

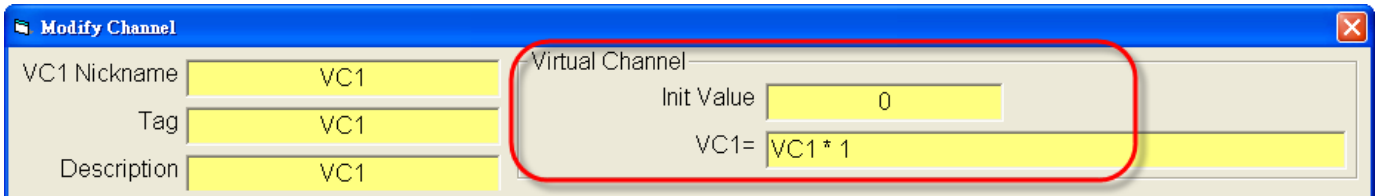
Classification	Virtual Channel Applied FAQ on EZ Data Logger				No.	2-010-02	
Author	Amber	Version	1.0.1	Date	2013/04/01	Page	1/5

How to use VC to do operations?

<i>Applied to:</i>	
<i>Platform</i>	<i>OS Version</i>
<i>PC</i>	<i>Windows 98/NT/2000/XP/Vista</i>

You can operate the data into the virtual channel by channel tag name easily. Such as total, average, sum, or other operations.

I. Virtual Channel Operation Expression



- Virtual Channels are operational. You can use the tag names to operate the virtual channel value.

Examples:

$VC0 = (AI_1 + AI_2) / 2$
 $VC1 = AI_3 ^ 2 * 100$
 $VC2 = DO_0 \text{ And } DO_1$
 $VC3 = \text{Abs}(AI_6)$

- Operators

Plus	+
Minus	-
Multiply	*
Divide	/
Power	^
Logic operators	Not, And, Or, Xor....

Classification	Virtual Channel Applied FAQ on EZ Data Logger				No.	2-010-02	
Author	Amber	Version	1.0.1	Date	2013/04/01	Page	2/5

- Usable function (You can use these function in VB Script)

Sin (<i>number</i>)	Return the sine of a specified number (radian)
Cos (<i>number</i>)	Return the cosine of a specified number (radian)
Tan (<i>number</i>)	Return the tangent of a specified number (radian)
Atn (<i>number</i>)	Return the arctangent of a specified number (radian)
Abs (<i>number</i>)	Return the absolute value of a specified number
Sqr (<i>number</i>)	Return the square root of a specified number (radian)

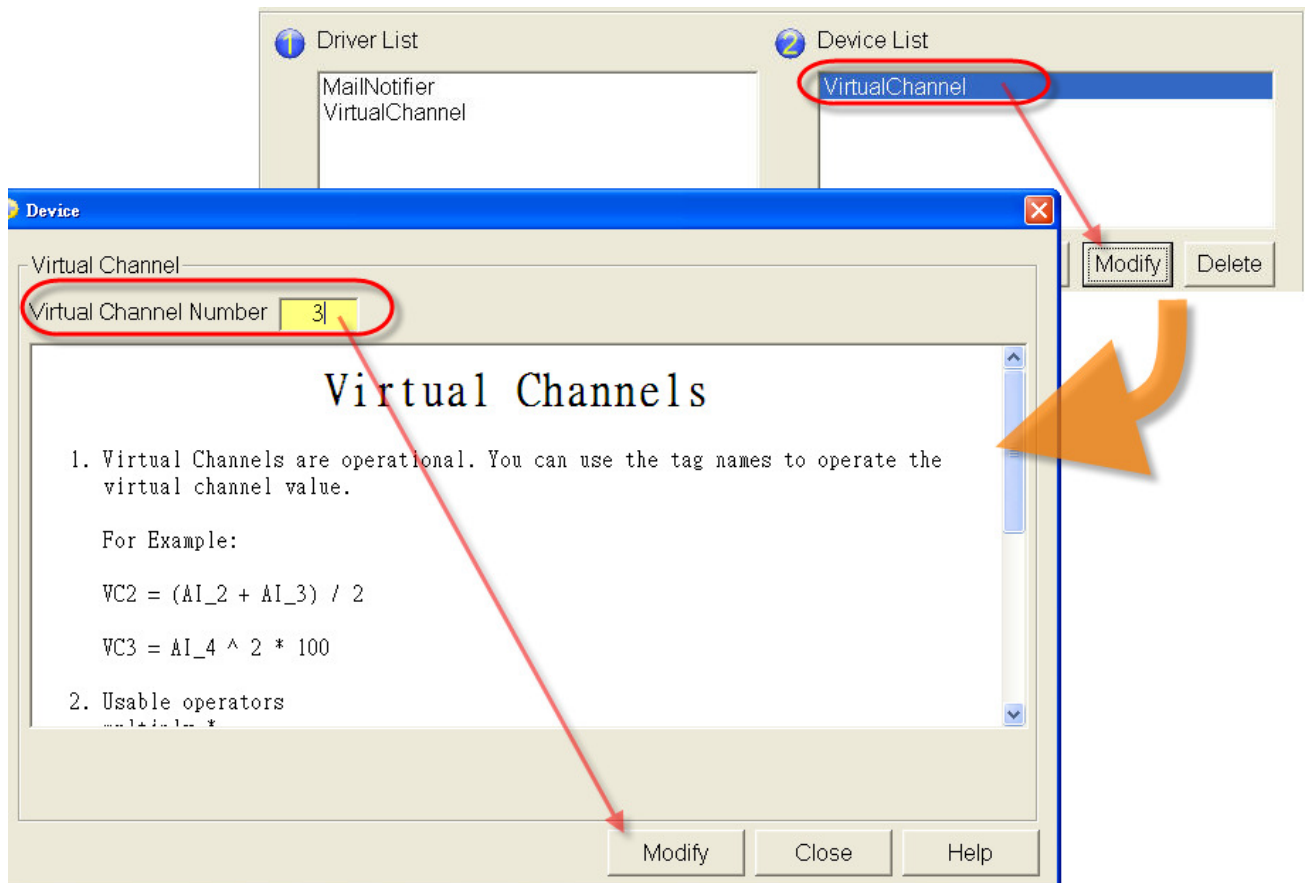
Classification	Virtual Channel Applied FAQ on EZ Data Logger				No.	2-010-02	
Author	Amber	Version	1.0.1	Date	2013/04/01	Page	3/5

