Configuring System Parameters

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To configure System Parameters, select from the drop down list in the upper middle of the "Program View" screen titled "System Parameter Config". You may select from the General/Password, HMI Edit/Serial Ports, Internet Connections, Periodic file or Event file choices. Configuring periodic and event files are described in a later document in this series.

Select the "Table" button from the system General Parameters window to access the table parameters. For tables, you may click the "Resize" button to change the length of the table.

General/Password

General Parameters

Parameter	Example	Description
URL for help	none	Enter path for your help screens. This may be on any computer accessible to you. Normally it is left blank which displays as "none", allowing you to access the help located on your ICON.
Loop 1 time mS	1000	Loop 1 will execute on the interval specified. A value of 1000 would select a value of 1000 milliseconds or 1 second. The default is Loop 1, 1000; Loop 2, 0 ; Loop 3, 0 and Loop 4, 0. You may disable a loop altogether by setting its loop execution time to 0.) A higher numbered loop may be interrupted by a lower number loop if execution of the higher numbered loop is not completed in time. A lower numbered loop completes execution of all instructions in that loop before returning to complete execution of instructions in higher numbered loops.
Loop 2 time mS	0	
Loop 3 time mS	0	
Loop 4 time mS	0	
Watchdog	Enabled	If "Enabled" is selected, if the ICON stops operation due to a power, lightning or static discharge glitch, the system will automatically restart. You may restart the ICON from scratch by selecting "Reset system". Then click "OK". Your browser will be disconnected from the ICON and you must wait about 40 seconds while the ICON boots back up before reconnecting.
Site title	Roaring Creek	The site title is prefixed to the beginning of each HMI Window. It also sets the ICON name as seen by other computers in a network (host name). Any spaces are converted to periods for host name. So if the

		name is "Site 1" the host name is "Site.1".
Date format	M-D-Y	Use the drop down list to select a format of Month-Day-Year, Year-Month-Day or Day-Month-Year.
Watchdog type	Elan520	This will be Elan520 or TS7200 depending on your processor.

Table Parameters

Parameter	Example	Description
Password	1aG56cvb5j	Enter your desired passwords. You may use numbers and upper and lower case letters. The password in row 1 is used to logon in "Programming Mode". All other passwords logon to the HMI display only. The longer the password the more secure. If the system is connected to the Internet the password should be at least 10 characters long.
Low	1	Set the low value for the security range. (Forced to 0 for row 1 and can't be changed.)
High	255	Set the high value for the security range. (Forced to 255 for row 1 and can't be changed.)
Encryption Key	A5F71DB7	Use any numbers 0 to 9 or letters A, B, C, D, E or F. (This an 8 digit hex number.)

Each HMI object (button, frame, etc.) has a security number from 1 to 255 which can be configured. This number is checked against the password security range in effect. HMI objects with security numbers outside the range defined by the password won't be displayed. For example, if my password is coded for a Low of 10 and a High of 50, any HMI object with a number less than 10 or greater than 50 will not be displayed. Therefore, the same HMI screen can be made to look different for user's accessing with different passwords.

If you pick a password of nothing (you delete all characters in the password entry field (which displays as "none")) and an encryption key of 00000000 then you can log on without entering any password or encryption key. This is obviously very insecure.

The encryption key is is used to encrypt the password for security.

HMI Edit/Serial Ports

General Parameters

Parameter	Example	Description
HMI grid snap	5	Enter the number of pixels you would like your HMI snap grid to be. The lower the number, the tighter your control. A snap grid allows you to place HMI objects more precisely. If you select 5 then HMI objects can only be aligned at 5 pixel boundaries.

Table Parameters

Parameter	Example	Description
Serial type	Modbus master	Select "Off" to disable this port. Otherwise select Modbus master, Modbus slave, X10, Ascii master or Ascii slave. You must set this entry to "Off" if you will be connecting the serial port to a standalone modem for remote dial-in access as described next in the "Internet Connections" section.
Serial baud rate	9600	Enter your baud rate.
Serial parity	None	Select the desired parity. Normally use "None".
Serial slave unit address	1	If this is a Modbus slave port, enter the Modbus unit adress.

