ALL-200G

Universal Gang Programmer

User's Manual

Apr. 2014

Caution : USB Interface Compatibility

- For USB 2.0 compatibility, your computer should work with the following operation system or later revision : Windows 2000 SP4/XP SP1/Server 2003/Vista/7/8
- Software incompatibility may happen if your computer uses any USB Host Controller from following:
 - Compaq PCI to USB Open Host Controller
 - VIA Tech PCI Universal Serial Bus Host Controller
 - VIA Tech 3038 PCI to USB Open Host Controller
 - SiS 7001 PCI to USB Open Host Controller
 - OPTi 82C861 PCI to USB Open Host Controller
- To check the validation of USB Controller on your computer:
 - Clici [Start], point to [Settings], and click [Control Panel]
 - Click [System], [Hardware], [Device Manager] and then [Universal Serial BusController]
 - Check whether the USB Controller shows up or not
- In case your USB interface card is incompatible with ALL-200G, you are suggested to use the USB interface card we approved and recommended.

Please refer to "optional accessory" in ALL-200G data sheet or contact HI-LO distributors for further information.



CATION OF COMPLIANCE
mpliance is hereby issued to the product
USB 2.0 Interface
ALL-200G
HILD SYSTEMS
HI-LO SYSTEM RESEARCH CO., Ltd. 4F, No.18, Ln.76, Rueiguang Rd,Neihu Dist., Taipei City 11491, Taiwan
EN 60950-1:2006+A11:2009+A1:2010+A12:2011 IEC 60950-1:2005+A1:2009
T140521T02-LV
Compliance Certification Services Inc. (Tainan Lab.) No.8,Jiucengling, Xinhua Dist., Tainan City 712 Taiwan (R.O.C.)
sted and found to comply with the stated re) required by the Directive 2006/95/EC. cated in the test report and are applicable only entified in the report.
Aanager

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Contents

ALL	-2000			1
1.	Intro	oduction	٦	8
	1.1	Pro	ogrammer and Accessories	8
	1.2	PC	System Requirements	9
	1.3	AL	L-200G Specification	10
2.	Singl	le ALL-2	200G Installation	11
	2.1	Hardv	ware	11
		2.1.1	ALL-200G Hardware Installation and Applications	12
	2.2	USB D	Driver	15
	2.3	Softw	/are	17
3.	ALL-	200G Ba	asic Operation	19
	3.1	Getti	ng Started	19
		3.1.1	Start with HACCESS	19
		3.1.2	Entries to Programming Driver	19
		3.1.3	Enter Main Menu of the Driver File	21
	3.2	Load	File to Programmer buffer	22
	3.3	Read	Contents from Master IC to Buffer	23
	3.4	Progr	am Buffer Contents to IC	25
	3.5	Optic	onal	26
		3.5.1	HEAD	27
4. 1	Λultip	le ALL-2	200G Installation	28
	4.1	Multip	ole ALL-200G Operation	29
	4.2	Read/	Compare on Multiple ALL-200G	31
5.	ALL-	200G So	oftware	32
	5.1	HA	CCESS User	32
	5.2	Fil	e	32
		5.2.1	Save Programmer Configuration	33
		5.2.2	Load Programmer Configuration	34
		5.2.3	Enable Job Function	35
	5.3	Dia	agnostic Tester	36
		5.3.1	HD-LED-TEST for Diagnostic Tester	36
	5.4	Ut	ility	38
		5.4.1	Hex to Bin Converter	38
		5.4.2	Bin to Hex Converter	39
		5.4.3	2-Way Splitter	40
		5.4.4	4-Way Splitter	41

	5.4.5	2-Way Shuffler	42
	5.4.6	4-Way Shuffler	43
	5.4.7	Version List	44
	5.4.8	Cross Reference	44
	5.4.9	Device List	45
	5.4.10	About	45
	5.5 Pro	otect Mode	46
	5.5.1	Protect Mode Password	47
	5.5.2	Protect Mode Option	
	5.5.3	Reset Protect Mode Option	
	5.6 Pro	ogramming Data / Function	49
	5.6.1	File	50
	5.6.2	Edit	53
	5.6.3	Operation	62
	5.6.4	USB Info	
	5.6.5	About	
6.	ALL-200G Tro	oubleshooting	
7.	Glossary		
	7.1 EPROM,	EEPROM, BPROM, and MPU	
	7.2 PLD, PAL	., GAL, PEEL, CPLD, EPLD, and FPGA	

1. Introduction

This manual guides you to install and operate ALL-200G under Windows 2000/XP/Server 2003/Vista/7/8. ALL-200G works with PC through USB 1.1/2.0 (Universal Serial Bus) to perform high-speed data transmission. The high-speed processor in programmer precisely controls programming timing and flow, this ensures accurate programming waveforms always generated on ALL-200G.

ALL-200G is embedded with 4Mbit memory to support the programming capacity for most E(E)PROM, MCU/MPU, and PLD. The software automatically uses PC memory as buffer to support high-density memory ICs, such as FLASH devices.

1.1 Programmer and Accessories

Each ALL-200G package contains the following standard accessories:

- Base Unit.
- An AC power cable, 1.8 M in length.
- A USB cable (Type A to Type B), 1.0 M in length.
- A CD-ROM for Driver Files.
- User's Manual.

Optional Accessories:
 Please find the required HEADs on HI-LO Website (<u>http://www.hilosystems.com.tw/</u>).

1.2 PC System Requirements

Minimal Requirements

- PC/Pentium III or above.
- Microsoft compatible mouse.
- A hard disk with at least 50 Mbyte free space.
- A CD-ROM drive with speed x2 or above.
- At least one USB port (Version 1.1/2.0)
- Equip 128MB memory space or above.
- Operating System: Windows 2000/XP/Server 2003/Vista/7/8.
- A monitor with 800 x 600 pixels or above.

Recommended Requirements

- PC/Pentium IX or above.
- Microsoft compatible mouse.
- A hard disk with at least 150 Mbyte free space.
- A CD-ROM drive with speed x8 or above.
- At least one USB port (Version 2.0)
- Equip 512MB memory space or above.
- Operating System: Windows 2000/XP/Server 2003/Vista/7/8.
- A monitor with 800 x 600 pixels or above.

1.3 ALL-200G Specification

Device Support	Pin Count : from 8 pins up to over 300 pins
	Device Type : EPROM, EEPROM, Serial PROM, FLASH, PLD/CPLD/FPGA,
	MPU/MCU,
Device Contact	Optioal HEADs
Max Sockets in parallel	8 sockets on optional GANG Programming Module
Controller	16 bits high-speed controller with big sized FPGA & CPLD
Interface Port	USB port
Data Transfer Rate	USB 1.1 : 12 Mb/s
	USB 2.0 : 480 Mb/s (suggested)
Max Sites in parallel	Up to 8 via tiered star USB
Functions	Load file,Read Master,Program,Verify,Auto,ID Check, Checksum, Blank Check,
	Erase, Protect/Unprotect, Secure, Edit, Function Configuration,Self Test
Host Computer	 An Intel Pentium III or compatible processor with 128MB of RAM
Requirements	• At least one USB port available (V 1.1/ 2.0)
	● 50 MB free hard disk space with Windows 2000/XP/ Server 2003/Vista/7/8
	operating system
	CD-ROM Drive
Power	AC voltage : 100-240 VAC
	Frequency : 50-60 Hz
	Power consumption : 50 W
Dimension	W x D x H : 162mm x 257mm x 100mm
Weight	~ 2.24 kg (Base Unit) ~ 2.56 kg (with socket boards on top)
Operating Temperature	0 ~ 40°C (32 ~ 105°F)
Safety Standards	CE Approved

2. Single ALL-200G Installation

2.1 Hardware

Before installation, make sure your PC has USB 1.1/2.0 port which can be connected to ALL-200G Programmer through USB cable. USB 2.0 is suggested for fast data transmission with ALL-200G Programmer.

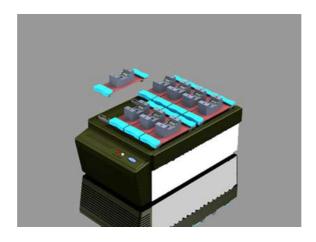
USB 1.1 (Full Speed)	:	Transmission rate 12 Mb/s
USB 2.0 (High Speed	:	Transmission rate 480 Mb/s (Suggested)

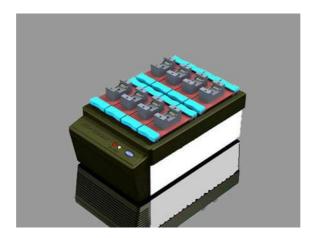
2.1.1 ALL-200G Hardware Installation and Applications

Step 1:

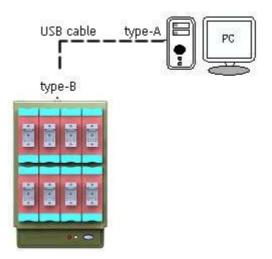
Make sure power of Base Unit is in "OFF" state and then positioning and mounting HEAD onto Base Unit.

See figures below:

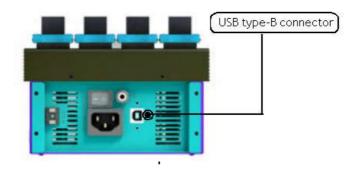




Step 2: Connect programmer and PC as figures below.



Connect the Type B end of USB cable to the USB Type B connector at rear panel of programmer, connect the Type A end of USB cable to the USB Type A connector on the PC.

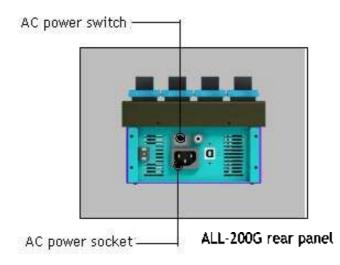


ALL-200G rear panel

Step 3:

Connect power cable to AC power socket of ALL-200G Programmer and plug in the other end to the outlet of power source (100-240VAC/50-60 Hz).

Power on the ALL-200G from the switch above the AC power socket on the rear panel.

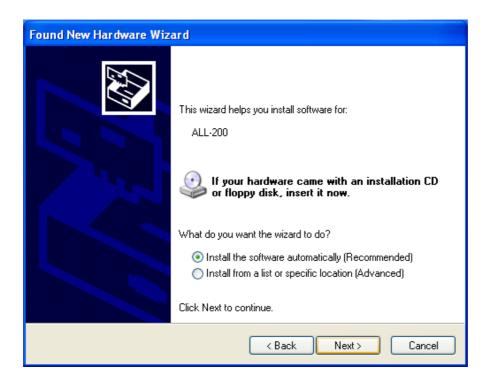


 Note: Please have PC completely powered on before turning on ALL-200G for installation and applications.

