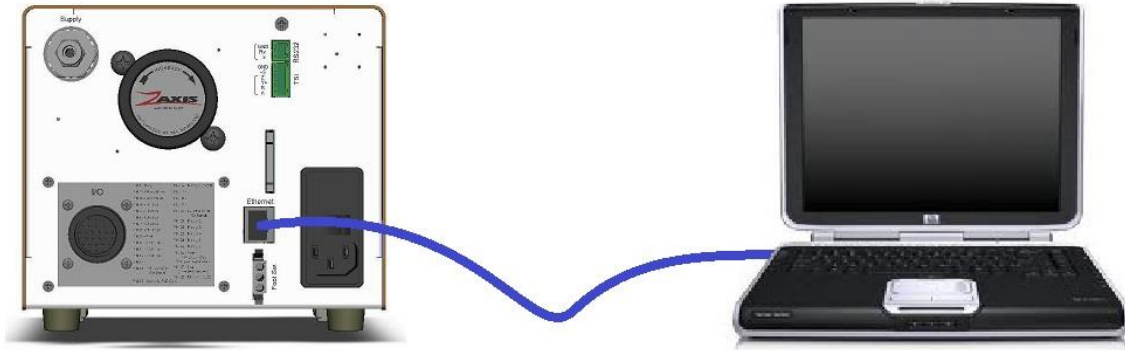




Program settings via Ethernet



The setup data from on the Isaac can be modified by a computer via the Ethernet connection on the back of the Isaac.

To read and/or modify the data with a computer you will need a crossover Ethernet cable (see diagram) and a terminal emulation program such as HyperTerminal.

To begin find the IP address of the laptop by running the command prompt (found in Start – Accessories). On the command line type 'ipconfig', this will display all the data associated with the Ethernet connections. Record the 'Local Area Connection IPv4-Address'.

If your primary connection is done wirelessly, you will need to connect the cable from the Isaac to your laptop, and power up the Isaac before recording the IP address.

On the Isaac, under 'COMM' – 'Ethernet Settings' turn the DHCP to **OFF**. The *IP Address* of the Isaac should be set to one address higher than the IP of the laptop.

For example Laptop = 169.254.96.1, set the Isaac to 169.254.96.2

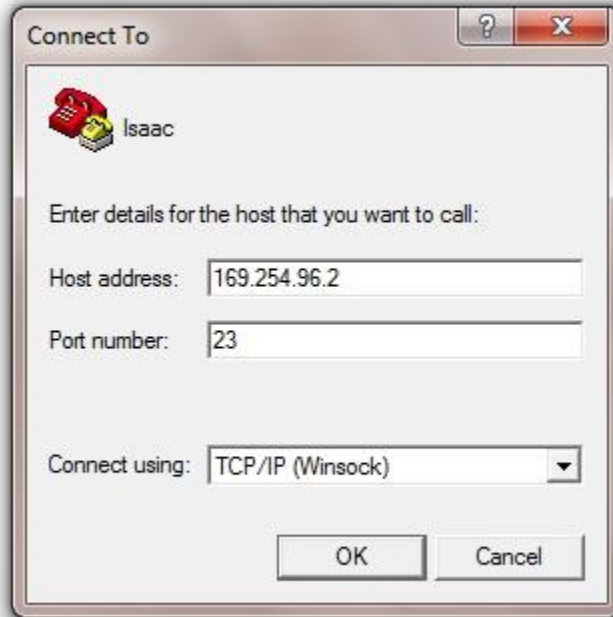
Starting HyperTerminal, the opening screen asks for a connection description, this description can be saved for future use to avoid going through all the configurations. We have chosen to call our example 'Isaac'.



With a connection description made the next screen to appear is Connect To. Hyper terminal has multiple ways of communicating. In the Connect using pull down menu choose TCP/IP (Winsock).



With the TCP/IP selection made the Host address and port numbering must be entered. The IP of the Isaac is the Host. The port number is always 23.



Pressing OK will initiate the socket connection from HyperTerminal to the Isaac. A successful connection will be shown by the connected counter in the lower right corner of the HyperTerminal screen.



Once the connection is made, the desired command is sent. All commands should be followed by the] (closed bracket symbol). The command set is located at the end of this document.

For read commands the data will be immediately returned.

Example: Read the set test pressure – RTP]

 Set the test pressure – STP10.00] (set the test pressure to 10.00)

 SRP] (starts the currently selected test)

When sending multiple commands, each single entry command (e.g setting or reading a timer) a delay of 75msec is required between each action. When sending a command to select program or increment/decrement to the next program, a 500msc delay is required between the next action. Changing program requires the processor to read from memory all the parameters associated with the test. This action takes close to five hundred milliseconds to perform.

