E'T·N Cutler-Hammer

ELCSoftGP

User Manual

January 2005

Preface

Information in this manual is subject to change without notice and does not represent a commitment on the part of Eaton Electrical Inc. Permission is granted to duplicate this material without modification only for your use or the internal use of other members of your company or your agents to assist you in the use and servicing of products purchased from Eaton Electrical. No permission is granted to modify this material or include this material in a compilation.

RESTRICTED RIGHTS LEGEND

Use, duplication, or disclosure by the Government is subject to restrictions set forth in paragraph (b)(3)(B) of the Rights in Technical Data and Computer Software clause of DAR 7-104.9(a). Contractor/Manufacturer is Eaton Corporation, Operator Interface Business, 811 Green Crest Drive, Westerville, OH 43081.

TRADEMARKS

PanelMate, Cutler-Hammer, Eaton and ePro Canvas are either federally registered trademarks or trademarks of Eaton Corporation.

Commercial brand names (trademarks) of products of manufacturers or developers, other than Eaton Corporation or its affiliates, that appear in this manual may be registered or unregistered trademarks of those respective manufacturers or developers, which have expressed neither approval nor disapproval of Cutler-Hammer[®] products and services.

©2005 Eaton Electrical Inc. All rights reserved.

Printed in the United States of America.

P/N MN05003002E

Support Services

The goal of Eaton is to ensure your greatest possible satisfaction with the operation of our products. We are dedicated to providing fast, friendly and accurate assistance. That is why we offer you so many ways to get the support you need. Whether it's by phone, fax or e-mail, you can access Eaton's support information 24 hours a day, seven days a week. Our wide range of services is listed below.

You should contact your local distributor for product pricing, availability, ordering, expediting and repairs.

Website

Use the Eaton Electrical website to find product information. You can also find information on local distributors or Eaton's Cutler-Hammer sales offices.

Website Address

www.eatonelectrical.com

e-COM Support Center

Call the e-COM Support Center if you need assistance with placing an order, stock availability or proof of shipment, expediting an existing order, emergency shipments, product price information, returns other than warranty returns, and information on local distributors or sales offices.

e-COM Support Center

Voice: 800-356-1243 (8a.m.–6p.m. EST) FAX: 800-752-8602 After-Hours Emergency: 800-543-7038 (6p.m.–8a.m. EST)

e-TRC Technical Resource Center

If you are in the US or Canada, and have OI/PLC/IPC questions, you can take advantage of our toll-free line for technical assistance with hardware and software product selection, system design and installation, and system debugging and diagnostics. Technical support engineers are available for calls during regular business hours.

e-TRC Technical Resource Center (support for OI, PLC and IPC)

Voice:

- 800-809-2772, selection 5 (8a.m.-5p.m. EST)
- 414-449-7100, selection 5 (8a.m.–5p.m. EST)

FAX: 614-882-0417

e-mail: CHATechSupport@eaton.com

After-Hours Emergency (Plant Down Only):

- 800-809-2772, selection 5 (5p.m.-8a.m. EST)
- 414-449-7100, selection 5 (5p.m.–8a.m. EST)

Table of Contents

Chapter 1 ELCSoftGP Operation 1-1
1-1 Hardware requirement 1-1
1-2 Installation1-1
1-3 Basic Introduction1-5
1-4 Skills for mouse operation1-6
1-5 ELCSoftGP Software Window1-6
1-5-1 Explanation1-6
1-5-2 Menu Bar Overview1-9
1-6 ELCSoftGP Software Explanation in Detail 1-16
1-6-1 File1-16
1-6-2 Edit
1-6-3 Compile1-28
1-6-4 Objects Function Explanation1-29
1-6-5 View1-52
1-6-6 Communication1-54
1-6-7 Local Page Settings1-55
1-6-8 Global Settings1-61
1-6-9 Tools
1-6-10 Windows1-66
1-6-11 Help1-67
Chapter 2 Communication Connection Mode 2-1
Chapter 3 Examples 3-1

www.comoso.com

Chapter 1 ELCSoftGP Operation

1.1 Hardware requirement

Operation system requirement for installing ELCSoftGP should be:

Items	System requirement
Operation system	Windows 95/98/2000/NT/XP
CPU	Pentium 90 or above
Memory	16MB or above (32MB and above is recommended)
Hard disk capacity	20MB or above
Display resolution	640x480, 16 colors and above
Mouse	Compatible with Windows
Printer	Compatible with Windows
RS-232	At least one Com Port to connect to GP02/GP04

1.2 Installation

- Start-up Windows
- Put the ELCSoftGP software CD into disk
- Press [Start] to select Run



■ Select the installation disk and directory to save.





■ Press <u>N</u>ext> for following steps to go to next step



■ Press <u>N</u>ext> for following steps to go to next step

🙀 ELCSoftGP - InstallShield Wizard 🛛 💌							
License Agreement							
Please read the following license agreement carefully.							
EATON ELECTRICAL INC. SOFTWARE LICENSE AGREEMENT							
THIS IS A LEGAL AGREEMENT BETWEEN YOU, THE END USER, AND							
EATON ELECTRICAL INC. BY INSTALLING, COPYING OR OTHERWISE USING							
SOFTWARE, INCLUDING ANY "ONLINE" OR ELECTRONIC DOCUMENTATION							
(COLLECTIVELY REFERRED TO AS " SOFTWARE"), YOU ARE ACCEPTING AND							
AGREEING TO THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO THE							
TERMS OF THIS AGREEMENT, DO NOT INSTALL, COPY OR USE THIS							
SOFTWARE.							
• I accept the terms in the license agreement							
\bigcirc I do not accept the terms in the license agreement							
TostallShield							
- A Development more							

• Enter user name and organization.

🔂 ELCSoftGP - InstallShield Wizard			×
Customer Information			
Please enter your information.			<u>ک</u>
User Name:			
eaton			
Organization:			
eaton			
Install this application for:			
Anyone who uses this contained.	omputer (all users)		
Only for me (delta)			
InstallShield			
	< <u>B</u> ack	<u>N</u> ext >	Cancel

Press <u>N</u>ext> for following steps to go to next step

🔂 ELCSoftGP - Install	Shield Wizard			×
Destination Folder Click Next to install to t	nis folder, or clic	k Change to inst	all to a different folde	r.
Install ELCSol C:\Program F	itGP to: iles\Eaton\ELCG	P\		<u>C</u> hange
InstaliShield		< <u>B</u> ack	Next >	Cancel

🛃 ELCSoft	GP - InstallShield Wizard 🔰 💈									
Ready to	Install the Program									
The wiza	rd is ready to begin installation.									
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.										
Current S	rent Settings:									
Setup Ty	rpe:									
Destinal C:\P	ion Folder: rogram Files\Eaton\ELCGP\									
User Inf	ormation:									
Com	pany: eaton									
InstallShield –										
	< <u>B</u> ack [Install] Cancel									
to the second s	GP - InstallShield Wizard									
Installing	ELCSoftGP									
The prog	ram features you selected are being installed.									
13	Please wait while the InstallShield Wizard installs ELCSoftGP. This may take several minutes.									
	Status:									
TostallShield										
- 1999-1999	< <u>B</u> ack <u>N</u> ext > Cancel									

■ Press Finish to end the window for installing.



After finishing installing, user can execute ELCSoftGP from windows by navigating to **Start>Programs>ELCGP>ELCSoftGP** or by selecting the icon on the desktop.



1.3 Basic Introduction

ELCSoftGP is the configuration software for the ELC GP (Graphic Panels) series of products. You can see the design results immediately on the screen so what you see in the ELCSoftGP program is what will be displayed on GP.

1.4 Skills for Mouse Operation

You can operate with either a keyboard or a mouse but it will be easier to operate with a mouse.

There are four main operation functions in Windows:

- One click left-button: to select function or component item.
- Double-click left-button: to enter or execute the item.
- Drag: press and hold on the left button to drag the mouse to move or adjust size. Once you release the button, the operation is finished. It is used to move or adjust size.
- One click right button: it will display a pop-up menu of editing operation for you to select.

The software will usually display a mouse pointer on the screen to let you know your position. The shape of the mouse pointer helps determine the current function available.

Mouse Pointer	Name	Functions
2	Arrow pointer	The position where the mouse is.
↔ ‡	Resize pointer	It will display on the border of windows or object when adjusting size.
+	Cross pointer	It will display when opening object or drawing.
I	I pointer	It will display when editing text.

1.5 ELCSoftGP Software Window

1-5-1 Explanation



www.comoso.com

- Display Name Bar: display the present file name and file directory.
- Menu Bar: There are 9 functions (File, Edit, Compile, Object, View, Transfer, Setting, Windows and Help) in the menu bar.
- Standard Toolbar: you can click the button what you want to execute directly with mouse. It is very easy for those users that are not familiar with computer to operate.
- Object Toolbar: you can click the button what you want to execute directly with mouse.
- Geometric Toolbar: it provides an easy drawing system in display plan for user to edit GP display directly.
- Text/Bmp Toolbar: it lets you precisely align the text and figures in the object to left end, the object center horizontally end, right end, top end, the object center vertically end or bottom. (you can move the text in the object by pushing button end of en
- Location Toolbar
 - 1. Tools at the left set (I, I, and I): they are used to adjust the location of the object.
 - 2. Tools at the right set (, and , and): they are used to align multiple objects to top, bottom, left and right. (these tools are enabled only when two or more objects are selected)
- Working Area: it is the area for editing. That is also the display that will show on GP screen.
- Status Bar: it is used to display the desired object name and geometric coordinate.

The start-up display of ELCSoftGP will be shown as follows. There are four functions in menu bar for you to select.



After opening file, you should set Device Type setting, including ELC or MVX Drives type..., GP Type and File Name. At the moment, you can select other functions in menu bar. We will introduce them later.



1-5-2 Menu Bar Overview

File (<u>F</u>)

SELC:	SoftGP - C:	Program Files	\Eaton\ELCG	P\DocFiles'	Doc0.gpf						_ 8 ×
File(E)	Edit(E)	Compile(<u>C</u>)	Objects(Q)	View(V)	Communication(M)	Local Page Settings(L)	Global Settings(<u>G</u>)	$\operatorname{Tools}(\underline{T})$	Window(W)	Help(H)	
New			Ctrl+N	13	= = 4 4	🛧 🎩 State 🗠	Font size	-			
Qper	ı File		Ctrl+O					_			
User	<u>M</u> enu Setti	ng		ELC	C-GP04						
Page	Property Q	utward to File		ELC	-GP02						
Save			Ctrl+S								
Save	As		Ctrl+Alt+S	ext Input		1					
Print				 Prin 	t GP Page F1	1					
⊆los	9			Prin	t Start Eigure F2						
Exit			Ctrl+X								

- New: Create a new file.
- Open File: Open an old file.
- User Menu Setting: users can set the languages or menu depends on requirement.
- Page property Outward to File: export all page to TXT or EXCEL file.
- Save: save the file into disk.
- Save as: save the present file to other file name.
- Print: print present file and set printer settings.
- Close: close present project.
- Exit: exit ELCSoftGP.

Edit (E)



- Add a new page: Add a new page
- Save page Bitmap: save the present page to clip board or file.
- Undo: back to the previous condition.

- Redo: do the condition before redo. (this item is for future edition)
- Delete: delete the component in editing page.
- Cut: delete and cut the component in editing page.
- Copy: copy the component in editing page.
- Paste: paste the component to editing page.
- Multi-Copy: duplicate an object to multiple objects.
- Copy Page: duplicate all objects in whole page.
- Paste Page: paste all objects that are duplicated to other blank page.
- Move Up: move up selected object when two or more objects are overlapped.
- Move Down: move down selected object when two or more objects are overlapped.
- Move Top: move selected object to the top layer when two or more objects are overlapped.
- Move Bottom: move selected object to the bottom layer when two or more objects are overlapped.
- Select all: select all components in editing page.

User could one-click right button of mouse to get pop-up menu to edit every component quickly, such as copy, paste, move and etc.

Undo	Ctrl+Z
Redo	Ctrl+Alt+Z
Select All	
Copy Page	
Paste Page	
Delete	Del
Cut	Ctrl+X
Сору	Ctrl+C
Paste	Ctrl+V
Multi-Copy	
Move Up	
Move Down	
Move to Top	
Move to Bottom	
Page Jump Condition Setting	ţ
Function Key Setting	
Alarm Buzzer Setting	
Alarm LED Setting	
Hide Setting	
Write Page No. Setting	



• Compile: to compile the finished page to download to GP.

