How to Program an IC Chip



Using the SUPERPRO 280U

The instructions vary slightly between different chips

- Follow red instructions if you are using the 2532 or the 2532A.
- Follow green instructions if you are using the 27C64.
- Follow blue instructions if you are using the 28C64.
- Follow purple instructions if you are using the GAL16V8.
- Follow white instructions for all chips.

Switch on power to the unit and wait for the LED to turn green
Open the Superpro program on the desktop

•Choose device you wish to program by clicking on device icon



SUPERPRO SP280U - SUPERPRO for Windows	
File Buffer Device Option Project Handler Help	
Lord Save Load Prj Save Prj ?	LogicTest
Device ATMEL AT89C51 1000H*8 40Pins MCUMPU	•
Buffer Checksum: 000FF000H File =	•
Operation Option Edit Auto Dev. Config Parameter Dev. Info Adapter D	ata Compare
Preparing Ready.	
💥 Program	
💦 🔀 Read	
🔀 💥 Verify	
Blank_check	
🖌 💥 Erase	
Lock_Bit1	
Lock_Bit12	
🔀 Lock_Bit123	
Success: 0 Failure: 0 Reset	
Ready	CANCEL //

•Select appropriate manufacturer and device name

•Under Manufacturer click TI, then TAB over to Device and select TMS2532 or the TMS2532A depending on your chip.

• Under Manufacturer click AMD, then TAB over to Device and select AM27C64 .

•Under Manufacturer click Atmel, then TAB over to Device and select AT28C64B.

•Under <u>Manufacturer</u> click <u>Lattice</u>, then TAB over to <u>Device</u> and select <u>GAL16V8</u>.

🔀 SUPERPRO SP280U - SUPERPRO for Windo	ws	
File Buffer Device Option Project Handler Help		
Load Select		Doru OgicTest
Image: Search Image: Search <td< th=""><th>Device Name : SMJ2564 SMJ2564@PLCC32 SMJ2716 SMJ27C256 SMJ27C256@PLCC32 SMJ27C512@PLCC32 SMJ27C512@PLCC32 TMS2516 TMS2516JLW TMS2532 TMS2532A TMS2532A TMS2564 TMS2564@PLCC32 TMS2564 TMS27128 TMS27128 TMS27128 TMS27128 TMS27128 TMS27128 TMS27128 TMS27128 TMS27128</th><th>Device Type ALL E(E)PROM/ FRAM/NVRAM B/PROM DRAM/SRAM PLD MCU/MPU Cancel Cancel</th></td<>	Device Name : SMJ2564 SMJ2564@PLCC32 SMJ2716 SMJ27C256 SMJ27C256@PLCC32 SMJ27C512@PLCC32 SMJ27C512@PLCC32 TMS2516 TMS2516JLW TMS2532 TMS2532A TMS2532A TMS2564 TMS2564@PLCC32 TMS2564 TMS27128 TMS27128 TMS27128 TMS27128 TMS27128 TMS27128 TMS27128 TMS27128 TMS27128	Device Type ALL E(E)PROM/ FRAM/NVRAM B/PROM DRAM/SRAM PLD MCU/MPU Cancel Cancel
Supported by Programmer Models: /	SUPERPRO SP280U /SUPERPRO SP580U /S	UPERPRO SP3000U
Success: 0	Failure: 0 Reset	
Ready		CANCEL

•Program should indicate that it is ready



•Place chip in the programmer in the ZIF socket

Pull lever to open slots
Place in programmer at the bottom of the slots with pin 1 pointing towards lever
Close slots by moving lever to original position

NOTE: This step only needed if you are using a UV erasable device (i.e. 2532A or 27C64).

<u>Check that EPROM has</u> <u>been erased</u> •Click Blank_Check and await verification •Click read button •Examine buffer to ensure that all points in memory are FF



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Load your program into the buffer

Press the load button.
Select the *.hex or *.jed file you wish to load into the chip





The File Type window will appear

Choose the appropriate file address but leave the buffer address unchanged

Set the File address to F000

Set the <u>File</u> address to E000 Set the <u>File</u> address to E000 Not needed for the GAL16V8.

	1000H*8 24Pins E/EPROM	32 1000H'
	^{300FDB2} File Type	n: 000FDB1
Adapter	Auto	it Auto
	repar eady.	Prepar Ready.
	repar File Mode: Normal eady.	Prepar Ready.
	repar Buffer Address: 0 eady.	Prepar Ready.
	eady. Eile Address: F000	Prepar Ready.
	lank_ lank I Buffer clear on data load with FF :00'C	Blank_ Blank_ 0:00'0
	☐ Show Offset Address(Minimize) after Loading	
	Cancel	
	Show Offset Address(Minimize) after Loading	

Verify your program is in the buffer

Press the buffer button
Examine hex code to ensure it matches your program
If you are running a standalone program, ensure that Reset/IRQ vectors are set







Program your chip

•Press the Program button

- •LED on device should turn orange.
- •LED will turn green again once programming is complete

•If LED turns **red** then there has been an error and you may need to re-program the chip. This is usually due to the chip not making a complete connection within the programmer socket. NOTE: LED will stay red until the next successful operation is complete

•Once complete, press the Verify button to ensure that the program has been loaded successfully

•NOTE: UV erasable devices take much longer to program then electrically erasable devices.

Remember to turn off the programmer when you are done!!!!

