

Do you often wonder how some of the incredible graphics were achieved in your favorite program. Looking at someone else's program is an excellent method of self-instruction. The problem is that often we only have the assembled (object) code in our possession. The L option of the A/E cartridge makes it possible to recreate source code from the object code. This is a useful feature. The catch is the inability to save the output of the L function to disk. Follow these simple instructions and you will be able to save the disassembled output to disk.

1. Load the object code to be disassembled. Unnecessary if you are dealing with ROM code.
2. Note the first memory address (hex) where the disassembly process is to begin.
3. Enter the debug mode of A/E by typing BUG and pressing return.
4. Start the disassembly process at the hex address noted in step 2. Enter the L command followed by the hex address and press return. This command disassembles 20 lines of code and displays the results on your T.V. (IMPORTANT--Note the last address printed on your screen).
5. Move the cursor to first line on screen using control and arrow keys and insert 2 blank lines using the shift and insert keys.
6. Return to the Edit mode by typing X and pressing return. The screen will still display the disassembled output.
7. Again move the cursor to the first line on the screen and enter Auto line numbering mode by typing NUM, press return. This will cause the cursor to print out the number 10 if this is the first time the auto numbering command has been executed or the next number incremented by 10. It will also place the number and the cursor at the start of the first line of disassembled code.
8. Using the control and delete key delete all characters up to two spaces prior to the assembly language mnemonic. The two spaces are necessary to conform to A/E spacing requirements.
9. Press return to enter this line of code into the source file. This will also generate the next line number incremented by 10. The cursor will appear at the beginning of the next line.
10. Continue with all 20 lines. When done, if you have more code to disassemble return to step 3. This can go on indefinitely or until source buffers are full at which time you will need to save the source file. The auto line numbering remembers the last line number and will correctly generate the proper sequences between 20 line chunks. This technique can be useful when you're trying to decipher code. Labels can be added in place of addresses in the operand fields and the corresponding label fields. This entire process is called unassembling object code. It can be very useful when used on small subroutines.

Note: This same process also works on EDASM, Optimized Systems Software's assembler/editor.