Program 8-Channel PWM Output Board: I-8088W or I-87088W or I-7088 in the ISaGRAF PAC.

Download FAQ-105 Demo

The following ISaGRAF PAC support I-8088W I/O board since the following driver version.

WP-8xx7: Ver. 1.05	iP-8xx7: Ver. 1.02
VP-25W7/23W7: Ver. 1.02	XP-8xx7-CE6: Ver. 1.02

The following ISaGRAF PAC support I-87088W I/O board and I-7088 remote I/O module since the following driver version.

WP-8xx7: Ver. 1.24	iP-8xx7: Ver. 1.08
VP-25W7/23W7: Ver. 1.15	XP-8xx7-CE6: Ver. 1.04
uPAC-7186EG: Ver. 1.11	

Please visit
http://www.icpdas.com/en/download/show.php?num=368&nation=US&kind1=&model=&kw=isagraf to download the newest driver of the ISaGRAF PACs.

I-8088W and I-87088W and I-7088 support 8-channel PWM outputs. The duty range (High/ High+Low) of the PWM output signal can be from 0.1 to 99.9%. Its output frequency in the ISaGRAF PAC is from 1 Hz to 100KHz. I-8088W and I-87088W and I-7088 support two PWM output modes, one is the “Continuous” mode. It outputs always. The other is the “Burst” mode. It outputs the required pulse count and then stop. Please refer to http://www.icpdas.com/en/product/I-8088W-G for other I-8088W and I-87088W specifications.
For I-7088, refer to http://www.icpdas.com/en/product/I-7088-G

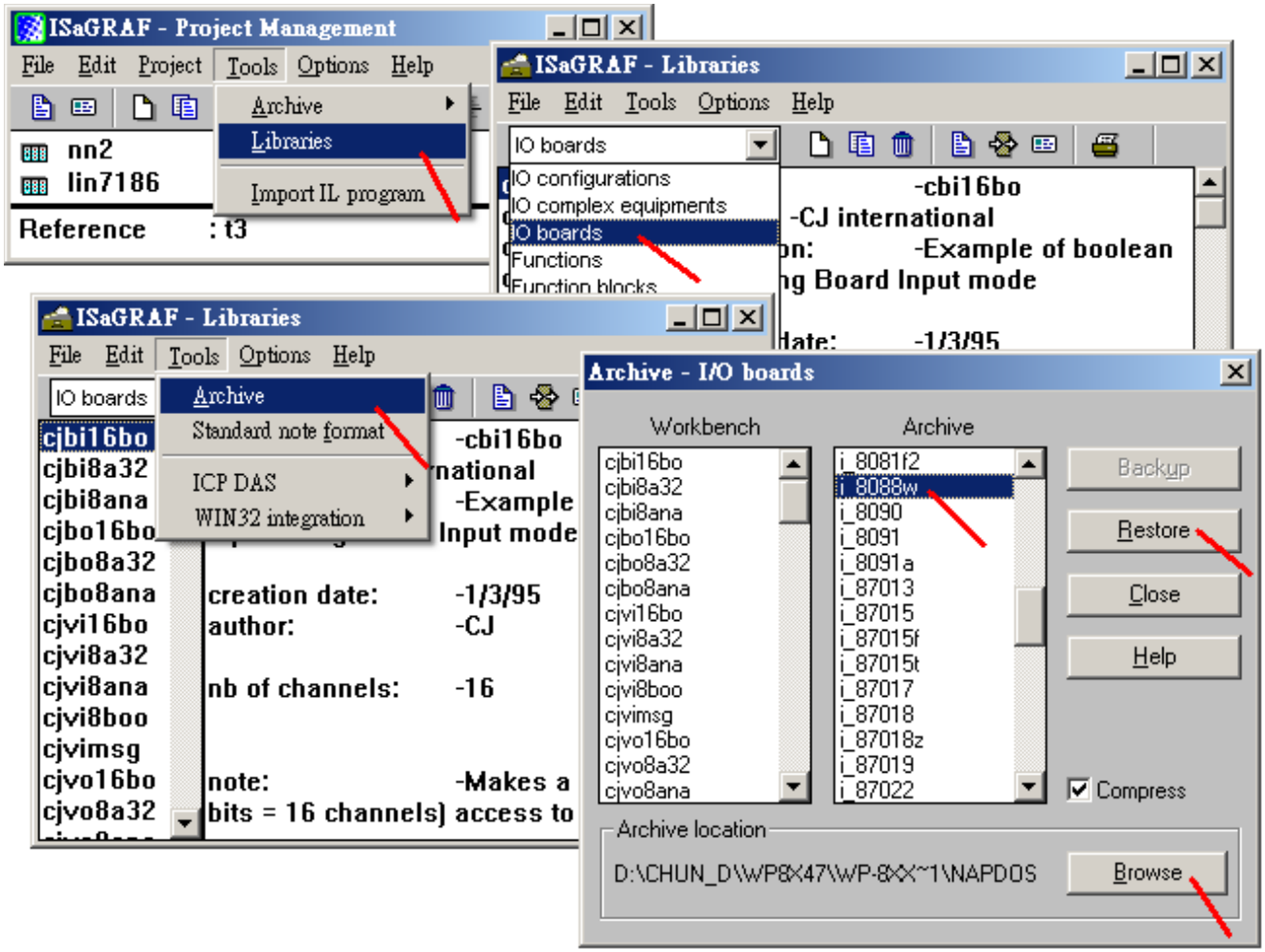
The ISaGRAF PAC can use I-8088W only in its I/O slot 0 to slot 7. (XP-8xx7-CE6 doesn't have slot 0). While I-87088W can be plugged in the I/O slot 0 to 7 or be used as RS-485 remote I/O.
I-7088 can be used as remote I/O only.