II. Virtual Channel Demo – How to do the sum

Step1 : Open **EZ Data Logger**, and then from the button list click the **Group Setup** button.



Step2 : From “Device List” select **VirtualChannel**, and then click **Modify** button→ In the popup “Device” form, type the **Virtual Channel Number** (up to 256 channels), and then click the **Modify** button.



Classification	Virtual Channel Applied FAQ on EZ Data Logger				No.	2-010-02	
Author	Amber	Version	1.0.1	Date	2013/04/01	Page	4/5

Step3 : Select one virtual channel, and then click the **Modify** button.

Channel List

AI List	AO List	DI List	DO List
Counter List	Freq List	Virtual Channel	Control Logic
Contact List	Web Camera		

Operation Demo	Description
VC0 + 1	Up count timer
(AI3 + AI4) / 2	Average
Abs(AI5)	Absolute Value Function
DO4 And DO5	Boolean operator

Nickname	Tag	Location	Init Value	Operation	Description
VC0	VC0	VC0	0	VC0 * 1	VC0
VC1	VC1	VC1	0	VC1 * 1	VC1
VC2	VC2	VC2	0	VC2 * 1	VC2

Select one virtual channel

3 Modify
Add>>

Step4 : Edit **Nickname**、**Tag** name、**Description** of VC channel → Set **Init Value** = 0, and set the operation: **Total1 = AI_0 + AI_1** → Select **component style** → Click the **Modify** button.

Modify Channel

VC0 Nickname: Total1
Tag: Total1
Description: AI_0 and AI_1

Virtual Channel
Init Value: 0
Total1= AI_0 + AI_1

Component Style: TextBox

Angular_Basic.ini
Angular_Circle_Golden.ini
Angular_Circle_Green.ini
Angular_Square_Blue.ini
Angular_Square_Gray.ini

123.456

Modify
Cancel

Classification	Virtual Channel Applied FAQ on EZ Data Logger				No.	2-010-02	
Author	Amber	Version	1.0.1	Date	2013/04/01	Page	5/5

Step5 : The setting result of the selected virtual channel is as below picture ↓

Channel List

AI List	AO List	DI List	DO List
Counter List	Freq List	Virtual Channel	Control Logic
Contact List	Web Camera		

Operation Demo	Description
VC0 + 1	Up count timer
(AI3 + AI4) / 2	Average
Abs(AI5)	Absolute Value Function
DO4 And DO5	Boolean operator

Nickname	Tag	Location	Init Value	Operation	Description
Total1	Total1	VC0	0	AI_0 + AI_1	AI_0 and AI_1
VC1	VC1	VC1	0	VC1 * 1	VC1
VC2	VC2	VC2	0	VC2 * 1	VC2

Step6 : Execute the project, and then open **Layout**. You can see that the Total1 value is the sum of AI_0 and AI_1.

Workgroup1 Ver 4.5.7

Picture Reset Position FontColor << >> Gauge Trend Hide

58.000

AI_0

132.000

AI_1

190.000

Total1

