

# How to Program an IC Chip



Using the SUPERPRO  
280U

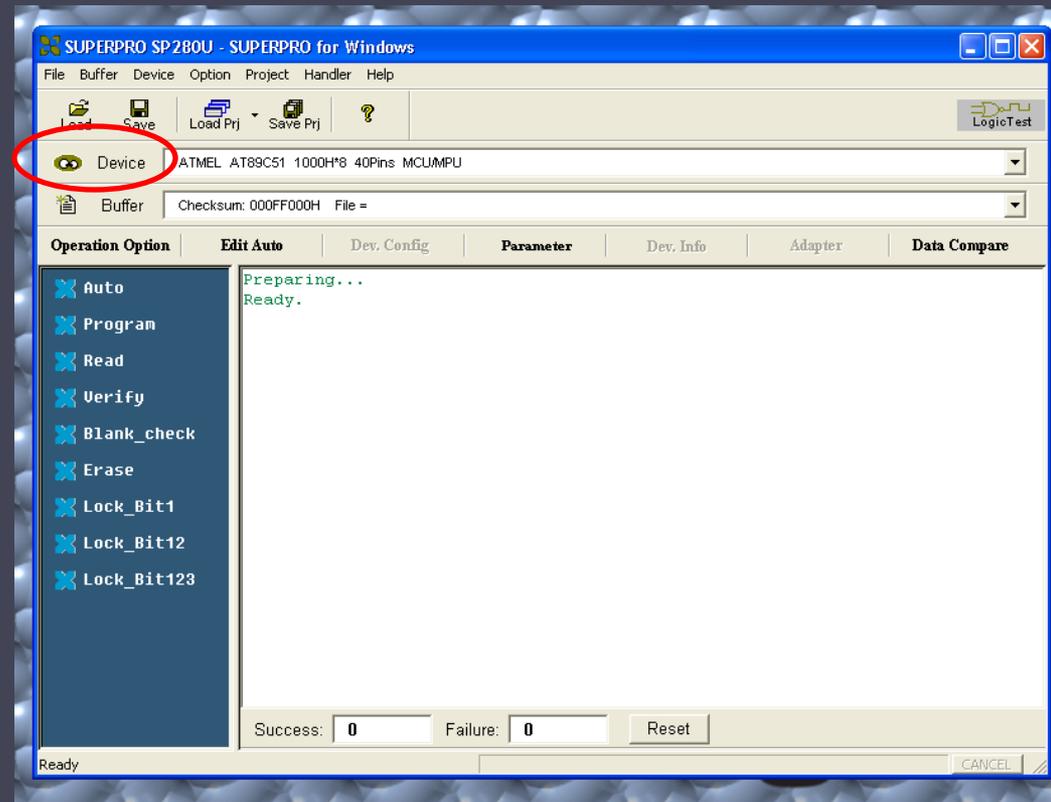
# The instructions vary slightly between different chips

