This is a trivial example of assembling and testing a program. It should work for anyone logged in to rabbit. It shows every keypress, even down to the 1 being used to show when I press ENTER. What I type is in **bold**, everything else came from the computer. This sample shows just entering a program, assembling it, and single-stepping through it. For anything else, see the proper documentation.

```
$ pico testprog.ass 1
1
        .makeexe
1
                 r1, 1
        load
                 r2, 34
                         1
loop:
        load
        mul
                 r1, r2
                         1
                         1
                 r1
        inc
                         1
                 loop
        jump
1
$ assemble testprog ↓
$ emulator testprog 1
No 'system.setup' in currecnt directory, reading '/usr/local/bin/system.setup'
disc 1 from file 'maindrive.disc', 6000 blocks
set SP to 0x80000000
set PC to 0x00000400
load file 'testprog.exe' starting at 0x00000400
   R0 = 0
                      R4 = 0
                                         R8 = 0
                                                            R12= 0
   R1 = 0
                      R5 = 0
                                         R9 = 0
                                                            SP = 0 \times 800000000
   R2 = 0
                      R6 = 0
                                         R10= 0
                                                           FP = 0x000000000
   R3 = 0
                      R7 = 0
                                         R11= 0
                                                           PC = 0x00000400
   FLAGS = 0 \times 00000031: R \simZ \simN \simERR SYS IP \simVM
00000400: (02100001) LOAD
                                 R1, 1 \rightarrow 1
   R0 = 0
                      R4 = 0
                                         R8 = 0
                                                             R12 = 0
   R1 = 1
                      R5 = 0
                                         R9 = 0
                                                             SP = 0x80000000
   R2 = 0
                      R6 = 0
                                         R10= 0
                                                            FP = 0 \times 000000000
   R3 = 0
                      R7 = 0
                                         R11= 0
                                                             PC = 0x00000401
   FLAGS = 0x00000031: R ~Z ~N ~ERR SYS IP ~VM
                                          > 1
                                 R2, 34
00000401: (02200022)
                        LOAD
   R0 = 0
                      R4 = 0
                                         R8 = 0
                                                             R12= 0
   R1 = 1
                      R5 = 0
                                         R9 = 0
                                                             SP = 0x80000000
   R2 = 34
                      R6 = 0
                                         R10= 0
                                                             FP = 0x000000000
                      R7 = 0
                                                             PC = 0x00000402
                                         R11= 0
   R3 = 0
   FLAGS = 0 \times 000000031: R \simZ \simN \simERR SYS IP \simVM
00000402: (10120000)
                                 R1, R2 \rightarrow 1
                        MUL
   R0 = 0
                                                             R12= 0
                      R4 = 0
                                         R8 = 0
   R1 = 34
                      R5 = 0
                                         R9 = 0
                                                             SP = 0x80000000
   R2 = 34
                      R6 = 0
                                         R10= 0
                                                           FP = 0 \times 000000000
   R3 = 0
                      R7 = 0
                                         R11= 0
                                                             PC = 0x00000403
   FLAGS = 0 \times 000000031: R \simZ \simN \simERR SYS IP \simVM
```

```
00000403: (08010000) INC R1 > 1
  R0 = 0
                 R4 = 0
                                   R8 = 0
                                                   R12= 0
  R1 = 35
                   R5 = 0
                                   R9 = 0
                                                   SP = 0x80000000
  R2 = 34
                                                   FP = 0x000000000
                   R6 = 0
                                    R10= 0
  R3 = 0
                   R7 = 0
                                  R11= 0
                                                   PC = 0 \times 00000404
  FLAGS = 0x00000031: R \simZ \simN \simERR SYS IP \simVM
  PC-4 = 0x00000401 = 1025
00000404: (320FFFFC) JUMP PC-4 \rightarrow 1
  R0 = 0
                   R4 = 0
                                  R8 = 0
                                                    R12= 0
                   R5 = 0
                                                   SP = 0x800000000
  R1 = 35
                                   R9 = 0
  R2 = 34
                   R6 = 0
                                  R10= 0
                                                   FP = 0x000000000
                                                   PC = 0x00000401
  R3 = 0
