

PROGRAMMER'S AID

simplified instructions

quikLoader PROGRAMMERS AID version 4.4

The PROGRAMMERS AID is an APPLESOFT program which will build quikLoader compatible EPROMS from disk-based programs. The instructions are in two parts. This first part consists of the most important, relatively easy directions, followed by a summary of all instructions. The second part covers these commands in more detail, plus some of the more advanced instructions, that might require some programming experience on the part of the user.

A copy of these instructions are on the enclosed disk in a text file named "INSTRUCTIONS"

INSTRUCTIONS

1) Important - To use some of the features of the AID, you must have the newest operating system installed in CHIP 0 of the quikLoader. The new version is labeled C0.256-5. If you do not have this version, the enclosed disk has a ready-to-burn file. Load your EPROM programmer with a 27256, and BLOAD the file (cataloged as C0.256-5). The file is set up to load at \$1000. When programmed, turn off power to the computer, remove the quikLoader, and remove the old operating system. (if you had a two or more chip version of the operating system, it will also be necessary to make the jumper and cut the "bowtie" on the back of the quikLoader, by socket 0, as shown on the quikLoader itself.) Plug the new CHIP 0 in socket 0, making sure that the notch on the EPROM is toward the top of the card. Re-install the quikLoader, plug it into the computer, turn on power, and check for proper operation.

If you do not have the facilities for programming a 27256, you may obtain the new chip from us for \$10.00, plus \$2.50 for shipping.

Note that you do not need the new operating system for using the AID, but for using the chip made with the AID.

2) To use the programmers AID, you need a text file with the commands recorded in it. Most word processors (such as APPLEWRITER) will make the necessary text file. If you do not have access to a word processor, a very rudimentary text file generator is included on the disk. RUN "MAKE TEXT".

3) The format of the commands are COMMAND (at least one space) NAME. For example, the command KATALOG MYFILE will tell the AID to construct a quikLoader program that will show on the quikLoader katalog as "MYFILE". It is not necessary to use more than one letter of the command e.g. K MYFILE will work just as well.

4) The command FILE (NAME) tells the AID to look for a file on the disk to turn into a chip program. Putting the above two commands together, we now have the simplest possible program for building a chip:

K MYFILE
F TESTFILE

This program will look on the disk for a file named "TESTFILE", and will turn it into a text file which, when EXECed, will build a file containing the overhead, catalog, and program, on a ready-to-burn file. Note that it does not matter if the program "TESTFILE" is APPLESOFT, Integer, or machine language.

5) If you wish the computer to auto-start a program on chip, the chip must be plugged into socket 6 of the quikLoader. You also have to inform the quikLoader that this is the particular program that will be the "POWER-UP" program. Thus, we use the command POWER-UP, in place of K, to show the GLOS that this is the power-up application. IMPORTANT NOTE: If your power-up application needs to use DOS, you must first tell the quikLoader to load DOS. This command is "DOS" or "D".

6) You can put several, or even many, programs on each chip, subject to memory availability. One of these programs can be the N-RESET program, that is, the program will run when the number corresponding to the quikLoader socket number is pressed, along with control and reset. The first program on the list will be the "N-RESET" program.

7) Sometimes you will find it necessary to load one or more machine language programs before running an APPLESOFT program. To do this, list the machine language program(s) before the APPLESOFT program. For example, if you have an APPLESOFT program on disk named INVOICE that needs a machine language segment named CLOCK DRIVER, and you want the katalog name to show as "DATED INVOICE", the program will look like this:

K DATED INVOICE
F CLOCK DRIVER
F INVOICE

Again, if the "DATED INVOICE" program were to be the "POWER-UP" program, the commands would be as above except:

P DATED INVOICE

Naturally, if your APPLESOFT program BLOADS the machine language segment, the line that contains the BLOAD command should be removed from the program.

8) The AID assumes that you are using a 27256 EPROM. (anything smaller is wasteful of the quikLoader.) If you must use a different size, the command is "CHIP", e.g.:

C 27128

You are limited to the chips from the 2764 to the 27512.