Objects (O):

File(E) Edit(E) Compile(C) Objects(Q) View(Y) Communication(M) Local Page Settings(L) Global Settings(G) Tools(T) Window(W) Help(H) D Image Settings(L) Static Text Image Settings(L) Static Text Image Settings(L) Fort size Image Settings(L) Static Text Image Settings(L) Fort size Image Settings(L) Image Settings(L)	
Difference Static Text Read Out Read Out Note Read Out	
Indicator (IOXIO) Indicator	
Multi-State Indicator	
T	
Dynamic Bitmap	
Message Display Circle Meter	
Button Euton	
Clock Display	
Multi-State Bitmap	
Units	
Numeric Input	
Curve	
A-Y Curve	
Rectangle(Outine)	
Rectargle(Sond)	
Circle(Solid)	
Curve	
Chord(Outline)	
Chord(Solid)	
Sector(Outline)	
Sector(Solid)	
Poly-Line	

- Static Text: edit text to shown on GP screen.
- Read Out: GP reads ELC corresponding value of register to show on GP screen.
- Indicator (16x16): There are two types 1.Indicator: read the corresponding contacts (ON or OFF). 2. Multi-state Indicator: reads the register data to show the corresponding indicator on GP screen.
- Bitmap: it is used to edit static bitmap to be the background. Or it also could be used for GP to read the corresponding contacts (ON or OFF) or register data to show the corresponding dynamic bitmap on GP screen.
- Scale: edit the scale that user needs to GP screen.
- Progress Bar: GP reads the ELC corresponding data of register to convert to progress bar to show on GP screen.
- Meter: GP reads ELC corresponding data of register to convert to circle meter to show on GP screen.
- Message Display: GP reads ELC corresponding contacts (ON or OFF) or register data to display the corresponding message on GP screen.

- Button: it will have a series of button type for you to choose. It will be easier to design ELC program.
- Clock Display: GP reads time/week/date from internal RTC or ELC series to display on GP screen.
- Multi-state Bitmap: GP reads the corresponding contacts (ON or OFF) or register data to show the corresponding user-defined figure or characters on GP screen.
- Units: edit the unit that user needs on GP screen.
- Numeric Input: you can use function key or instruction key to input figures. GP will transmit figures to the corresponding registers of ELC when pressing Enter.
- Curve: GP reads a serial figure from ELC corresponding registers to convert to curve and display on GP screen.
- X-Y Curve: GP reads a serial figure from ELC corresponding registers to convert to XY chart and display on GP screen.
- Geometric Graphic: it is used to edit GP display.

View (\underline{V}) :

SELC	SoftGP - C	:\Program File	s\Eaton\ELCG	P\DocFiles'	Doc0.gpf							_ 8 ×
File(E)	Edit(<u>E</u>)	Compile(<u>C</u>)	Objects(<u>Q</u>)	View(V)	Communication(<u>M</u>)	Local Page S	ettings(<u>L</u>)	Global Settings(<u>G</u>)	$\operatorname{Tools}(\mathbb{T})$	Window(<u>₩</u>)	Help(<u>H</u>)	
	≥ ∎ @	ымX	8 B B	Page <u>M</u>	lanager		- <u>-</u>	Font size	Y			
	<u>(A)</u>	0: % }	<u> Sal = (0) =</u>	<u>G</u> P Pag Start F	(e							
			<u>>000</u>	Full Sc	reen and <u>R</u> efer Device							
(Ĵ) (i)) ۱۱۹۰	•≡• →≡ <u>∓</u>	11	Page <u>M</u>	Lorkspace		Т					
ĪŢ	1 + -			Qbject	Inspector							
			-	🖌 Standar	d Toolbar	Shift+F1	<u> </u>					
0 :				✓ <u>O</u> bject	Toolbar	Shift+F2						
				✓ <u>G</u> eome	tric Toolbar	Shift+F3						
				✓ Text/B	mp Toolbar	Shift+F4						
				✓ Locatio	on Toolbar	Shift+F5						

- Page Manager: manage the edited page.
- Gp Page: display edited GP page and switch between GP page and start-up display.
- Start Figure: edit start-up display and switch between GP page and start-up display.
- Full Screen and Refer Device: display full-screen and relative device name.
- Page Workspace: display current edition pages and start-up screen.
- Object Inspector: display all properties of objects and it also can be edited and set directly.
- Standard Toolbar: show/hide Standard Toolbar.
- Object Toolbar: show/hide Object Toolbar.
- Geometric Toolbar: show/hide Geometric Toolbar.
- Text/Bmp Toolbar: show/hide Text/Bmp Toolbar.

■ Location Toolbar: show/hide Location Toolbar.

Communication (<u>M</u>)

File(E) Edit(E) Compute(C) Objects(Q) View(W) Communication(M) Local Page Settings(L) Global Settings(G) Tools(T) Window(W) Help(H) Image: Ima
Image: Store of the state
D D T Textinput

- Read from GP: Read application program from GP to ELCSoftGP.
- Write to GP: Write application program from ELCSoftGP to GP.
- Write Start figure to GP: Write start-up display that edited by ELCSoftGP into GP.
- Write Menu to GP: Write user-defined user menu that edited by ELCSoftGP into GP.

Local Page Settings (L):

③ELCSoftGP - C:\Program Files\Eaton\ELCGP\DocFiles\Doc0.gpf						_ 8 ×
$File(\underline{F}) Edit(\underline{E}) Compile(\underline{C}) Objects(\underline{O}) View(\underline{V}) Communication(\underline{M})$	Local Page Settings(<u>L</u>)	$\texttt{Global Settings}(\underline{G})$	Tools(I)	Window(<u>₩</u>)	Help(<u>H</u>)	
	Page Jump Condition	Setting Ctrl+F1	-			
	Function <u>Key</u> Setting	Ctrl+F2				
	Alarm <u>B</u> uzzer Setting	Ctrl+F3				
	Alarm <u>L</u> ED Setting	Ctrl+F4				
	Hide Page Setting	Ctrl+F5				
♥ ♥ ➡ ➡ = ₹ ₹ ₹ 조 Text input	Write Page <u>N</u> o. Settin	g				
	, <u> </u>		1			
(6)0;						

- Page Jump Condition Settings: input the jump page condition. If the condition is held, it will jump to the designated page.
- Function Key Setting: it is used to define the functions and button types of function keys F0~F9, Up, Down, Left, Right.
- Alarm Buzzer Setting: input alarm condition. When the condition is held, buzzer sounds.
- Alarm LED Setting: input alarm condition. When the condition is held, alarm LED will light.
- Hide Page Setting: users cannot see these hidden pages when browsing pages by pressing UP/DOWN key.
- Write Page No. Setting: write page number of current page to the connected device.

User could one-click right button of mouse to get pop-up menu to edit every component quickly, such as Page Jump Condition Settings, Function Key Setting, Alarm Buzzer Setting and etc.

Undo Redo	Ctrl+Z Ctrl+Alt+Z
Select All Copy Page Paste Page	
Delete Cut Copy Paste Multi-Copy Move Up Move Up Move Down Move to Top Move to Bottom	Del Ctrl+X Ctrl+C Ctrl+V
Page Jump Condition Settin Function Key Setting Alarm Buzzer Setting Alarm LED Setting Hide Setting Write Page No. Setting	ıg

Global Settings (G):



- System Page Jump Setting: when the conditions are held, it will jump to the designated page. This is used for system to change page. It is not necessary to set change condition for each page. Once the condition in each page is held, it will jump to the designated page. (if the conditions of system change page conflicts with the conditions of each page, the conditions of each page has high priority.)
- System Function Key Setting: it is used to define the button type and functions of function keys F0~F9, Up, Down, Left, Right. It doesn't need to set in each page. Once the function keys F0~F9 are used, they will be executed according to the definition of button type and functions. (if the function settings of system conflicts with the function settings of each page, the function setting of each page has high priority.)

- System Alarm Buzzer Setting: to set system alarm condition. When the conditions are held, buzzer will sound. It doesn't need to set condition in each page. Once the condition is held, buzzer will sound in any page. (if the system alarm condition conflicts with the alarm condition of each page, the alarm condition of each page has high priority.
- System Alarm LED Setting: to input alarm condition. When the condition is held, GP alarm LED will light. It doesn't need to input alarm condition in each page. (if the alarm condition conflicts with alarm condition of each page, the alarm condition of each page has high priority.)
- System Clock Setting: write GP time/week/date to the connected device.
- System Power ON Marco Setting: it is used to set the interval time (when it is to transmit instruction) and the connected device (the device that instruction needed to be transmitted) after power up.

PELCS ACR CARACTER CONTRACTOR	- Ell-JD5f					(a) v
File(E) Edit(E) Compile(C) Objects(Q) Via	ew(V) Communication(M)	Local Page Settings(L)	Global Sett	tings(G) Tools(T)	Window(W)	Help(H)
		1 UState	▼ Font	Default Text Font		Ctrl+D
	K (nput	I		Communication Se GP Protocol Settin GP Object Commu Change Device Typ User-Level/Passwo AutoSave Setup	ttings g mication Defaul pe vd Setting	Ctrl+C .t Setting
③0:		💶 🖌 Re-Define Up/Dow	n Key	Function <u>K</u> ey Setti	ng	•
EATON	9	All Page Size Page <u>S</u> ize		Page Size Grid Setting		•
ELC-GP04	C2!5/1	COO Grid On Grid Off				

Tools (\underline{T}) :

- Default Text Font: it is used to set the font attributes that used in ELCSoftGP.
- Communication Setting: it is used to set the communication format between PC and GP.
- GP Protocol Setting: set the communication format of GP and monitor devices, including RS-232 COM1 and RS-485(RS-422) COM2.
- GP Object Communication Default Setting: set the communication port and station number for all objects in GP to communicate.
- Change Device Type: switch the device type that GP connects.
- User-Level/Password Setting: set user level and password.
- AutoSave setup: set time to auto save file, such as before compiler or when.
- Function Key Setting: it is used to enable Up, Down key.
- Page Size: it is used to set windows' size.
- Grid Settings: it is used to set using grid or not.

Windows (<u>W</u>):

③ELCSoftGP - C:\Program Files\Eaton\ELCGP\DocFiles\Doc0.gpf		_ 8 ×
File(E) Edit(E) Compile(C) Objects(Q) View(Y) Communication(M) Local Page Settings(L) Global Settings(G) Tools(T)	Window(W) Help(H)	
D 2 日本の マン X 時間 ② 1 日本 1 日本 2 日本 2 日本 2 日本 2 日本 2 日本 2 日本	Tile Vertically	
	Cascade	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		

- Tile Vertically: display edit page in vertical.
- Tile Horizontally: display edit page in horizontal.
- Cascade: display edit page in overlay.

Help(<u>H</u>):



- Version: display software version of ELCSoftGP and relative information.
- Help: provide electronic file of ELCSoftGP user manual.

Above is the basic introduction of ELCSoftGP. We will explain the functions that used frequently for detail in the following.

1.6 ELCSoftGP Software Explanation in Detail

1-6-1 File

Create a New File

It is used to create a new file. Do one of the following:

Method 1:

Step 1. File (\underline{F}) > New

SELC:	SoftGP -								_ 8 ×
File(E)	Edit(E) Com	pile(<u>C</u>) Objects(<u>C</u>) $View(\underline{V})$	Communication (A) Local Page Settings(L)	Global Settings(<u>G</u>)	Tools(I)	Help(H)	
New			C	trl+N 🔤 🛙	State 🗧	▼ Font size	-		
Qper	n File 🗥		C	trl+0		_ ,			
User	<u>M</u> enu Setting			•					
Page	Property <u>O</u> utward	l to File							
Save				trl+S					
	: <u>A</u> s			trl+Alt+S					
Print	t			>					
Clos	e								
C:\P: C:\P: C:\P: C:\P: C:\P:	rogram Files/Eato: rogram Files/Eato: rogram Files/Eato: rogram Files/Eato: rogram Files/Eato:	n\ELCGP\DocFiles n\ELCGP\DocFiles n\ELCGP\DocFiles n\ELCGP\DocFiles n\ELCGP\DocFiles	\Doc5.gpf \Doc1.gpf \Doc3.gpf \Doc2.gpf \Doc0.gpf	<	– 5 last u	sed file	S		
Exit			C	trl+X					

www.comoso.com

Step 2. Set Device type.

New Project	
Set Device Type	
EATON ELC - PB/PC/PA/PH	-
GP Туре	
ELC-GP04	•
File Name	
Monitor Production Line	
OK Cancel	

- Step 3. User can set ELC or Inverter Type, GP type and File Name in this dialog box.
- Step 4. You can use file name to record the function of program. For example, you can name "Monitor Production Line" for the program that monitors the production line.
- Step 5. ELCSoftGP document usually have extension .gpf. ELCSoftGP will name your new file to be Doc0. (the default name will be Doc0.gdf, Doc1.gdf.....in order.

The following is the window for creating new project.

Q)ELCS	oftGP - C:	Program File	s\Eaton\ELCC	3P\DocFiles\	Monitor Production L	ine.gpf					_ 8 ×
]	File(E)	Edit(E)	$Compile(\underline{\mathbb{C}})$	Objects(<u>Q</u>)	View(V)	$\texttt{Communication}(\underline{M})$	Local Page Settings(<u>L</u>)	Global Settings(<u>G</u>)	Tools(I)	$\texttt{Window}(\underline{W})$	Help(<u>H</u>)	
	D	F 🗖 🖨	ыыХ	X 🖻 🖪	Ø 🕲 🛣	<u>te te s s s</u>	1 State	Font size	V			
		A 58 8	0: 8 1	<u> </u>	= 🥷 😫	1 🔂 🔯 🕇						
				<u>900</u>								
	(Î) (Î) II+-	•≣• →≣ <u></u>		Text Input		T					
	7	+ →										
Γ	® 0:											
ſ												

Method 2: Click the button 🗋 to create a new file.