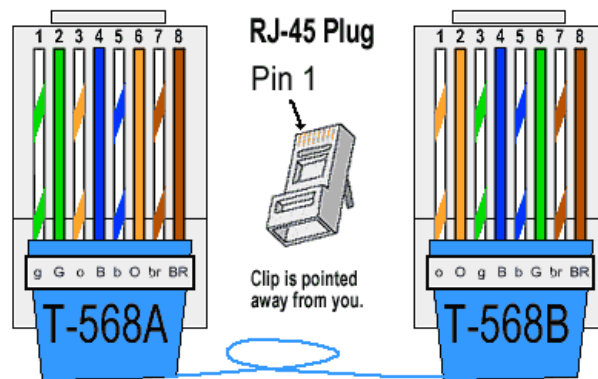
All parameter changes will affect the currently selected test, That is, the test shown on the screen. Make sure to read the current test value before writing any values.

If the data output selection in the program screen is set to 'ethernet' the test results will be output on the same socket port (23) at the conclusion of the test.

Test Pressure	STPfff.fffff	RTP	fff.fffff is test pressure value
Pressure +	SPTPfff.fffff	RPTP	fff.fffff is plus tolerance value
Pressure -	SPTMfff.fffff	RPTM	fff.fffff is minus tolerance value
Next Program	SLNii	RLN	ii is the program number
Output COM select	SERx	RER	see Result output com options in 'fields' tab
Channel Select	SECx	RECx	see Enabled channels in 'fields' tab
CP1 Pre Timer	ST1fff.f	RT1	
CP2 Pre Timer	ST2fff.f	RT2	
CP 2 Post Timer	ST8fff.f	RT8	
CP2 Post Timer	ST9fff.f	RT9	
Valve 1 Status	SCV1i	RCV1	0=off 1=on
Valve 2 Status	SCV2i	RCV2	0=off 1=on
Hold on Fail select	SCHi	RCH	0=off 1=on
Fast Fill Timer	ST3fff.f	RT3	
Fill Timer	ST4fff.f	RT4	
Settle Timer	ST5fff.f	RT5	
Test Timer	ST6fff.f	RT6	
Vent Timer	ST7fff.f	RT7	
FF Auto Select	SFAx	RFA	0=off 1=on
FF Pressure	SFPfff.fffff	RFD	fff.fffff is the fast fill pressure
Vent Auto Select	SVAx	RVA	Timed = 0 Auto = 1
Valve on	STPV		Run the valve on sequence to set test pressure Disabled by sending any character.
Increase Limit	SMLfff.fffff	RML	fff.fffff is the increase limit value
Enable Increase Box	SLDx	RLD	1= Evaluate at EOT, 2 = increase enabled, 3 both
Decay Limit	SMDfff.fffff	RMD	fff.fffff is the decay value
Evaluate at end of Test Box	SLDx	RLD	1= Evaluate at EOT, 2 = increase enabled, 3 both
Leak Standard Port Enabled	SLSx	RLS	0=off 1=on
Test Volume	STVfff.fffff	RTV	fff.fffff is the test volume value
Test Type	STTi	RTT	see test types in the 'fields' tab
Flow Max Value	SFHfff.fffff	RFH	fff.fffff is the flow max value
Flow Min Value	SFLfff.fffff	RFL	fff.fffff is the flow min value
Burst Max Value	SBHfff.fffff	RBH	fff.fffff is theburst max value
Burst Min Value	SBLfff.fffff	RMD	fff.fffff is the burst min value
Burst Trigger Value	SMDfff.fffff	RMD	(Same as decay Limit)
Burst Ramp Rate	SRRff.fffff	RRR	fff.fffff is the ramp rate value
Current Program	SCPi	RCP	i is the program number
Program Name	SPNsssss	RPN	sssss is the sting (15 characters max)
Increment Prog	SPI		
Decrement Prog	SPD		
Run Test	SRP		
Abort Test	~		Tilde symbol
Read Counter Rejects (Fail)		RCRi	i is the channel number
Read Counter Tested		RCTi	i is the channel number
Reset Counter	SCR		
Pressure Digits	SDP	RDP	see test pressure digits on 'fields' tab
Result Digits	SDR	RDR	see result digits on 'fields' tab

ATM Pressure	SAP	RAP	
Units	SPUi	RPU	see units on 'fields' tab
Serial Logging	SSLi	RSL	see serial logging on 'fields' tab
Kp (Electronic Regulator)	SKPff.fff	RKP	Kp constant value for e. regualtor control
Ki (Electronic Regulator)	SKIff.fff	SKI	Ki constant value for e. regualtor control
%feedback time	STLD	RTLd	% of rematining fill time for feedback
Write paramters to FLASH	SWR		Writes all flagged changes to FLASH memory

Cable Diagram



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