

The Boot loader is only 128 words of code. It require one pin to tell when to boot. In this case PinC.1 is used. The aumont of memory needed for loader is only 256 bytes . The Code for boot loader is modification of program written by David Moran - BootM8.Bas. I chose this code because of the small size and simplicity. In my edition of the loader boot process starts when PinC.1 is short to GND. Other wise processor starts the main code without any wait. The speed of sending data to CPU is setup for 19,200 bps what is optimum to Use with internal 4 or 8 Mhz oscillator.

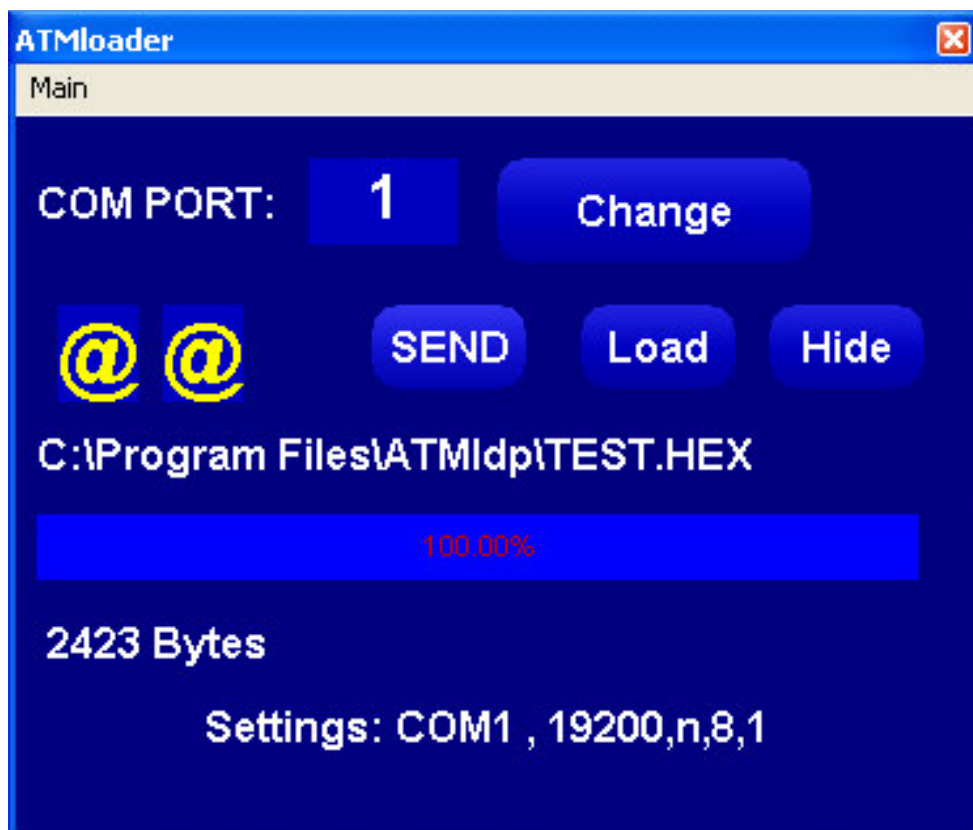
The fusebits need to be set for 128 bytes for the boot code, starting at \$F80

Fusebits:	Boot	Application	Bootloader	End of	Boot Reset
BOOTSZ1	BOOTSZ0	Size	Flash Section	Flash Section	Application Address
1	1	128	\$000 - \$F7F	\$F80 - \$FFF	\$F7F

Standard Intel hex file can be sent: (spaces added for readability)  
All record sizes must be even, AVR uses WORDs, not bytes