Method 3: Pressing (Ctrl) + (N) to create a new file.

• Open an Old file

Method 1:

Step 1. choose File (\underline{F}) > Open File

ELC	:SoftGP - C	:\Program File:	s\Eaton\ELCG	P\DocFiles	Monitor F	roduction L	ine.gpf					_ 8 ×
File(E) Edit(E)	Compile(<u>C</u>)	Objects(<u>Q</u>)	$View(\underline{V})$	Commun	nication(M)	Local Page Settings(<u>L</u>)	Global Settings(<u>G</u>)	$\operatorname{Tools}(\underline{T})$	$\texttt{Window}(\underline{W})$	Help(<u>H</u>)	
Nev	A			Ci	rl+N	alal	A State	- Font size	_			
Qpe	m File	N		Ci	rl+0							
Use	r <u>M</u> enu Sett	ing V				• 🛃 🕂						
Pag	e Property 🤇	<u>)</u> utward to File										
Sav	e			Ci	rl+S							
Sav	e <u>A</u> s			Ci	rl+Alt+S		<u> </u>					
Prin	nt					•						
⊆lo	se											
CAL				an5 mf		—						
C.1	logiam Pile	- DE AURIELCO		f								
C:u	-logialli File	SEALOILELCC	PD FILES DO	oci.gpi								
C:V	'rogram File	es/Eaton/ELCC	rP\DocFiles\D	oc3.gpt								
C:V	Program File	es\Eaton\ELCC	P\DocFiles\Do	oc2.gpf								
C:\I	Program File	es\Eaton\ELCC	P\DocFiles\Do	oc0.gpf								
Exi	t			Ci	rl+X							
1												

Step 2. Open an old file dialog box.

Open					<u>?</u> ×
Look in:	ELCSoftGF)	•	+ 🗈 📸 🎫	
My Recent Documents	Doc0				
Desktop					
My Documents					
My Computer					0 1
My Network Places	File name: Files of type:	JI GP File (*.gpf)			Cancel

File name ⇒ key in or select the file name that you want to open. It will show all the file type that selected in "file of type" in this dialog box.

File of type ⇒ select the file type you want to open: Gdf File (i.e. *.gdf)

Look in \Rightarrow select the disk or file that you want open.

Method 2: Click the button $\stackrel{\frown}{=}$ to open the existed file.

Method 3: Pressing (Ctrl) + (O).

User Menu Setting

You can set the language, menu content or GP information according to your request. In addition to the default three languages, user can select the suitable language for themselves. The following is for detail:

- Step 1. Choose File (<u>F</u>) > User Menu Setting > ELC-GP04 and it will show 21 pages (User &Menu Setting-0 ~ User &Menu Setting-20) about user menu setting for you to set.
- Step 2. Choose File (<u>F</u>) > User Menu Setting > ELC-GP02 and it will show 41 pages (User &Menu Setting-0 ~ User &Menu Setting-40) about user menu setting for you to set.

SELCSoftGP - User & Menu Setting						_ 8 ×
File(E) Edit(E) Compile(C) Objects(Q) View(V) Communication	on(M) Local Pa	age Settings(<u>L</u>)	Global Settings(<u>G</u>)	Tools(I)	Help(<u>H</u>)	
New	Ctrl+N	State 👻	▼ Font size	~		
Qpen File	Ctrl+O					
User <u>M</u> enu Setting Prov. Recorder Anternal in File		TLC-GP04				
rage riopeny willward to rile	Ctrl+S	ELC-Gr02	<u> </u>			
Sawe As	Ctrl+Alt+S					
Print	¢arrintio ►	- 🗆 🗙				
Close			×			
ChProgram Eiles/Estan/ELCCED/DesEiles/Manitar Production Line and	r	-	×			
C. 9 rogram Files/Eston/ELCGP/DocFiles/Doc5 mf						
C:\Program Files\Eaton\ELCGP\DocFiles\Doc1.gpf						
C:\Program Files\Eaton\ELCGP\DocFiles\Doc3.gpf						
C:\Program Files\Eaton\ELCGP\DocFiles\Doc2.gpf						
	("trl+¥	-				
	Cuilly					
ELCCACD II., Man Calin						
File(F) Edit(E) Compile(C) Objects(O) View(V) Commission	mMA Local P	age Settingell)	Global Settinge(G)	Toole(T)	Help(H)	_ <u> </u>
		rge Dennigo(<u>D</u>)	Giobai Denings(G)		Therp(<u>LL</u>)	
		State	Font size		 	
OUser &Menu Setting-15						
Wuser & Menu Setting-16		<u>×</u>				
User & Menu Setting-17	_					
User & Mony Setting 10						
Source and Setting-19 Setting-20			xI			
N 'H Thut of Bange						
▕▎▛▁▁∇▐╷						
4 _						
┝──╵┝╻╻┕						
-4Enter						
V-16 V-16					 	

Step 3. You can set the language you need here. But you can't modify the function definition and button size.

Step 4. You just need to double-click the item you want to modify and it will show the dialog box for you to edit.

©User &Menu Setting-2 2.Contrast 3.BackLight 4.Date/Time	× = _ - - -
5.Buzzer	
Static Text	X Set Frame No Frame Align Text From Left to Right Location Set Align left Middle Font
©0ser 20Menu Setting-2 2.Contrast 3. backlight ° 4.Date/Time 5.Buzzer	

- Step 5. After editing, press 1. D/L AP GP04 ← PC in GP04 hardware main menu. The words "WAIT COMM…" will be shown on GP screen.
- Step 6. Choose Communication (M) > Write Menu to GP. This function just can be used under the mode of User Menu Setting. It is used to download the menu to GP.

Step 7. To set language you should select 6. language setting in GP04 main menu and then press Enter to set.



Page property Outward to File

Export all page to TXT or Excel file.

Step 1. Choose File (\underline{F}) > Page property Outward to File.

⑤ELCSoftGP - C:\Documents and Settings\chunchin.wang\桌面\test\tp0	4108\Doc0.gpf						_ 8 ×
File(E) Edit(E) Compile(C) Objects(Q) View(V) Communicat	.on(<u>M</u>) Local H	Page Settings(L)	Global Settings(<u>G</u>)	$Tools(\underline{T})$	Window(<u>W</u>)	Help(<u>H</u>)	
New	Ctrl+N	State -	▼ Font size	-			
<u>O</u> pen File	Ctrl+O						
User <u>M</u> enu Setting		•					
Page Property Qutward to File							
Save	Ctrl+S	T					
Dave As	Ctrl+Alt+S						
Close							
		- [] ×					
C:\Documents and Settings\chunchin.wang\桌面\test\tp04108\1.gpf							
C:\Program Files\Eaton\ELCGP\DocFiles\Doc4.gpf							
C.VProgram Files/Eaton/ELCGP/DocFiles/Wionitor Production Line.gr	4	F 1					
C.Program Files/Eaton/ELCGP/DocFiles/Doc1.mpf							
C. Frogram Files Batori EDCGF Boor hes Boor, gpr		-					
Exit	Ctrl+X						
	****	-					
63	. بد بد بد	<u>н</u>					
<u> </u>	####	+					
		.					
	####	FF					
X:61 Y:0 Device	Type: EATON I	elc - pb/pc/pa	/ GP Type: ELC-GP0	4			

Step 2. Choose the page that needed to

-Page Di	mo_0 m1_0 y0_0 (c) ====== ======= ======================	Page Select 0: state1 1: state2	
Object	Name	Object Location	Object Size	Read Ad
Button		(8,3)	(3,15)	
Button		(7,25)	(3,15)	
Numer	.c Input	(63,4)	(3,15)	
Indicat	or	(41,4)	(3,15)	M0
Indicat	or	(41,25)	(3,15)	M1
Button		(6,45)	(3,15)	
Indicat	or	(41,46)	(3,15)	YO
Numer	.c Input	(62,25)	(3,15)	
	•	(62.45)	3.15	



Page Number	Ohiect Name	Object Location	Object Size	
1	Numeric Input	(63.45)	(3.15)	
1	Button	(7,25)	(3,15)	
1	Numeric Input	(63,4)	(3,15)	
1	Indicator	(41,4)	(3,15)	
1	Indicator	(41,25)	(3,15)	
1	Button	(6,45)	(3,15)	
1	Indicator	(41,46)	(3,15)	
1	Button	(8,3)	(3,15)	
1	Numeric Input	(62,25)	(3,15)	
2	Numeric Input	(63,45)	(3,15)	
2	Button	(7,25)	(3,15)	
2	Numeric Input Outward To		x ^{3,15)}	
2	Indicator		3,15)	
2	Indicator Outward F	OF OF OF	\$,15)	
2	Button 💿 Text Fi	1e	3,15)	
2	Indicator	Can	cel 3,15)	
2	Numeric Input O Excel F	Vile	3,15)	
2	Button		3,15)	

Save

It is used to save the present file into disk.

Method 1: choose $File(\underline{F})$ > Save to save with the original file name.

⊚ELCSoftGP - User &Men	u Setting			
File(E) Edit(E) Compile	(C) Objects(Q)	View(<u>V</u>)	Communication(<u>M</u>)	Local Pa
New			Ctrl+	N
<u>O</u> pen File			Ctrl+	0
User <u>M</u> enu Setting				•
Page Property <u>O</u> utward to	File			
Save	<u></u>		Ctrl+	S
Save <u>A</u> s	2		Ctrl+	Alt+S
Print				Þ
<u>C</u> lose				
C:\Program Files\Eaton\E	LCGP\DocFiles\	Monitor Prod	luction Line.gpf	
C:\Program Files\Eaton\E	LCGP\DocFiles\	Doc5.gpf		
C:\Program Files\Eaton\E	LCGP\DocFiles\	Docl.gpf		
C:\Program Files\Eaton\E	LCGP\DocFiles\	Doc3.gpf		
C:\Program Files\Eaton\E	LCGP\DocFiles\	Doc2.gpf		
Enit				

Method 2: Click the button

Method 3: Press (Ctrl) + (S).

Save as

Save the present file in another name into disk. ELCSoftGP will save new file to be the default name, if you want to save it to another name, please choose "Save as".

Step 1. Choose File (\underline{F}) > Save as.

ELCS	oftGP - C:	\Program Files	\Eaton\ELCG	P\DocFiles	Doc4.gpf					
File(E)	Edit(E)	Compile(<u>C</u>)	Objects(<u>Q</u>)	View(V)	Communication(<u>M</u>)	Local Pag				
<u>N</u> ew					Ctrl+	-N				
<u>O</u> pen	File				Ctrl+	ю				
User]	<u>M</u> enu Setti	ing				•				
Page I	Property Q	utward to File								
<u>S</u> ave					Ctrl+	-S				
Save ,	As				Ctrl+	-Alt+S				
Print		N				•				
⊆lose										
C:\Pro	ogram File	s\Eaton\ELCG	P\DocFiles\M	lonitor Prod	luction Line.gpf					
C:\Pro	ogram File	s\Eaton\ELCG	P\DocFiles\D	oc5.gpf						
C:\Pro	ogram File	s\Eaton\ELCG	P\DocFiles\D	ocl.gpf						
C:\Pro	C:\Program Files\Eaton\ELCGP\DocFiles\Doc3.gpf									
C:\Pro	ogram File	s\Eaton\ELCG	P\DocFiles\D	oc2.gpf						
Exit					Ctrl+	-X				

Step 2. input file name and then save.

Open					? ×
Look in:	ELCSoftGP		-	+ 🗈 📸 📰 -	
My Recent Documents Desktop My Documents My Computer	Doc0				
My Network	File name:			•	Open
Places	Files of type:	GP File (*.gpf)			Cancel

Print

Step 1. Choose File (\underline{F}) > Print. > print GP Page or > print Start Figure.



Step 2. You can check the print attribute you need in the following dialog box.

Printer	
Print way • print by Page) print by Bmp
Page Print Set ✓ Print File Name ✓ Page Edit ✓ Print Page Title ✓ Page jump conditi ✓ All Object Info. in	Preview Print
Printer Set	Cancel

Step 3. You can preview the print result.

Preview			×
	ELCSoftGP		
	File name=Doc0.gpf		
		Page: 1/6	Previous page
	Display0 Title:state1		
	mo_0 #####		Next page
	m1_0 #####		
	yo_o 💬 🗰 #####		
	Page &Jump Condition Setting		
			Print
			Canaal

Close

Choose File (\underline{F}) > Close. to close the present file.

Exit

Choose File (<u>F</u>) > Exit or click \bowtie at the right upper-corner. Please confirm to save or not before exit ELCSoftGP.

1-6-2 Edit

In addition to undo, cute and paste functions of ELCSoftGP

Method 1: Choose Edit (\underline{E}) >

Add a New Page

Choose Edit (<u>E</u>) > Add a New Page or click the button \square to add new page.

