MEGA MENU

Workshop # 1

How to compile the Mega Menu program

Mega Menu is a menu program for the Texas Instruments Home Computer TI-99/4a with a TIPI and XB

Workshop task

How to compile the XB program MEGA MENU using Harry Wilhelms XB Compiler from the Game Developer's Package (XBGDP)?

Requirements

TI-99/4a console, 32KB, tipi card (sidecar or tipipeb), raspberry py with a tipi image installed
PC, classic99 emulator, XB256 Isabella6 package, Asm994a assembler
Network connection between the tipi/raspberry py and the PC

Due to the size of the program, the program must be assembled and compiled on a PC with classic99 emulator, XB256 and Asm994a assembler

Optional requirements

Speech Synthesizer
Peripheral Expansions System (PEP Box) with disk controller and disk drives, RS232 card
Matrix printer connected to the Centronics port of the RS232 card

Preparation of the development environment

PC preparations:
Install the TI-99/4a emulator "classic99" on your PC
Install the XB256 Isabella6 software on your PC
Configure the classic99 DSK1. for access to the Isabella6 folder
Making sure the PC has access to the tipi/raspberry py

TI-99/4a preparations:
Configure a menu item in your Mega Menu program with the following disk paths:

- Load Mega Menu
- Configure a free menu item e.g. "H" CTRL+C
  - menu item: H
  - Menu-text 17: MM v.248
  - Command / path and name: TIPI.MM.MM
  - Prog ART: X
  - DSK1. MM
  - DSK2.
  - DSK3. MM.P.XB.XB256
- Select the new menu item H to start XB version of the existing Mega Menu
- Break „CTRL+4"

Alternative change the disk paths in the tipi config program

- Start your TI-99/4a with TI-Basic or XB
- CALL TIPI
- Select 1 to change the DSK1 mapping to: MM
- Select 3 to change the DSK3 mapping to: MM.P.XB.XB256

- OLD DSK1.MM ENTER

… make your changes in the XB program

- SAVE DSK1.MM248 ENTER

The new XB program "MM248" should be compiled in XB256

Step by step Mega Menu compiling instructions

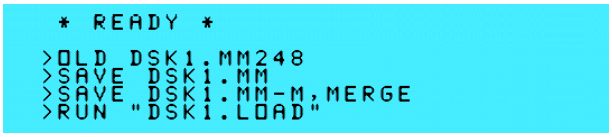
PC - Copy TIPI.MM.MM to …/classic99/ISABELLA6
PC / Classic99 - DSK1=classic99/ISABELLA6
- Write TIFILES headers
- Write DV80 as Windows Text

- run XB and XB256 in classic 99



- EXTENDED BASIC ENTER

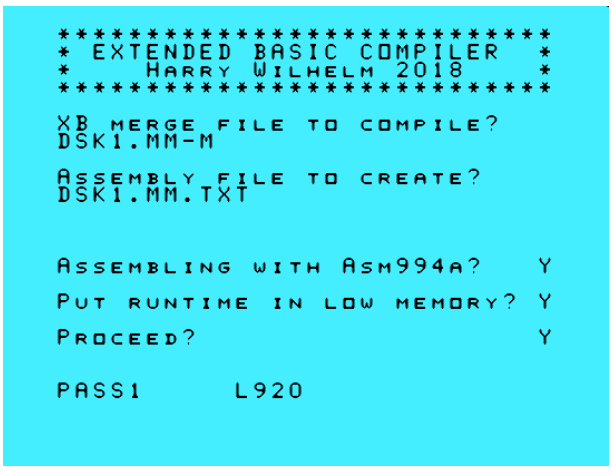
- OLD DSK1.MM248 ENTER
- SAVE DSK1.MM ENTER
- SAVE DSK1.MM-M,MERGE ENTER



- RUN “DSK1.LOAD” ENTER



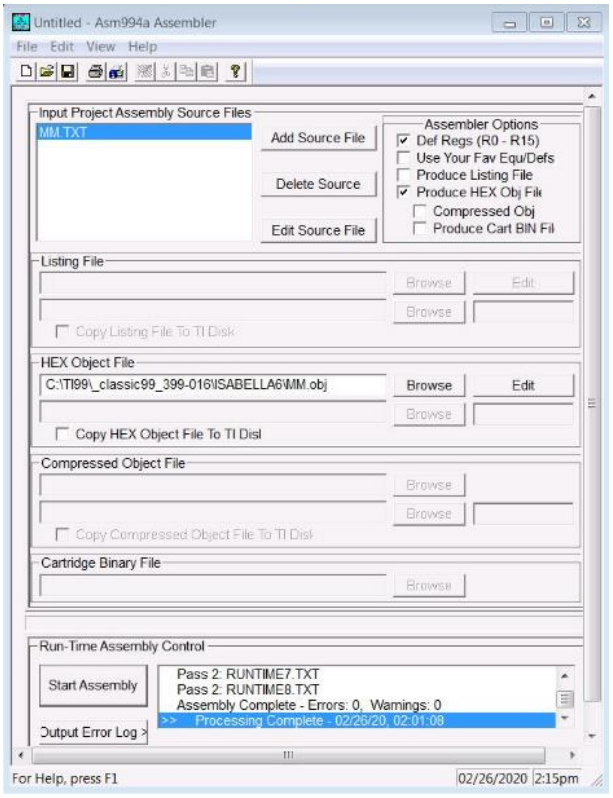
- COMPILER ENTER
XB merge file to compile?
DSK1.MM-M ENTER
Assembly file to create?
DSK1.MM.TXT ENTER
Assembling with Asm994a? Y ENTER
Put runtime in low memory? Y ENTER
Proceed? Y ENTER



