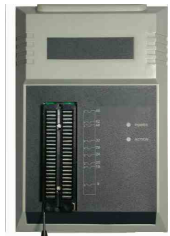


Standard Accessories

Leaper-48 main unit x1, USB cable x1, DC 12V/2A adaptor x1, Operation software CD-ROM x1, Quick User Guide x1



Main unit

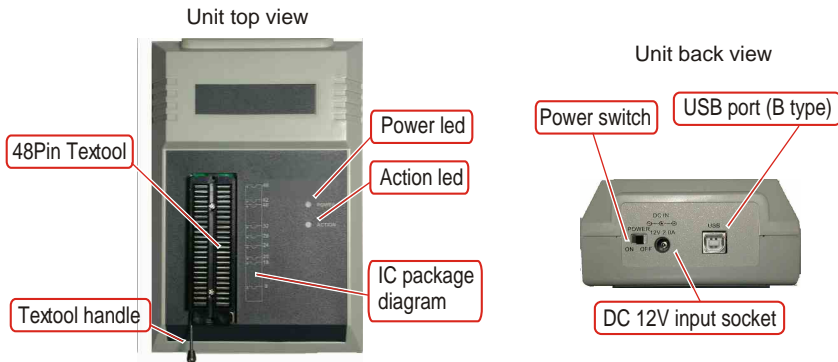


Adaptor



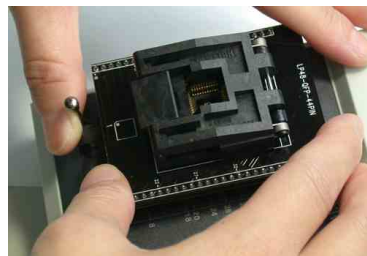
USB cable

Introduction



Attention

1. It is preferred to use an internal USB port of your PC. External USB ports are not recommended because of shared bandwidth and possible compatibility issues of other USB devices.
2. When you use special socket adapters (PLCC, TSOP, SOP...), Please pull the textool up to 80 . Put the special socket adapter in the textool and then pull the handle down to fix the socket adapter.

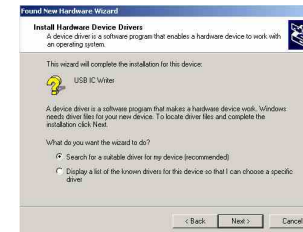


Install software and driver

1. Set Font Size to [small fonts] (96 dpi) to have the optimal display.
 - 1.1 Click the right button on the desktop. -> Select the [Properties] in the bottom of the function menu.
 - 1.2 Select [Settings] and then click the [Advanced] to set Font Size.
2. Install the software before connecting the Leaper-48 to the PC.
 - 2.1 Insert the software CD into your CD-ROM drive. Auto Run start-up installation. Follow the instructions to complete installation.
 - 2.2 If Auto Run doesn't work, click [Setup.exe] in the CD directory to install.
3. Install the driver of Leaper-48 hardware.
 - 3.1 Make sure the Leaper-48 power is [OFF]. Connect the power adaptor to the Leaper-48. Plug in and then turn on the power. The green led on the adaptor and power led on the programmer panel will be lit on.
 - 3.2 Link the USB cable to PC USB port and programmer USB port.
 - 3.3 After assembling the USB cable and the power adaptor, Windows will auto start-up [Found New Hardware Wizard].
 - 3.4 Install Hardware Device Driver
 - > Search for a suitable driver for my device(recommended)
 - 3.5 Locate driver files Optional search locations
 - > CD-ROM driver
 - 3.6 Driver Files Search Result
 - > Windows found a driver for this device....\driver\usbwriter.inf
 - 3.7 Completing the Found New Hardware Wizard



[3.3]



[3.4]



[3.5]



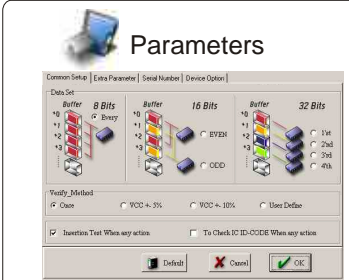
[3.6]