■ Save page Bitmap: Choose Edit (<u>E</u>) > Save page Bitmap to save the present page Bitmap to clipboard or file.



- Undo, Redo: to back to the previous action or redo the action before execute "undo".
- The functions of delete, Cut, Copy, Paste, Multi-Copy, Copy Page, Paste Page, Move Up, Move Down, Move Top, Move Button and Select all:

Delete: delete the component from editing page.

Cut: delete and cut the component from editing page.

Copy: copy the component from editing page.

Paste: paste the component from editing page.

Multi-Copy: duplicate an object to multiple objects.

Copy Page: duplicate all objects in whole page.

Paste Page: paste all objects that are duplicated to other blank page.

Move Up: move up selected object when two or more objects are overlapped.

Move Down: move down selected object when two or more objects are overlapped.

Move Top: move selected object to the top layer when two or more objects are overlapped.

Move Bottom: move selected object to the bottom layer when two or more objects are overlapped.

Select all: select all components from editing page.

www.comoso.com

Method 2: User could one-click right button of mouse to get pop-up menu to edit every component quickly, such as copy, paste, move and etc.

Undo	Ctrl+Z
Redo	Ctrl+Alt+Z
Select All	
Copy Page	
Paste Page	
Delete	Del
Cut	Ctrl+X
Сору	Ctrl+C
Paste	Ctrl+V
Multi-Copy	
Move Up	
Move Down	
Move to Top	
Move to Bottom	
Page Jump Condition Setting	
Function Key Setting	
Alarm Buzzer Setting	
Alarm LED Setting	
Hide Setting	
Write Page No. Setting	

1-6-3 Compile

Choose Compile (<u>C</u>) > Compile or click the button $\boxed{100}$ to compile application program to transmit to GP04. After compiling successfully, you will get the following dialog box.

ELCSoftGF	- C:\Docu	ments and Setti	ngs\chunchin.wang	(\桌面\test\tp04108\Dc	oc0.gpf					_ 8 ×
File(E) Edit	t(E) Con	npile(<u>C</u>) Obje	cts(Q) View(V)	Communication(M)	Local Page Settings(L)	Global Settings(<u>G</u>)	$\operatorname{Tools}(\underline{T})$	Window(<u>W</u>)	Help(H)	
0 🛩 🖬		ompile Ctrl+T	- 00	# # 🔍 🔍	1 J State	 Font size 	-			
	i eti oti	🌮 😰 🖘 💶	@ ≕ ® @							
		<u> </u>	<u>98</u> 1-							
	■ N- *■ × -	-	i 📕 Text Input		Т					
Ţ≛⊫										
,, <u> </u>					1					
	O:stat	le 1								
	Γ	_	1/~~							
		mo_O		##	###					
	L		┛╲╱╴		· · · · · · · · · · · · · · · · · · ·					
			1			TI OG NOD				
		m1 0.		HH	###	ELCSottGP	×			
		<u>_</u> ~		++	+++++	Succeed in Cor	npiler!!			
						Memory Used	=1%			
		o o	L (A A)	+++			_			
		yo_o			+++++	OK				
		.0 O	6 A .	+++	***					
		yo_o		+++	***					
, X:43 Y:1				Device Type: E	ATON ELC - PB/PC/PA	GP Type: ELC-GP0	14			
,										

1-6-4 Objects Function Explanation

You could choose Object (<u>O</u>) or press(ALT)+(O)to set object. It is the management system for all objects. You need to open a page before using this function.

- Static Text
- Step 1. Choose Object (\underline{O}) > Static Text or click the button \underline{M} . At the moment, the mouse pointer will be cross pointer. You can press the left button of mouse, drag to the position you need and then release to get the text square.

SEL	CSoftGP - (C:\Documents a	nd Settings\ch	unchin.wang	(桌面\test\eaton\Doc().gpf					_ 8 ×
File	E) Edit(<u>E</u>)	Compile(<u>C</u>)	Objects(<u>Q</u>)	View(V)	Communication(<u>M</u>)	Local Page Settings(<u>L</u>)	Global Settings(<u>G</u>)	Tools(I)	Window(<u>W</u>)	Help(<u>H</u>)	
	🖻 🔒 🗧	n a X	X 🖻 🖻	Ø 🗳 😿	<u>† †</u> <u>5</u>	1 State	Font size	Y			
	<u>sa</u> 58 8	10: 8 8	<u>Sa = (0)</u>	😇 👧 💁) 🖬 🔯 🎦 🕂						
			<u>900</u>	5 –							
(Ĵ)	÷	- +≣+ →≡ =	<u> </u>	Text Input		÷ T					
7	± ■ + +		1								
):										
	[
	L			•							

Step 2. Move the mouse to static text square and then double-click left button of mouse to get the following window.



Step 3. You can input text and setting the font attributes (including frame setting, Align Text, Location setting and font type). Frame setting could be no frame single frame, double frames, bold frames, dotted line frames or spotted line frames. Align Text could be from left towards to right, from right towards to left, from up towards to down and from down towards to up. Location setting could be left side, right side or middle side. You could select the font you need by pressing the button "Font" and you will get the following dialog box.

		?
Font style: Regular	Size:	ОК
Regular Italic Bold Bold Italic	8 10 12 14 18 24	Cancel Apply
Sample	/yZz	
Script: Western	•	
	Font style: Regular Italic Bold Bold Italic Sample AaBb' Script: Western	Font style: Size: Regular 8 Regular 8 Italic 10 Bold 12 Bold Italic 14 Sample 24 Script: Western
Step 4. After setting, you will get the static text. If it can't show completely, you should enlarge the size of text square.



Step 5. Choose View (\underline{V}) > Object Inspector: display all properties of objects and it also can be edited and set directly.



- Read Out
- Step 1. Choose Object (<u>O</u>) > Read Out or click the button Step 1. Choose Object (<u>O</u>) > Read Out or click the button Step At the moment, the mouse pointer will be cross pointer. You can press the left button of mouse, drag to the position you need and then release to get the Read Out Object.
- Step 2. Move the mouse to the Read Out Object and then double-click left button of mouse to get the following window.

Read Out		
Refer Device		Frame Set
DO	Refer	No Frame
		Font
Value Type	unsigned T	
Value Length	16bit 💌	
Position Set	Align Left 💌	🔲 Fill Leading Zeroes
		ОК
Integer Number	5 💌	
Decimal Number	0 💌	Cancel

Step 3. Click reference device and you will get the following window.

Refer Device		
Refer Device		
Device Name D	Comm. Addr. (0~255)	1 •
Equipment No.	GP Port :	COM1 -
0 1 2 3 4 5		OK
6789AB		Clear
		Close

- Step 4. In this dialog box, you could set device name to be T, C and D and device number to be 0~F. If your device name is AC driver, it doesn't need to check device name. It will show symbol \$ to mean AC driver absolute address. What you need is to input absolute address in device number.
- Step 5. You could set device name, value type, value length, position, integer number, decimal number, frame setting, font, blink and fill 0 into upper bit.
- Step 6. Value type could be unsigned, signed, hexadecimal, BCD code, ASCII code, Binary or Floating. Value length could be 16 bits or 32 bits. The position could be right side, left side and middle.

- Step 7. The digital numbers of integer and decimal according to the setting of display value number. For example, if the real value of timer T0 is 50 seconds, if you set integer number is 3 and decimal number is 0 and it will display 500. If you set 3 for integer number and 1 for decimal number and it will display 050.0.
- Step 8. The settings of frame could be no frame, double-line frame, bold frame and the font size could be 5X8, 8X8, 8X12 and 8X16.
- Step 9.You could choose to fill 0 in upper bit or not. For example, there are 6 integer numbers and 2 decimal numbers of a value. If you check to fill 0, the value 324836 will display to 003248.36. If you don't check to fill 0, the value 324836 will display to 3248.36.
- Step 10. After setting, GP will read ELC corresponding reference device to show the value on GP screen.
- Step 11. Choose View (V) > Object Inspector: display all properties of objects and it also can be edited and set directly.



Indicator(16x16)

There are two types for you to choose:

Indicator: Choose Object (\underline{O}) > Indicator(16x16) > Indicator or click the button $\underbrace{\$!}$ to set. When GP reads the ELC corresponding contacts (ON or OFF), it will show the corresponding figure.

Indicator Refer Device		Bitmap Set	
MO	Refer	ON - Bmp	
ОК	Cancel	OFF - Bmp	

Multi-state Indicator: choose Object (\underline{O}) > Indicator(16x16) > Multi-state Indicator or click the button \bigcirc to set.

Step 1. Choose Object (<u>O</u>) > Indicator(16x16) > Multi-state Indicator. If you set as the following dialog box, When the device value >= 300, current state is 0 and the bitmap will display ^(☉). There are five indications from 0 to 4.

Multi-State Indicator	
Refer Device	Bitmap Set
D0 Refer	
	Set Display Sequence
	C From Max. to Min.
Value Type unsigned 💌	• From Min. to Max.
Value Length 16Bit 💌	
Current State	ок
Device value >=Range value 300	Cancel

I	Multi-State Indi	cator			
	Refer Device		E	Bitmap Set	
	100			C	
		Refer			~
				-Set Display	Sequence
				○ From M	ax. to Min.
	Value Type	unsigned 💌		• From M	in. to Max.
	Value Length	16Bit 🔹			
	Current State	0 -			OK
	Device value >=:	0 1			Cancel
Ļ		2			
1		3			
1		4			

- Step 2. The settings of, Current state 0~4, bitmap set, set display sequence and device value >= range value setting. You could set the corresponding bitmap for the current state. Each current state has the corresponding range value, if device value >= range value and it will show the corresponding bitmap. For example, if current state 0 and range value is 300, current state 1 and range value is 500, when device value is between 300, 500 and it will show the corresponding bitmap of current state 0, if device value is large than 500, and it will show the corresponding bitmap of current state 1. But if device value is small than 300, it won't display any bitmap due to no current state conforms to it.
- Step 3. Choose View (\underline{V}) > Object Inspector: display all properties of objects and it also can be edited and set directly.
- Step 4. it is used to set the arrangement order of the state of the corresponding device (from max to min or from min to max)
- Step 5. Double click the input cell of device value >=Range value to get the pop-up dialog of all state table for user to set.

All States '	Table 🗵
	Device value >=Range value
State0	0
State1	0
State2	0
State3	0
State4	0
ок	Cancel Refer Value

Step 6. "Refer Value" can be used to calculate state range.

Ed	it Range Ca	lculator				×
Г	Range Limit-					
	Select State	Range				
	State	0	·	2	State	4
	Upper Bo	und 1000			Lower Bo	und 0
		:	Setti	ng	Ņ	

Bitmap

You could choose static bitmap or dynamic bitmap.

Static Bitmap: choose Object (<u>O</u>) > Bitmap > Static Bitmap or click the button **&**. It will read the static bitmap to be the background of GP. It just can read the file with extension .bmp now.

- Step 1. Choose Object (O) > Bitmap > Static Bitmap and move the mouse to the editing area. At the mor
 Image: Discrete the mouse pointer will be cross pointer. Pressing the left button and hold (Image: Discrete the button the action will be finished. The component Image: Image: Image: Discrete the shown.
- Step 2. Moving the mouse on this component and double-click the left button. You will get the following open dialog box. Choosing the picture with BMP file you want to open, and then click Open to return and the picture you choose will display on the screen.

Open		?×
Look in: 🗀 BMP Pictures	- 🖬 🎦 🗢 🔽	(95x59)
IMG28611527 IMG513031272 IMG35728419 IMG679462100 IMG45285488 IMG709191044 IMG45285785 IMG759035626 IMG60114917 IMG843742472 IMG81627946 IMG939311421	IMG941741757 Sixer IMG941831199 tgy Iaker tp04 M Warriors PLC Wizards plc2 圖形1	KORS
File name: Sixer	Dpen	
Files of type: Bitmaps (*.bmp)	Cancel	



Step 3. Choose View (\underline{V}) > Object Inspector: display all properties of objects and it also can be edited and set directly.

ELCSoftGP has built-in Bitmaps (including button type and arrows) for users to use. The built-in Bitmaps are saved in Program File\ Eaton\ ELCGP\ BmpGroup.

en			20				Ľ.
Look in:	BmpGroup		<u>•</u>	🗢 🗈 💣 📰]-	Picture:	R
	Bmp-8x8						
My Recent	Clock						
Documents	darrow						
	darrwn						
Desktop							
	dswitch1						
	aswitch2						
Documents	dswitch3					(None)	
	dtime						
y Computer							
	1						
My Network	File name:	dswitch006h		•	Open]	
Places	Films of topos	Discons (* Loca)			Cancel	10	

Open						? ×
Look in: 🗀 dsv	vitch3	•	+ 🗈 📸 🎫		(69x69)	<u></u>
dswitch001a dswitch001b dswitch002a dswitch002b dswitch003a dswitch003b	dswitch004a dswitch004b dswitch005a dswitch005b dswitch005c dswitch005d	dswitch005e dswitch005f dswitch005g dswitch005h dswitch006a dswitch006b	dswitch006c dswitch006d dswitch006f dswitch006f dswitch006g dswitch006h	22222 -		
File name: ds	witch006b tmaps (*.bmp)		Open Cance			
Files of type: Bi	tmaps (*.bmp)		Cance	el		

- Dynamic Bitmap: Choose Object (<u>O</u>) > Bitmap > dynamic bitmap or click the button GP reads ELC the corresponding contacts (ON or OFF) or register data value will do comparison operation according to the corresponding base state. The setting bitmap will be displayed on the screen according to the operation result. (it you check bit, base state could be 0 or 1. If you check value, base state could be set to 255)
- Step 1. Choosing Object (O) > Bitmap > Dynamic Bitmap and then move the mouse to the editing area. At the moment, the □ □ pointer will be cross pointer and you could press left button and hold on to □ □ nce you release the button, the action will be finished and the component □ □ □ will be displayed.
- Step 2. You could move the mouse to this component and double-click the left button to get the following dialog box.