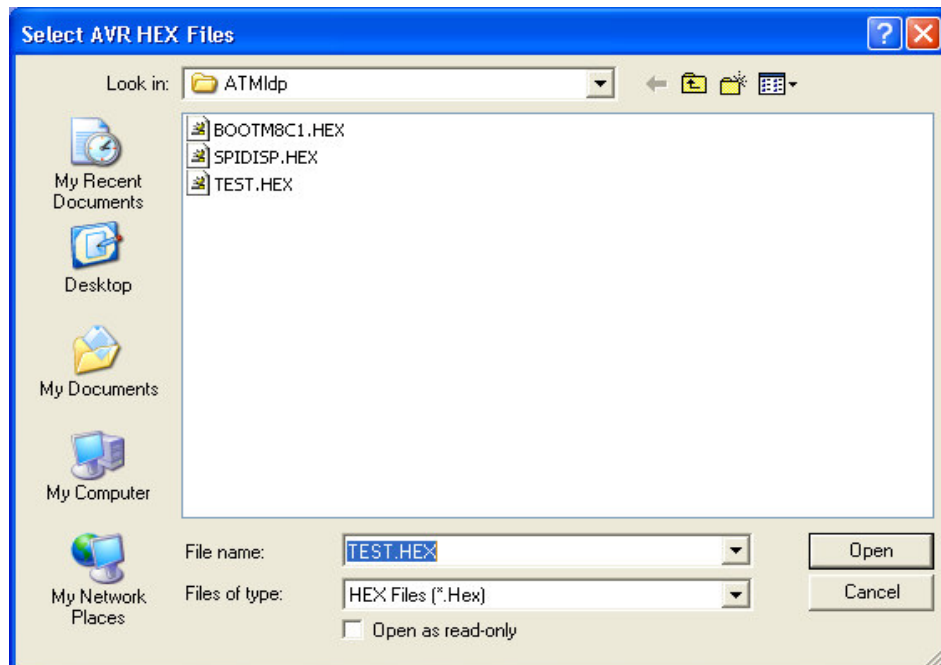
:Size	Address	Type	Data Bytes	Checksum
:10	00 00	00	26 C0 B3 C0 B3 C0 B3 C0 C5 C0 C5 C0 D0 C0	A4
:10	00 10	00	DB C0 E4 C0 ED C0 30 31 32 33 34 35 36 37 38 39	E7
-				
-				
:10	05 30	00	55 DF 08 95 57 E5 57 DF 52 E5 55 DF 54 E5 53 DF	A2
:10	05 40	00	5C E2 51 DF 53 2F 52 95 49 DF 53 2F 47 DF 01 D0	33
:0B	05 50	00	08 95 5D E0 48 DF 5A E0 46 DF 08 95 A2 DC	
:00	00 00	01		FF

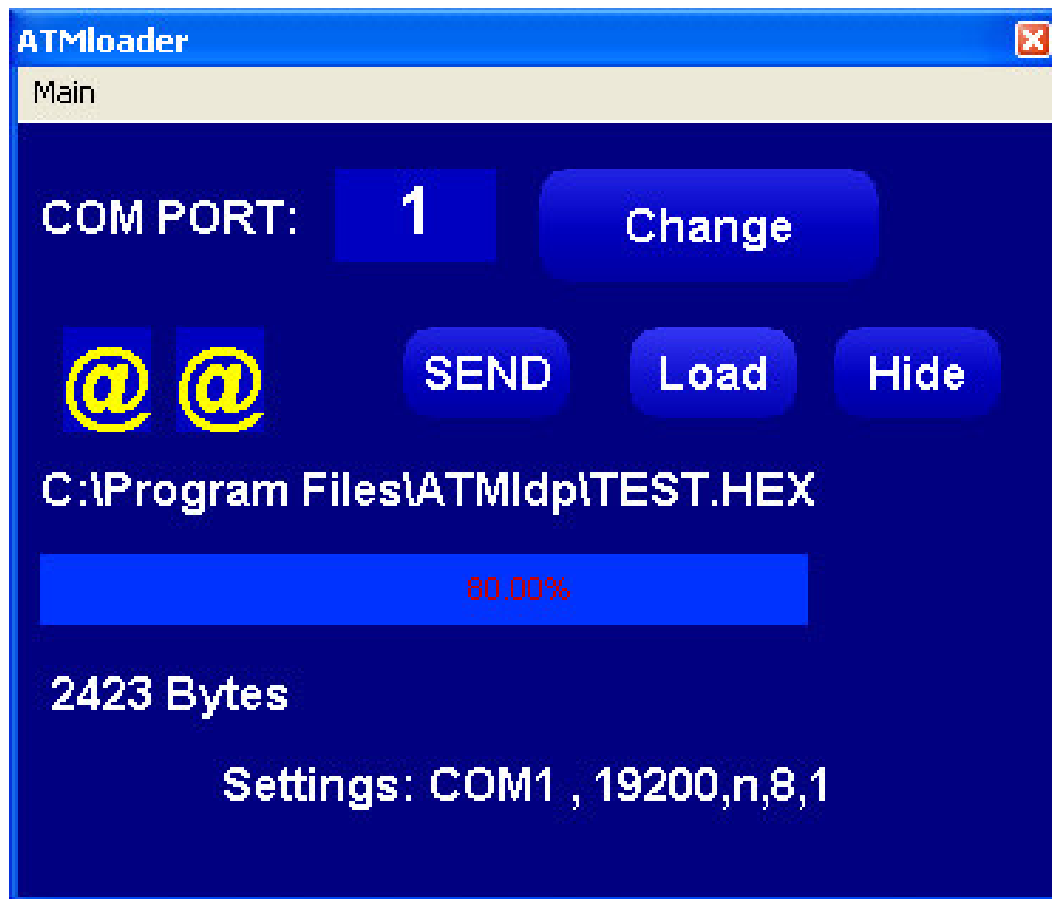
Program for sending data to CPU is written in Visual Basic V6.0