[3.7]

LEAP Electronic Co., Ltd.
 Tel : + 886-2-2999 1860
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 http ://www.leap.com.tw
 Email: service@leap.com.tw

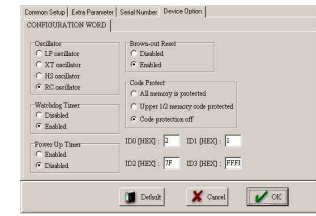
* Above installation is described in Windows 2000 *



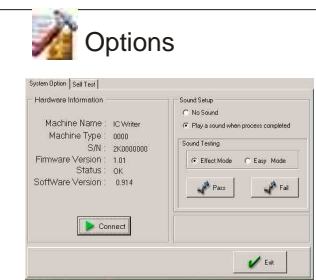
1. Memory device split function
2. High-low voltage verify
3. Pre-check on device (i.e. pin scan, IC identify...)

Description	Synval	Min	Max	Unit
Supply Vcc min voltage during read	Yes	2.5	5	V
Supply Vcc max voltage during verify	Yes	2.5	5.3	V
Supply Vcc min voltage during program	Yes	2.5	5	V
Product identification voltage	VID	2.5	12	13.9
Typ program voltage during program	Vpp	2.5	12	13.9
Typ program voltage during read	Vtype	2.5	12	13.9
Program Pulse width	type	1	40	65353 us
Erase Pulse width	time	1	300	65353 us
Write cycle time	time	1	1	30
Minimum program delay enable	X	1	20	30

Device DC/AC parameter settings



Device settings
*only enabled when programmer is turned on and connected to the PC

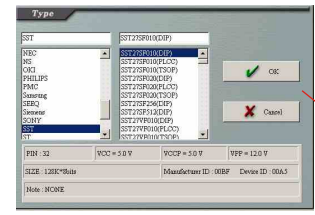


1. Programmer information
*only enabled when programmer is turned on and connected to the PC
2. Sound settings



Programmer self-test
*only enabled when programmer is turned on and connected to the PC
*Remove any device from the ZIF socket, if present.

Select IC number



Load file



Programming source

IC type

Load from PC

Verify source IC

Edit file

Save file

Exit program

Source filename

IC manufacturer, type number and package

Device verify Check SUM

Programming status

Run

Stop

Auto loop

Process option

Counter

Clear counter

Progress percentage

Erase

Blank check

Program

Verify

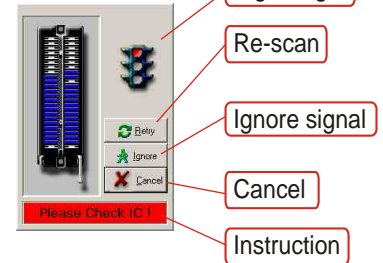
Protect / security

Program process & options

Save file

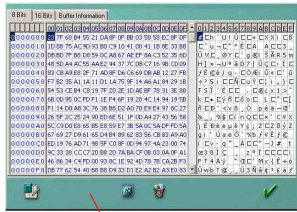


Device pin check



Source file editing

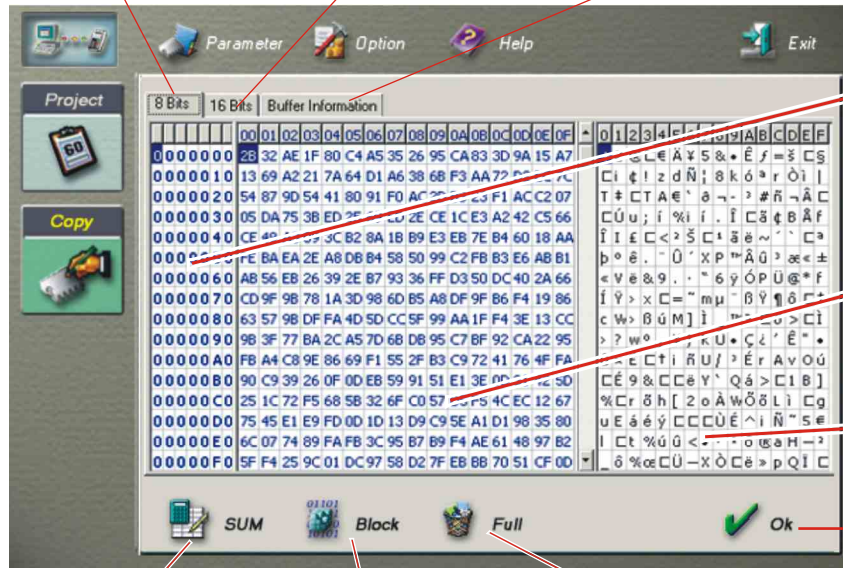
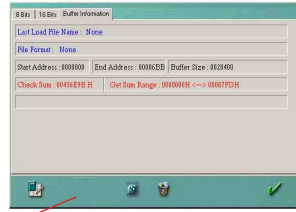
8bits HEX display



