS TO FIRST SELECT THE 600/620 YOU WISH TO ADDRESS AND PLACE THE SELECTED UNIT UNDER COMPUTER CONTROL:

ADR [cr]	read the ADDRESS of the selected unit	nn [lf]
	Use this QUERY command if your installation has two or more 600/620s	
#nn [cr]	select the 600/620 ADDRESS	[no reply]
IFS [cr]	request INTERFACE STATUS	LCL [lf] or RMT [lf]
	Control is either from the Front Panel ("LCL") or from your computer ("RMT")	
RMT SELECT [cr]	change to REMOTE mode (computer control)	ok [lf]
	To transfer control back to the 600/620 Front Panel, use the command LCL [cr]	

2 USE THIS COMMAND TO PLACE BOTH CHANNELS OF THE SELECTED UNIT INTO THE MANUAL SETPOINT MODE:

CH1 M [cr]	set Channel 1 Setpoint operation to MANUAL Mode	ok [lf]
	CH1 Setpoint is removed from Programmer Control	
	Use the command "CH2 M" to place Channel 2 Setpoint operation under Manual control	

3 USE THESE COMMANDS TO READ THE STATUS OF EVENTS, PROCESS VALUES AND SETPOINTS:

MS1 [cr]	read the MANUAL SETPOINT for Channel 1	xxx.x [lf]
MS2 [cr]	read the MANUAL SETPOINT for Channel 2	xxx.x [lf]
PR1 [cr]	read the current PROCESS VALUE for Channel 1	xxx.x [lf]
PR2 [cr]	read the current PROCESS VALUE for Channel 2	xxx.x [lf]
AEV [cr]	read the current EVENT STATUS	1•••5•7•A•••E••H [lf]
	Events that are "ON" are noted by identifying character; events that are "OFF" are noted by "•"	

4 USE THESE COMMANDS TO EXECUTE REAL-TIME CONTROL OVER SETPOINTS, EVENTS AND THERMOBOOST OF THE SELECTED UNIT:

CM1 [cr]	clear the MANUAL SETPOINT for Ch 1 (Use "CM2" for Ch2)	ok [lf]
MS1 nnn.n [cr]	set the MANUAL SETPOINT for Ch 1 (Use "MS2..." for Ch2)	ok [lf]
CH1 % OUTPUT [cr]	set Ch1 to %OUTPUT (PCT) mode (Use "CH2..." for Ch2)	ok [lf]
M%1 nnn [cr]	set nnn% output on Ch1 (Use "M%2..." for Ch2)	ok [lf]
	PCT OUTPUT mode must be selected	
MBD nn [cr]	set THERMOBOOST value for COOL action	ok [lf]
MBI nn [cr]	set THERMOBOOST value for HEAT action	ok [lf]
MA1 nn [cr]	set ALARM LIMIT for Ch 1 (Use "MA2..." for Ch2)	ok [lf]
	Limit defined is deviation from manual setpoint	
MEN n n [cr]	set specified events to "ON"	ok [lf]
MEC [cr]	clear all MANUAL events	ok [lf]
MEF n n [cr]	set specified events to "OFF"	ok [lf]

5 USE THIS COMMAND TO RETURN THE SELECTED 600/620 CONTROLLER TO FRONT PANEL OPERATION:

LCL [cr]	place selected unit under LOCAL control (front panel)	ok [lf]

NOTE:

Append a [LF] to the IEEE command not a [CR] as shown in the reference guide.

▲ CONTROL PROGRAMMER

RUN, STOP (HOLD), RESET, ETC.

Use these commands to control operation of your 600A/620A Programmer – Run, Stop, Reset, etc. – from your computer or smart terminal.