9) If your program is too large to fit on a single chip, not to worry, the AID will take care of that. You may use several CHIP commands. If the programs take more space than you planned for, the AID will tell you that there is not enough room, giving you a chance to either call for an additional chip, or substitute a larger one.

10) Getting back to the beginning, DO NOT do any programming on the supplied disk. We suggest that you use one disk per chip set, at least at the beginning. Onto a freshly INITted DOS 3.3 disk, transfer the APPLESOFT program AID, and the binary program CAT (A\$8400, L\$200). Using a text editor, build your commands, and save them to a text file with a file name of your choice on the same disk. (this name will be shown in the following paragraphs as {name}). Transfer all disk files that you will be using onto the same disk.

11) When you're ready, RUN AID. When the screen shows the words "INSERT SOURCE DISK", hit return. The screen will then show the words "ENTER SOURCE FILE NAME". Enter the {name} and hit return. The program will go through your text file, command by command, and find the necessary files. It will also make some additional files on the disk. After three passes, it will make a file called "MAKE {name}". When the words "SUCCESSFUL ASSEMBLY" appear on the screen, hit reset to leave the program, then type "EXEC MAKE {name}". The computer will go through that text file and make a file called "{name}.C0" (that's number zero, not letter "oh").(If you end up with more than one chip file, they will be {name}.C1, etc.) This file is a standard DOS 3.3 machine language file, starting at \$1000, with the length necessary to fill the selected chip. Simply burn this into a chip, plug it into the quikLoader, and you should be all set.

12) A few additional notes:

When burning one or more chips in a set, the lowest chip number contains the GETSLOT.

Unused bytes are set to \$FF, to cut down on programming time.

All files built using the AID are primary routines. This means that you do not waste the space between \$C000 and \$C0FF.

13) REVIEW BY EXAMPLE:

```
C 27256
C 2764
K GLFILE1
F PROGRAM1
K GLFILE2
F PROGRAM2
P GLFILE3
F MLFILEA
F MLFILEB
F MLFILEC
F PROGRAM3
```

Explanation: We expect to use two chips, a 27256 and a 2764. The first program that will appear on the quikLoader Katalog for this chip will be "GLFILE1". This program appears on the disk under the name PROGRAM1. This program will also be the N-RESET program of this chip.

The second program will appear on the quikLoader Katalog as "GLFILE2". It corresponds to the disk-based program "PROGRAM2".

The third (and last) program will be shown as "GLFILE3". The quikLoader will first load three machine language segments, "MLFILEA", "MLFILEB", and "MLFILEC". The quikLoader will then load the program "PROGRAM3". "GLFILE3" is also the POWER-UP program on this chip.

SUMMARY OF COMMANDS

COMMAND	FORMAT	DESCRIPTION
C	C [chip type]	Sets up file to use different size chips. Default size is 27256. Use 2764 through 27512.
D	D	Move DOS 3.3 to RAM.
F	F [file name]	Name of file on disk that the AID looks for.
G	G %[addr]	GO TO MOTHERBOARD. Turns off quikLoader.
H	H %[addr]	HIGH RAM CONTROL. Causes STA at %C0[addr]
I	I	Move Integer BASIC to high RAM. Not necessary to run normal integer programs.
J	J [name]	Jump to file named [name]. This can be a K, P, or L file. Does not turn off quikLoader.
K	K [name]	The file name as you want it to appear on the quikLoader Katalog.
L	L [name]	Sets a Label for the J command.
P	P [name]	Tells the quikLoader that this is the power-up application. NOTE - If [name] is left blank, the following file will run only at power-up, as it will not show on the Katalog.
R	R	Turns off quikLoader and performs motherboard Reset
S	S %[addr]	Turns off quikLoader, does a Subroutine on the motherboard at [addr], and goes back to the quikLoader. %45 - %49 = Acc, X, Y, status, and stack pointer.
V	V [name]	Verbatim. Takes the file [name] and puts it verbatim (that is, exactly as is) into the quikLoader primary routine. The file must be 6502 machine code. The accumulator value must be retained.