16bits HEX display



Buffer & file information



Address of data
Click and enter new address.

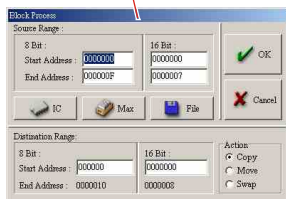
HEX code Display
Click to enter hexadecimal data.

ASCII code Display
Click to enter text.

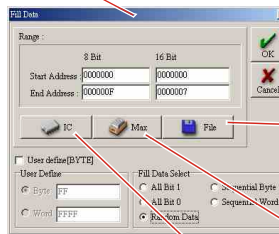
Exit edit window



Get data block checksum
*When a Microchip PIC device is selected, IC checksum will be shown directly.



Data block - Move/Copy/Swap



Data block - Fill

Confirm changes

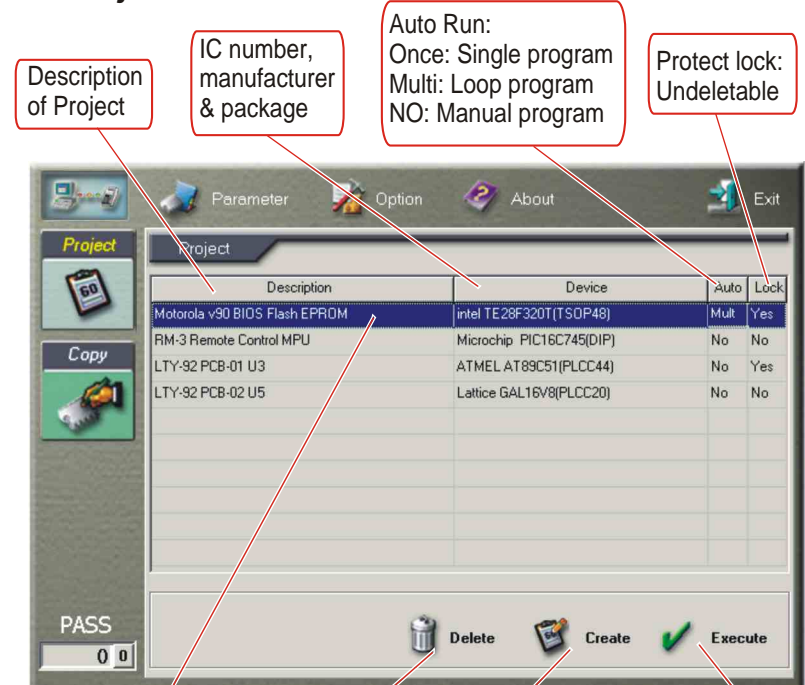
Cancel changes

Set data block range by load file size

Set data block range by maximum size of buffer

Set data block range by selected IC size

Project



Description of Project

IC number, manufacturer & package

Auto Run:
Once: Single program
Multi: Loop program
NO: Manual program

Protect lock:
Undeletable

Select project
Double click to run the project.
Single click to select the project.
Click right button to display properties of the project. Double click blank row to create a new project.

Delete project

Create new project
Create new project with present settings. Only reserve for 10 records. Or the project keeper will delete the un-protect and former file (on the top row).