2.2 USB Driver

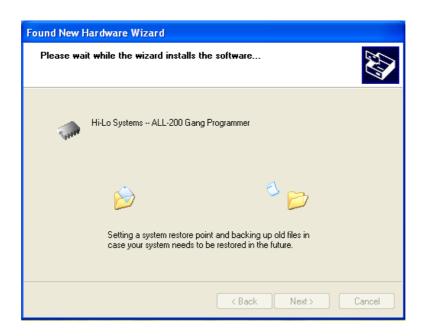
Insert the Driver Files CD into CD-ROM drive, connect USB cable between PC and ALL-200G, power on ALL-200G Programmer, the PC will detect the new hardware and a window will pop up "Found New Hardware Wizard".

Step 1:



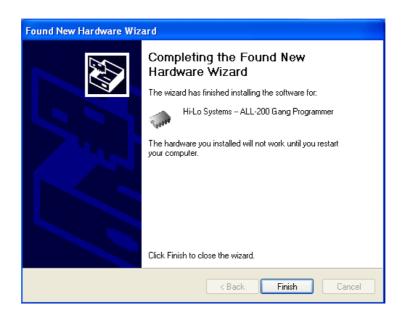
♦ To install under Windows 2000/XP/Server 2003/Vista/7/8, you need to change Log-in authority to "Administrator" or "Power-User" in order to install new software/hardware driver.

Step 2:



PC will allocate files named "ALL200.INF" and "ALL200.SYS" for installation. Then click "Next" to continue.

Step 3:



Windows has finished the USB driver installation for ALL-200G. Click "Finish" to complete USB driver installation.

2.3 Software

Insert Driver Files CD to CD-ROM drive and it'll run automatically.

But if it doesn't, go to directory of ALL-200G under File Manager to execute the SETUP.EXE file, or run the SETUP.EXE from START menu of WINDOWS and follow all steps accordingly as follows:



Check of installed software:

- (1) Check the software installation with File Manager and make sure HACCESS.EXE, individual IC programming driver and Utility files exist under C:\Program Files\ALL-200G directory. HACCESS.EXE is a system file easy for you to select IC Manufacturer, Product Type and the corresponding programming driver.
- (2) When programming driver is executed, software will automatically check the connection of ALL-200G. If software cannot detect ALL-200G, the connection and/or installation might have problem and it might not be possible to access ALL-200G.



(3) Run "USB Info." option under HACCESS menu to check the connection between ALL-200G and PC.



3. ALL-200G Basic Operation

3.1 Getting Started

We will have a brief description of ALL-200G basic operation, introduce how to access the desired IC programming driver through HACCESS, the main system program. We will also introduce functions of Device, Load, Blank check, and Program by taking SPANSION S29AL004D-TA-01 as an example.

 For best view of ALL-200G information displayed, user's screen should have resolution 800x600 pixels or above.

3.1.1 Start with HACCESS

Click the icon of HACCESS **WHACCESS** to activate HACCESS.EXE and get the following display on the window.

3.1.2 Entries to Programming Driver

Click "Device" and "Select Device" to display two entries to programming driver, "Select manufacturer/type" and "Search for type" (as the figure below).

💞 Manufacture List	
Select manufacturer/type Search for type	
© AMIC © CFEON © INTEL © MXIC © SPANSION © SST © STM	
✓ OK Kancel	SPANSION'

(1) Select manufacturer/type

Click "Select manufacturer/type" in "Manufacturer List" to display IC Manufacturer options. Select "SPANSION" and click "OK" to display Type List.

Select "EEPROM/FLASH" in product groups at left side and select "S29AL004D-TA-01" in product types at right side of Type List and then click "Run".

SPANSION			
Туре	HEAD	TOP	
ASH S29AL004D-TA-01	HD-FLASH-TS48	1110002	
S29AL004D-TF-01	HD-FLASH-TS48		
S29AL004D-TF-02	HD-FLASH-TS48		
S29AL008D-TF-01	HD-FLASH-TS48		
\$29AL008D-TF-02	HD-FLASH-TS48		
S29AL016D-TF-01	HD-FLASH-TS48		
S29AL016D-TF-02	HD-FLASH-TS48		
S29GL01GP-TF-R1	HD-S29GLXXX-TS5	6	
S29GL032A-TF-R3	HD-FLASH-TS48		
S29GL032N-TF-03	HD-FLASH-TS48		
S29GL032N-TF-04	HD-FLASH-TS48		
S29GL064N-TF-03	HD-FLASH-TS48		
S29GL064N-TF-04	HD-FLASH-TS48		
S29GL064N-TF-06	HD-FLASH-TS48		
S29GL064N-TF-07	HD-FLASH-TS48		
S29GL128P-TF-01	HD-S29GLXXX-TS5		
\$29GL128P-TF-02	HD-S29GLXXX-TS5		
S29GL256P-TF-01	HD-S29GLXXX-TS5		
\$29GL512P-TF-R1	HD-S29GLXXX-TS5	6	
<			1

(2) Search for type

Click "Search for type" in "Manufacturer List", select "S29AL004D- TA-01" and the required HEAD P/N is displayed under the block of Search. Then click "OK" to enter the main menu of driver file.

Manufac	ture List		
Select manu	facturer/type Sea	rch for type	
SPANSION SPANSION	529AL004D-TA-0 529AL004D-TF-0 529AL004D-TF-0 529AL008D-TF-0 529AL008D-TF-0 529AL018D-TF-0 529AL018D-TF-0 529AL018D-TF-0 529GL032A-TF-R	1 2 1 2 1 2	
Search :	s29a ==> HD-FLASH-	9	Found : 8 devices
	🗸 ОК	X Cancel	

3.1.3 Enter Main Menu of the Driver File

Main Menu of the Driver File contains three major parts, the first row for menu of main functions, the second row for quick function keys, and the rest for dialogue boxes of IC information like IC Manufacturer, Product Type, HEAD needed... etc.

Edit Operation USB Info. About d Auto Biank Prostam Verify Compare Frase Prot crammer Status (Best Virw : 100 x 600)		
Device	Messages	
Mfr.: SPANSION Type: S29AL004D-TA-01[TSOP48] Head: HD-FLASH-TS48	Set J1 ⁻ J5 1-2 connect.	
Target Zone (Byte Wide) Device Start: 00000000 Device End: 0003FFFF Buffer Start: 00000000 Buffer End: 0007FFFF uffer Checksum: 07F80000 CRC Checksum: 0041		
uffer Status : PC Memory Buffer Size[Bytes] : 2048K		

Remark:

When reselecting IC manufacturer and product type, the information in dialog box will be updated accordingly and the driver file will be downloaded to ALL-200G Programmer. If the message "File not found" appears, it means the driver file is not available in PC. Then check the attached Driver File CD or visit HI-LO web site at http://www.hilosystems.com.tw for S/W download. If a specific HEAD is needed, "File not found" may also indicate the absence of the required HEAD S/W. Try to install the S/W again.

3.2 Load File to Programmer buffer

Programming code should be loaded after you select IC Manufacturer and Product Type. In general, programming code is saved in a file in Bin/Hex format. This code needs to be loaded to programmer buffer and then programmed into Blank IC devices. To load file to programmer buffer, click "File" menu, select "Load File to Programmer Buffer" option, following dialogue box will appear:

Look in:	TEST			• • • • •	
	Name 🔺	Size	Туре	Date Modified	-
	Chi_090328	1 KB	File	10/17/2007 9:03 AM	
My Recent Documents	Chi_090720.s19	Chi_090720.s19 50 KB 519 File 8/26/2004		8/26/2004 9:07 AM	
Documents	🔂 Chi_090906	64 KB	BIN File	6/18/2008 9:09 AM	
	🛅 Chi_091220	64 KB	BIN File	10/17/2007 9:12 AM	
Dealthree	🔂 Chi_091244	64 KB	BIN File	10/17/2007 9:12 AM	
Desktop	🖬 Chi_091302	32 KB	BIN File	10/17/2007 9:13 AM	
1	🛅 Chi_091414	8 KB	BIN File	4/23/2007 9:14 AM	
	🛅 Chi_091436	64 KB	BIN File	10/17/2007 9:14 AM	
My Documents	🔂 Chi_091456	32 KB	BIN File	10/17/2007 9:14 AM	
ny o councilio	Chi_093714.HE	X 4 KB	HEX File	7/15/2008 9:37 AM	
	🛅 Chi_094742	512 KB	BIN File	9/17/2007 9:47 AM	
1	Chi_094940.he	x 23 KB	HEX File	10/18/2007 9:49 AM	
My Computer	Chi_100834.he	x 5KB	HEX File	11/24/2004 10:08 AM	3
		22.60	DTAI CA	6/10/2000 10-10 AM	3
	File name:	Chi_155142		·	Open
My Network	Files of type:	All Files(*.*)		•	Cancel

Function of file loading is similar to that under Windows environment.

Enter the file name to be downloaded and click "Open", the named file will be loaded to programmer buffer. Note: Disk drive and file path must be correct. Select and click the correct drive and folder that the file located to. If it cannot be operated by mouse, apply <TAB>,

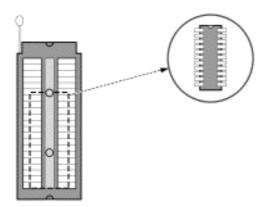
<UP>, <DOWN>, and <ENTER> keys for selecting and confirming.

3.3 Read Contents from Master IC to Buffer

When programming code is stored in a Master IC, insert the Master IC onto socket of HEAD # 1, click "Read" button on screen or press "R" key on keyboard to read programming code from Master IC to programmer buffer.

Counter :		
Message :		
Normal	C Even	C Odd
ID Check	⊡ Ir	nsertion Test
Run		Close

When inserting Master IC onto socket of HEAD # 1, make sure Pin 1 orientation identical with the indicative positioning diagram by socket. If IC's pin count is less than the socket's, please put IC onto socket as the diagram indicated overleaf.



♦ Caution! Incorrect IC positioning might cause IC damage or be programmed to an unknown state.

3.4 Program Buffer Contents to IC

Insert ICs to be programmed onto sockets, click "Auto" button on screen or press "A" key on keyboard, following dialogue box will appear.

Mfr.: SPANSION Type: S29AL004D-TA-01	Serial No.: OFF				CRC (141 10000
Program Setting	Procedure Status : UNLOCK	S	ocke	:t #					Coun	ter :
✓ Insertion Test ✓ ID Check	Site # Status :	1	2	3	4 5	56	7	8	ок	NG
-	0		Π	-		1	T		8	8
Unprotect	1		F	1	T I	TE		T	8	8
⊽ Erase	2		_		- r				-	
✓ Blank Check									-	
✓ Program								-	1	
Verify >	4		F						1	
-	5	-	F	1	E				-	B
Protect	6		-		r= r				-	17
T.					-		-	-	-	
T.	7	- A				4		1	1	
-							T	otal :	16	16
									Rese	t Count

Click "Run" button on screen or "Y" key on keyboard or "YES" on programmer to start programming buffer contents to blank ICs.