I-87088W and I-7088 support not only the 8-Ch. PWM outputs but also supports 8-Ch. D/I (or 8-Ch. D/I Counters).

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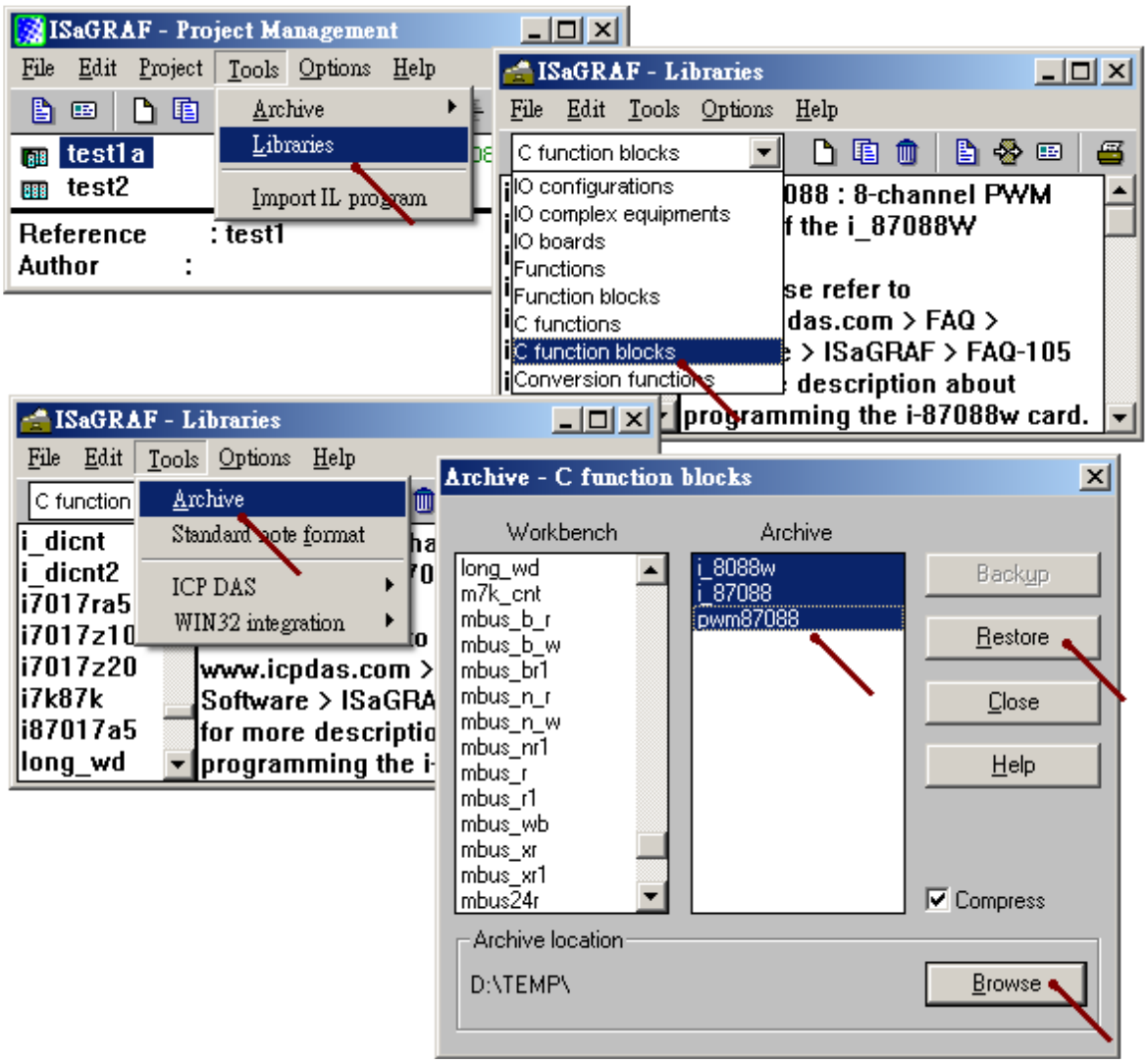
Before you can program I-8088W and I-87088W and I-7088 by ISaGRAF, please make sure your PC has already installed the correct I/O board library into the ISaGRAF workbench. The file name are “i_8088w.bia”, “i_8088w.fia”, “i_87088w.xia”, “i_87088.fia” and ”pwm87088.fia”. You can download them from http://www.icpdas.com/en/faq/index.php?kind=280#751 > FAQ-105. And then install them as below.