- 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

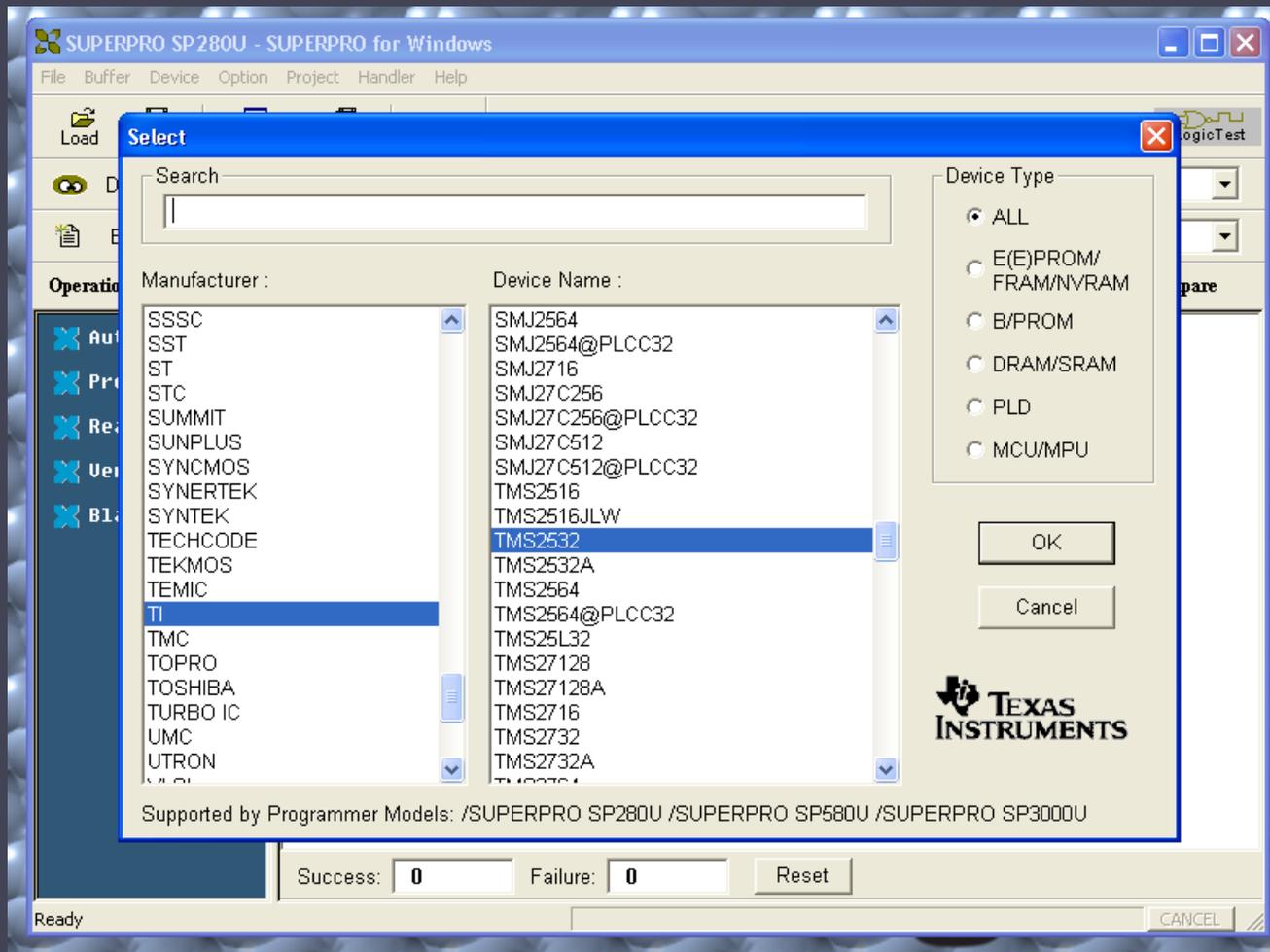


- Choose device you wish to program by clicking on device icon

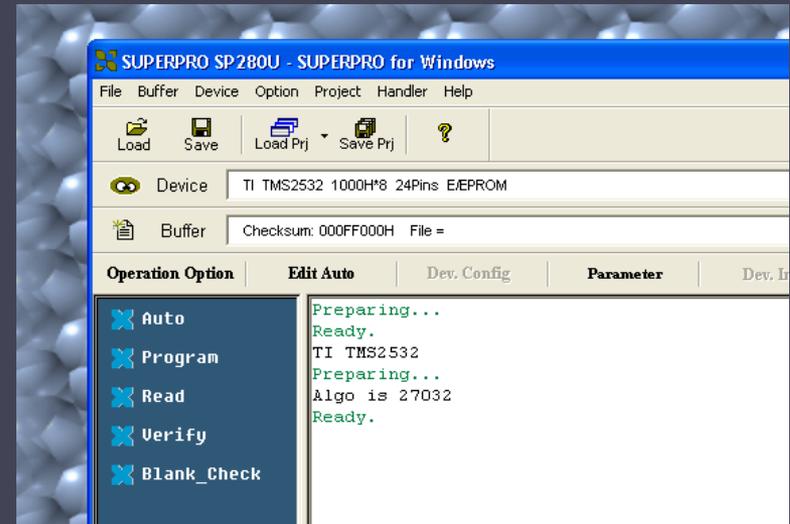


## •Select appropriate manufacturer and device name

- 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 Manufacturer click Lattice , then TAB over to Device and select GAL16V8.