After programming, system will automatically verify data read from programmed ICs with data in programmer buffer. If both data match, the corresponding LED by the programming unit will be lit indicating successful programming; if it's not lit, the programming fails.

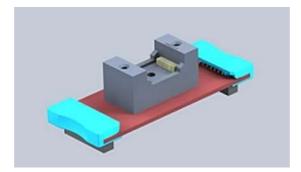
For next IC programming cycle, the "BUSY" LED must be off. Then insert blank ICs onto sockets, click "Run" button on screen or "Y" on keyboard or "YES" on programmer to continue programming.

Click "Close" button on screen or <ESC> key on keyboard to go back to main menu.

3.5 Optional

For the sake of supporting various ICs nowadays, HEADs are designed for most kinds of IC packages such as PLCC, SOP, TSOP, QFP, PGA, ... etc.

Each HEAD has 40/48 gold-plated pins in various layout which can be inserted onto 48 pins ZIF socket on the Programming Module. Each HEAD has one (or more) programming file(s) that needs to be loaded to the same directory as HACCESS.



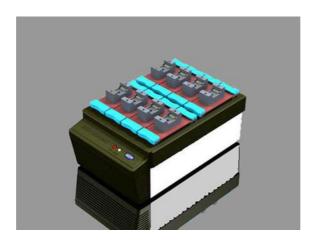
3.5.1 HEAD

■ S/W Installation:

Copy the HEAD file(s) attached to the same directory as that for HACCESS file(s).

■ H/W Installation:

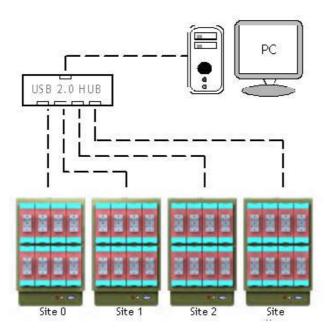
Insert the required HEADs onto the programmer; at most 8 HEADs can be inserted. See the figure below:



4. Multiple ALL-200G Installation

USB interface provides functions like "Plug-and-Play", auto detection, high expansibility, and high transmission rate (480 Mb/s for 2.0 version). By using these functions, ALL-200G can be installed up to 8 sets and running simultaneously (Site No. 0~7).

After single ALL-200G installation, more ALL-200G Programmers can be installed through either extra USB ports of your PC or USB 2.0 Hub connected as the following diagram. But USB Hubs not admitted by HI-LO are not suggested.



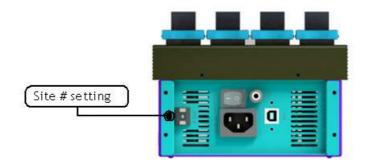
Multiple ALL-200G installations through USB 2.0 Hub

4.1 Multiple ALL-200G Operation

Multiple ALL-200G operations can increase programming throughput. With Multi-Thread methodology, each programmer can operate independently. The diagram below shows two ALL-200G Programmers are programming (Site #0 and Site #1).

Mfr.: SPANSION	Serial No.: OFF CRC Checksum :	0041
Type: S29AL004D-TA-01	Buffer Checksum :	07F80000
Program Setting Insertion Test ID Check ID Unprotect F Erase Blank Check P Program Verify Setial Number Protect F F F F F F F F F F F F F F F F F F F	Procedure Status : UNLOCK Site # SOver # Ste # Status : O 3 4 5 6 7 8 Programming 932 Site # 1 3 4 5 5 7 Total :	Counter : OK NG 56 0 56 0 10 112 0

Site # setting switch is located on the rear panel of ALL-200G Programmer. Valid Site # for Multiple ALL-200G setup is 0~7 and cannot have the same Site # in whole system.



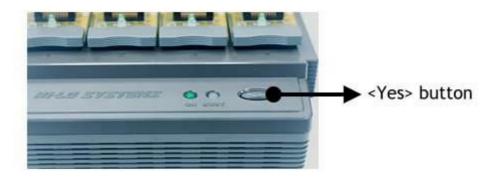
When running ALL-200G programming software, system will automatically detect and load necessary driver S/W and also download programming code to ALL-200G via USB port. Operation of multiple ALL-200G sets is basically the same as that of single ALL-200G. There are two operation modes for multiple ALL-200G programming, synchronous operation and asynchronous operation; choose either of them after entering programming mode on screen.

Synchronous operation:

Run programming on all the ALL-200G at the same time. Put ICs onto sockets of each ALL-200G, press "Y" key on PC keyboard. ALL-200G will start programming simultaneously.

Asynchronous operation:

Run programming on each ALL-200G one after another. Put ICs onto sockets of the 1st ALL-200G, press <YES> on the programmer to start programming; then put other ICs onto sockets of the 2nd ALL-200G, press <YES> on the programmer to start programming; then the 3rd one ... and so on.



4.2 Read/Compare on Multiple ALL-200G

To perform Read/Compare function under Multiple ALL-200G setup, only the IC on socket # 1 of the minimum Site # (i.e. the 1st ALL-200G) is valid. This means that only IC on the 1st socket of the 1st ALL-200G can be read/Compared under Multiple ALL-200G setup <pls see 5.6.3 (1) for details of Read function>.

Counter :				
Message :				
Normal	C Eve	n	C Odd	l)
🔽 ID Check	v	Inse	rtion Te	est
Run		CI	ose	
lf you use eve will automatica device size.				

Read Dialogue Box

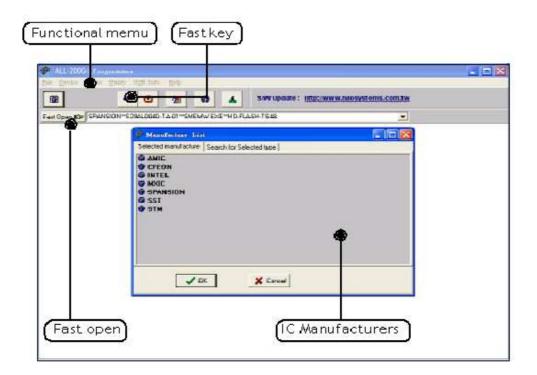
Compare and Display Error	
Counter : 003FFFF	
Message : Compare Err Device Data Buffe	
0000008:FF-FF (00000	010 : FF-55)
ID Check	☑ Insertion Test
Run	Close

Compare Dialogue Box

5. ALL-200G Software

5.1 HACCESS User

System Software "HACCESS" is an interface guiding user to locate the driver software for product type to be programmed. HACCESS also provides File Management Utilities as well as Data Base of programmable IC products.



5.2 File

Under the "File" menu of HACCESS contains three special commands -- Save Programmer Configuration, Load Programmer Configuration and Enable Job Function.

5.2.1 Save Programmer Configuration

After all programming options are set, select "Save Programmer Configuration" to save all the info as a *.g20 file (Job File), including Target Zone settings (Device Start, Device End, Buffer Start, and Buffer End), Mfr. and Type selections, Load File setting, Auto function settings and Other programming settings.

Save Programm	ner Configurat	ion			? 🔀
Save in:	JobFile		•	+ 🗈 💣 📰+	
My Recent Documents Desktop My Documents My Computer	TEST.g20				
My Network Places	File name:	Test.g20		•	Save
Flaces	Save as type:	Job File (*.g20)		•	Cancel

Job File Information	
2009/6/18-10:08:31 Note (Maximun 255 characters)	
Test Information	
ОК	

5.2.2 Load Programmer Configuration

After saving the programmer configuration, you may then use this command to load a desired configuration data file (Job file) back to the software driver whenever needed to reinstall all the programming data information (note: not all software contains Target Zone data) as well as "Auto" function with settings saved previously.

After loading Programmer Configuration, you only need to select "Auto" function to begin programming.

Load Progra	mmer Configuration		? 🔀
Look in: 🔎	JobFile	- 🗢 🖻	•
🗢 TEST.e20			
File name:			Open
Files of type:	Job Files(*.e20)	-	Cancel

Job File Information	
Job was Created on : 2009/6/18-10:08:31 Note :	
Test Information	~

5.2.3 Enable Job Function

This command allows users to enable or disable the Job Function selection.

After Job Function is enabled, select a configuration data file (Job file) and click "Open" to download all the configuration setting previously saved back to programmer.

You can also install a short cut in the Startup directory of Windows so that the driver will automatically start when your PC is activated and the operation system runs.



5.3 Diagnostic Tester

You can run "Diagnostic Tester" with HD-LED-TEST board to check each socket on ALL-200G.

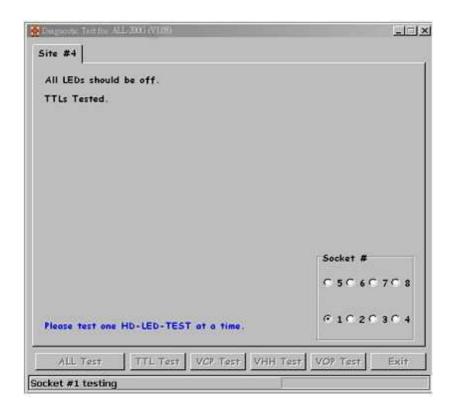
5.3.1 HD-LED-TEST for Diagnostic Tester

Insert HD-LED-TEST board onto a socket and run Diagnostic Tester (see the figure below). The diagnostic includes ALL Test, TTL Test, BVCP Test,VHH Test,VOP Test and voltage measurement.

 Be sure to remove any HEAD from programmer before running Diagnostic Tester; otherwise HEADs or IC on HEADs might be damaged.

Select a pr	ogrammer	Select a socket
	Diagnostic Test for ALL-200G (V1.05)	
Ц	Site #1	1
		Socket #
		0 5 0 6 0 7 0 8
test options 🗲		@1020304
		• 1 • 2 • 3 • 4
	ALL Test TTL Test VCP Test VHH Test	VOP Test Exit





 After TTL Test, the following message appears for voltage measurement; please check accordingly.

Please m	easure TP2 and TP3 on HD-LED-TEST of Site ≇0 with a voltmeter	\mathbf{X}
?	1.) Are D51 and D53 on HD-LED-TEST lit? 2.) Is the voltage between TP3 and TP4(GND) equal to 14 ± 0.2 volts? 3.) Is the voltage between TP2 and TP4(GND) equal to 24.1 ± 0.2 volts? Yes No	

5.4 Utility

File Management Utilities include Hex to Bin Converter, Bin to Hex Converter, 2-way splitter, 4-way splitter, 2-way shifler, and 4-way shuffler, ...etc.

5.4.1 Hex to Bin Converter

Convert data from Hex format to Binary format for programmer Read/ Write.