Execute Project

Hot Key

Image	Description	Key	Image	Description	Key
	Project	F10		Run Process	Enter
	Select IC Type	T		Auto Process	A
	Load Source File	F2		Erase IC	E
	Read IC data	R		Blank Check	C
	Edit Data	F4		Program IC	P
	Save data to file	F3		Verify IC	V
	Exit System	X	HotKey		

Click [Space] bar in the main operation screen to pop Hot Key menu.

How to create a project

Step 1 Create a Project

1. Click [Project] icon.
2. Click [Create] button to start up the project editing window./ Double click blank column to create a new project.
3. Enter project description.
4. Select [Auto loop] parameter: Once/ Batch/Manual.
5. Select [Project Protect] to protect project.
6. Click [OK] to save the project or click [Cancel] to discard any changes.



Description of Project

IC number, manufacturer & package

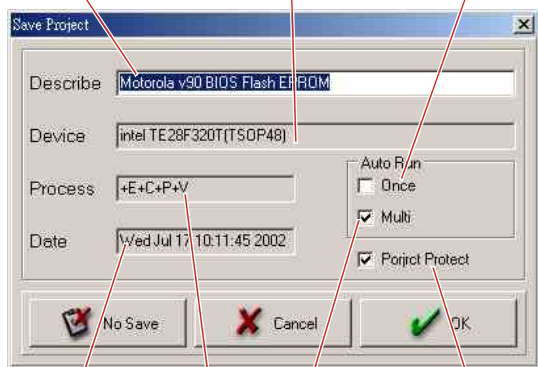
Auto Run: Single program

Project created date and time

Auto Run: Loop program

Programming Process
E: Erase IC, C: Blank check, P: Program IC, V: Verify IC, S: Protect/Security

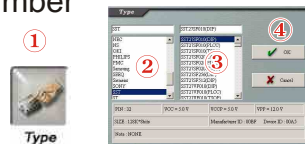
Protect lock: Undeletable



How to program an IC

Step 1 Select IC number

1. Click [Type] icon.
2. Select IC manufacturer.
3. Select IC number.
4. Click [OK] Button.



Step 2 Get source data

Mode 1: Load from file

1. Click [Load] icon.
2. Click [Browse] to load file.
3. Set file format.
4. Click [Load] button to read data.



Mode 2: Read from source IC

1. Place source IC.
2. Click [Read] icon.
3. Start to read and verify IC.
3. Check status and checksum



Step 3 Program IC



Mode 1: Program single IC

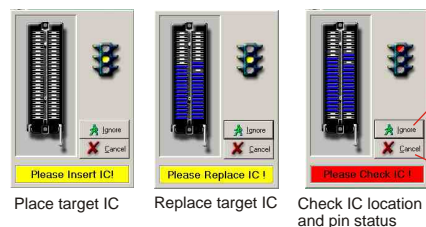
1. Select process options.
2. Place target IC.
3. Click [Run] icon.
4. Check process status.

Process option



Mode 2: Program batch of ICs

1. Select process option.
2. Place target IC.
3. Click [Auto Loop] icon.
4. Check process status.
5. Repeat above steps for the next IC.
6. Click [Cancel] icon on Scan IC Window to stop process.



Click to ignore the IC check and process the next IC

Click to stop the batch programming

Step 1 Execute Project

1. Click [Project] icon.
2. Double click to run project or click right button to check the properties of the project.



Double click blank column to create a new project.



Step 2 Program IC

Method 1: One time auto-program

1. Place target IC.
2. Check process status.



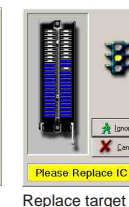
Place target IC

Method 2: Loop auto-program

1. Place target IC.
2. Check process status.
3. Repeat above steps for the next IC.
4. Click [Cancel] button to stop programming.



Place Target IC



Replace target IC



Check IC pins and location

Click to ignore the IC check and process the next IC

Click to stop the batch-program

Method 3: Manual program

1. Place target IC
2. Click [Run] icon.
3. Check process status.

Run