Dynamic Bitmap	
Refer Device	Set Display Sequence From Max. to Min. The From Min. to Max. [16 x 16]
⊖ Bit ⊙ Value	
Value Type Signed 💌	
Value Length 16Bit	Bmp Clear
Total States 255	Bmp Read Ly
Current State 0	T ext input
Device value >=Range value	Font Set
0	OK Cancel

- Step 3. The settings of reference device, Total state, Current state, device value >= range value setting are the same as the Multi-state Indicator. The Total state could be set to 0~254. If you press BMP read, you will get the open dialog box. You could set the corresponding bitmap for the current state. Each Current state has the corresponding range value, if device value >= range value and it will show the corresponding bitmap. For example, if current state 0 and range value is 100, current state 1 and range value is 300, when device value is between 100, 300 and it will show the corresponding bitmap of current state 1. But if device value is small than 100, it won't display any bitmap due to no current state conforms to it.
- Step 4. Choose View (\underline{V}) > Object Inspector: display all properties of objects and it also can be edited and set directly.
- Step 5. it is used to set the arrangement order of the state of the corresponding device (from max to min or from min to max)
- Step 6. Double click the input cell of device value >=Range value to get the pop-up dialog of all state table for user to set.

All States Ta	able	×
	State Value	
State0	0	
State1	0	
State2	0	
State3	0	
State4	0	
State5	0	
State6	0	
State7	0	
State8	0	
State9	0	
State10	0	
State11	0	
State12	0	
State13	0	
State14	0	
State15	0	
State16	0	
State17	0	
State18	0	
State19	0	
State20	0	
State21	0	
State22	0	
State23	0	-
OK	Cancel Refer Value	

Step 7. "Refer Value" can be used to calculate state range.

Edit Range Calculator	×
Range Limit	
Select State Range	-
State Contraction - State 254 -	
Upper Bound Lower Bound 1000 0	
Setting	

Scale

Step 1. Choose Object (\underline{O}) > Scale or click the button \underline{S} to get the following dialog.

Scale		
Scale Position	Тор	Value Length
Scale Side	Normal direction 💌	16bit 💌
Main Scale	5	Font
Sub Scale	2	5x8 💌
Max. Value	100	ok b
Min. Value	0	Cancel

- Step 2. You could set scale position, progress direction, main scale, sub scale, Max. value, Min value, value length or font in the dialog box.
- Step 3. The graduation of scale could be face up, down, left or right. The progress direction could be Forward (increase from left to right or top to bottom), or reverse (increase from right to left or bottom to top).
- Step 4. Setting the precision of scale of main scale and sub scale.
- Step 5. The scale usually display with bar chart and that is very clear for user to see the value from the Progress Bar.



Step 6. Choose View (\underline{V}) > Object Inspector: display all properties of objects and it also can be edited and set directly.

- Progress Bar
- Step 1. Choose Object (<u>O</u>) > Progress Bar or click the button E to get the following dialog box.

Progress Bar Refer Device	
DO	Refer
Value Type	unsigned
Value Length	16Bit
Direct Set	From Top to Bottom 💌
Max.	9999
Min.	0
OK	Cancel

- Step 2. You could set reference device, value type, value length, direct set, max., and min value in the dialog box.
- Step 3. direct set is used to set the direction for Progress Bar to increase and show on the GP screen.
- Step 4. Max. value and min. value are the range for value to display. Only the value between max. and min. value will be shown on the bar chart.
- Step 5. After setting, GP will read ELC corresponding register data and convert it to Progress Bar to show on GP screen.
- Step 6. Choose View (\underline{V}) > Object Inspector: display all properties of objects and it also can be edited and set directly.
- Meter
- Step 1. Choose Object (\underline{O}) > Meter >circle meter or click the button $\underline{69}$ to get the following dialog box.

Circle Meter			
Refer Device		_,	Style • 300 Degrees
	Refe	er	C 360 Degrees
Value Type	unsigned	•	Font 5x8 V
Integer Number	3	•	Main Scale
Decimal Number	0	•	Sub Scale 2
Max. Value	100		······
Min. Value	0		OK
			Cancel

- Step 2. You could set reference device, value type, integer number, decimal number, max. value, min. value, style, font, main scale and sub scale.
- Step 3. The style could be 300 or 360 degrees. It means a circle is 300 or 360 degrees.



- Step 4. After setting, GP will read the ELC corresponding register data and convert it to circle meter to show on GP screen.
- Step 5. Choose View (\underline{V}) > Object Inspector: display all properties of objects and it also can be edited and set directly.
- Message Display
- Step 1. Choose Object (<u>O</u>) > Message Display or click the button it to get the following dialog box. The settings of reference device, Total state, Current state, device value >= range value setting are the same as the Dynamic Bitmap. The max. Total state is 255 (Value) or 2 (Bit).

Message Display	
Refer Device	Set Display Sequence © From Max. to Min. © From Min. to Max
C Bit © Value	© Static C Blink
Total States 2	O Scoll Display From Bottom to Top
Value Type unsigned	Conversion Interval 500 ms.
Value Length 16Bit 💌	Message Text
Current State 0 💌	Font
Device value >=Range value	
	OK Cancel

- Step 2. GP will read the ELC corresponding contacts (ON or OFF) or register data and display the corresponding status on GP screen. The content of message could only be text and the text direction of LED message will be scrolls in a loop as follows: from right to left, from left to right, from top to bottom and from bottom to top.
- Step 3. Choose View (\underline{V}) > Object Inspector: display all properties of objects and it also can be edited and set directly.
- Step 4. it is used to set the arrangement order of the state of the corresponding device (from max to min or from min to max)
- Step 5. Double click the input cell of device value >=Range value to get the pop-up dialog of all state table for user to set range value and edit message text.

All States T	able		x
	Range value	Message Text	
StateO	0		
State1	0		
State2	0		
State3	0		
State4	0		
State5	0		
State6	0		
State7	0		
State8	0		
State9	0		
State10	0		
State11	0		
State12	0		
State13	0		
State14	0		
State15	0		
State16	0		
State17	0		
State18	0		
State19	0		
State20	0		
State21	0		
State22	0		
State23	0		-
OK	Cancel Refe	r Value	

Step 6. "Refer Value" can be used to calculate state range.

E	lit Range Calculator	×
Г	Range Limit	
	Select State Range	
	State 🛛 🔽 ~ State 254 💌	
	Upper Bound Lower Bound	
Setting		

Button

ELCSoftGP provides a series of button for user to use in every kind of occasion. That will save much time in designing ELC program. Choose Object (\underline{O}) > Button or click the button \underline{S} to get the following dialog box. The following is the introduction for the buttons. The function of button includes user level and used with Tools (\underline{T}) > User-Level/Password Setting. Choose View (\underline{V}) > Object Inspector: display all properties of objects and it also can be edited and set directly.

ON/OFF button: press this button and GP will send the contact signal to the ELC corresponding contact ON or OFF. There are 6 types of ON/OFF buttons.

- Set ON : Once you press this button and it will be always On.
- Reset : Once you press this button and it will be always Off.
- Rising Pulse: pressing this contact to send the signal of rising-edge to the ELC corresponding contact.
- Falling Pulse: pressing this contact one time to send the signal of falling-edge to the ELC corresponding contact.
- Toggle On/Off: pressing the contact one time, the contact will be On and it will be Off once you press the contact again.
- Momentary: the contact will be On when you press and hold on. Once you release the button, the contact is Off.
- Step 1. Choose Object (<u>O</u>) > Button and move the mouse to the editing area. At the moment, the mouse pointer will be cross pointer. You could press the mouse and hold on to drag, once you release the button the component will be displayed.

Step 2. Double-click left button and you will get the following dialog box.

Button	
Button Type Set ON	Font Setting User Level
Write-in MO Read	5x8 Picture: [None]
Value Length Image: Call and Call an	Bmp Read Bmp Clear
Button Text input text	OK L

- Step 3. Pressing I button at the right side of "Button Type" to select Set ON.
- Step 4. Pressing button at the right side of "Write" to select the reference device to write. And pressing button at the right side of "Read" to select the reference device to read.
- Step 6. User Level setting is used to protect this button. It should use with Tools (\underline{T}) > User-Level/Password Setting. If you set password for the button, you should enter correct password before executing the button function.
- Step 7. Check "Call" and press is to choose to call which reference device. And select "after writing" or "before writing" to Set or Reset. For example, if the reference device is Y3 and check "after writing" to "set". It will inform Y3 to set after pressing the button.
- Step 8. Font is used to set the text on the button. Its size is usually set to 8X12. You could also select figure to put on button. You could select no frame, single frame, double frame, circle frame and hidden for the button. If you select hidden, the button won't have any frame on the GP page but it still has the same function when executing.
- Step 9. If you press BMP read, you will get the open dialog box. You could set the corresponding bitmap for the current state.

- Step 10. After setting and press OK, the button will be used according to the setting unction.
- Multi-state: press this button and GP will send the signal to the ELC corresponding contact or register. The signal could be cycle through S0 > S1 > S2 > S1 > S2 > S1 > S0 or S0 > S1 > S2 > S1 > S0. The max. state could be 256 (VALUE), 16 (LSB) and 2 (BIT).

Button	
Button Type Multi-State Button Type Multi-State Bit O Va Change To: Previous State Next State	bue CISB Font Setting User Level
Function Key F0	[None]
Value Length 16Bit Call Value Type Unsigned Total States 16	Bmp Read Bmp Clear
Current State 0 Set Frame Single 1 Button Text Multi-state	Frame OK Cancel

Value: Press this button and GP will display built-in value on screen. You could use function key or common key to enter value. When pressing Enter, GP will send value to ELC corresponding register.

Button			
Button Type	Value 🔻	Value Format	Font Setting User Level
	,	Integer Number 3 💌	5x8 • 0 •
Write-in		Decimal Number 2	Picture:
Read [Range Limit Min. Value 0	
Function Key	; F0 💌	Max. Value 65535	[None]
Value Length	16Bit 💌	Call	
Value Type	Unsigned 💌		Bmp Read
Total States	1 *	C Before Writing C Reset	Bmp Clear
Current State	0 💌	• Alter writing • Set	
		Set Frame Single Frame	OK
Button Text	input value		Cancel

- Step 1. The setting steps are the same as ON/OFF button. There are some setting items are different in the dialog box.
- Step 2. The value length could be set to 16 bits or 32 bits. Value type could be unsigned , signed, hexadecimal and BCD.
- Step 3. If you set 3 for integer number and 2 for decimal number, the whole number will be displayed as 000.00. If you set 5000 for the maximum value, the maximum you could input is 050.00 due to there are 2 decimals. If you set 500 for the maximum value, the maximum you could input is 5.00.
- Step 4. After finishing input, press OK to enter and the button will be used by the function you set.
- Constant: Pressing this button and GP will send the constant setting to ELC corresponding register.

Button		
Button Type Constan	nt Constant Setting 12345	Font Setting User Level
Write-in D0 Read		5x8 • 0 • Picture: [None]
Value Length 16Bit	Call	
Value Type Unsig	gned 🔽	Bmp Read
Total States 1 Current State 0	Before Writing C After Writing Set	Bmp Clear
	Set Frame Single Frame	ОК
Button Text input o	constant	Cancel

Increase/Decrease: Pressing this button and GP will read register data from ELC and add or submit according to the settings. It will write the result to ELC corresponding register. If you set 10 for inc/dec and 1000 for up/down bound, it means it will increase/decrease 10 for each time you press the button. And the maximum you can increase/decrease is 1000.

Button		
Button Type Increase	Jog Settings Step Value 10 Range limit 10000	Font Setting User Level 5x8 0 Picture:
✓ Function Key F0	 	[None]
Value Length 16Bit		
Value Type Unsigned Total States 1	© Before Writing © Reset	Bmp Read Bmp Clear
Current State 0		
Button Text Increase	Set Frame Single Frame 💌	Cancel

Page Jump: Pressing this button and GP will change to designate page. You can press **I** to select or enter the page number directly.