- Program should indicate that it is ready

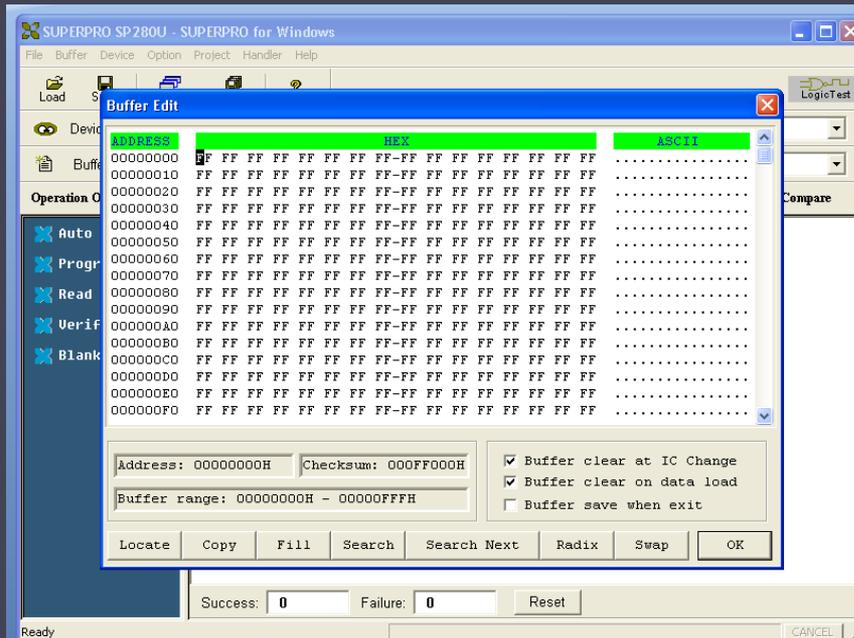
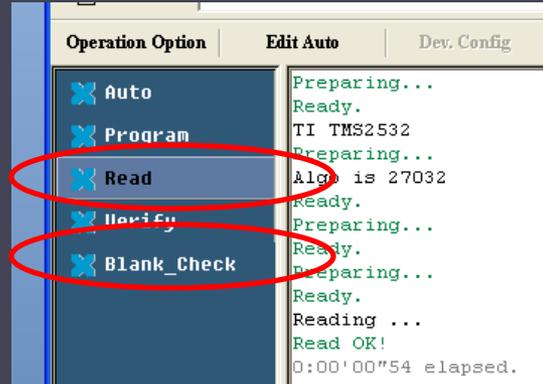


- Place chip in the programmer in the ZIF socket
  - Pull lever to open slots
  - Place in programmer at the bottom of the slots with pin 1 pointing towards lever
  - Close slots by moving lever to original position