🜮 Utility			
HEX to Binary PATH: C:WO			
Input Hex File :			🕒 Browse.
Output Bin File :			
HEX Format :	-Intel •	Unused Byte	-
Start Address :	00000	тоон 1	C FFH
End Address :	FFFFF •	X Start	<u><u> </u></u>
		0%	

5.4.2 Bin to Hex Converter

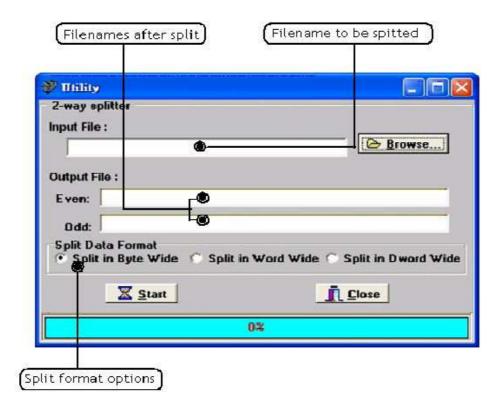
Convert data from Binary format to Hex format.

Utility			
Binary to HEX Converter Path: C:\Program Fles\Hi-Lo	VALL-200		
Input BIN File:	•	e	Browse
Output HEX File:	-•		
File Format:	Incer 1122 10		
	-		V
nput BIN File Start Address:	00000		X Start
Input BIN File Start Address: Dutput HEX File Start Address:			

Hex output Start Add.

5.4.3 2-Way Splitter

Split one file into two output files. One file contains odd-byte data of the original file and the other file contains even-byte data of the original file.



Split Data Format:

Normally the split data is in Byte Wide; however, user can choose Word Wide (two bytes) or Double Word Wide (four bytes) as unit of data split.

5.4.4 4-Way Splitter

Split one file into four output files. The 1st file contains the 1st byte of every 4-byte data segment of the original file. The 2nd, 3rd, and 4th file contains the 2nd, 3rd, and 4th byte of every 4-byte data segment of the original file.

🖗 Utility		
4-way splitter Input File :		
	۰	Browse
Output File		
1st:	۵	
2nd:	-@	
3rd:		
4th:	Lø	
Split Data Fo		ord Wide 🕤 Split in Dword W
	🗶 <u>S</u> tart	
	0%	

Split Data Format:

Normally the split data is in Byte Wide; however, user can choose Word Wide (two bytes) or Double Word Wide (four bytes) as unit of data split.

5.4.5 2-Way Shuffler

Combine two files into one. Insert data of Even file into even byte position of the combined file and insert data of Odd file into odd byte position of the combined file.

💞 Utility		
2-way shuffler		
Output File :		
Input File :		
Even:	– ®	
L TOIL)		
Odd:	⊢⊜	
Shuffle Data Form		
 Shuffle in Byte 	Wide Shuffle in Word	Wide 🔘 Shuffle in Dword
Xs	tart	
	ian	IL Close
	02	

Shuffle Data Format:

Normally the shuffled data is in Byte Wide; however, user can choose Word Wide (two bytes) or Double Word Wide (four bytes) as unit of data shuffle.

5.4.6 4-Way Shuffler

Combine four files into one. Insert data of 1st file into the 1st byte of every 4-byte data segment of the combined file, insert data of 2nd, 3rd, and 4th file into the 2nd, 3rd, and 4th byte of every 4-byte data segment

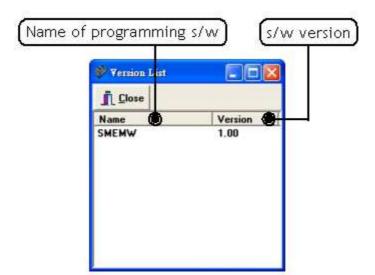
💞 Utility		
4-way shuffler Output File :		
		Browse
Input File :		
1st:	F®	
2nd:	-@	
3rd:	-@	
4th:	Le	
Shuffle Data Form Shuffle in Byte		ord Wide 🔿 Shuffle in Dword
🔀 Star	t	
	0%	

Shuffle Data Format:

Normally the shuffled data is in Byte Wide; however, user can choose Word Wide (two bytes) or Double Word Wide (four bytes) as unit of data shuffle.

5.4.7 Version List

List version number of current programming software



5.4.8 Cross Reference

List the Cross Reference of IC Mfr., Product Type, and the corresponding programming software.

(IC Mfr		Program	ming softwar	e	
		t Type)		Required	I HEAD
🌮 Cross Ref	erence				
📇 Đơn	Basave j	(Close			
Mfr.	Type	File 🌰	HD 🙆	TOP	~
AMIC CFEON CFEON CFEON INTEL MAIC MAIC MAIC MAIC MAIC MAIC MAIC MAIC	A29L320AUV-F EN29LV160AB-TP EN29LV320AB-TP EN29LV320AB-TP EN29LV320AB-TP EN29LV320AB-TP EN29L280C3-TD MX29GL128ELT2-G MX29GL128ELT2-G MX29GL256ELT2-G MX29GL256ELT2-G MX29LV128DTT-G MX29LV128DTT-G MX29LV120CBT MX29LV320CBT MX29LV320CBT MX29LV300CBT-G S29AL004D-TA-01 S29AL004D-TA-01	SMEMW.EXE SMEMW.EXE SMEMW.EXE SMEMW.EXE SMEMW.EXE SMEMW.EXE SMEMW.EXE SMEMW.EXE SMEMW.EXE SMEMW.EXE SMEMW.EXE SMEMW.EXE SMEMW.EXE SMEMW.EXE SMEMW.EXE SMEMW.EXE SMEMW.EXE	HD-FLASH-TS48 HD-FLASH-TS48 HD-FLASH-TS48 HD-FLASH-TS48 HD-FLASH-TS48 HD-F236L200000000000000000000000000000000000	56 56	
SPANSION	S29AL004D-TF-01 S29AL004D-TF-02	SMEMW.EXE	HD-FLASH-TS48		
<	and the second s				5

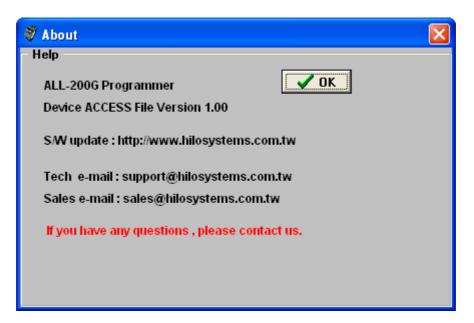
5.4.9 Device List

List all device types that are programmable at current version.

	Save the li	ist	
6	🛞 Device List		
Ł	Pint Save I Close		
Print out the list	***** ALL-200 DEVICE LIST ****	•*	
	<< ACE >> ### Serial E/EEPROM Device ### ACE24C02FM+(SOP8-150) ACE24C04TM+(TSSOP8) ACE24C04TM+(TSSOP8) ACE24C128DM+(TDFN8-2*3) ACE24C16TM+(TSSOP8) ACE24C32AFM+(SOP8-150) ACE24LC02FM+(SOP8-150) ACE24LC04FM+(SOP8-150) ACE24CM+(SOP8-150)	ACE24C04FN+(SOP8-150) ACE24C08AFM+(SOP8-15) ACE24C128AFM+(SOP8-15) ACE24C16FN+(SOP8-150) ACE24C266FM+(SOP8-15) ACE24C32ATM+(TSSOP8) ACE24C32ATM+(TSSOP8) ACE24LC02TM+(TSSOP8) ACE24LC08TM+(TSSOP8) ACE24LC08TM+(TSSOP8)	↓ IC Product Type

5.4.10 About

Provide information of current HACCESS file and contact addresses if any service needed.



5.5 Protect Mode

Protect Mode provides control of software access.



5.5.1 Protect Mode Password

For the first time to run Protect Mode, you need to key in new pass- word and confirm again; then click "OK" to enter Protect Mode Option.

To change the password or re-starting Protect Mode, you need to key in the original password, and then new password and confirm again.

🌮 Protect Mode Password	
* Maximun Password ler	ngth is 15 characters *
Old Password :	
New Password : 🛛	*****
Confirm New Password :	*****
ОК	Close

To cancel Protect Mode, the password is also essential.



5.5.2 Protect Mode Option

After s/w enters Protected Mode, a functional menu is available for user to select functions to run on the left and then select options to execute on the right.

🂞 Protect Mode Option		
 Run Load File Function Run Save File Function Run Load Job File Function Run Save Job File Function Run Edit Function Run Modify Buffer Function Run Select Device Function Run Read Function Run Auto Function 	Auto Function Options Select Insert Test Select ID Check Select Unlock Select Unprotect Select Erase Select Blank	 Select Program Select Verify Select Serialization Select Config Select Protect Select Security/Lock

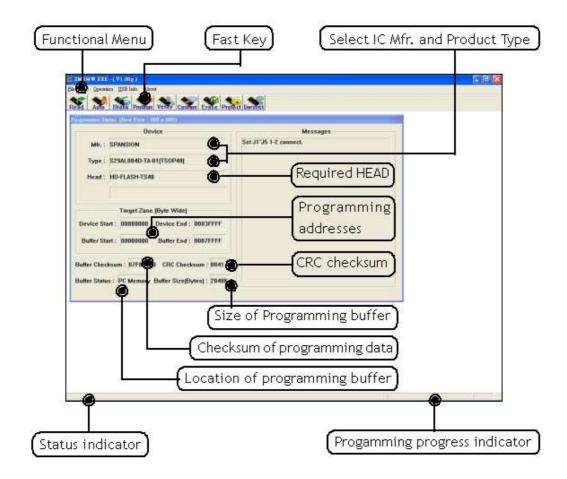
5.5.3 Reset Protect Mode Option

When Protect Mode Option is reset, the following message will pop up. If you click "Yes", all the settings will be changed back to the original default settings.



5.6 Programming Data / Function

Programming software includes loading of programming driver, utilities of data management, and control of programming function/operation. Each programmable IC needs correct functional setup before programming. User needs to refer IC data sheet and/or application software for proper setup of programming function. See description below by taking SPANSION S29AL004D-TA-01 device as an example.



5.6.1 File

 SMEM N. EXE-(V100g)

 Bit Opention [25B lafo. About
 Loof File D'rogammer Buffer
 Zeer File from Programmer Buffer
 Zeer File from Programmer Buffer _ 6 🔀 Save Programmer Configuration 00 ± 6 Enable Log Eile Punction Messages ice Enable Beep/Sound Set J1"J5 1-2 connect. Exit Type : S29AL004D-TA-01(TSOP48) Head : HD-FLASH-TS48 Target Zone (Byte Wide) Device Start : 00000000 Device End : 0003FFFF Buffer Start : 00000000 Buffer End : 0007FFFF Buffer Checksum : 07F80000 CRC Checksum : 0041 Buffer Status : PC Memory Buffer Size[Bytes] : 2048K

Load/Save of data file and configuration file. See dialogue boxes below.

