

GUT- 6001 Handy EPROM Writer

USER'S MANUAL



**ISO-9001 & ISO-14001
CERTIFIED MANUFACTURER**



GOOD WILL INSTRUMENT CO., LTD.
NO. 95-11, PAO-CHUNG ROAD, HSIN-TIEN CITY,
TAIPEI HSIEN, TAIWAN, R. O. C.
Tel : 886-2-2917-9188 Fax : 886-2-2917-9189
[http : //www.goodwill.com.tw](http://www.goodwill.com.tw)
E-mail : marketing@goodwill.com.tw

OVERSEAS SUBSIDIARIES :
U.S.A./INSTEK CORP.
1205 John Reed Court
City of Industry, CA 91745, U. S. A.
Tel : 1-626-3366537 Fax : 1-626-3691748

MALAYSIA/GOOD WILL ELECTRONICS SDN. BHD.
No. 5-3-11, Hurza Complex, Jalan Gangsa, Greenlane
Heights, 11600 Penang, Malaysia
Tel : 002-60-4-6591988 Fax : 002-60-4-6591989

TABLE OF CONTENTS

I .INTRODUCTION.....	2
II .STANDARD ACCESSORIES.....	2
III .INSTALLATION.....	3
IV .STAND ALONE MODE.....	3
(1) FUNCTIONS.....	3
(2) THE TABLE OF THE KEYS.....	4
(3) DESCRIPTION OF FUNCTION KEYS.....	4
(4) EXAMPLE OF LCD DISPLAY.....	6
V .REMOTE CONTROL MODE.....	8
(1) GUT-6001 EXECUTION PROGRAM.....	8
(2) INTRODUCTION FOR SOFTWARE VIEW.....	8
(3) SCREEN.....	9
(4) OPERATION DESCRIPTION.....	10
(5) THE LIST OF SUPPORT DEVICES.....	14

I .INTRODUCTION

GOOD WILL INSTRUMENT CO., LTD. is very proud of their GUT-6001 programmer, which is a highly precise and convenient ERROM programmer. It is equipped with two operation modes.

(1) Stand alone mode

- *FUNCTIONS SET
- *IC TYPE SELECT
- *BLANK CHECK
- *VERIFY AND CHECK SUM
- *PROGRAM

(2) Remote control mode

- *TYPE
- *READ
- *PROGRAM
- *VERIFY
- *DISK
- *HELP
- *PROCESS
- *PARAMETER

This manual includes some simple operation. As to the detailed operation, it is described in the "HELP" of the software.

II .STANDARD ACCESSORIES

1. GUT-6001 main unit x 1.
2. 26 / 25 pins Printer connection cable x 1.
3. DC 12V/500mA adaptor x 1.
4. Software driver disk x 1.

III.INSTALLATION

(1) Stand alone mode

Put one or two 9V alkaline batteries into the back of GUT-6001 or plug in DC12V/500mA adaptor to work.

(2) Remote control mode

- 1.Connect the 26 Pins Printer cable with the Printer Interface of PC and with the main unit GUT-6001.
- 2.Plug DC12V Adaptor in GUT-6001.
- 3.Switch on the power of GUT-6001.
- 4.It can work with PC after installing the system software and execute "LP3.BAT"

IV.STAND ALONE MODE

(1) FUNCTIONS

A. Process device type :

- EPROM 2732 - 27080 (including 21V & 25V devices)
- FLASH 28F256 - 28F020 , MX28F4000 (Vpp 12V)
- FLASH AT29C256 - ATC29020 (Vpp 5V)
- EEPROM 2817,2864,28256,28010
- SRAM 6264 - 628512
- FLASH AM29F010 - AM29F040

B. Function Keys :

- [1] Device select
- [2] Algorithm set
- [3] Blank check
- [4] Verify & checksum
- [5] Program
- [6] Erase FLASH & EEPROM
- [7] SRAM test

C. Programming mode selection :

- [1] Program + Verify (P+V)
- [2] Blank check + Program + Verify (C + P + V)

D. Programming algorithm setting :

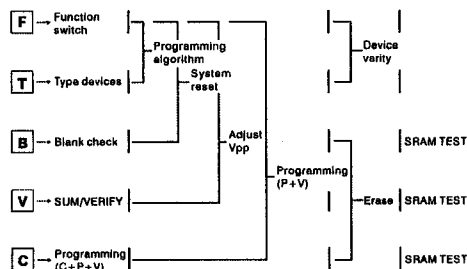
- [1] Quick pulse 50uS
- [2] Quick pulse 100uS
- [3] Snap 100uS
- [4] Intelligent 500uS
- [5] Intelligent 1mS
- [6] Interactive 500uS
- [7] Interactive 1mS
- [8] Standard 5mS
- [9] Standard 10mS
- [0] Standard 50mS