Install the IO board library - “i_8088w”:



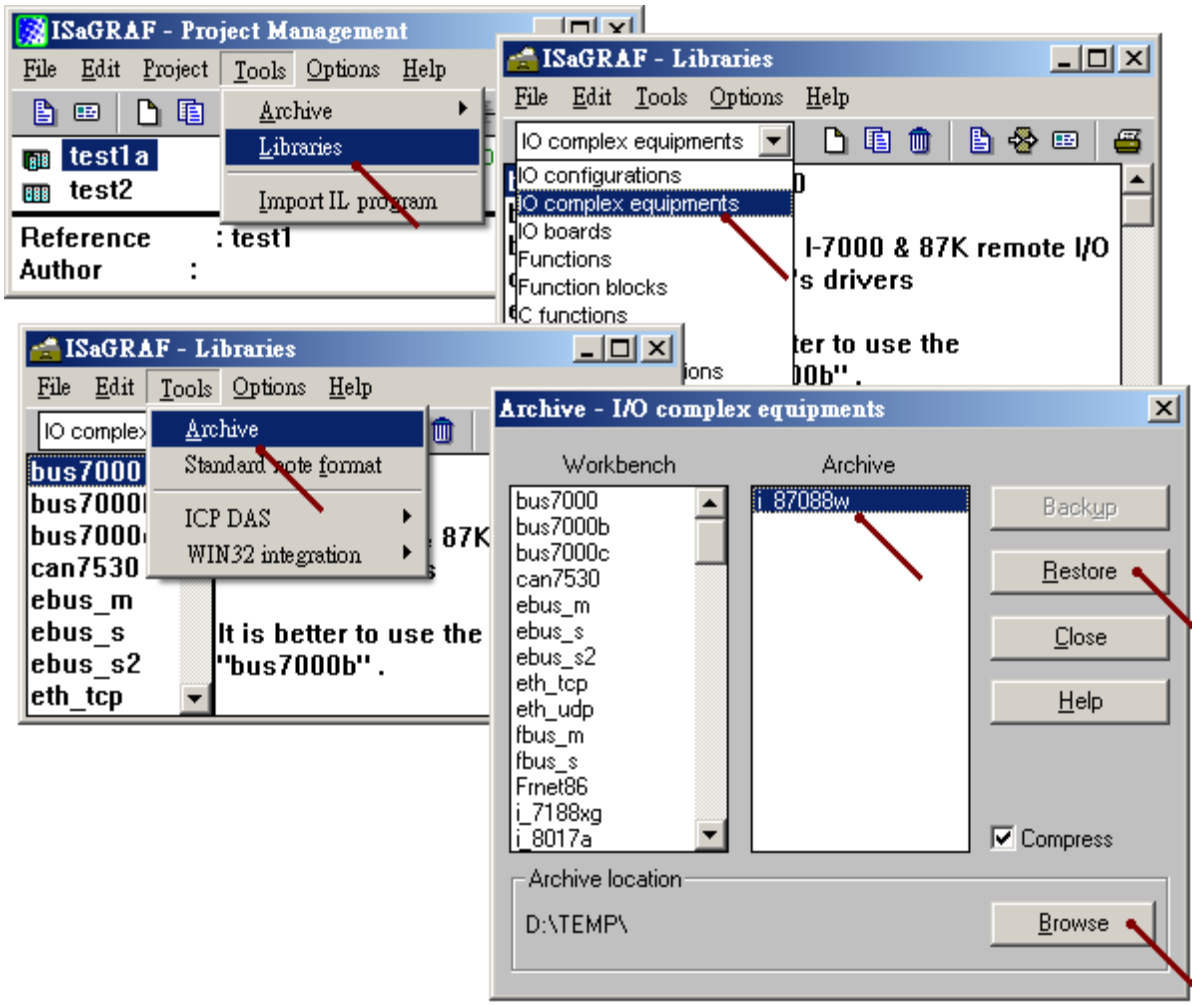
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Install the C-function blocks - “i_8088w”, “i_87088” and “pwm87088”:



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Install the I/O complex-equipments - “i_87088w”:

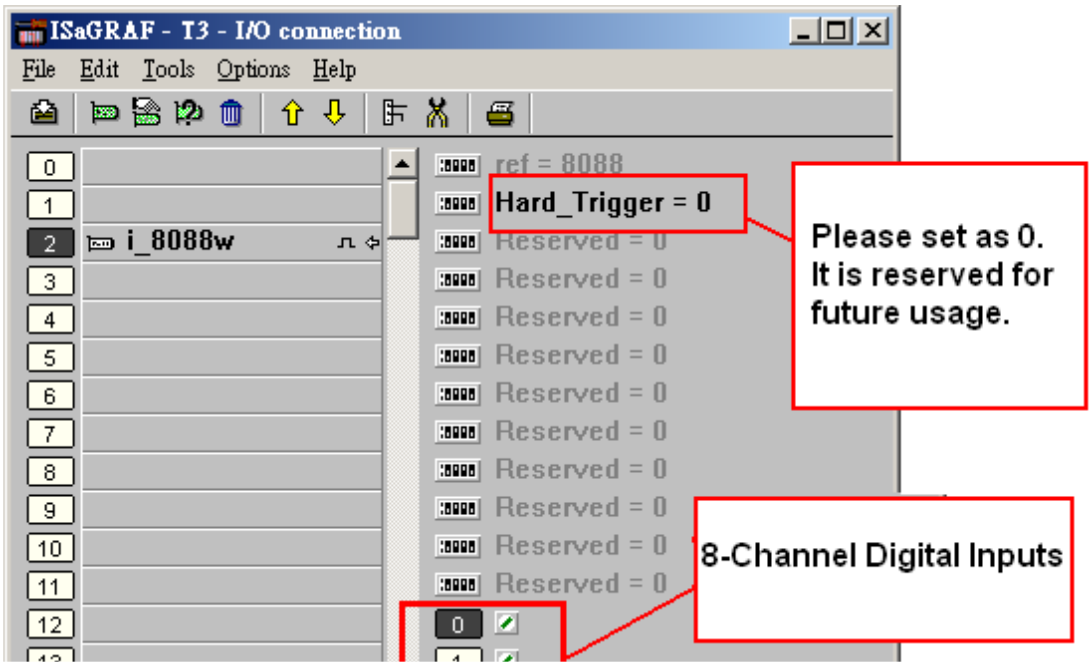


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1.1: Using I-8088W

To use I-8088W, first connect the “i_8088w” I/O board in the IO connection windows.

The ISaGRAF demo program is the “xpdmo75”.You may visit http://www.icpdas.com/en/faq/index.php?kind=280#751 > FAQ-105 to download it. Then follow the steps listed in the section 9.5 of the ISaGRAF user's manual to restore the “wpdmo75.pia” to your PC/ ISaGRAF.

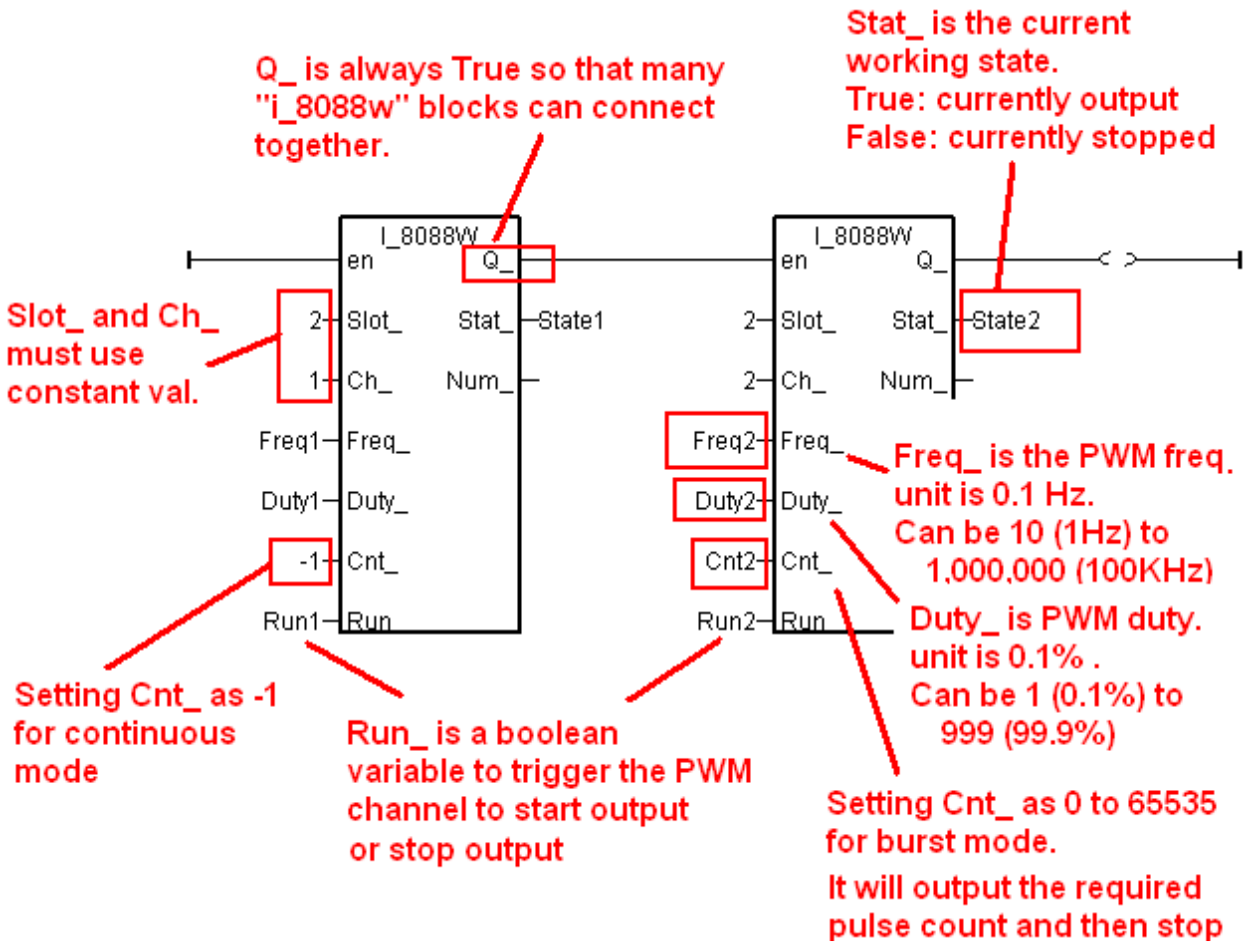


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Then using the c-function block “i_8088w” to control the PWM output for each channel.