COMMAND	FUNCTION	REPLY
1 USE THESE COMMANDS TO FIRST SELECT THE 600/620 YOU WISH TO ADDRESS AND PLACE THE SELECTED UNIT UNDER COMPUTER CONTROL:		
ADR [cr]	read the ADDRESS of the selected unit *Use this QUERY command if your installation has two or more 600/620s*	nn [lf]
#nn [cr]	select the 600/620 ADDRESS	[no reply]
IFS [cr]	request INTERFACE STATUS *Control is either from the Front Panel ("LCL") or from your computer ("RMT")*	LCL [lf] or RMT [lf]
RMT SELECT [cr]	change to REMOTE mode (computer control) *To transfer control back to the 600/620 Front Panel, use the command LCL [cr]*	ok [lf]
2 USE THESE COMMANDS IF YOU WISH TO READ THE SELECTED PROGRAM AND STEP OR SELECT A SPECIFIC PROGRAM AND STEP:		
PRN [cr]	read the selected PROGRAM number	nn [lf]
STN [cr]	read the selected STEP number	nnn [lf]
PRN nn [cr]	select a PROGRAM number	ok [lf]
STN nnn [cr]	select a STEP NUMBER in the selected program	ok [lf]
3 USE THESE COMMANDS TO RUN A PROGRAM:		
RUN p [cr]	run PROGRAM "p"	ok [lf]
RUN p s [cr]	run PROGRAM "p" from STEP "s" *"s" must be a RAMP/SOAK (STD) step*	ok [lf]
4 USE THESE COMMANDS TO STOP (HOLD) OR RESET THE PROGRAM THAT IS CURRENTLY EXECUTING:		
STP [cr]	STOP (HOLD) the program that is executing	ok [lf]
RES [cr]	RESET the STOPPED program to STEP 1	ok [lf]
5 USE THESE COMMANDS TO OVERRIDE THE PROGRAMMED VALUES FOR THE CURRENT STEP: (NOTE: SEND COMMAND W/O DATA TO READ CURRENT VALUE)		
CS1 nnn[cr]	Change Current Channel 1 SETPOINT *Use "CS2..." to change Channel 2 setpoint*	ok [lf]
CA1 nnn[cr]	Change Current Channel 1 DEVIATION ALARM *Use "CA2..." to change Channel 2 deviation alarm*	ok [lf]
CCT hh mm ss[cr]	Change Current TIME REMAINING in Step	ok [lf]
CCE 1.....78A.....GH[cr]	Change the Current EVENTS *Note: all 16 events must be entered in proper sequence*	ok [lf]
CCL nnnn[cr]	Change Current LOOPS	ok [lf]
CCC nnnn[cr]	Change Current CYCLES	ok [lf]
CTI nnn[cr]	Change Current PROGRAMMED HEAT (Increase Thermal Boost)	ok [lf]
CTD nnn[cr]	Change Current PROGRAMMED COOL (Decrease Thermal Boost)	ok [lf]
6 USE THIS COMMAND TO RESUME EXECUTION OF THE PROGRAM:		
RUN [cr]	RESUME execution of program *PROGRAM # and STEP # must have been previously selected*	ok [lf]
7 USE THIS COMMAND TO RETURN THE SELECTED 600/620 CONTROLLER TO FRONT PANEL OPERATION:		
LCL [cr]	place selected unit under LOCAL control (front panel)	ok [lf]

NOTE:

Append a [LF] to the IEEE command not a [CR] as shown in the reference guide.

▲ UPLOAD / DOWNLOAD

SAVE AND RESTORE PROGRAMS AND PID VALUES

Use these commands to transfer programs and tuning values between your computer and your Model 600A/620A Environmental Chamber System Controller.

COMMAND	FUNCTION	REPLY

1 USE THESE COMMANDS TO FIRST SELECT THE 600/620 YOU WISH TO ADDRESS AND PLACE THE SELECTED UNIT UNDER COMPUTER CONTROL:

ADR [cr] ..... read the ADDRESS of the selected unit ..... nn [lf]
Use this QUERY command if your installation has two or more 600/620s

#nn [cr] ..... select the 600/620 ADDRESS ..... [no reply]

IFS [cr] ..... request INTERFACE STATUS ..... LCL [lf] or RMT [lf]
Control is either from the Front Panel ("LCL") or from your computer ("RMT")

RMT SELECT [cr] ..... change to REMOTE mode (computer control) ..... ok [lf]
To transfer control back to the 600/620 Front Panel, use the command LCL [cr]

2 USE THESE COMMANDS IF YOU WISH TO SAVE (UPLOAD) PROGRAMS AND PID PARAMETERS TO THE COMPUTER:

ULP n [cr] ..... save PROGRAM "n" from the selected unit ..... *xxxxxx....xxxx\\\ [lf]
The data for program "n" is represented by "xxxxxx....xxxx"

ULD P [cr] ..... save ALL PID PARAMETERS from the selected unit ..... xxxxxx...xxxx ok [lf]
The PID data is represented by "xxxxxx...xxxx"

ULD S [cr] ..... save the TOTAL PROGRAM MEMORY from the selected unit . xxxx....xxx [lf] [lf] ok [lf]
The data for all 200 steps of program memory is represented by "xxxxx....xxxx"

3 USE THESE COMMANDS IF YOU WISH TO RESTORE (DOWNLOAD) PROGRAMS OR PID VALUES TO THE SELECTED 600/620 CONTROLLER:

DLP nn [cr] **xxxx...xxxx** [cr] ..... Load PROGRAM "nn" ..... ok [lf]
"xxxx....xxxx" represents the data for Program "nn" previously saved using the "ULP nn" command

DLD P [cr] **xxxx...xxxx** [cr] ..... Load PID Parameters ..... ok [lf]
"xxxx...xxxx" represents the PID data previously saved using the "ULD P" command