Compiling PASS1 and PASS2

Asm994a Assembler

- Add Source File = MM.TXT
- Assembler Options
  Def Regs(R0-R15)
  Produce HEX Obj File = MM.obj
- Start Assembly

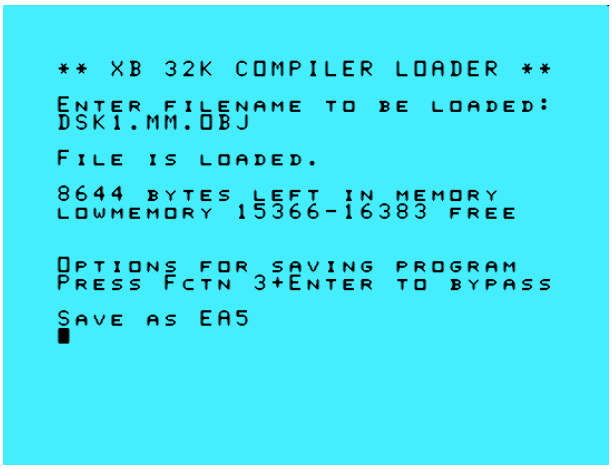


PC / Classic99

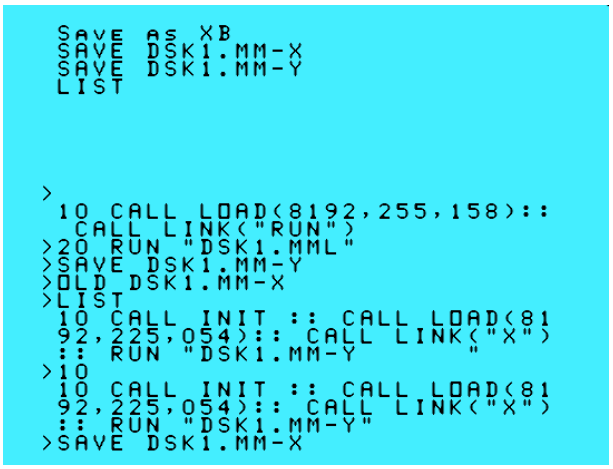
- LOADER ENTER
  >USE 32K RAM (large programs) ENTER
  >LOAD using Extended BASIC ENTER

XB 32K Compiler LOADER

Enter Filename to be loaded:
DSK1.MM.OBJ ENTER
loading file – be patient…
8644 bytes left in memory
Save as EA5
DSK1.MM-E FCTN+3,ENTER



	Save as XB	
	SAVE DSK1.MM-X	ENTER
	SAVE DSK1.MM-Y	
List the MM-Y program	>LIST	ENTER
	10 CALL LOAD(8192,255,158):: CALL LINK(“RUN”)	
Enter new line 20	>20 RUN “DSK1.MML”	ENTER
Save the MM-Y file	>SAVE DSK1.MM-Y	ENTER
Load the MM-X file	>OLD DSK1.MM-X	ENTER
List the MM-X program	>LIST	ENTER
	10 CALL INIT :: CALL LOAD(81 92,255,054):: CALL LINK(“X”) :: RUN “DSK1.MM-Y ”	
Edit line 10	>10	FCTN+X
	10 CALL INIT :: CALL LOAD(8192,255,054)::	
Delete all blanks in the file name	CALL LINK(“X”):: RUN “DSK1.MM-Y”	ENTER
Save the MM-X file	>SAVE DSK1.MM-X	ENTER



PC	Copy classic99/ISABELLA6/MM-X to TIPI.MM.MM-X
	Copy classic99/ISABELLA6/MM-Y to TIPI.MM.MM-Y
TI-99/4a	Autorun RXB or XB with MM-X new version

If the new program works fine you should copy the XB source file from the PC to the tipi folder

PC	Copy classic99/ISABELLA6/MM to TIPI.MM.MM

CREDITS to

M. Brent / Tursi for providing the TI-99/4a emulator classic99
http://www.harmlesslion.com/software/classic99

Harry Wilhelm / Senior_falcon for providing the Extended Basic Game Developers Package (XBGDP) Isabella6
https://atariage.com/forums/topic/224905-xb-game-developers-package/?tab=comments#comment-2980221

Cory Burr (Burrsoft) for providing the Win994a Simulator and the Asm994a Assembler
http://www.99er.net/win994a.shtml

Tim / twoodland for his feedback to the Mega Menu program. That gave me the idea to create this workshop.