The “Freq_” and “Duty_” can be dynamically modified when the PWM mode is “Continuous” mode and “Run_” is True (Started). The frequency and duty of the PWM output will change to the required value.

If the “Cnt_” value is modified to a different value when “Run_” is True, the PWM output will automatically stop first and then start immediately to output the required PWM pulse (no matter it is continuous mode or burst mode).



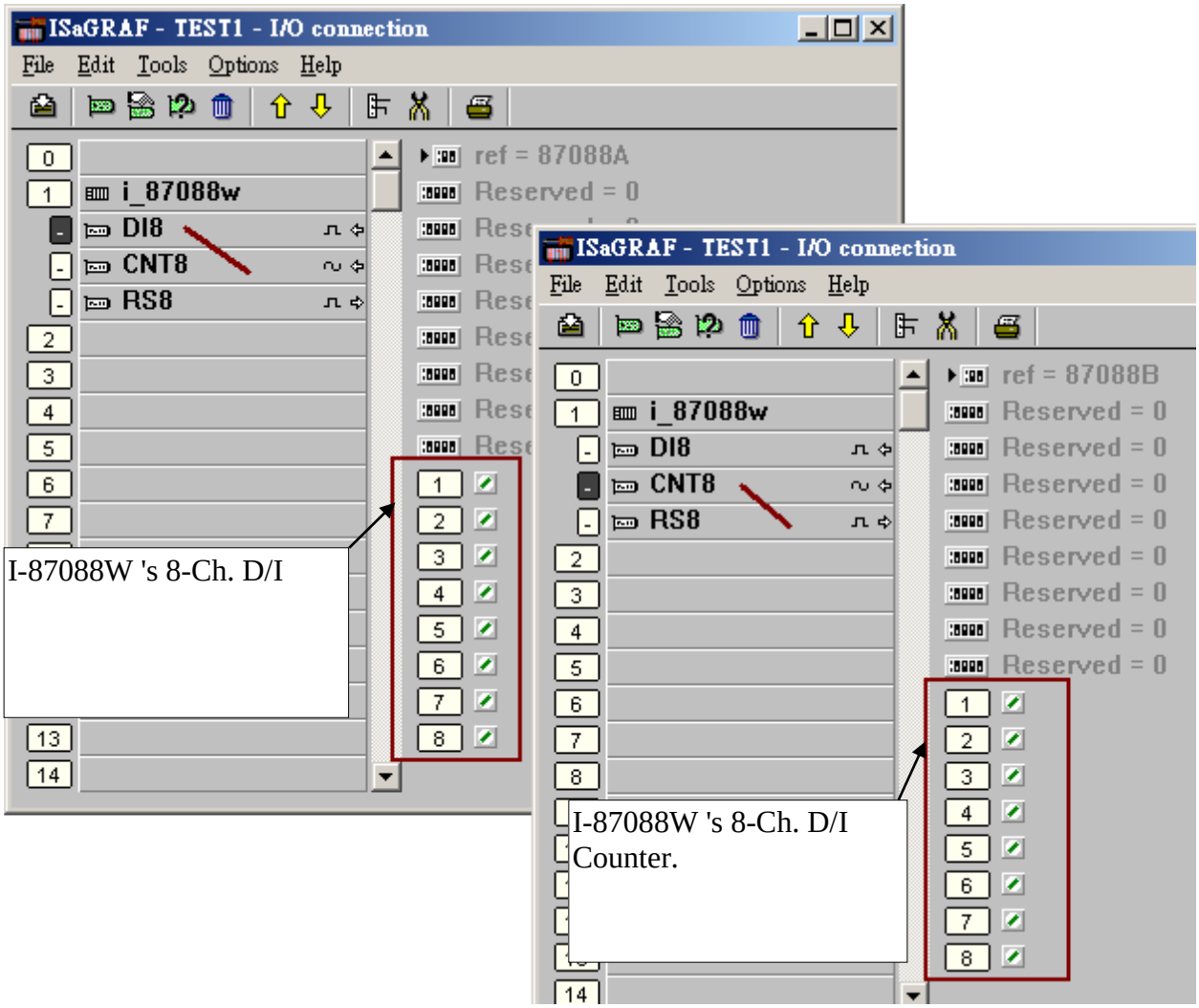
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1.2: Using I-87088W as Local I/O

To use I-87088W as local I/O (in the I/O slot number 0 to 7 in the ISaGRAF PAC), first connect the "i_87088w" I/O complex-equipment in the IO connection windows.

The ISaGRAF demo program is the "xpdmo75A".You may visit http://www.icpdas.com/en/faq/index.php?kind=280#751 > FAQ-105 to download it. Then follow the steps listed in the section 9.5 of the ISaGRAF user's manual to restore the "wpdmo75.pia" to your PC/ ISaGRAF.