(1) Click "Load File to Programmer Buffer" in File menu and the following dialogue box will show up.

Look in:	TEST			• • • • •	
	Name 🦟	Size	Туре	Date Modified	3
	Chi_090328	1 KB	File	10/17/2007 9:03 AM	
My Recent	Chi_090720.s1	9 50 KB	519 File	8/26/2004 9:07 AM	
Documents	Chi_090906	64 KB	BIN File	6/18/2008 9:09 AM	
(P)	Chi_091220	64 KB	BIN File	10/17/2007 9:12 AM	
	Chi_091244	64 KB	BIN File	10/17/2007 9:12 AM	
Desktop	Chi_091302	32 KB	BIN File	10/17/2007 9:13 AM	
-	Chi_091414	8 KB	BIN File	4/23/2007 9:14 AM	
	Chi_091436	64 KB	BIN File	10/17/2007 9:14 AM	
My Documents	Chi_091456	32 KB	BIN File	10/17/2007 9:14 AM	
my Documents	Chi_093714.HE	X 4 KB	HEX File	7/15/2008 9:37 AM	
-	Chi_094742	512 KB	BIN File	9/17/2007 9:47 AM	
	Chi_094940.he	x 23 KB	HEX File	10/18/2007 9:49 AM	
My Computer	Chi_100834.he	x 🇥 5 KB	HEX File	11/24/2004 10:08 AM	
. y componen		97.00	DN/Cla	£/10/0000 10-10 AM	
	File name:	Chi_155142		•	Open
My Network	Files of type:	All Fles(".")		•	Cancel
Places		All Files(".") Binaty Files(".bir HE> Files	1)	•	

7 Automatic File Format File Formats :	File Status :
Binary Intel HEX MOTOROLA S Record ASCII-Hex Space ● ✓ Unused Bytes :	File start: 00000000 File end: 0000803F Buff start: 00000000
C 00 C FF	OK Cancel

Automatic File Format:

Enable this option if you are not sure the format of data file and a proper file format will be selected automatically.

- Automatic File Offset: Enable this option if you are not sure the offset of data file and the File Start will be automatically adjusted.
- Unused Bytes:

[Don't Care]: Keep the data as it was in unused bytes of buffer memory.

[FF]: Write "FF" to unused bytes of buffer memory.

[00]: Write "00" to unused bytes of buffer memory.

(2) Click "Save File from Programmer Buffer" in File menu to save a data file from programmer buffer as a Binary file; then the following dialogue box will show up.

But to save data files as other formats, please run "Utility" in main menu of HACCESS (see details in 5.4).

Save in.	TEST			ď 🖬 •	
My Recent Documents Desktop My Documents	Chi_090328 Chi_090720.s19 Chi_090906 Chi_091220 Chi_091244 Chi_091302 Chi_091404 Chi_091405 Chi_091456 Chi_093714.HE3 Chi_094742 Chi_094940.hes Chi_100834.hes	Chi_105820.H01 Chi_110112 Chi_115322.H00 Chi_115322.H01 Chi_115842.hex Chi_130642 Chi_132906 Chi_133226.hex Chi_133614 Chi_133614 Chi_142436.HEX	Chi_143512 Chi_154156.HEX Chi_155122.hex Chi_155142.hex Chi_163952 Chi_163952 Chi_165612 Chi_170252.Hex Chi_171044.HEX Chi_172708.rar Chi_173202.hex Chi_174354 Chi_215500.hex Chi_222444.hex		
My Computer	File name: Save as type:	Chi_093714 All Files(".")		•	Save Cancel
		Binary Files(".bin)	۲		

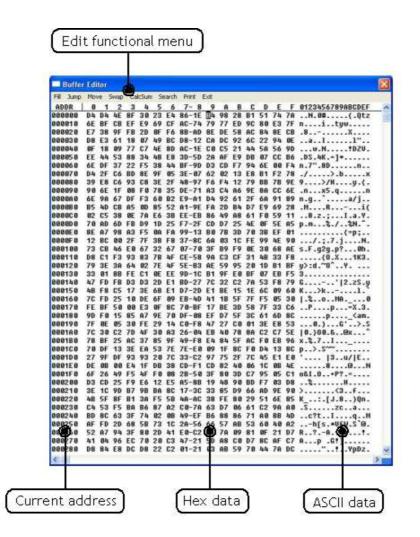
5.6.2 Edit

Includes programming data editing and addressing. See dialogue box below.

Mir.: SPANSION Set J1"/5 1-2 cannect. Type:: S29AL8040-TA-81[TS0P48]	
Hoad : HD-FLASH-TS48 Target Zone (Byde Wide) Device Start : 00000000 Device End : 0003FFFF Butter Start : 00000000 Butter End : 0007FFFF Butter Checksum : 07FB0000 CFIC Checksum : 0041	

(1) Edit data:

Provides functions such as Fill, Jump, Swap, Calc, SUM, Search,...etc. for users to edit programming data in Hex and ASC II expressions.



(2) Fill:

Specify start and end addresses and data to be filled in; then click "OK" and data will be filled into the specified area.

Buffer																	×
Fill Jump	Mon	10 3	in ap	C	lçşul	1.5	sarch		Exit		_						
ADDR	0	1	2	3	4	5	6	7-				C				0123456789ABCDEF	1
000000	D4	D4	4E	8F									51	74	7A	N.0#(.Qtz	
000010	6E	BF	CB	EF	E9	69	CF	AC-7	4 79	77	ED	90	80	E3	7F	nituw	1.0
000020	E7	38	9F	FB	2D	ØF	F6	8B-A	D 8E	DE	58	AC	84	8E	CB	.8X	
000030	D8	E3	61	18	87	49	BC	D8-1	2 CA	DC	92	60	22	94	0E	aI1"	
000040	ØF	18	89	77	C7	4E	80	AC-1	E CO	C5	21	44	58	56	9D		
000050	EE	44	53	88	34	4B	E8	3D-5	D 28	AF	E9	DB	87	CC	86	.DS.4K.=1*	
0 0 0 0 0 0 0 0		DF	37													n.7".8Dn	
000070		2F						3E-0								./x	
000080		E8		93			0.2	00.0	1 02							9>/Hy.{.	
8988888		6E		88	FIL	1						×		CC			
0000000		98		DF		85						_				n.q`a/j	
800080		4D		AS	ST	ART	- 15	000000	-1	0		1		69		.MRi(
0000000		C5			· · · ·	~	lo	000000	0	0	6			59		8.z.;I.a.Y.	
				0E			1		-1								
0000D0		AD		FB	1.0	END	: 0	007FFF	F	Car	cel				A5	p.m%./%N.^.	
0 30 0 0 0		A7		83			-	1	-	0.000		1		EF	01	·····{=p;	
0000F 0		BC			1	ATA	F	F						4E		/.;.7.jN.	
000100		CB		EO	1.00		-									s.F.g2g.p?0h.	
000110		C1		93								_		33		{0.X1K3.	
000120	79			64										B1	BF	y>:d.~0^Y	
000130	33	81		FE		-	1.1						07		F5		
000140	47	FD	FB	D3												G' 2.zS.y	
888158	4 B	F8	C 5	17	3E	6B	E1	D7-2	D E1	BE	15	1E	30	89	68	K>k1.	
000160	70	FD	25	10	DE	6F	89	EB-4	D 41	18	5F	7F	F5	85	30	1.%MA0	
080178	FE	BF	50	00	E3	ØF	80	70-B	F 17	BE	3D	58	7F	33	C6	P=X.3.	
000180	9D	FØ	15	85	87	9E	78	DF-0	8 EF	D7	5F	30	61	6D	80	p <am.< td=""><td></td></am.<>	
000190	7F	ØE	05	30	FE	29	14	CØ-F	8 47	27	CO	81	3E	E8	53	0.)G'>.S	
0001A0	70	38	62	70	4F											10.)00.8@x^	
000180		BF	25	AC	37											x.%.71	
000100	70	DF	13		EA											p>.s~~	
000100	27	9F	DF		93			33-0									
0001E0	DE	OB			1F			CD-F							4E	8N	
0001F0								28-5							C1		
888288	D3	CD		F9		12									DS		
								A5-8									
000210		10		B7		BA		17-3								>	
000220		5F	8F	B1												K:.[J.8)Qn.	
00230		53			B6			C0-7									
000240					74		08	49-E								c?tIqM	
000250				68		73		2A-5								h[s.*UfW.S`@.	
000260																R?Az!.	
000270	41	84	96	EC	70	20	C3	47-2	1 50	88	CO	D7	80	AF	C7	Ap .Gt]	
000280	D8	84	E8	DC	D8	22	C2	01-2	1 03	AB	59	78	44	78	DC	YpDz.	
																Contraction of the second states of the second stat	

(3) Jump:

Specify the start address to jump to, then click "OK", system will jump to the specified address with data displayed.

10000		tor															
Fill Junip																	
ADDR	0	1	2		4			7- 8		A						0123456789ABCDEF	-1
000000																nityw	
000020	E7															.8X	
000030								D8-12								aI1"	
000040								AC-1E									
000050								3D-5D								.DS.4K.=]*	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																n.7".8Dn	
000070					8E	9F	05	3E-07	62	02	13	E8				./x	
000080				93			m	RESS								9>/Hy.{.	
100090		6E		88	JUI	WP A	UUF	11.55								.nx5.qn	
0000A0			67													n.g`a/j	
000080			CB		1000		10		-11	1	OK	8				.MRi(
000000	82	C5	38	ØE	ST	ART	: 0	0000000			- OIN					8.z.;I.a.Y.	
8 09 9 9 6	78	AD	6D	FB			-		-			1		5E	A5	p.m%./%N.^.	
0 3000E	8E	A7	98	83							Canc	el		EF	01	{=p;	
0000F 0	12	BC	00	2F						1.00	200	_	0	4E	98	/.:.7.jN.	
00100	73	CB	46	EØ	07	32		01 10	ы	07		UL	30			s.F.g2g.p?0h.	
000110	DS	C1	F3	93	83	78	4F	CE-58	98							(0.X 1K3.	
000120	79															u>:d.~0^Y	
000130	33															3	
000140																G'12.zS.u	
000150																K>k1.	
000160																1.%0MA0	
000170								70-BF								P=X.3.	
000180								DF-08									
000100	7F																
000140																10.)00.&@x^	
000180																x.2.71	
000180																p>.s~~	
																13u/IE	
0001D0																	
0001E0	DE															8@N	
0001F0																o&I.0+P?.=	
00200								A5-88								H	
000210																>	
000220																K:.[J.8)Qn.	
00230																.Szca	
000248								49-EF								c?tIqM	
000250								2A-56								h[s.*UfW.S`@.	
00260																R?Azt.	
00270																Ap .Gt]	
00280	20	01.	EQ	DC	D.O.	22	63	01-21	82	OR	50	78	hh	70	DC		12

(4) Move:

Specify start and end addresses in which data to be moved, and also specify the destination address to move to. Then click "OK", and system will move data between specified addresses to the destination area.