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

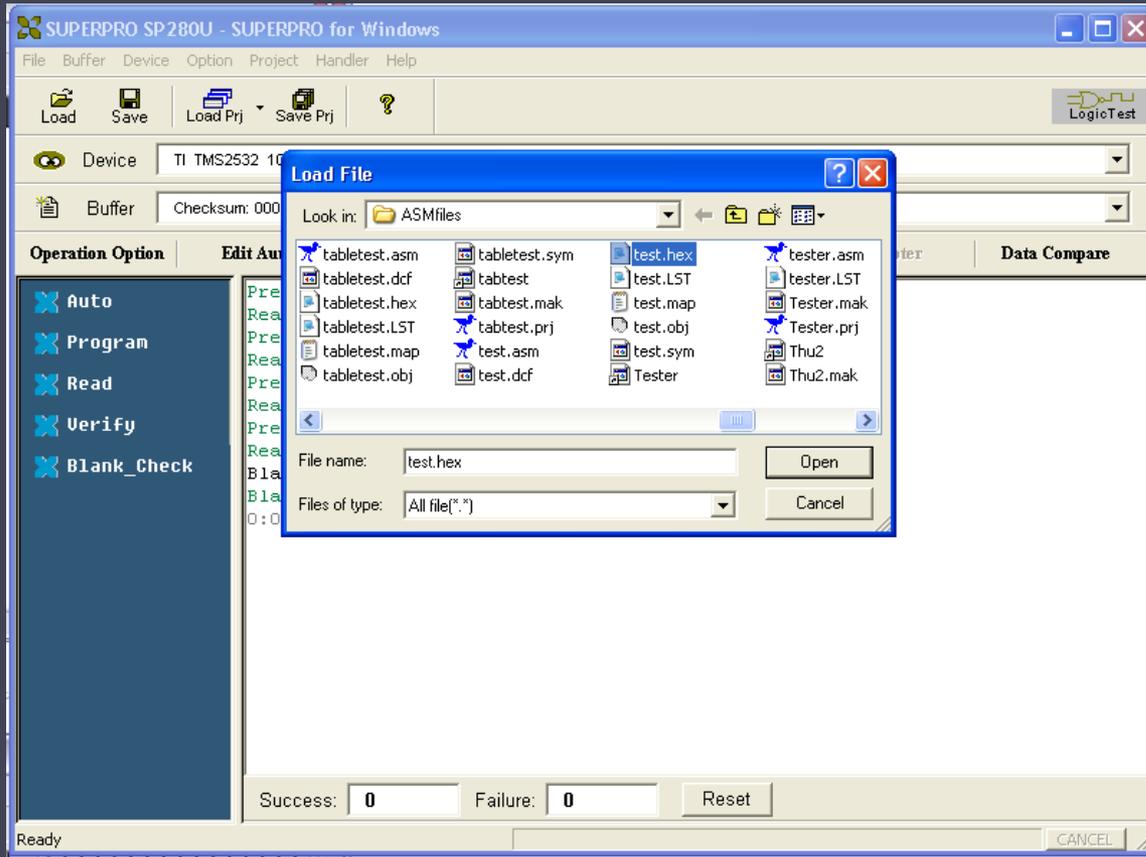
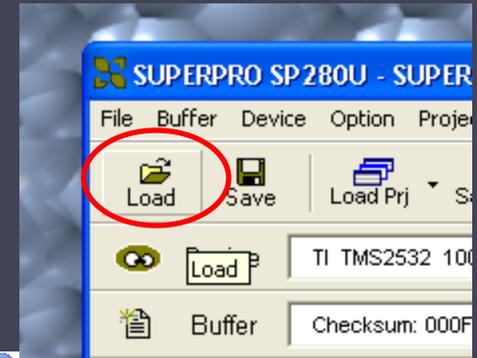
Check that EPROM has been erased

- Click Blank\_Check and await verification
- Click read button
- Examine buffer to ensure that all points in memory are FF



# Load your program into the buffer

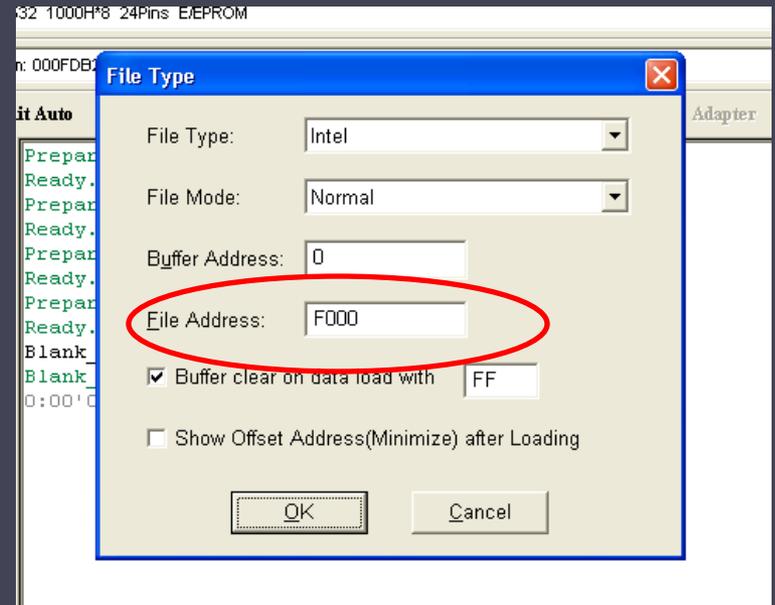
- Press the load button.
- Select the \*.hex or \*.jed file you wish to load into the chip