(Please refer to the section 1.3 in this document for using I-87088W and I-7088 as RS-485 remote I/O module)

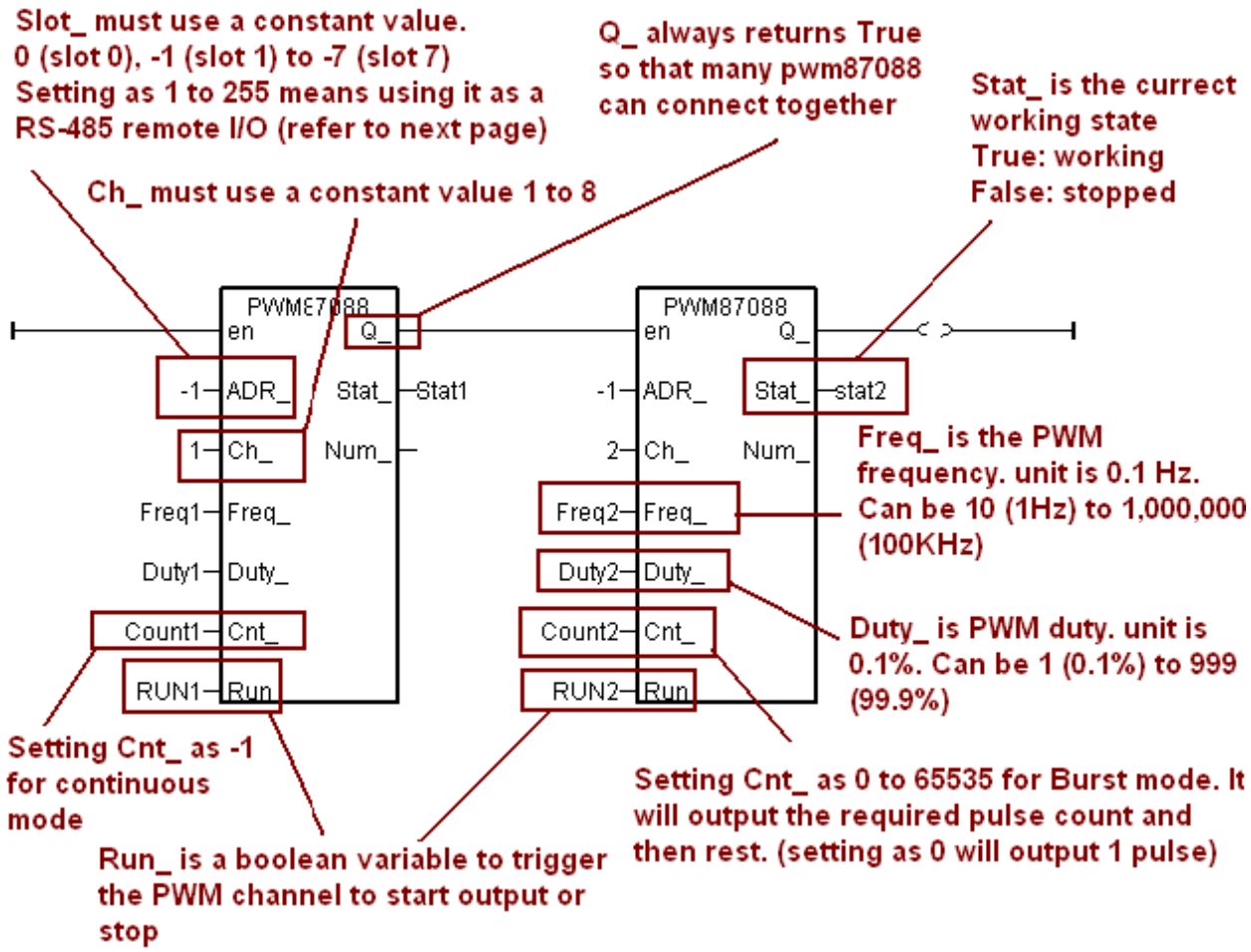


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Then using the C-function block “pwm87088” to control the PWM output for each channel.

Please must set the “ADR_” as 0 (slot 0) or -1 (slot 1) to -7 (slot 7) for using I-87088W as local I/O module.

The “Freq_” and “Duty_” can be dynamically modified when the PWM mode is “Continuous” mode and “Run_” is True (Started). The frequency and duty of the PWM output will change to the required value.



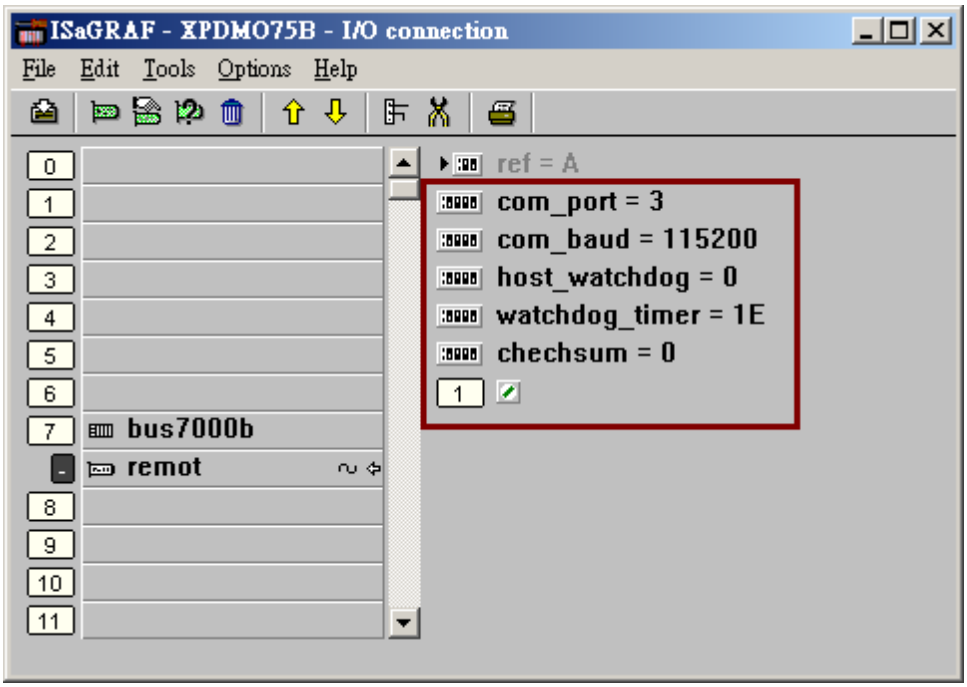
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1.3: Using I-87088W and I-7088 as RS-485 remote I/O