Bulle	Edi																×
Fill Jump	Mo	n s	Бууар	Ca	kSun	n Se	arch	Print	Edit								
ADDR	0	1	2	3	4	5	6	7- 8	9	A	B	C	D	E	F	0123456789ABCDEF	2
000000	D4	D4	4E	8F	30			86-1E						74	78	N.0#(.Qtz	
000010	6E	BF	CB	EF	E9	69	CF	AC-74	79	77	ED	90	80	E3	7F	nityw	
000020	E7	38	9F	FB	2D	OF	F6	8B-AD	8E						CB	.8X	
000030	D8	E3	61	18	07	49	BC	D8-12			92			94	ØE	aI1"	
000040	ØF	18	89	77	C7	4E	8D	AC-1E	CO	C5	21	44	5A	56	9D		
000050	EE	44	53	88	34	4B	E8	3D-5D	2A	AF	E9	DB	07	CC	B6	.DS.4K.=]*	
000060	6E	DF	37	22	F5			BF-9D						00	F4	n.7".8Dn	
000070	D4	2F	C6	BD	8E	9F	85	3E-07	62	02	13	E8	B1	F2	78	./x	
000080	39	E8	C6	93	Curro							6	B	7B	9E	9>/Hy.{.	
000090	90	6E	1F	08	MO	VE						6	3	CC	6E	.nx5.qn	
0000A0	6E	9A	67	DF					2011	124		1.1	A	91	89	n.g`a/i	
0000B0	85	4D	CB	A5	S	LABT	. 0	0000000		(эк		þ	69	28	.MRi(
000000	82	C5	38	0E	~									59	11	8.z.;I.a.Y.	
000000		AD	6D			END	. 0	007FFFF		~		1	F	5E	A5	p.m%./%N.^.	
0000E0	8E	87	98	A3		0.12	-	32320336		La	incel		k	EF	01	{=p:	
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000170	FE	BF	50		E3			70-BF						33		Pp=X.3.	
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00260	52	A7	94	3F	80	2D	41	E0-C2	BE	78	89	81	ØF	21	D7	R?Az!.	
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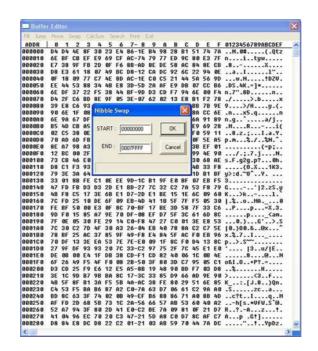
(5) Swap - Byte and 4 Bytes:

Specify start and end addresses in which data to be byte-swapped or 4-byte-swapped; then click "OK" to start swapping.

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ADDR	Mon	1	2	3	4	5	6	Prink 7-	Ent. 8 9	A	в	C	D	ε	F	0123456789ABCDE	
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000030	DB	E3	61	18	87	49	BC	D8-1			92	60	22	94	ØE	a11".	
000040	ØF	18	89	77	C7	4E	8D	AC-1	E CO	0.5	21	44	5A	56	9D		
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000130	33	81	88	FE	C1	ØE	EE	9D-1	C 81	9F	EØ	BF	87	E8	F5	3	
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888248	BD	80	63	3F	74	82	0B	49-F	F B6	88	86	71	80	88	4D		M
000250	AF	FD	20	68	5B	73	10	28-5	6 66		AB	53	60	40	A2	c?tIq h[s.*UfW.S`@	
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Batfor Boole	0 FF	1 FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF		7- FF-FF FF-FF FF-FF FF-FF FF-F FF-F FF-F FF-F FF-F FF-FF-F FF-FF-F FF-FF-F FF-FF-FF-FF-FF-FF-FF-FF-FF-FF-FF-FF-FF-			FF		FF	FF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	0123456789ABCDE	
Batro Boolean Boo	0 FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	1 FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FF	FF	FF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF		7- FF-FF FF-FF FF-FF FF-FF FF-FF FF-F FF-F FF-F FF-F FF-FFFF FF-FF FF-FFF FF-FFF			FF		FF	FF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	0123456789ABCDE	
Balfe Bog	0 FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	1 FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF		7- FF-FFF-F			FF		FF	FF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	0123456789ABCDE	
Ref 198 R	0 FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	1 FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FF	FF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF		7- FF-FF-F FF-FF-F FF-FF-F FF-FF-F FF-FF-FF-F FF-FF-FF-FF-FF-FF-FF			FF		FF	FF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	0123456789A8CDE	
Batfe Bog	0 FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	1 FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FF		7- FF-FF FF-FF FF-FF FF-FF			FF		***********************	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	0123456789ABCDE	
Baffe Boole B	0 FF	1 FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FF		7- FF-FF-F FF-FF-F FF-FF-F FF-FF-F FF-FF-FF-F FF-FF-FF-FF-FF-FF-FF			FF		FF FF 	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	0123456789ABCDE	

(6) Swap - Nibble:

Specify start and end addresses in which data to be nibble- swapped; then click "OK" to start Nibble-swapping.



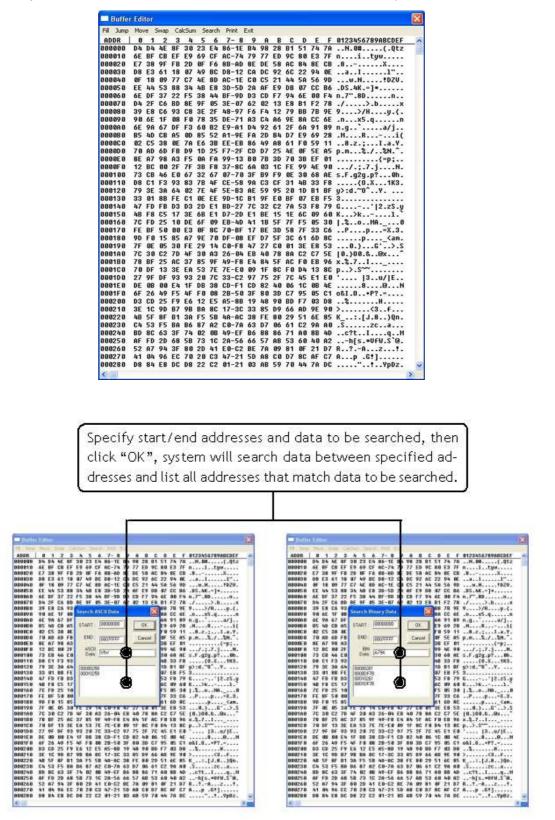
(7) CalcSum:

Specify start/end addresses in which data to be calculated for checksum; then click "OK" to calculate and display checksum on screen.

Buller				_	_	_	_		_								Þ
onut An	190		it re		ician		sarch		Ect								
ADDR	0		2	3	4	5	6	7-8	9							0123456789ABCDEF	
000000		D4	4E													N.0#(.Qtz	
000010		BF														nityw	
000020	E7	38	9F	FB	20	ØF		8B-AD								.8X	
000030	D8	E3	61	18	07			D8-12								a	
000040	ØF	18	89	77	C7			AC-1E									
000050	EE	44	53		34			3D-5D								.DS.4K.=]*	
808868	6E	DF	37	22	F5	38	44	BF-9D	D3	CD	F7	94	6E	88	F4	n.7".8Dn	
000070	D4	2F	63	8D	8E	9F	05	3E-07	62	82	13	E8	B1	F2	78	./x	
000080	39	E8	C6	93	6			14				-	88	78	9E	9>/H	
000090	98	6E	1F	08	Ch	eck	Sum					\mathbf{x}	84	CC	6E	.nx5.gn	
0 0 0 0 0 0 0 0	6E	96	67	DF								100				n.g`a/j	
000080		40			er	ADT	. 15	0000000	-1	-	ÖK.		E9	69	28	.MRi(
000000		CS		ØE	51	BHI	0 10	0000000			UK			59		8.z.;I.a.Y.	
000000	70	AD	60	FR						-				SE		p.n%./%N.^.	
1000E 0		87			1.1	END	16	007FFFF	-11	C	ance	a 11	38		01		
1000F 8		BC					10	UUIIIII		-	-		99		98	/.:.7.jN.	
000100		CB		EB												s.F.g2g.p?8h.	
000110		C1											hB	33	FR	(0.X 1K3.	
000120				64	1.00							_	10	81		u>:d.~0^Y	
000130		81				0F	FF	9D-1C	R1	OF	EB	RE				3	
000140																G'12.zS.u	
000150	48			17												K>k1.	
100160								E8-40							38	1.2NA0	
000170	FE							78-BF								Pp=X.3.	
001120								DF-08									
100180	7F		05					C0-F8									
188148				7D												10.)00.8@x^	
000180		BF	25	AC	37	30	HJ	20-04	ED	40	10	OH	52	50	SE	x.&.71	
000100	70															p>.s~~	
000100	27	9F	DF													' 3u/ E	
0001E0	DE			E4				CD-F1								8N	
1001F0	6F															o&I.0+P?.=	
00200	D3							A5-88								н	
000210	3E			87		BA										>	
000220		5F		81												K:.[J.8)Qn.	
000230				BA				C0-78								.Szca	
000240			63		74			49-EF								c?tlqM	
000250	AF	FD	20	68				2A-56								h[s.*UfW.S'@.	
000260		A7	94													R?Azt.	
00200																	
000270																Ap .Gt]	

(8) Search:

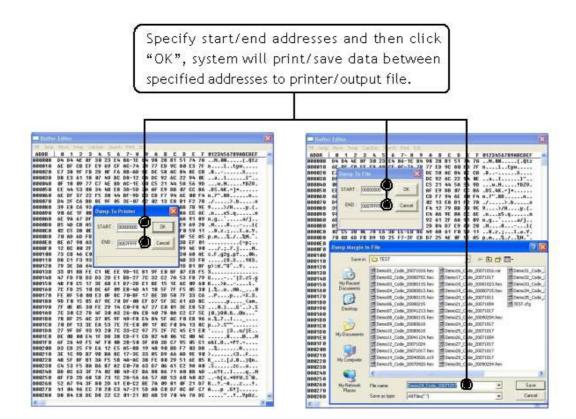
Two options available, search ASC II data or search Binary data.