Button		
Button Type Page jump	Page Jump Setting Page No:	Font Setting User Level
Write-in		Picture:
Read	2 3 4	Dimil
Function Key F0	▼ 5 6 7	[None]
Value Length		
Value Lype	Before Writing Reset	Emp Read
Current State 0	C After Writing C Set	Bmp Clear
	Set Frame Single Frame	ОК
Button Text Page jamp		Cancel

Password: There are functions of password setting and inform command in the dialog box. You could use password setting to protect this button. And you could check "call" to set to call the reference device to reset to set before writing or after writing. User can use "User level" to set the user priority.

Button		
Button Type	Password •	Font Setting User Level
Write-in Read	F0	5x8 • 0 Picture: 1 2 3 4 [None]
Value Length	Call	
Value Type		Bmp Read
Total States	1 © Before Writing © Reset	Bmp Clear
Current State	0 C After Writing C Set	
	Set Frame Single Frame	OK
Button Text	Password	Cancel

- Clock Display
- Step 1. Choose Object (\underline{O}) > Clock Display or click the button $\underline{\mathfrak{M}}$ directly and you will get the following dialog box.
- Step 2. Choose View (\underline{V}) > Object Inspector: display all properties of objects and it also can be edited and set directly.

Clock Display	
└ ^{Time association}	
• GP Time	Write To
C ELC Time	
	Frame Set
 Time 	
C Day	No Frame 💌
C Date	Location Set
Font	Align Left 🔹
5x8 💌	
	OK Cancel

- Step 3. You can set time relative, font, frame set and Location set in the dialog box.
- Step 4. GP will read the value of time and date of REAL TIME CLOCK and display on GP screen directly.

- Step 5. You could select time of GP or time of ELC. Time of GP means the time you write into reference device and time of ELC means the time read the ELC time from register data.
- Multi-state Bitmap
- Step 1. Choose Object (<u>O</u>) > Lamp Display or click the button dialog box. The settings are the same as dynamic figure. The addition setting is text input. It is used to input text and edit text. screen.

Multi-State Bitmap		
-Refer Device		
M0 Refer	[16 x 16]	
Value Type		
Value Length	[None]	Bmp Clear
Total States 2		Bmp Read
Current Stat 0	Text input	
State ∀alue	can input text	Font Set
	OK	Cancel

- Step 2. Choose View (\underline{V}) > Object Inspector: display all properties of objects and it also can be edited and set directly.
- Units
- Step 1. Choose Object (<u>O</u>) > Units or click the button \square directly and you will get the following dialog box.

Units	
Metrology Type	Length
Unit Name	KM 🔹
ОК	Cancel

- Step 2. You could set the Metrology type and Unit Name you need.
- Step 3. Choose View (\underline{V}) > Object Inspector: display all properties of objects and it also can be edited and set directly.

Numeric Input

You can use function key or instruction key to input figures. GP will transmit figures to the corresponding registers of ELC when pressing Enter.

Step 1. Choose Object (<u>O</u>) > Numeric Input or click the button is directly and you will get the following dialog box. The settings of reference device, Value Set, Limit Set, Outline Set, Call Set, User Level are the same as the Button Value Setting.

Numeric Input		×
Refer Device	Outline Set	
D0	Frame	No Frame 💌
Read	Font	5X8
Value Set	Align Horizontally	M. 4.0.
✓ Function key F4	1 mgr	
	Align Vertically	Middle 🔻
Value Type unsigned 💌		
Value Length 16bit 💌	Call Set	
Integer Number 5	Call	
Decimal Number 0	C Before write	C Reset
Limit Set	C After muite	C Set
Min. value 0	*) Filter write	
Max. value 65535	User Level 0	
	OK	Cancel

- Step 2. Choose View (\underline{V}) > Object Inspector: display all properties of objects and it also can be edited and set directly.
- Curve

GP reads a serial figure from ELC corresponding registers to convert to curve to display on GP screen.

Step 1. Choose Object (\underline{O}) > Curve or click the button \underline{M} directly and you will get the following dialog box.

Curve Refer Device		
DO	Refer	
Vertical Max.	1000	
Vertical Min.	0	
Horizontal Max.		OK
Horizontal Min.		Cancel

Step 2. User designates D0 device and GP will use D0 content to be sampling points and 100 points max. Odd numbers will be a sets(D1, D3...) and even numbers will be the other sets (D2, D4...). User can use these two sets to draw two curves.

- Step 3. Choose View (\underline{V}) > Object Inspector: display all properties of objects and it also can be edited and set directly.
- X-Y Curve

GP reads a serial figure from ELC corresponding registers to convert to XY chart to display on GP screen.

Step 1. Choose Object (\underline{O}) > X-Y Curve or click the button \square directly and you will get the following dialog box.

X-Y Curve		
Refer Device		
DO	Refer	
Vertical Max.	1000	
Vertical Min.	0	
Horizontal Max.	1000	ОК
Horizontal Min.	0	Cancel
l		1

- Step 2. User designates D0 device and GP will use D0 content to be sampling points and 100 points max. The first point of corresponding XY can be composed of D1 and D2, the second point of corresponding XY can be composed of D3 and D4, and in this way, a XY chart can be drawn.
- Step 3. Choose View (\underline{V}) > Object Inspector: display all properties of objects and it also can be edited and set directly.
- Geometric Figure

You could press the buttons directly and press the buttons result that did with these tools.



1-6-5 View

Page manager

Choose View (\underline{V}) > Page Manage and you will get the following dialog box. You could input page title to delete or add or insert that page or open all pages.



GP page

Display GP page and change the page between GP page and start-up display.

■ Start-up display

It is used to edit start-up display and change the pages between start-up display and GP display.

■ Full Screen and Refer Device:

Display full-screen and relative device name.



Page Workspace

Display current edition pages and start-up screen.

Page Workspace	<u> </u>
⊡- GP Page	
O:state O	
-1:state1	
2:state2	
5:TEST2	
6:TEST3	
7:state3	
8:state4	
Start Figure	

Object Inspector

Display all properties of objects and it also can be edited and set directly.

🔊 Object Inspector	
Property	
⊡Basic Info	{Left,Top,Width,Height}
Device Addr.	D0
GP Port	COM1
Unit Addr	1
Frame set	No Frame
Font Set	5X8
Orient Horizontally	Align left
Add Zero	Yes
Value Type	unsigned
Value Length	Bit16
Integer Number	5
Decimal Number	0
1	

 Toolbar: including Standard Toolbar, Object Toolbar, Geometric Toolbar, Text/Bmp Toolbar and Location Toolbar. Show/Hide Toolbar

1-6-6 Communication

Read from GP

Step 1. After editing, choose Communication (<u>C</u>) > Read from GP or click the button directly to read the program from GP04 to ELCSoftGP.

Step 2. After editing, press 1. U/L AP GP04 CPC in GP04 hardware main menu. The words "WAIT COMM…" will be shown on GP screen.

	43%	
ELCS	oftGP	×
Tran	ismission finished!!	
	OK Ç	

Write to GP

Step 1. After editing, Choose Communication (\underline{C}) > Write to GP or click the button directly to write the program edited by ELCSoftGP into GP04.

Step 2. After editing, press 1. D/L AP GP04 → PC in GP04 hardware main menu. The words "WAIT COMM…" will be shown on GP screen.

Confirm	×
Do you want to transfer the modified design to GP?	
Yes No	
43%	
ELCSoftGP X	
Transmission finished!!	
OK L	

- Write Start figure to GP
 - Step 1. After editing, Choose Communication (\underline{C}) > starting figure write in to edit start-up display to input to GP04.
 - Step 2. After editing, press 1. D/L AP GP04 → PC in GP04 hardware main menu. The words "WAIT COMM…" will be shown on GP screen.
- Write Menu to GP
 - Step 1. After editing, Choose Communication (<u>C</u>) > User Menu Write in to edit user menu to input to GP04.
 - Step 2. After editing, press 1. D/L AP GP04 → PC in GP04 hardware main menu. The words "WAIT COMM…" will be shown on GP screen.

1-6-7 Local Page Settings

There are six functions (including Page Jump Condition Settings, Function Key Setting, Alarm Buzzer Setting, Alarm LED Setting, Hide Page Setting, and Write Page No. Setting) you can use. We will explain these six functions in the following.

- Page Jump Condition Settings
- Step 1. Choose Local Page Settings (L) > Page Jump Condition Settings or click right mouse button directly in editing page and select "Page Jump Condition Settings" in pop-up menu, or Press (Ctrl) + (F1). There are 20 sets max.



Step 2. After clicking, it will show "Page Jump Condition Settings" dialog box.

Page Jump Condition Setting	
Refer Device	M0 == ON Jump To Pg.1
D0 Refer	D0 = UnInt(0) Jump To Pg.1
Condition Set	Delete
⊙ Bit ⊙ Value	
Jump Page 1	
Value Set	
Value Length 16Bit 💌	Add
Value Type unsigned 🔻	Update
Compare Set	
0 = 💌	Close

Step 3. Click reference device to input device name, device number and communication address. The devices' name that you can set in this window are X, Y, M, S, D, C and T and the equipment no. are 0~9.

Select the reference device (In the "Page Jump Condition Settings" dialog box, it is different to set Bit or Value in condition Set. If you set to Bit, the device name you can select are X, Y, M, S, C and T. If you set to Value, the device name you can select are T, C and D. In dialog box of device reference, you can check device name and select device name by clicking **I**. If it is AC drive, you don't need to check device name. It will show \$ to mean absolute address of AC drive, input equipment no, communication address and then press Enter to return to jump page set dialog box.

Refer Device	
Refer Device	
🗖 Device Name 💲 💌	Comm. Addr. 1
Absolute address 2001	GP Port : COM1 -
0 [] 2 3 4 5	OK
6789AB	Clear
	Close

Step 4. In condition set, you could set Bit or Value. If you set it to Bit, it will jump to designate page. If you set it to Value, you need to input value length, value type, condition and operation condition. If the conditions are held, it will jump to the designate page. If you just edit one page, the jump page will display 0 due to the default first page is number 0.