To use I-87088W or I-7088 as RS-485 remote I/O, first setting I-7088 and I-87088W as INIT mode and then running the PC/ DCON Utility to configure I-7088 and I-87088W once. Please must set proper "Address", "Communication Baud-rate" and "Checksum disabled or enabled" (default is disabled). And make sure the "D/I inverse" setting is disabled. (Disable the "D/I Inverse" means the ISaGRAF will read D/I value as False when there is no D/I signal, while read value as "True" when there is D/I signal input. **If this "D/I inverse" setting is mistaking enabled, please set I-7088 and I-87088 as INIT mode first, then run the DCON Utility to disable it (or you may send the "~00D00" command directly to it to disable the "D/I Inverse" setting)**)

To program the remote I-7088 (or I-87088W), first connecting the "bus7000b" in the ISaGRAF IO connection window. Set proper "com_port", "com_baud" and "checksum".

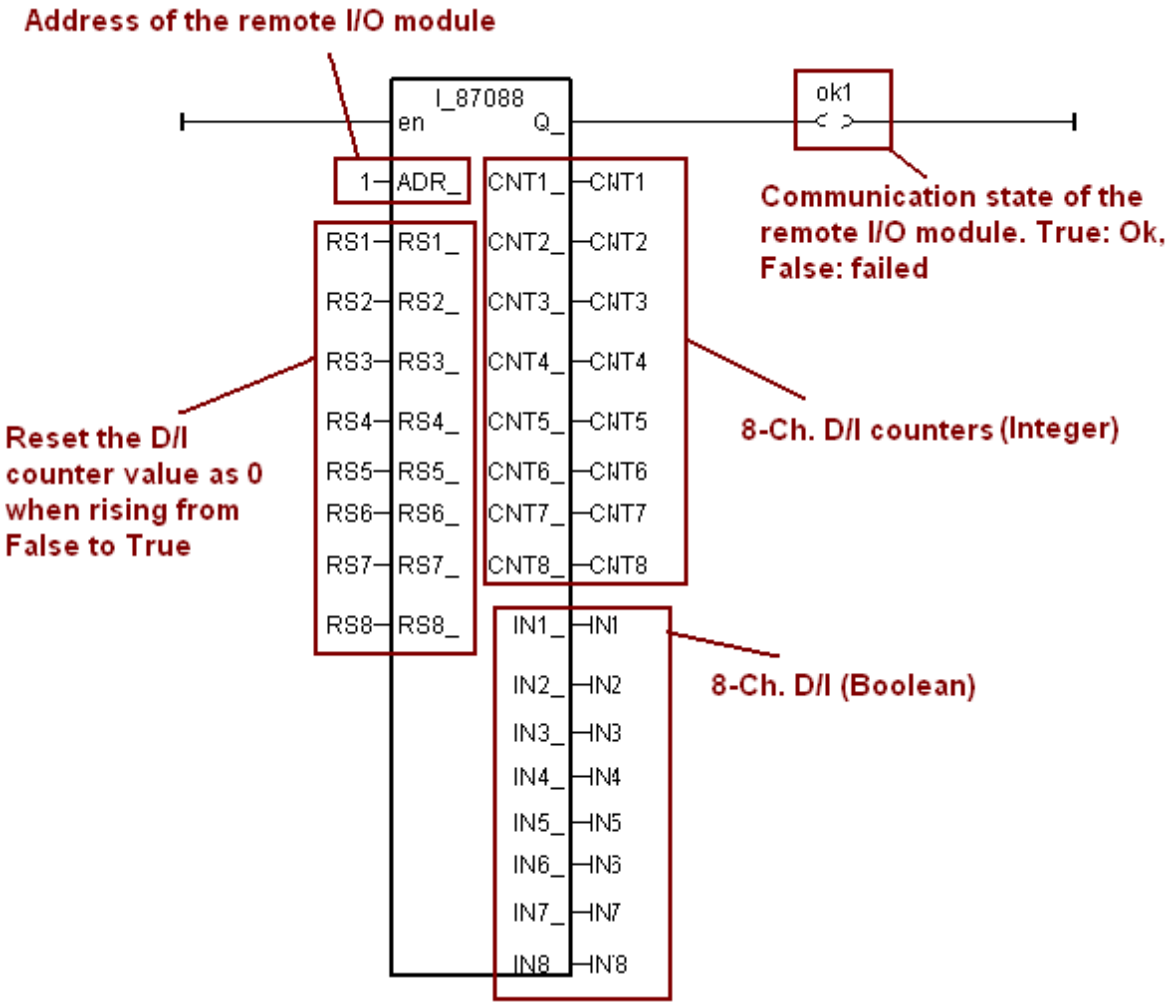
The ISaGRAF demo program is the "xpdmo75B".You may visit http://www.icpdas.com/en/faq/index.php?kind=280#751 > FAQ-105 to download it. Then follow the steps listed in the section 9.5 of the ISaGRAF user's manual to restore the "wpdmo75.pia" to your PC/ ISaGRAF.