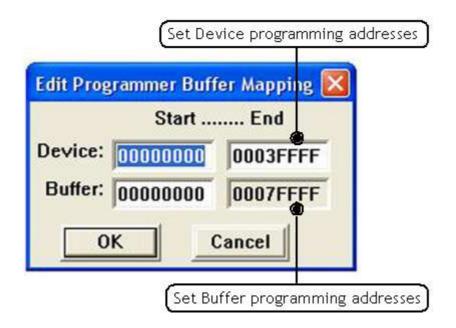
(9) Print:

Two options available, print to printer or ouput to file.

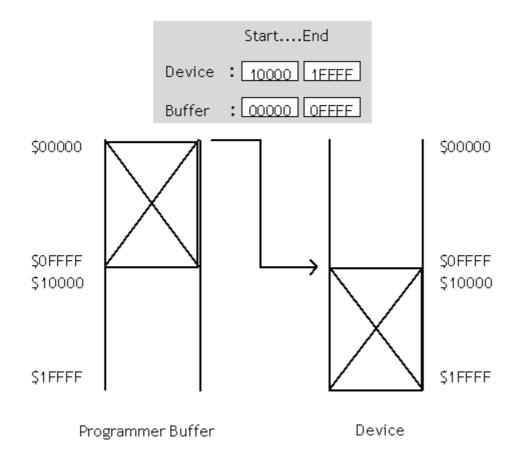
Buffer	Edi	tor															
Fill Jump	M	ove	Swap) Ç	alcSu	m	earch	h Brint	Exit	8							
ADDR	0	1	2	3	4	5	6	1.7	o Priz	ofer	В	C	D	E	F	0123456789ABCDEF	
000000	FF	FF	FF	FF	FF	FF	FF		o File		F	FF	FF	FF	FF		
000010	FF	FF	FF	FF	FF	FF	FF	F			·F	FF	FF	FF	FF		
000020	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000030	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000040	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000050	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000060	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000070	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000080	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000090	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
0000A0	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
0000B0	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000000	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000000	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
0000E0	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
0000F 0	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000100	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000110	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000120	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000130	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000140		FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000150	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000160	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000170	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000180		FF	FF	FF	FF	FF	FF	FF-FF		FF	FF		•••		FF		
000190		FF	FF	FF	FF	FF	FF	FF-FF		FF	FF			FF	FF		
0001A0		FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF		FF	FF		
0001B0		FF	FF	FF	FF	FF	FF	FF-FF		FF	FF				FF		
000100	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
0001D0		FF	FF	FF	FF	FF	FF	FF-FF		FF	FF	FF	FF	FF	FF		
0001E0	10.0	FF	FF	FF	FF	FF	FF	FF-FF	1.5	FF	FF	1.1	FF				
0001F0		FF	FF	FF	FF	FF	FF	FF-FF	100	FF	FF	FF	FF	FF	FF		
000200		FF	FF	FF	FF	FF	FF	FF-FF		FF	FF	FF	FF	FF			
000210		FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF				FF		
000220		FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		
000230		FF	FF	FF	FF	FF	FF	FF-FF		FF	FF	FF	FF	FF	FF		
000240			FF	FF				FF-FF			FF		FF			•••••	
000250	FF	FF	FF	FF	FF	FF	FF	FF-FF	FF	FF	FF	FF	FF	FF	FF		



(10) Modify Programmer Buffer Mapping:



Eg.: Program data from Buffer address \$00000 - \$0FFFF to Device address \$10000 - \$1FFFF.



5.6.3 Operation

Different IC product type might have different options of programming functions. Basically, programming functions include options of Erase, Blank, Program, Verify, Lock, Auto, ...etc.

	disease gan be	ta gheat	
	Bred Company	Ten Verify Carabee Erabe Pr	and the state
	D Check	.000 x 6800	
_	Exercited Environment	Device	Messages
	Elech		Set J1"J5 1-2 cannect,
	Ingen (TAUTISOPHI	
1	Pigevit		
H	Live .	\$40	
	£≥¢i		
	Δum.	ane (Byte Wide)	
200	Sockets Selection	and the second second	
Devec	ce start : 0000	10800 Device End : 1003FFFF	
Butte	er Start : 0000	10000 Butter End : 8007FFFF	
utter (Status : PC M	emory Buffer Size(Byten) : 2048K	

User can also click <Fast Key> to execute program functions.

See <Fast Key> indicated below:

File Edit	Operatio	n <u>U</u> SBI	nfo. <u>A</u> bou	t				
Read	Auto	Blank	Program	Verify	Compare	Erase	Protect	Uneratect
	Fast	key fo	r Devic	e S29G	L004D-	TA-01	ŝ	

(1) Read:

Read contents in IC memory. Read function is only valid for IC on

following position.

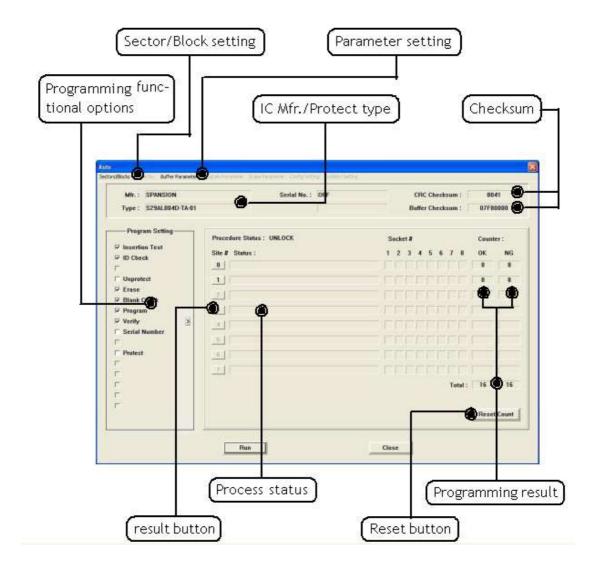
- Single ALL-200G setup : IC on the 1st HEAD (HEAD # 1).
- Multiple ALL-200G setup : IC on the 1st HEAD (HEAD # 1) of the minimum site # programmer.

	Counter :	
r	Message: • Normal C Even C Odd	Process statu
	ID Check Insertion Test Run Close	and Message
ead options)	If you use even or odd mode, the buffer will automatically expand to 2 times the device size.	

 After Read operation, suggest user to double-check to confirm checksum and the data read are all correct. (2) Auto:

Protect Mode inactivated

Enter programming mode with all programming functions activated.



 Different IC product type might have different programming functional setting and parameter setting. User needs to refer IC data sheet for proper settings of programming functions and programming parameters. Protect Mode activated:

After Protect Mode is activated in HACCESS, all programming settings of Auto function will run based on the setting of Protect Mode Option.

Besides, at the lower right corner of Auto dialog appears an additional button of "Lock Proc.", which locks the thorough programming dialog except the <RUN> button.

Mfr. : SPANSION Type : S29AL004D-TA-01(Serial Ne. : OFF ISOP48]						um :		004 07F80	
- Program Setting Incertion Test ID Donk Unpremet Erate Uhas Clock Program Verity Setted Member Promet	Precedure Status : UNLOCK	s 	ock 2		5	6 	7 Tata	8 	Counte OK B Besset	r: NG
	Bun	Che	160	-				्म २२	Lock	

Lock Process:

After Protect Mode is activated in HACCESS, click <Lock Proc.> to lock the thorough programming dialog of Auto function but <RUN> button is excepted.

The procedure status will show "LOCK" and <Lock Proc.> will change into <Unlock Proc.>.

You can either click <RUN> to start programming or <Unlock Proc.> to unlock the dialog.

♦ Entering password is essential for Lock and Unlock process.

Mfr.: SPANSION Type: S29AL004D-TA-01[Serial No. 1 OFF		1			ecksa ecksa		00 87F8	
Program Setting	Procedure Status : LOCK	Sec	iket i 2 3		5	6 7	8	Coust	ter : NG
F III Check	31					TI			1
🗖 Unpromit	3.1			T				-	
F fraor F Illank Check	241					TT			
F Diagram	21								
P Verity 3	4		÷,					-	
🗆 Serial Ruinber	31								
Parat	7.00							-	
E:									1
E	<u>711</u>								1
						- 11	latal :	0	0
								_ with	(dealer 1
	Run	 Ioni		ſ.			(Unloc	k Proc.

■ Sector/Block:

Specify sectors/blocks to protect if needed.

Mfr. : SPANSION	N	Serial No. :	OFF	CRC Checksum	n: 50C8
Type: S29AL004	ID-TA-01			Buffer Checksum	n: 077F44FE
	Set Protect Sectors up			×	N.
Program Setting	Ø000000-0007FFF	IT .	(F	IF 1	Counter :
✓ Insertion Test	₩ 0008000-000FFFF	F	Г	Г	Counter:
	₩ 0010000-0017FFF	E.	E.		8 OK NG
✓ ID Check	₩ 0018000-001FFFF	TO 1	Г	Г	
74 (A)	₩ 0020000-0027FFF	Γ	Г	Г	- 1 k / k.
Unprotect	@ 0028000-002FFFF	Г	F	F	
✓ Erase	₩ 0030000-0037FFF	E.	E State	T ₂	
✓ Blank Check	₩ 0038000-0037FFF	E.	E	E.(
✓ Program	₩ 003C000-003CFFF	[T]	F	F	
	Ø 003D000-003DFFF	E .	Г	F	
Verify	Ø 003E000-003FFFF	F	E.	E	
Serial Number	Г	15 C	F	Г	
1	E	E.	198 198	1	
Protect	Г	10	「」	10	
-	Г	17	[S]	E	
2	E.	F	(F)	- F	
				C OTP Protect/Lock	
			1000	the second s	0 0 it
2	<< Previous (Se	et / Clear) all blocks	Next>>	OK Cancel	
	- Annual Annual				1
					Reset Count

Parameter:

Special setting for programming if needed. If any of the options is shown in gray, it's not available.

a / Odd Parameter	
Program / Verify • Normal ou use even or odd mode,the bu es the device size .	C Even C Od

■ Serial Number:

Select "Serial Number" option of the programming setting to enable "Serial No." of Auto function; then click "Serial No." to set the length, start address and format, etc.

This feature is provided based on algorithm/application of IC product so it is not available for all ICs.

MIR.: SPANSION	Serial No. : 00000000000000				RC	Che	cksu	m :	00	41
Type: \$29AL004D-TA-01	S/N Start Address : 0000000					Che				0000
Program Setting	Procedure Status : UNLOCK									
🗟 Insertion Test	Site # Status :	3	ocke			5	2		Ceun	ter:
17 ID Check	u l	- 1	6	ř.		2				
C Unpratect	1									
🖗 Erase									-	
₩ Blank Check ₩ Program										
Verity 3	110									
🕫 Serial Number										
F Protect								-		
F	71								-	
Г.	(<u></u>)								-	
r.							2	fotal :	1.8	

Serial Number	
Length:	4 (1-4 Words)
S/N Start Address:	0000000
Display Format:	• HEX C BCD
Start Serial No.:	000000000000000 In HEX
Direction (MSB in):	📀 Low Byte 🕤 High Byte
ОК	Cancel

- (3) Erase : Enter programming mode with Erase function activated.
 - Blank : Enter programming mode with Blank check activated.
 - Program : Enter programming mode with Program function activated.
 - Verify : Enter programming mode with Verify function activated.