E. Programming Vpp setting :

- [1] Vpp = 12.00V
- [2] Vpp = 12.25V
- [3] Vpp = 12.50V
- [4] Vpp = 12.75V
- [5] Vpp = 13.00V
- [6] Vpp = 13.25V
- [7] Vpp = 21.00V
- [8] Vpp = 25.00V

(2) THE TABLE OF THE KEYS :

(Please make reference to the five keys on GUT-6001)



(3) DESCRIPTION OF FUNCTION KEYS

OPERATION INSTRUCTION : Function is distinguished by the KEY

[FUNC] whether it is pressed or not.

1. When [FUNC] key isn't pressed :

[TYPE] :

To set up the device type (EPROM → FLASH → EEPROM RAM → Back to EPROM) the range is from 2732 to 628512.

[BLANK] :

To check if the device of SLAVE on the TEXTOL is blank or not,

The result will be displayed by PASS/FAIL.

[SUM/VER] :

The key has two functions at this time. One is for getting the CHECKSUM of MASTER, and the SUM will be displayed directly on the right top of the LCD. The other function is to verify the data of SLAVE with the date of MASTER. The result will be displayed by PASS/FAIL on the right bottom of the LCD.

[COPY] :

To copy the data from MASTER to SLAVE. Before the process, it will check if the device of SLAVE is blank or not (C+P+V).

2. When [FUNC] key is pressed with following keys at the same time :

[TYPE] :

To set up one of the ten programming algorithm for the devices, the result will be displayed as follows :

Display of LCD

- Q-50uS
- Q-100uS
- N-100uS
- I-500uS
- I-1mS
- A-500uS
- A-1mS
- S-5mS
- S-10mS
- S-50mS

Programming algorithm

- Quick pulse 50uS
- Quick pulse 100uS
- Snap 100uS
- intelligent 500uS
- intelligent 1mS
- Interactive 500uS
- Interactive 1mS
- Standard 5mS
- Standard 10mS
- Standard 50mS

[BLANK] :

To reset the system If users press [FUNC] and [BLANK] at the same time about two seconds, then system will reset.

[SUM/VER] :

To adjust Vpp when it is programming. The range is from 12.00V to 13.25V, and every 0.25V is one section. There are six sections, another two sections are 21.00 and 25.00V.

[COPY] :

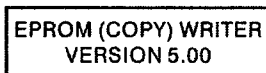
To copy the data of the MASTER to SLAVE, Before the process, it will not check if the device of SLAVE is blank or not for the SLAVE (P+V) .

3. When the programmed device is FLASH 28F256 -MX 28F4000, AT 29C256 -AT29C020 or EEPROM 2817 -28010, please keep pressing [BLANK] and then press [COPY] . The device put on SLAVE will be erased to blank.

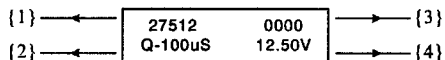
4. When the device is SRAM 6264 -628512, press one of the keys [BLANK] , [SUM/VER] , [COPY] to test if the SRAM put on SLAVE is effective or not.

(4) EXAMPLE OF LCD DISPLAY

A. When system is booting or rebooting, it will display the first screen as follows :



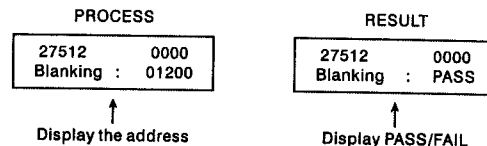
B. The explanation of general operation :



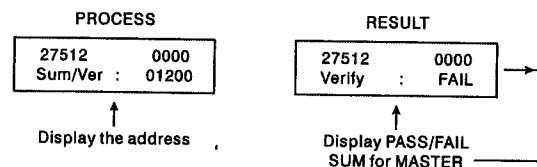
- {1} : The type of the device.
- {2} : The programming algorithm for the device.
- {3} : The CHECKSUM of last MASTER device.
- {4} : The programming Vpp of the SLAVE

C. Example of the active screen :

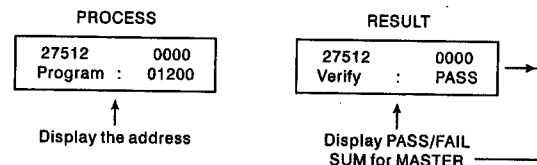
[1] Check blank :