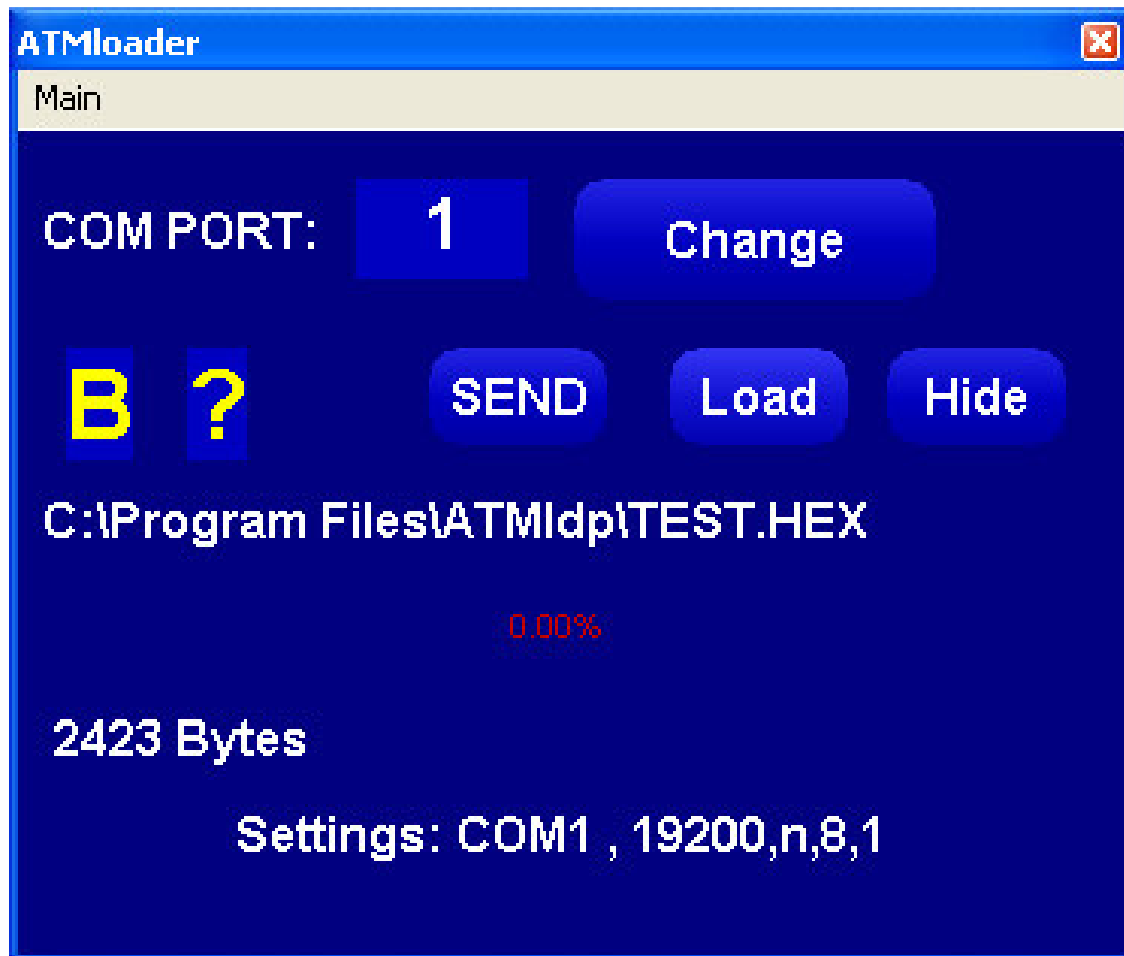
ATm8Ld require to select com port . The message box will prompt you to set the port number on first run. If you want to change port any way change the number In text box , than hit CHANGE, Program will finish rewriting registry with new port number. After next start up program is ready to operate on the port.