Note: You may not resize this table which contains four entries.

You may configure up to four serial ports. The ICON comes standard with two serial ports so a PC-104 expansion board must be added to increase the number of serial ports to three or four.

Internet Connections

General Parameters

Parameter	Example	Description
Connection Type	Ethernet	You can choose from "Ethernet Only" or an additional serial connection on COM1, COM3 or COM4. Pick "Ethernet" if your only computer connection to the ICON is by ethernet. If you also require dial-in access from a remote computer by a dial up modem, select a modem connection which is usually on COM3. The “Direct” selections are for testing only and should not be selected. When configuring your dial connection on your PC you need to enter a user name of “icon” and a password of “icon”. (Note: The passwords and encryption keys entered earlier provide the real login protection.) You may still connect to the ICON with ethernet even if you select a serial access mode.
IP Address	192.168.1.100	Enter a static IP. Leave blank (which displays as none) to use a DHCP assigned value.

Netmask	255.255.255.0	If a static IP address is entered, enter your netmask here otherwise leave blank (which displays as none).
Port Number:	80	Normally use 80. If you already have a web server on port 80 or you need to port forward from a single router connected to the Internet to multiple ICONs on your internal LAN, you can assign non-standard port numbers such as 81, 82, etc.
Broadcast:	192.168.1.255	Enter your broadcast IP address.
Gateway:	192.168.1.1	Enter your gateway IP address.
Mail Server IP	207.115.63.77	Enter your outgoing mail server IP address. Set to a blank string (none) if emailing is to be disabled. To get your IP number use the ping program. For instance, if your outgoing mail server is smtp.sbcglobal.net, execute a "ping smtp.sbcglobal.net". You will get a response like "Pinging smtp.prodigy.net [207.115.63.77] with 32 bytes of data:". Enter the IP address in []. It does not matter that the request times out, you are just getting a name server to resolve your mail server name to an IP address.
IP Email 1 (return address)	1	This index must point to the email address to use for a return address. Set to 0 if email is disabled.
IP Email 2	0	Set to 0 to disable IP emailing. Otherwise select an email index. Whenever the ICON detects that the Internet IP address has changed, the new IP address is emailed to all recipients listed between IP Email 1 and IP Email 2. Only enable if you wish to access the ICON from the Internet and the IP address can change. This will occur if the ICON does not have a static IP address on the Internet.
Mail user name	dummy@i-netcontrol.com	Enter the user name used to access your outgoing email SMTP server.
Mail password		Enter the password used to access your outgoing email SMTP server.
Mail server port		Enter the port number used for your outgoing email SMTP server. This is usually 587 but might be 25.
Ethernet Modbus slave enable	Enabled	Select “Enabled” if another TCP Modbus device is going to access ICON program data by Modbus.
Ethernet Modbus slave port	502	Usually the port number is 502
Ethernet Ascii slave enable	Enabled	Select “Enabled” if another TCP ASCII device is going to access ICON program data by the ICON's ASCII data transfer protocol.

Ethernet Ascii slave port	500	Enter the port for the communication link. There is no standard value but 500 should work for most cases.
Modem Alarm	Land Line	The ICON has the capability of dialing out four separate alarms on a land line or cell phone system. If this is enabled and the ICON is properly programmed, when any one of four alarms occurs, the attached modem is used to dial an operator and signal the alarm number with a touch tone beep. One beep indicates alarm 1, two beeps alarm two, etc.

Table Parameters

Parameter	Example	Description
E-mail Address/ phone #	rweaver@imt.net or 406-999-9999	Enter a list of email addresses. These addresses comprise the list you have to choose from when configuring IP Email 1 and IP Email 2 above. If you wish to email periodic or event data, this list is also used. The actual email indexes for the periodic and event files are configured under their respective sections. If you also have “Modem Alarm” from above selected, you can follow your list of emails with a list of phone numbers to be used with alarm dial-out.