                   R7 = 0
                                  R11= 0
  FLAGS = 0x00000031: R ~Z ~N ~ERR SYS IP ~VM
00000401: (02200022) LOAD R2, 34 > 1
  R0 = 0
                   R4 = 0
                                    R8 = 0
                                                   R12= 0
                                                   SP = 0x800000000
FP = 0x000000000
  R1 = 35
                   R5 = 0
                                    R9 = 0
  R2 = 34
                   R6 = 0
                                    R10= 0
                   R7 = 0
                                                   PC = 0 \times 00000402
  R3 = 0
                                    R11= 0
  FLAGS = 0x00000031: R ~Z ~N ~ERR SYS IP ~VM
00000402: (10120000) MUL R1, R2 \rightarrow 1
                                                   R12= 0
  R0 = 0
                   R4 = 0
                                    R8 = 0
                                                   SP = 0x80000000
  R1 = 1190
                 R5 = 0
                                  R9 = 0
  R2 = 34
                   R6 = 0
                                  R10= 0
                                                   FP = 0x000000000
                   R7 = 0
  R3 = 0
                                  R11= 0
                                                   PC = 0x00000403
  FLAGS = 0x00000031: R \simZ \simN \simERR SYS IP \simVM
00000403: (08010000) INC R1 > 1
                   R4 = 0
                                                   R12= 0
  R0 = 0
                                  R8 = 0
                 R5 = 0
                                                   SP = 0 \times 800000000
  R1 = 1191
                                  R9 = 0
  R2 = 34
                  R6 = 0
                                  R10= 0
                                                   FP = 0x000000000
  PC = 0 \times 00000404
                                    R11= 0
  FLAGS = 0 \times 000000031: R \simZ \simN \simERR SYS IP \simVM
  PC-4 = 0x00000401 = 1025
00000404: (320FFFFC) JUMP PC-4 \rightarrow 1
  R0 = 0
                   R4 = 0
                                  R8 = 0
                                                   R12= 0
  R1 = 1191
                   R5 = 0
                                  R9 = 0
                                                   SP = 0x800000000
                                                   FP = 0x000000000
  R2 = 34
                   R6 = 0
                                   R10= 0
                   R7 = 0 R11= 0
  R3 = 0
                                                   PC = 0x00000401
  FLAGS = 0 \times 000000031: R \simZ \simN \simERR SYS IP \simVM
00000401: (02200022) LOAD R2, 34 \rightarrow 1
                   R4 = 0
  R0 = 0
                                    R8 = 0
                                                   R12= 0
  R1 = 1191
                   R5 = 0
                                    R9 = 0
                                                   SP = 0x80000000
  R2 = 34
                                                   FP = 0x000000000
                   R6 = 0 R10= 0
R7 = 0 R11= 0
  R3 = 0
                                                   PC = 0 \times 00000402
  FLAGS = 0x00000031: R ~Z ~N ~ERR SYS IP ~VM
```

```
00000402: (10120000) MUL R1, R2 > 1
                   R4 = 0
                                    R8 = 0
  R0 = 0
                                                   R12= 0
                                                  SP = 0x800000000
FP = 0x000000000
  R1 = 0x00009E2E
                   R5 = 0
                                    R9 = 0
  R2 = 34
                   R6 = 0
                                    R10= 0
                                                   PC = 0x00000403
  R3 = 0
                   R7 = 0
                                    R11= 0
  FLAGS = 0 \times 000000031: R ~Z ~N ~ERR SYS IP ~VM
00000403: (08010000) INC R1 \rightarrow 1
  R0 = 0
                   R4 = 0
                                    R8 = 0
                                                   R12= 0
                  R5 = 0
                                                   SP = 0x80000000
  R1 = 0x00009E2F
                                    R9 = 0
                                                   FP = 0x000000000
  R2 = 34
                   R6 = 0
                                  R10= 0
  R3 = 0
                   R7 = 0
                                    R11= 0
                                                   PC = 0x00000404
  FLAGS = 0x00000031: R ~Z ~N ~ERR SYS IP ~VM
  PC-4 = 0 \times 00000401 = 1025
00000404: (320FFFFC) JUMP PC-4 > 1
                   R4 = 0
  R0 = 0
                                   R8 = 0
                                                   R12= 0
  R1 = 0x00009E2F R5 = 0
                                    R9 = 0
                                                   SP = 0x80000000
  R2 = 34
                   R6 = 0
                                    R10= 0
                                                   FP = 0x000000000
  R3 = 0
                   R7 = 0
                                                   PC = 0x00000401
                                    R11= 0
  FLAGS = 0x00000031: R ~Z ~N ~ERR SYS IP ~VM
00000401: (02200022) LOAD R2, 34 > [control-c]
> [control-c]
> [control-c]
$ ls -1 testprog* 1
-rw-r--r-- 1 sratbag class 81 Sep 21 17:34 testprog.ass
-rw-r--r-- 1 sratbag class 20 Sep 21 17:34 testprog.exe
$
```