Page Jump Condition Setting M0 == ON Jump To Pg.1 D0 Refer ON / OFF Set 2 C Set OFF 3 4 5 C Set OFF 3 4 5 C Set ON 6 7 3 8 0 Close Close Page Jump Condition Setting M0 == ON Jump To Pg.1 D0 Refer Do = Unint(0) Jump To Pg.1 Delete D0 Refer Do = Unint(0) Jump To Pg.1 Delete D0 Refer Value Set Delete Value Eength 16Eit Value Type unsigned Compare Set Close	it mot page to namber of		
Refer Device M0 == ON Jump To Pg.1 D0=Unint(0) Jump To Pg.1 D0=Unint(0) Jump To Pg.1 ON / OFF Set 2 C Set OFF 3 C Set ON 5 6 7 8 Close Delete All M0 Refer Close Close Delete All D0 Refer Condition Set Delete D0 Refer Condition Set Delete Data On Iump To Pg.1 D0 Refer Value Set Value Value Length 16Bit Value Type Unsigned Compare Set O O Image I	Page Jump Condition Setting		
M0 Refer Condition Set Delete © Bit Value Jump Page Add ON / OFF Set Add © Set OFF Add 0 Set ON 6 7 7 T 0 Refer 0 Refer Device 0 Refer 0 Initi(0) Jump To Pg.1 0 Update 0 Delete 0 Initi(0) Jump To Pg.1 0 Delete Delete Delete 0 Initi(0) Jump To Pg.1 0 Initit(0) Jump To Pg.1 0 <	Refer Device	M0 == ON Jump To Pg.1	
MU Refer Condition Set Delete Imp Page Delete All ON / OFF Set Add C Set OFF Add 4 Add • Set ON 6 6 7 8 Close Page Jump Condition Setting Refer Device M0 == ON Jump To Pg.1 D0 Refer Condition Set O = Unint(0) Jump To Pg.1 Delete All Delete All Jump Page Delete All Value Set Value Value Length 16Bit Value Type Unsigned Compare Set O O Image Colspan="2">Close		D0 = UnInt(0) Jump To Pg.1	
Condition Set © Bit Update ON / OFF Set 2 C Set OFF 3 4 5 6 7 8 M0 == ON Jump To Pg.1 Delete All Update Close Page Jump Condition Setting M0 == ON Jump To Pg.1 Do Page Jump Page Do Refer Ondition Set Condition Set Diation Set Delete All Update Compare Set Diation Set Conse	IMU Refer		
Online © Eit Value Jump Page 1 ON / OFF Set 2 Correst 3 4 5 6 7 3 * Add Update Close Page Jump Condition Setting M0 == ON Jump To Fg.1 Do Understand Do Page Jump Condition Setting M0 == ON Jump To Fg.1 Do Understand Do Understand Delete Delete Delete All Add Update On pare Set O Imp Page	Condition Set		Delete
Imp Page Imp Page ON / OFF Set 2 C Set OFF 4 Set OFF 4 Set ON 6 7 Imp Page Close Close Delete All Add Update Close Page Jump Condition Setting Condition Set Delete Do Refer Do Refer O Refer Value Set Delete Value Length 16Bit Value Type unsigned Compare Set O O Imp Close	G Dia C Value		
Jump Page 1 ON / OFF Set 2 C Set OFF 4 4 5 6 5 6 7 7 8 Close Close Page Jump Condition Setting M0 == ON Jump To Pg.1 D0 Refer D0 Refer D0 Refer D0 Refer D0 Refer D0 Refer Value Set Delete Value Length 16Bit Value Type unsigned Compare Set 0 Image Set Close			Delete All
ON / OFF Set 2 Set OFF 4 Set ON 6 7 8 Value Set Condition Setting M0 == ON Jump To Pg.1 D0 Refer Device Delete Condition Set D0 Refer Device Delete All Delete All Delete All Delete All Value Set Add Update Compare Set D = Value Set Compare Set Compare Set Compare Set Compare Set Compare Set Compare Set Com	Jump Page 1		
Add Set OFF Add Update Close Close Page Jump Condition Setting Refer Device DO Refer Condition Set Condition Set Condition Set Value Set Value Set Value Length 16Bit Value Type Unsigned Close Delete All Add Update Close Delete All Update Close	ON / OFF Set 2		
Set ON 4 7 7	C Set OFF 3		Add
Set ON 6 7 8	4		
7 Close Page Jump Condition Setting M0 == ON Jump To Pg.1 D0 Refer D0 Refer Condition Set Delete O Bit Value Jump Page Delete Value Length 16Bit Value Type unsigned Compare Set Close Close Close	• Set ON 6		Update
Refer Device D0 Refer D0 M0 == ON Jump To Pg.1 D0 = Unlnt(0) Jump To Pg.1 Delete Delete Delete All Value Set Value Length 16Bit Value Type unsigned O Close Close	7		
Page Jump Condition Setting Refer Device D0 Refer D0 Refer D0 Bit Value Jump Page Value Set Value Ength 16Bit Value Type unsigned Compare Set O Close	8 🗾		
Page Jump Condition Setting Refer Device D0 Refer D0 Refer Condition Set Delete D Bit Value Jump Page Delete Value Set Add Value Type Unsigned O = Compare Set Close			Close
Page Jump Condition Setting Refer Device D0 Refer D0 Refer D0 United Set Value Set Value Set Value Length 16Bit Value Type Unsigned Compare Set 0 Image Set Close			
Refer Device D0 Refer M0 == ON Jump To Pg.1 D0 = Unint(0) Jump To Pg.1 D0 = Unint(0) Jump To Pg.1 Delete Delete All Delete All Value Set Value Length 16Bit Value Type Unsigned Compare Set 0 Image To Pg.1 Delete Delete Delete All Image To Pg.1 Delete Delete All Image To Pg.1 Delete Image To Pg.1 Delete Image To Pg.1 Image To Pg.1 Delete Delete Delete All Image To Pg.1 Delete All Image To Pg.1 Image To Pg.1 Delete All Image To Pg.1 Ima	Page Jump Condition Setting		
Refer D0 Refer D0 = Unint(0) Jump To Pg.1 D0 = Unint(0) Jump To Pg.1 Delete Delete Delete All Delete All Value Set Value Length 16Bit Value Type Unsigned Compare Set 0 Image:	P. G. During		
D0 Refer Condition Set Delete Bit Value Jump Page Delete All Value Set Add Value Length 16Bit Value Type Unsigned Compare Set O O = Close	Refer Device	MU == ON Jump To Pg.1 D0 = UnInt/0) Jump To Pg.1	
Condition Set Bit Value Jump Page Value Set Value Length 16Bit Value Type Update Compare Set 0 Close Close	D0 Refer		
Condition Set C Bit Value Jump Page Value Set Value Length 16Bit Value Type Compare Set 0 Close Close			
C Bit C Value Jump Page Value Set Value Set Value Length 16Bit Value Type Compare Set 0 = Close	Condition Set		Delete
Jump Page Value Set Value Length 16Bit Value Type Compare Set 0 Close	⊂ Bit ⊙ Value		Datas Att
Value Set Value Length I6Bit Value Type Unsigned Compare Set	Jump Page		Delete All
Value Length 16Bit Value Type Unsigned Compare Set Close	-U-1 St		
Value Length 16Bit Value Type Unsigned Compare Set	value Set		Add
Value Type Unsigned Compare Set	Value Length 16Bit 💌		
Compare Set	Value Type		Update
0 = V Close	Compare Set		
Close			
Close		-	
			Close

You can set the value length and value type that you need in value setting. Value length could be 16-bit or 32-bit. Value type could be unsigned or signed decimal, hexadecimal or BCD. Condition could be =, <, >, >=, <= or !=.

Page Jump Condition Setting	
Refer Device M0 == ON Jump To Pg.1	
D0 Refer 1 Int(0) Jump To Pg.1	
23	
Condition Set 4	Delete
O Bit O Value	Datata Att
Jump Page	Delete All
Value Set	
Value Longth 16D4 - 20D4	Add
Value Lengur	
Value Type unsigned 🔽 unsigned	Update
Compare Set	
	Close
<u> </u>	
<=	
!=	

Step 5. After finishing input, press "Add in" to add. The condition will display in the message window. You can press "Update" to update jump page condition or press "Delete", "Delete All" to delete condition.

Page Jump Condition Setting		
Refer Device D100 Refer Condition Set Bit • Value Jump Page 7 • Value Set Value Length 16Bit • Value Type unsigned • Compare Set 500 >= •	M0 == ON Jump To Pg.1 D0 = UnInt(0) Jump To Pg.1 D0 = UnInt(300) Jump To Pg.3 Y0 == ON Jump To Pg.5 D100 >= UnInt(500) Jump To Pg.7	Delete Delete All Add Update Close

Step 6. After setting, press "Close" to return to editing page.

- Function Key Setting
- Step 1. Choose Local Page Settings (<u>L</u>) > Function Key Settings or click right button of mouse to get the pop-up menu to select function key settings, or Press (Ctrl) + (F2).

Step 2. And then you will get the following function key setting dialog box.

Function key Setting				×
Function Key	Button Type			Set
FO				
F1	Write			
F2				Clear
F3	🗖 Read			
F4				
F5	∀alue length	T		Clear All
F6		·		
F7	Value Type	v		User Level
F8				
F9	Total State	1		0 💌
Up			💿 Before Writing 🖉 Reset	
Down			C After Writing C Set	
Left				Close
Right				

- Step 3. it is used to set button type of function key F0~F9, Up, Down, Left, Right. (you can refer to object setting.) Once you set a function key, you should press button "Set" to set. And if you want to clear a function key, you just need to select that function key and press "Clear" to clear or press "Clear All" to clear all. After setting, you can press "Close" to exit this dialog box.
- Alarm Buzzer Setting
- Step 1. Choose Local Page Settings (<u>L</u>) > Alarm Buzzer Setting or click right button of mouse in editing page to get pop-up menu to select alarm setting, or Press (Ctrl) + (F3).
- Step 2. And then you will get the alarm setting dialog box.

Alarm Buzzer Setting			×
Refer Device Re	fer		ок
● Bit C Value			Cancel
Value Type Set		Bit Device Set	
Value Length	~	○ OFF	
Value Type	7	• ON	
Compare Value	.	_	
			Close

- Step 3. The settings are the same as jump page settings. When the condition is held, buzzer will sound.
- Alarm LED Setting
- Step 1. Choose Local Page Settings (<u>L</u>) > Alarm LED Setting or click right button of mouse in editing page to get pop-up menu to select alarm setting, or Press (Ctrl) + (F4).

Step 2. And then you will get the alarm setting dialog box.

Alarm LED Setting		×
Refer Device		OK
D0 Refer		
O Bit ● Value		Cancel
Value Type Set	Bit Device Set	
Value Length 16Bit 💌	© OFF	
Value Type Unsigned 💌	C ON	
Compare Value = 🔻 300		<i>(</i> 1
		Close

- Step 3. The settings of alarm LED are the same as alarm settings. Once the condition is held, the alarm LED will light.
- Hide Page Setting
- Step 1. Choose Local Page Settings (<u>L</u>) > Hide Page Setting. users cannot see these hidden pages when browsing pages by pressing UP/DOWN key.
- Step 2. After clicking Tools (\underline{T}) > Function Key Setting > Re-Define Up/Down Key, following confirmation dialog will be shown.



Step 3. After pressing Yes, the function of "Hide Page Setting" will be invalided.

■ Write Page No. Setting

Choose Local Page Settings (\underline{L}) > Write Page No. Setting. Write page number of current page to the connected device.

Write Page No. Setting			
Refer Device	Set		
	Close		
Cancel 1			

1-6-8 Global Settings

System Page Jump Setting

Choose Global Settings (\underline{G}) > System Page Jump Setting to get the dialog box. You should notice that System Page Jump Setting is the condition of change page of all pages but the condition of change page in Local Page Settings menu is only for the editing page. If there is a conflict between these two conditions, Local Page Settings > Page Jump Setting has high priority. There are 20 sets max. The setting method is the same as Local Page Settings > Page Jump Setting.

System Page Jump Setting	
Refer Device	
Refer	
Condition Set	Delete
⊙ Bit ⊂ Value	
Jump Page 0 💌	Delete All
ON / OFF Set	
• Set OFF	Add
C Set ON	Update
	Close

System Function Key Setting

Choose Global Settings (\underline{G}) > System Function Key Setting to get the dialog box. System function key is for all pages and the function key in Local Page Settings > Function Key Setting is only for the page you edit. If there is a conflict between these two conditions, Local Page Settings > Function Key Setting has high priority. The setting method is the same as Local Page Settings > Function Key Setting.

System Function key Setting				×
Function Key	Button Type	•		84
FO				Det
F1	Write			
F2				Clear
F3	🗖 Read			
F4		_		
F5	∀alue length	_		Clear All
F6		,		
F7	Value Type	v		User Level
F8				
F9	Total State	1		0 🔻
Up			Before Writing Seset	
Down			C After Writing C Set	1
Left				Close
Right				

System Alarm Buzzer Setting

Choose Global Settings (\underline{G}) > System Alarm Buzzer Setting to set. When the condition is held, the buzzer in GP will sound. The System Alarm Buzzer Setting is for all pages and the Local Page Settings > Alarm Buzzer Setting is only for the page you edit. If there is a conflict between these two conditions, Local Page Settings > Alarm Buzzer Setting has high priority. The setting method is the same as Local Page Settings > Alarm Buzzer Setting.

System Alarm Buzzer Setting		×
Refer Device		ок
M0 Refer		
Bit C Value		Cancel
Value Type Set	Bit Device Set	
Value Length	 OFF 	
Value Type	O ON	
Compare Value		Close

System Alarm LED Setting

Choose Global Settings (\underline{G}) > System Alarm LED Setting to set. When the condition is held, system LED will light. The System Alarm LED Setting is for all pages and the Local Page Settings > Alarm LED Setting is only for the page you edit. If there is a conflict between these two conditions, Local Page Settings > Alarm LED Setting has high priority. The setting method is the same as Local Page Settings > Alarm LED Setting.

System Clock Setting

Choose Global Settings (\underline{G}) > System Clock Setting to set. Write GP time/week/date to the connected device.

System Clock Setting	×	
Refer Device	Set	
	Close	
Cancel 2		

System Power ON Marco Setting

Choose Global Settings (\underline{G}) > System Power ON Marco Setting to set. After power up, it will send an instruction after the setting of time interval (500ms~2000ms).

System Power ON Macro Setting		×
Refer Device Ti	me Interval Set	ок
C Bit C Value	1000ms 1500ms 2000ms et	Cancel
Value Length 16Bit	© OFF	
Value Type Unsigned Value Device Set		
Value Data 0		Close

1-6-9 Tools

Default Text Font

Choose Tools (\underline{T}) > Default Text Font to get the following dialog box. User could set the font attributes.

Font			?×
Font: MS Sans Serif MS Serif The MS UI Gothic O MV Boli The New Gulim The NSimSun O Palatino Linotype ▼	Font style: Regular Italic Bold Bold Italic	Size: 8 10 12 14 18 24	OK Cancel Apply
	Sample AaBbYyZz		
	Script: Western	•	

Communication Setting

Choose Tools (<u>T</u>) > Communication Setting to get the following dialog box. You could set $0\sim255$ to GP Station Address. It can transmit data to GP. You could set COM1 ~ COM8 for PC COM Ports. You could set 9600~115200 bps for Baud Rate. These settings should be set to the same as GP04, otherwise it can't transmit between GP and ELC.

C	Communication Setting			
	GP Station Address	1 .		
	PC COM Port	COM3 💌		
	Baud Rate	115200		
	OK	Cancel		

■ GP Protocol Setting

Choose Tools (<u>T</u>) > GP Protocol Setting to get the following dialog box. You could set COM1 (RS-232) Data Format and COM2(RS-422/RS-485) Data Format. These settings can transmit between GP and ELC.

GP Protocol	×
COM1 Data Format	COM2 Data Format
Baud Rate	Baud Rate
9600 🔽	9600 💌
Data Length	Data Length
7 💌	7 💌
Parity	Parity
Even	Even
Stop Bit	Stop Bit
1	1
	OK Cancel

■ GP Object Communication Default Setting

Choose Tools (\underline{T}) > GP Object Communication Default Setting to get the following dialog box. Set the communication port and station number for all objects in GP to communicate..