## The File Type window will appear

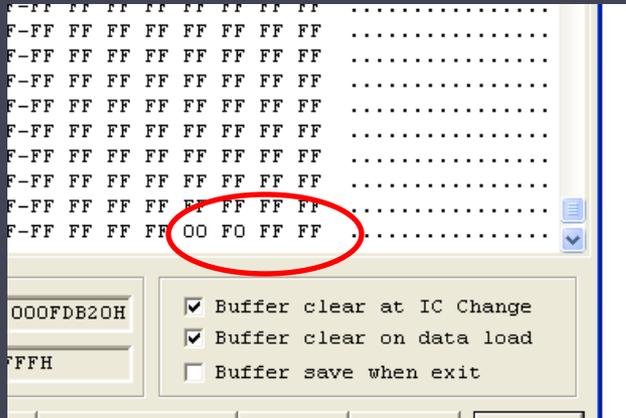
Choose the appropriate file address but leave the buffer address unchanged

Set the File address to F000  
Set the File address to E000  
Set the File address to E000  
Not needed for the GAL16V8.



# 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



Buffer Edit

ADDRESS	HEX	ASCII
00000000	78 D8 A2 FF 9A A9 FF 8D-02 A0 A9 00 8D 03 A0 AD	x.....□.....□..
00000010	01 A0 10 FB A9 FF 8D 00-A0 A2 00 E8 D0 FD A9 00	□.□.....□.....□.
00000020	8D 00 A0 AD 01 A0 30 FB-10 E5 FF FF FF FF FF FF	.....□.□.....□.
00000030	FF FF FF FF FF FF FF FF-FF FF FF FF FF FF FF	.....□.....□.
00000040	FF FF FF FF FF FF FF FF-FF FF FF FF FF FF FF	.....□.....□.
00000050	FF FF FF FF FF FF FF FF-FF FF FF FF FF FF FF	.....□.....□.
00000060	FF FF FF FF FF FF FF FF-FF FF FF FF FF FF FF	.....□.....□.
00000070	FF FF FF FF FF FF FF FF-FF FF FF FF FF FF FF	.....□.....□.
00000080	FF FF FF FF FF FF FF FF-FF FF FF FF FF FF FF	.....□.....□.
00000090	FF FF FF FF FF FF FF FF-FF FF FF FF FF FF FF	.....□.....□.
000000A0	FF FF FF FF FF FF FF FF-FF FF FF FF FF FF FF	.....□.....□.
000000B0	FF FF FF FF FF FF FF FF-FF FF FF FF FF FF FF	.....□.....□.
000000C0	FF FF FF FF FF FF FF FF-FF FF FF FF FF FF FF	.....□.....□.
000000D0	FF FF FF FF FF FF FF FF-FF FF FF FF FF FF FF	.....□.....□.
000000E0	FF FF FF FF FF FF FF FF-FF FF FF FF FF FF FF	.....□.....□.
000000F0	FF FF FF FF FF FF FF FF-FF FF FF FF FF FF FF	.....□.....□.

Address: 00000000H    Checksum: 000FDB20H

Buffer range: 00000000H - 00000FFFH

Locate   Copy   Fill   Search   Search Next   Radix   Swap   OK

Success: 0   Failure: 0   Reset

# 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 than electrically erasable devices.



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