DLD S [cr] **xxxx....xxxx** [cr] ..... Load TOTAL PROGRAM MEMORY (all 200 steps) ..... ok [lf]
"xxxx....xxxx" represents the total program memory previously saved using the "ULD S" command

4 USE THIS COMMAND IF YOU WISH TO VERIFY A PROGRAM IN THE MEMORY OF THE SELECTED 600/620 CONTROLLER:

VFP nn [cr] **xxxx...xxxx** [cr] ..... VERIFY Program "nn" ..... *ok [lf] or *? [lf]
"xxxx...xxxx" represents the data for Program "nn" previously saved using the "ULP nn" command
*Response is *ok [lf] if verification is successful; otherwise response is *? [lf]*

5 USE THIS COMMAND TO RETURN THE SELECTED 600/620 CONTROLLER TO FRONT PANEL OPERATION:

LCL [cr] ..... place selected unit under LOCAL control (front panel) ..... ok [lf]

NOTE:

Append a [LF] to the IEEE command not a [CR] as shown in the reference guide.

▲ IEEE-488 COMMAND SET

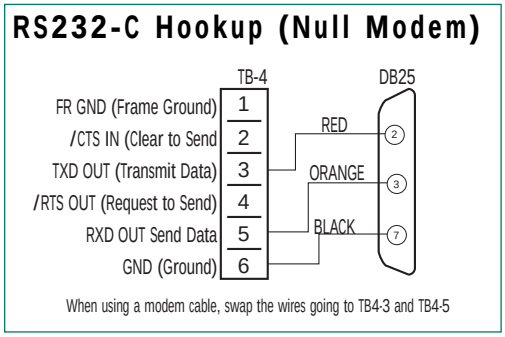
Use these commands to perform the specified IEEE-488 operations in connection with your Model 600A/620A Environmental Chamber System Controller.

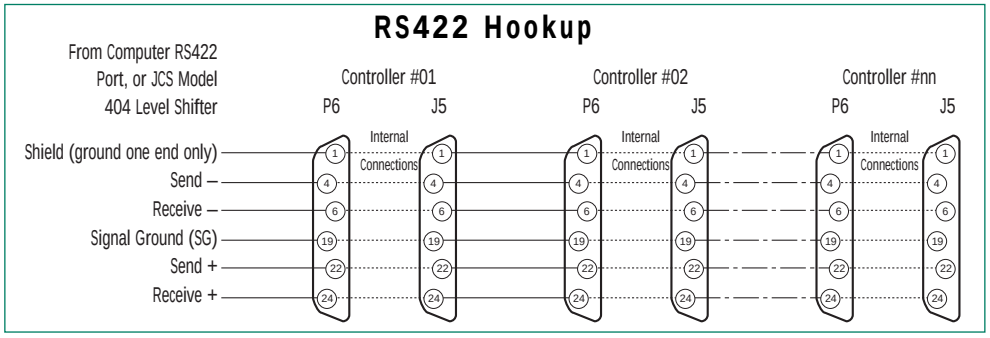
COMMAND	FUNCTION	REPLY
RQN [cr]	ENABLE IEE488 service request	ok [lf]
RQD [cr]	DISABLE IEEE488 service request	ok [lf]
SRN n n [cr]	enable individual SRQ MASK BIT	ok [lf]
	The SRQ bits are assigned as follows:	
	Bit 0: Deviation Alarm Channel 1 or Channel 2	*Bit 1: Event F (OFF to ON Transition)*
	Bit 2: Setpoint Alarm Channel 1 or Channel 2	*Bit 3: Input at TB-6, Pin #8*
	Bit 4: Channel 1 Process Limit	*Bit 5: Channel 2 Process Limit*
	Bit 6: Serial Poll (Set Anytime SRQ Issued)	*Bit 7: Unused*
SRS [cr]	read IEEE488 SRQ mask status register	1••4•••• [lf]
	See above for SRQ bit assignments	
SRS •1•3•5•• [cr]	store image of the total SRQ mask	ok [lf]
	All 8 bits are stored at the same time	
SRC [cr]	clear enabled SRQ mask bits	ok [lf]
GTL [cr]	go to local	no reply
DCL n [cr]	clear device	no reply

NOTE:

Append a [LF] to the IEEE command not a [CR] as shown in the reference guide.

▲ HOOKUP DIAGRAMS





NOTE:

Append a [LF] to the IEEE command not a [CR] as shown in the reference guide.

TMC Services Inc.
P.O. Box 157
Elk River, MN 55330

Phone: 763-241-1456
Fax: 763-241-1829
Email: jcsystems@tmcservices.net
Web: www.jcsystemsinc.com