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Then using the “i_87088” function-block to connect I-7088 (or I-87088W) on the upper position in the Ladder or function-block program.

(Please refer to the section 1.2 of this document for using I-87088W as local I/O module)

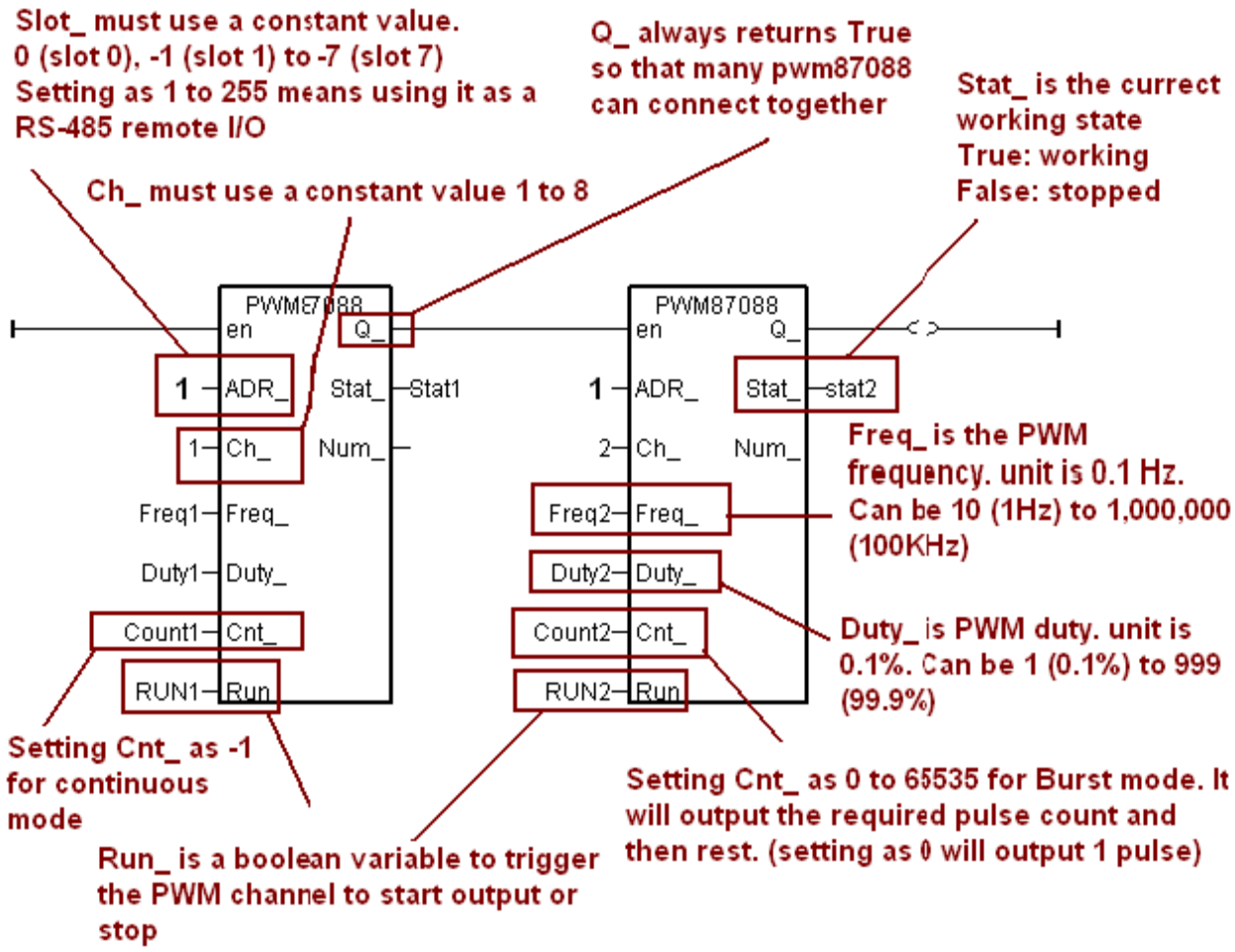


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Then using the C-function block “pwm87088” to control the PWM output for each channel.

Please must set the “ADR_” as 1 (Addr. 1) to 255 (Addr. 255) for using I-87088W and I-7088 as RS-485 remote I/O module.

The “Freq_” and “Duty_” can be dynamically modified when the PWM mode is “Continuous” mode and “Run_” is True (Started). The frequency and duty of the PWM output will change to the required value.



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