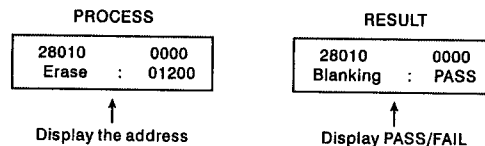
[2] Verify devices and display CHECKSUM :



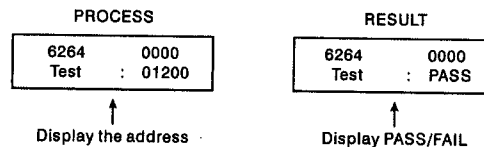
[3] The screen for programming the device :



[4] The screen for erasing devices :



[5] The screen for testing SRAM :



V. REMOTE CONTROL MODE

(1) GUT-6001 EXECUTION PROGRAM

LP3.BAT	GUT-6001 MAIN EXECUTION PROGRAM Process Device 2732-27020(EXECUTIVE)
LP3-4M.BAT	GUT-6001 MAIN EXECUTION PROGRAM Process Device 2732-27080 (EXECUTIVE)
MAIN.EXE	System support program

(2) INTRODUCTION FOR SOFTWARE VIEW

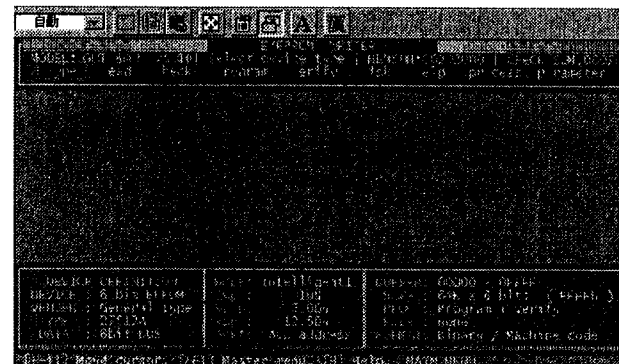
(As following figure)

- A. The description and model of the product.
- B. The existing .OVL and version of the current system.
- C. The meaning of the function keys.
- D. The check sum of memory buffer.
- E. The check sum of the device.
- F. Function keys.
- G. Display the data of buffer (fast turnkey)
- H. After setting the vendor and type, it will display the parameter data of the device as follows automatically.

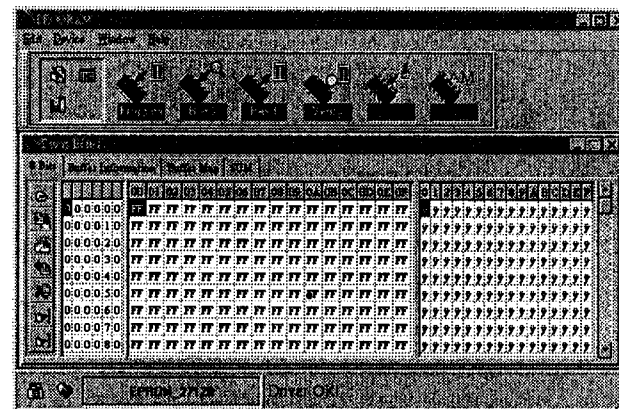
DEVICE : the variety of device
 VENDOR : the brand of device
 TYPE : the type of device
 MODE : the mode of programming
 Tpw : the programming pulse width
 Vcc : the voltage of Vcc
 Vpp : the voltage of programming Vpp
 SIZE : the capacity of IC memory
 PROC : the procedure of programming
 FILE : the name of file
 FORMAT : the format of transmitting file

(3) SCREEN

(All the functions shown below are for reference only, the detail functions should be referred to the software.)



DOS VERSION



WINDOWS VERSION

(4) OPERATION DESCRIPTION

TYPE

- (1) [T] Set IC Vendor/Type
After Setting the vendor, Choose the IC type. Confirm and then press [Enter]. After Selection, the bottom of screen will display all parameter set by system automatically.
- (2) [Space] Set IC type only
Set IC type only.

READ

- (1) [R] read into address 0000
Read the data of MASTER IC into address 0000 in the buffer of computer.
- (2) [Ctrl] [R] Read into any address
Read the data of MASTER IC into any appointed address in the buffer.
- (3) [Shift] [R] Read into the next address
Read the data of MASTER IC into the next appointed address in the buffer.