The Intel hex code of the program must be preloaded by using LOAD Program use widows file picker and full path will be remember in registry also The internal buffer will be fill with file . After next start up the same file will be used until you load other.

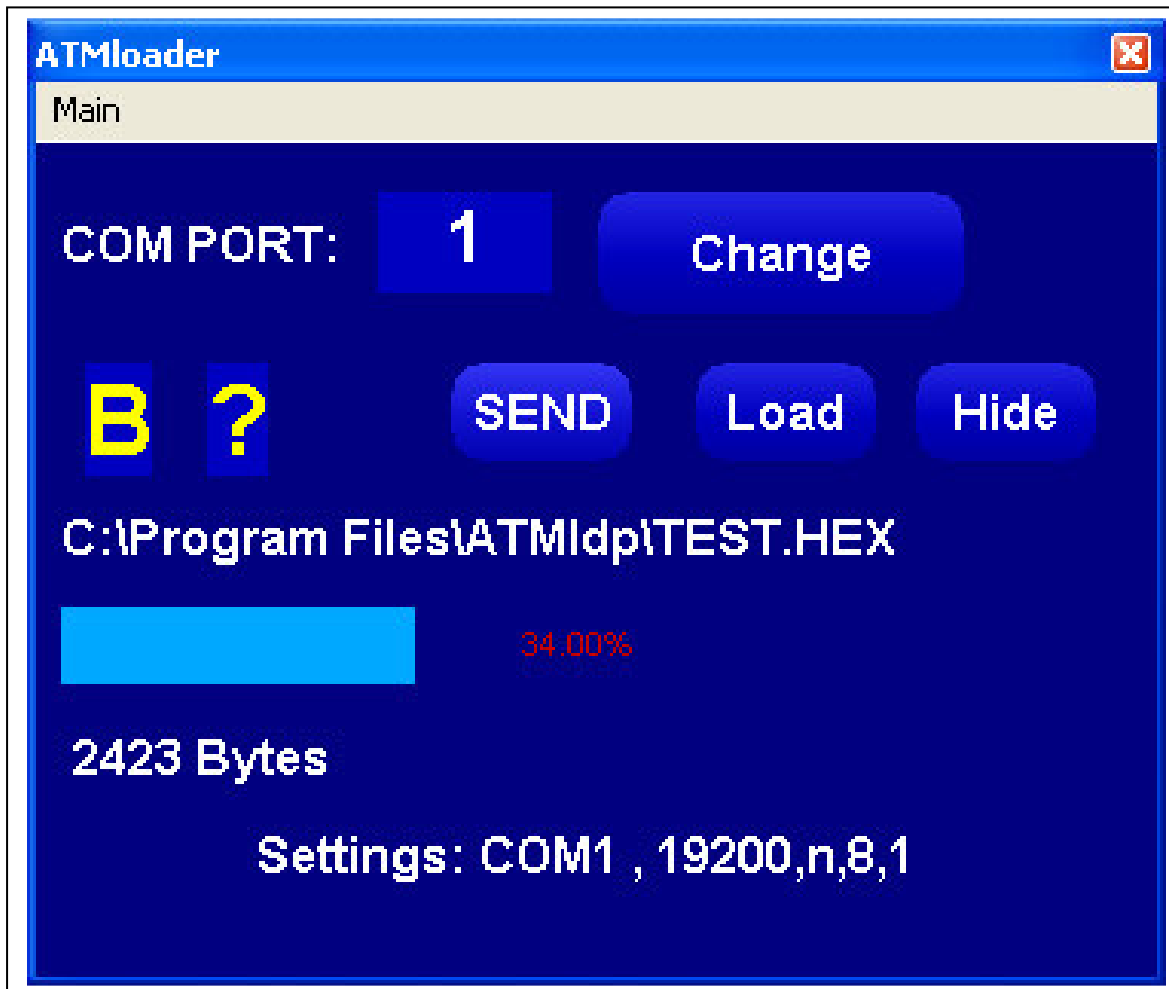




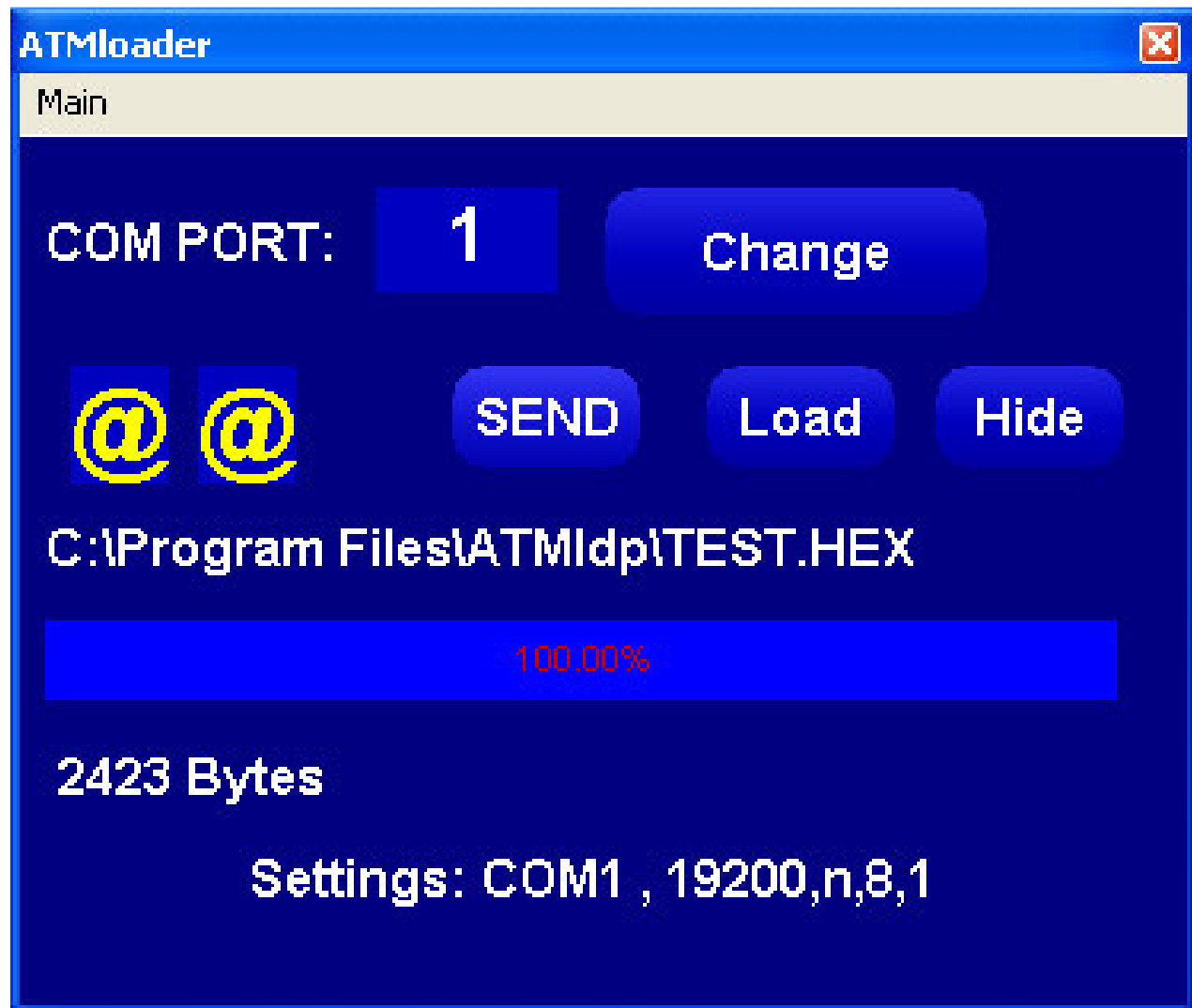
After Loading the file, set the switch in boot position.  
Power off ,and power on the board .Program will respond with  
Labels B ? instead of labels @ @



Now hit the SEND to send hex file to board.



Board will receive record by record hex code of micro program.  
Each record starts with labels B ? . In case of error the labels can change  
B ! for header mismatch and B C for bad check sum.  
Each record will be program into flash memory. The loader is only  
For flash code.



End Screen when whole program has been download to the board.

The labels change again to @ @ and boot switch can be move for position

RUN – PinC.1 open respect to GND . Board can be power down and power up.

On power up downloaded program will start wit out any delay.