GP Object Communication Default Setup		
🔽 Select Default COM Port	🔽 Select Default ELC ID	
Select HMI Port	Set ELC ID	
© COM1(RS232)	1 •	
© COM2(RS485 or RS422)		
OK	Cancel	

■ Change Device Type

Choose Tools (\underline{T}) > Change Device Type to get the following dialog box. It can change connected device type. For example, before changing ELC to SIEMENS S7-200 series, it needs to modify bit/value device one by one.

Device Address Map Table			
Target Device Siemens S7-200 Series			
,			
Bit Device: X	▼ ▼		
Bit Device: Y	Ι		
Bit Device: M	Q		
Bit Device: S	M		
Bit Device: T	SM		
Bit Device: C	S		
Value Device: T	VW		
Value Device: C	IW		
Value Device: D	QW		
OK N			

■ User-Level/Password Setting

Choose Tools (\underline{T}) > User-Level/Password Setting to get the following dialog box. If there is User Level setting, GP will execute password function according to User-Level/Password Setting. The higher user level and higher priority and it needs the same level or higher priority to operate.

Pa	assw	ord Setup			×
		Password	User Level	Password	User Level
	1	111111	4 💌	6 000000	0 🗸
	2	222222	3 💌	7 000000	0 💌
	3	000000	0 💌	8 000000	0 💌
	4	000000	0 🔹	9 000000	0 💌
	5	000000	0 💌	10 000000	0 💌
		0	DK	Cance	el

AutoSave setup

Choose Tools (<u>T</u>) > AutoSave setup to get the following dialog box. It can set the time for auto file save, such as before compiler or when.

AutoSave Setup	×
🔽 Auto Save	
C Saving at beggining to compile	
⊙ Saving at Intervals 3 ▲ Minutes	
OK	

Function Key Setting

Choose Tools (\underline{T}) > Function Key Setting > Re-Define Up/Down Key. it is used to enable Up, Down key.

Page Size

Choose Tools (<u>T</u>) > Page Size (All Page Size or Page Size) to set page proportion. The setting could be 100%, 200% or 400%.

Frame Setting

Choose Tools (\underline{T}) > Frame Setting to use grid as coordinate reference or not.

1-6-10 Windows

Choose Windows to select Tile Vertically, Tile Horizontally or Cascade.
1-6-11 Help

Choose Help (<u>H</u>) > version to display ELCSoftGP software version.



Choose Help (\underline{H}) > Help to get the help of ELCSoftGP software.

Chapter 2 Communication Connection Mode

Before any communication between the GP and ELCSoftGP software is conducted, the user should complete the GP hardware settings and connect the correct wiring between the two components.

There are three items in the communication protocol of GP series product that must be set for communication to work properly.

- The GP address and control port.
- The RS-232 settings.
- The RS-485 settings.

The software communication settings must also be set correctly to achieve proper communication.

In the ELCSoftGP software select "Tools" then "Communication Settings". Enter the GP Station Address, PC COM Port, Baud Rate as shown in the following diagram.

ELCSoftGP - C.'Program Files/Eaton/ELCGP/DocFiles/Doc5.gpf	
File(E) Edit(E) Compile(C) Objects(Q) View(V) Communication(M) Local Page Settings(L) Global Se	ttings(G) Tools(T) Window(W) Help(H)
- D 😂 🖬 🚳 🗢 兴 🖄 🏗 🔊 🔍 🖓 🕹 👬 🏝 🔍 🔍 🖓 State 🚼 🕑 Font	Default Text Font Ctrl+D
N 99 81 01 87 87 50 = 69 = 8 59 10 11 10 12 +	Communication Settings Ctrl+C
	GP Protocol Setting
	GP Object Communication Default Setting Change Device Type
	User-Level/Password Setting
	AutoSave Setup
	Function Key Setting
	Page Size
	Grid Setting
mo_0 ##### m1_0 ##### y0_0 ******	Communication Setting GP Station Address 1 PC COM Port COM3 Baud Rate 115200 OK Cancel
X:61 Y:0 Device Type: Siemens S7-200 Series GP Type:	ELC-GP04

After entering the correct settings, the PC is capable of communicating to the GP.

ELC-ELC-GP04 may connect to a PC by using cable ELC-CBPCGP3

ELC-CBPCGP3



Communication methods:

Step 1. After creating a display program, the program should be compiled before downloading to the GP. Select "Compile" in the menu bar to complete this task. Any errors in programming will be displayed after this process.



Step 2. On the GP, select the "Download GP04 CPC."

Step 3. To execute the command in the menu bar, choose "Communication" then "Write to GP" and finally select "Yes" to confirm the download. The software and hardware will both display the progress during download as shown below.



Chapter 2 Communication Connection Mode

Step 4. Users may also read from the GP and display it on the ELCSoftGP window. The steps are similar to Downloading, except choose "Read from GP". The software and hardware will both display the progress during download as shown below.

8	ELCS0	oftGP -										_ 8 ×
Fi	le(E)	Edit(<u>E</u>)	$Compile(\underline{C})$	Objects(<u>Q</u>)	View(<u>V</u>)	Communication(<u>M</u>)	Local Page Settin	ngs(L)	Global Settings(<u>G</u>)	$Tools(\underline{T})$	Help(<u>H</u>)	
	0 🖻		юαΧ	X 🖻 🔒		<u>R</u> ead from GP	Ctrl+R		Font size	-		
ŕ						Write to GP	Ctrl+₩				 	
						Write Start Eigun	e to GP D					
						write <u>wi</u> ent to G	r					



ELCSoftGP	x
Transmission finished!!	
OK L	

GP04:



Chapter 3 Examples

Example 1. Edit Start Figure

Step 1. Open ELCSoftGP to select File (\underline{F}) to create new file. Then choose View (\underline{V}) > Start Figure and it will escape Start Figure



Step 2. In edition display, you can choose static text or static graphics. If you choose static graphics, the mouse pointer will become to cross pointer in the working area. At this time, you can press the left button of mouse and hold on to drag. After releasing the

left button, **where** will show on the edition display as shown in above figure.

Step 3. To move mouse to this component and double-click the left button of mouse, you will get the window as shown in the following.

.

Open						<u>?</u> ×
Look in:	🗀 BmpGroup		💌 🗢 🖻 (* 🎟 •	Picture:	A
My Recent Documents Desktop My Documents My Documents	Bmp-8x8 Bmp_8x8 Clock darrow darwn damp dnumber dswitch1 dswitch2 dswitch3 dsymbol dtime				(None)	
My Network	File name:	dswitch006h		• Open]	
Flaces	Files of type:	Bitmaps (*.bmp)		Cancel		/



- Step 4. In GP04, choosing 1. download program GP04 C. On GP04 screen, it will show the words of "WAIT COMM...".
- Step 5. In ELCSoftGP, choosing "Communication" > "Write Start figure to GP" and then press "Yes" for confirmation. It will start to download to GP and it will display the progress during download. Start figure can be downloaded without compiler.

Step 6. In GP04, choosing "4. GP04 SETUP" > "8. START-UP DISPLAY" > "2. USER DEFINE" as the following and you will finish the start-up display.

1. D/L AP GP04 \Leftarrow PC 2. U/L AP GP04 \Rightarrow PC 3. COPY GP04 \Leftrightarrow GP04 4. GP04 SETUP 5. EXIT & RUN



Note: You can set start-up display by yourself. But the picture must be monochromatic BMP file and the Max. size should be 128X64. If you want to add text on it, the picture should be smaller than 128X64 as shown in the following.

Example 2. To use GP04 to connect to two ELC and control their output contacts ON/OFF.

Step 1. Choose File (\underline{F}) to create a new file.

S BLC201	ngr -												_ 미 스
File(E)	Edit(<u>E</u>)	$\operatorname{Compile}(\underline{\mathbb{C}})$	Objects(<u>O</u>)	$View(\underline{V})$	Commun	ication(M)	Local Page Set	tings(<u>L</u>)	Global Settings(<u>G</u>)	$\operatorname{Tools}(\underline{T})$	$Window(\underline{W})$	$\operatorname{Help}(\underline{H})$	
New	h	2		Ct	xl+N	alal	1 State		Font size	-			
Qpen F	ile n	2		Ct	rl+O			,					
User M	<u>l</u> enu Setti	ng				•							
Page Pi	roperty 🔾	utward to File											
Save				Ct	rl+S								
Save <u>A</u>				Ct	rl+Alt+S								
Print						*							
Close													
C:\Prog	gram Files	Eaton/ELCO	3P\DocFiles\E	Doc5.gpf									
Exit				Ct	al+X								
1													

Step 2. Model settings should be set as following: 1. Set Device Type: You should choose "EATON ELC – PB/PC/PA/PH", GP type: you should choose ELC-GP04, File Name: you can name by yourself, here we name it " Connection with two ELC" and then press "OK" to enter edit mode.

New Project						
Set Device Type						
EATON ELC - PB/PC/PA/PH						
GP Type						
ELC-GP04						
File Name						
Connection with two PLC						
OK Cancel						

Step 3. To choose "Object (\underline{O})" and move mouse to working area. At this time, mouse pointer will be cross pointer. To press left button and hold on to drag and the component

will show in window after you release the button.

- Step 4. Choose View (V) > Object Inspector: display all properties of objects and it also can be edited and set directly.
- Step 5. Double-click the left button of the mouse and you can see the following window.

Button		
Button Type Toggle On/Off 💌		Font Setting User Level
[]		5x8 💌 0 💌
Write-in Y0		Picture:
Read Y0		
		Nonel
F0 Function Key F0		[110110]
Value Length	□ Call	
Value Type		Bmp Read
Total States 2	© Before Writing © Reset	Bmp Clear
Current State 0	C After Writing C Set	
Set	Frame Double Frame 🔻	ок
Button Text YO OFF		Cancel

Step 5. To click 🔳 in the right side of button type and you can choose Button type.

Step 6. To click besides "Write" and the window of "Device reference" will be shown as following. Here we set Y1 to control ON/OFF of Y1. That is very important to set the communication address. If the communication address of the first ELC is 1 and then set it to 1, the communication address of the second ELC is 2 then set it to 2. Each ELC has its communication address independently.

Refer Device							
Refer Device							
🔽 Device Name 🛛 🔽	Comm. Addr. 1						
Equipment No.	GP Port : COM1						
0 1 2 3 4 5	OK						
6789AB	Clear						
	Close						

- Step 7. If you check the item of "Read" and press besides "Read", it will also have the window of device reference. You can set the device name, number and communication address that you want to read and then press "OK" to return to the window.
- Step 8. If you check the item of "Function key" and press 🗾 besides "Function key", you will get the pop-up menu. You can set it by yourself to control button components.
- Step 9. You can set password to protect this component.
- Step 10. Button text is to set the text on the button. The font size is usually 8X12 and is also clear to display. You can also put the figure on the button.
- Step 11. To press "OK" after finishing setting and this button will be used for the setting functions.
- Step 12. Choose "Compile" > "Compile" to compile the edition page.
- Step 13. In TP04G, choose "1. download program TP04Q PC" to download and it will show "WAIT COMM...".
- Step 14. In ELCSoftGP, to choose "Communicate" > "Write to GP" and press "OK" to download program to GP04.
- Step 15. To modify ELC communication address according to ELC parameter setting.
- Step 16. Using RS-485 to connect GP and ELC. The connection method is to connect negative terminal of RS-485 of two ELC to negative terminal of RS-485 of GP04 and connect positive terminal of RS-485 of two ELC to positive terminal of RS-485 of GP04.

Step 17.Then choosing "5. EXIT & RUN" in GP04 menu to RUN.



The max. ELC numbers that GP04 can connect is less than 255 ELCs. Master GP connects to slave ELC in series with RS-485. In each ELC, you should give them a different communication address. The setting methods are the same as one-to-one connection but the difference is it needs to set ELC communication address in ELCSoftGP.



www.comoso.com

Company Information

Eaton's electrical business is a global leader in electrical control, power distribution, and industrial automation products and services. Through advanced product development, world-class manufacturing methods, and global engineering services and support, Eaton's electrical business provides customer-driven solutions under brand names such as Cutler-Hammer[®], Powerware[®], Durant[®], Heinemann[®], Holec[®] and MEM[®], which globally serve the changing needs of the industrial, utility, light commercial, residential, and OEM markets. For more information, visit **www.EatonElectrical.com**.

Eaton Corporation is a diversified industrial manufacturer with 2003 sales of \$8.1 billion. Eaton is a global leader in fluid power systems and services for industrial, mobile and aircraft equipment; electrical systems and components for power quality, distribution and control; automotive engine air management systems and powertrain controls for fuel economy; and intelligent drivetrain systems for fuel economy and safety in trucks. Eaton has 55,000 employees and sells products to customers in more than 100 countries. For more information, visit **www.eaton.com**.

Eaton Corporation 1000 Cherrington Parkway Moon Township, PA 15108-4312 USA Tel: 1-800-525-2000 www.EatonElectrical.com



© 2005 Eaton Corporation All Rights Reserved Publication No. MN05003002E January 2005

www.comoso.com