CHECK

- (1) [C] Device blank check
Check if there is any data in the SLAVE IC.
- (2) [N] Check device data sum
Check the data sum of MASTER IC, but won't read the data into the buffer.

PROGRAM

- (1) [P] Program from address 0000
Program the data of buffer address 0000 to SLAVE IC.
- (2) [Ctrl] [P] Program from any address
Program the data of buffer from any appointed address to SLAVE IC.
- (3) [Shift] [P] Program from the next address.
Program the data of buffer from the next appointed address to SLAVE IC.
- (4) [B] Erase EEPROM and FLASH EPROM device.
Erase EEPROM and FLASH EPROM electrically.
- (5) [Ctrl] [A] Auto blank check.....ON
Check blank automatically before program.

VERIFY

- (1) [V] Verify from address 0000
Verify device data from address 0000. (able to appoint MASTER or SLAVE)
- (2) [Ctrl] [V] Verify from any address
Verify device data with buffer from any appointed address.
(able to appoint MASTER or SLAVE)
- (3) [Shift] [V] Verify with the next address
Verify device data with buffer from the next appointed address.
(able to appoint MASTER or SLAVE)
- (4) [E] Display verify error.....ON
List the difference between device data and buffer.

DISK

- (1) [Ctrl] [D] List disk directory
List disk directory.
- (2) [L] Load disk data file to buffer
Down load the disk data file to buffer of computer.
- (3) [S] Save buffer data to disk
Save buffer data to floppy disk or hard disk.
- (4) [Ctrl] [M] Define macro key
After the users finish defining the macro key in buffer, end it by press [Ctrl] [M].
- (5) [Ctrl] [E] Erase macro key
Erase the defined macro key data.
- (6) [Ctrl] [T] List macro key
List the defined macro key and note.
- (7) [Ctrl] [L] Load macro key file
Load macro key file to the buffer. When entering the system, it will load to the macro key file "UNIV. KEY" automatically.
- (8) [Ctrl] [S] Save macro key file to disk
Save the macro key file to floppy disk or hard disk.
- (9) [Shift] [T] View the text file
View the text file.
- (10) [Ctrl] [I] Entry rest time, system lock.
- (11) [W] Select mega buffer file.
- (12) [Shift] [I] Initialize mega buffer on disk.
- (13) [Z] Change the size of buffer
- (14) [Ctrl] [Q] Exit
Exit the system.

HELP

- (1) [H] Help
Support the explanation of instruction for operation software.
Use [Pgup] [Pgdn] keys to look up.
- (2) [I] Device information
Support the pin out map of devices.

PROCESS

- (1) [D] Dump buffer HEX data
Display the data in the buffer, which contains HEX/ASCII and can edit the HEX/ASCII. When the cursor moves, the data of this address will be displayed with BIN, HEX and ASCII Code.
[Ctrl] [E] Command to edit HEX.
[Ctrl] [A] Command to edit ASCII.
- (2) [U] Display buffer used map
Display the used address of buffer in order to let users understand and analyze.
- (3) [Shift] [D] Edit encryption table
Supply an additional buffer to input Password.
- (4) [Ctrl] [X] Compile 16/32/64 bit data to 8 bit data.
- (5) [Shift] [X] Combine 8 bit data to 16/32/64 bit data.
- (6) [Shift] [C] Buffer data lock/unlock.
Lock or unlock the buffer data.
- (7) [Ctrl] [N] Read memory check sum
Read the check sum of buffer.
- (8) [Ctrl] [F] Buffer fill 0FFh data
Fill in FFH in the buffer data.
- (9) Fill sequential word in buffer.
- (10) Fill sequential byte in buffer.

PARAMETER

- (1) [M] Programming flow chart
Set the mode of programming.
- (2) [Ctrl] [C] Programming Vcc voltage
Set the programming voltage (Vcc)
- (3) [Ctrl] [B] Programming Vpp voltage
Set the programming voltage (Vpp)
- (4) [Ctrl] [O] Printer port NO LPT1
Set the address of printer port.

(5) THE LIST OF SUPPORT DEVICES

EPROM	: 2732 - 27080 (Vpp 12.0V~25.0V)
EEPROM	: 2817, 2864, 28256, 28010
FLASH EPROM	: 28F256 - 28F020, 28F4000, AT29C256 - AT29C020, AM29F010 ~ AM29F040
SRAM	: 6264 - 628512

*Windows version will not support:

ATMEL:

AT29C010, AT29C020, AT29C040, AT29C256, AT29C257,
AT29C512