Protect : Enter programming mode with Protect function activated.

MIL: SPANSION	Serial No.: OFF	CRC Checkson : 9041
Type : S29AL004D-TA-	H	Buffer Checksum : 07F80000
— Program Setting —	Procedure Status : UNLOCK	Sacket # Counter :
7 Insertion Test	Sile # Status :	12345578 OK NG
P ID Check	0	
-	1	
terre de la composición de la composicinde la composición de la composición de la composición de la co		
Blank Check		
-	415	
	3410	
-		
8	71	
	(LL)	
		Tatal : 16 0
-		Reset Count
	Flue	Close

Mfr. : SPANSION Type : S29AL004D-TA-01	Serial No. : OFF					:RC					01 07F1)41 9000
Program Setting	Procedure Status : UNLOCK		Se	cke	1.2						Court	ter :
P Insertion Test	Sile # Status :		1	2	3	4	5	6	1	8	0K	
F		10									B	
5	1										8	
F	1											
₽ Program	-21											
P Verity		-										
-	31	- 11										
E.	31											
r r	1											
r .									Te	tal :	16	
r r												
192											Rese	t Ce
		-	_	_						-		
	Run		los		1							

■ Extended Verify options : Click the button ≥ beside Verify function to view extended options below.

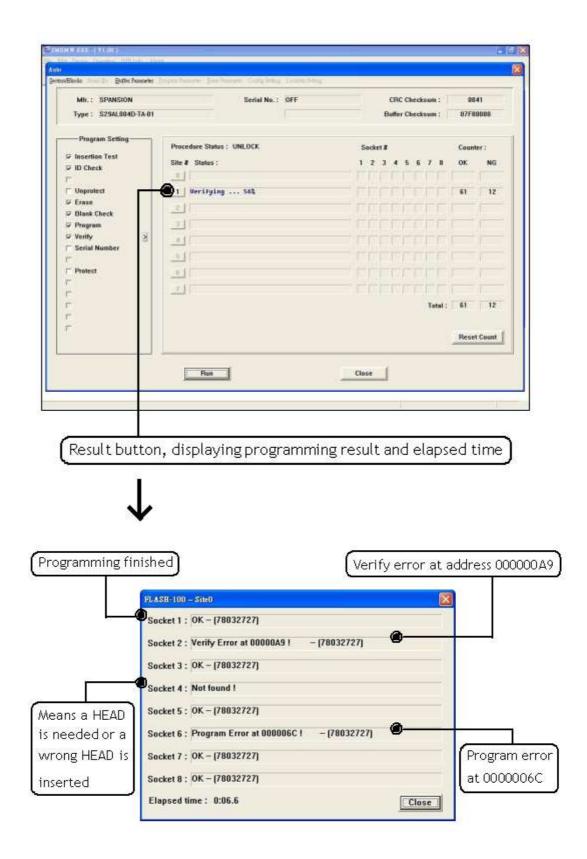
Verify Voltage :	Normal(Once) 🛛 💌
ĺ	Normal(Once)
Verify	High & Low(Twice)

Verify Voltage :

Normal [Once] : Verify with IC's standard voltage.

High & Low [Twice] : Verify with the range of high and low voltages.

- Verify : Verify programming result.
- Verify CRC : Verify CRC code after programming.



5.6.4 USB Info.

Display current ALL-200G connection status through USB interface.



5.6.5 About

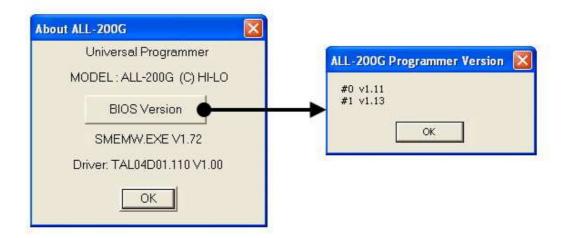
Provide information of the required HEAD(s) and programmer hardware/software.

rammer Slatus (Best Yinw - 800 × 600)	otect Unrefect	
Device	Messages	
Mfr. : SPANSION Type : S29AL004D-TA-01(TSOP48)	Set J1°J5 1-2 connect.	
Head : HD-FLASH-TS48		
Target Zone (Byte Wide) Device Start : 00000000 Device End : 0003FFFF		
Buffer Start : 00000000 Buffer End : 0007FFFF		

(1) HEAD List: Display the supported IC packages and required HEAD.



(2) Programmer Info.: Display model number of current programmer and version number of current programming driver.



6. ALL-200G Troubleshooting

After power on, ALL-200G will run self-diagnostics and USB connection check. Green/Red LED will display test result. Table listed below summarize test result with possible causes/dispositions for troubleshooting.

Condition Possib	le cause/Dispositions
After power on, Green	Poor contact / operation abnormal:
and Red LED off.	1. Check power cable connection.
	2. Need troubleshooting. Contact your local dealer for
	service.
After power on, Green	Fail self diagnostic test:
and Red LED flash.	1. Check if there is IC on socket (Should be removed).
	2. Need troubleshooting. Contact your local dealer for
	service.
After power on, Green LED	Fail ALL-200G memory diagnostic test:
off but Red LED flash.	1. Try to power on again.
	2. Need troubleshooting. Contact your local dealer for
	service.
After power on or during	Fail USB connection check:
programming, Green LED	1. Check USB cable connection.
flash but Red LED off.	2. Check PC BIOS setup to see if USB is disabled
	(Should be enabled).
	3. Need troubleshooting. Contact your local dealer for
	service.
During programming,	USB communication error:
Greend LED on but Red	1. Check USB cable connection.
ED flash.	2. Need troubleshooting. Contact your local dealer fo
	service.

7. Glossary

7.1 EPROM, EEPROM, BPROM, and MPU

Programmable device: An integrated circuit (IC) that can be programmed.

Bit, Nibble, Byte, Word, Double Word
 Bit : A basic unit of binary data.
 Nibble : A group of 4-bit binary data. A nibble ranges from 0H to FH.
 Byte : A group of 8-bit binary data. A byte ranges from 0H to FFH.
 Word : A group of 16-bit binary data. A word ranges from 0H to FFFFH.
 Double word : A group of 32-bit binary data. A double word ranges from 0H to FFFFFH.

Buffer

There is 4 Mbit memory buffer in ALL-200G Programmer. IC driver file can automatically allocate/arrange these 4Mbit memory space for programming depending on IC memory size and read/write needs.

When data needs to be programmed to IC, data needs to be loaded to programmer buffer first and then program to IC. When data is read from Master IC, the data is also stored in programmer buffer, it can then be edited or saved to disk for future use.

75

Buffer Start and Buffer End Address

It specifies the start and end addresses in programmer buffer in which data is to be programmed to IC in sequence. This is also the area that data is used for Checksum calculation.

CheckSum

This is the SUM of all data contents between buffer start and buffer end addresses. All data are added and the least significant 16 bits (4 HEX) are displayed as the Checksum. (Some data in some ICs might not be covered in Checksum calculation.) Checksum will be calculated after IC reading, file loading, type changing, or buffer editing.

Bit Count of data

A NIBBLE contains 4-bit data. A BYTE contains 8-bit data. A WORD contains 16-bit data.

MPU is normally in 8 or 16 bit width, but still have some in 12 or 14 bit width.

Device Start and Device End address

It specifies the start and end addresses inside IC device. During IC programming, data stored in programmer buffer will be written to this specified area.

USB interface

USB, Universal Serial Bus, is a high speed data transmission bus initiated by Intel and then supported by NEC, IBM, MicroSoft, Compaq,...etc. It is now a data transmission standard between PC and peripheral devices.

V1.1	USB Full-Speed :	12 Mb/s	
V2.0	USB High-Speed:	480 Mb/s	(Suggested)

Security fuse

Security fuse is available in most of programmable ICs. Once the Security fuse has been blown, the data stored in IC cannot be read out correctly and IC cannot be programmed either. However, IC can still operate functionally no matter the Security fuse has been blown or not.

 Note: Once the Security fuse has been blown. IC data can no longer be read out or programmed correctly, please double-check before programming Security fuse.

Lock bits

Some MCU/MPU use Lock bits to protect data programmed. Normally user has options to select individual Lock bit to protect different area of memory data. Please refer IC data sheet for definition of Lock bits.

Encryption

Some MCU/MPU use Encryption code for data protection. If an IC has been programmed with Encryption code, then a correct decryption code must be given to read the correct data.

Protection Fuse

Some FLASH memory use Protection fuse for data protection. It can prevent data change from accident programming. The Protection fuse must be reset to Unprotection state, if the programmed data need to be changed. The default state of Protection fuse is Unprotection.

7.2 PLD, PAL, GAL, PEEL, CPLD, EPLD, and FPGA Programmable Logic Device (PLD)

PLDs are usually grouped into following four categories:

PLD: A one time Programmable Logic Device such as PAL.

EPLD: A UV Erasable PLD such as EPLD, CPLD, and FPGA. These devices have transparent window on top of package for UV light exposure.

EEPLD: An Electrically Erasable PLD such as GAL, PEEL, CPLD.

CPLD: A more complex PLD device.

JEDEC fuse map file of PLD

JEDEC fuse map file is a standard format used for PLD programming. It contains fuse information and functional test vectors of PLD to be programmed. Most PLD assemblers or compilers such as PALASM, OPAL, CUPL, ABEL, AMAZE, and PDK-1, can create JEDEC fuse map file.

POF fuse map file of PLD

POF fuse map file is a format used for ALTERA PLD programming. POF file can store more programming data than JEDEC file.

Fuse blown and intact

Most of unprogrammed (blank) PLD have fuses in intact (connect) state. After programming, PLD fuses are blown to open state. For one time programmable PLD, once fuses are blown (opened), they cannot be changed back to intact (connect) state. However, the UV erasable PLD can be erased to change fuses back to intact (connect) state by UV light exposure and the electrically erasable PLD can be electrically erased to change fuses back to intact (connect) state by using Erase function on this Programmer.

Array fuse, Configuration fuse

Array fuses are the main logic fuses in a PLD. Different types of PLD have different logic function arrangement. Configuration fuses define the I/O architecture of a PLD such as Combinatorial/Registered, Output feedback/Output enable, and so on. Generally, user do not have to understand the details of these fuses because logic compiler will automatically translate logic statements and equations into JEDEC format file.

Security fuse

Most of PLD have Security fuse. Once Security fuse is blown, data in PLD can no longer be read out correctly. Generally, the PLD will be read as blank if Security fuse is blown.

Note: