



```

0000 1: ;-----
0000 2: ;      Copyright 2010 Integrated Logic Systems
0000 3: ;      Source Code is Copyright Stephen J. Car
0000 4: ;
0000 5: ;
0000 6: ;      Please do not share this source!
0000 7: ;-----
0000 8: ;      Error.com
0000 9: ;
0000 10: ; This is a program that functions as a database for
0000 11: ; Makemsgb creates a database.
0000 12: ;
0000 13: ;
0000 14: ;
0000 15: ; ~~~~~
0000 16: ;-----
0000 17: ; Notes: o This source code MAY NOT be placed for download
0000 18: ;      o "mea" is a macro that loads the address of the
0000 19: ;      into the pointer specified by the second field.
0000 20: ;-----
0000 21: ; Assembler: MADMAC (tm) ST Cross Assembler (Atari Corp)
0000 22: ;      XASM st and IBM VERSIONS
0000 23: ;-----
0000 24:
0000 25: com_file_name: .macro
0000 26: ;      dc.b 13,"filename.ext",$9b
0000 27: ;      dc.b 12,"Error.com ", $9b
0000 28: ;      .endm
0000 29:
0000 30: ;
0000 31: ;~~~~~
0000 32: ; File revision history. Version Number in hex
0000 33: ;
0000 34: file_ver:      equ $17
0000 35: ;~~~~~
0000 36: ; the Month in dec for the first time this revision
0000 37: ;was compiled
0000 38: ;
0000 39: c_month:      equ 8
0000 40: ;~~~~~
0000 41: ; the day in dec for the first time this revision
0000 42: ;was compiled
0000 43: c_day:      equ 28
0000 44: ;~~~~~
0000 45: ; the year in dec for the first time this revision
0000 46: ;was compiled
0000 47: c_year:      equ 2012
0000 48: ;~~~~~
0000 49: ; Type of compiler used in program
0000 50: ;
0000 51: ; 0 = unknown Compiler
0000 52: ; 1 = xasm
0000 53: ; 2 = mac_65

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```

0000      54: ; 3 = basic
0000      55: ; 4 = compiled basic xl
0000      56: ; 5 = C65
0000      57: ; 6 = Action
0000      58: ;
0000      59: ; We can add more as time goes on!
0000      60: ;
0000      61: ;
0000      62: ;
0000      63: xasm:          equ    1
0000      64: mac_65:          equ    2
0000      65: basic:      equ    3
0000      66: basicxl:       equ    4
0000      67: c65:         equ    5
0000      68: action:        equ    6
0000      69:
0000      70: file_compiler:    equ    xasm
0000      71: ;~~~~~
0000      72: ; is this relocatable code ?
0000      73: ; anyother value other than 1 or 2 would be unknown
0000      74: r..yes:          equ    1
0000      75: r..no:           equ    2
0000      76: ;
0000      77: ;~~~~~
0000      78: ; Gotta define if it can be relocated
0000      79: l_relocatable:   equ    r..no
0000      80: ;
0000      81: ;
0000      82: ;~~~~~
0000      83: ; Gotta define our Header control Byte
0000      84: ;$ff=bypass intro
0000      85: ;$15 = Bypass Dos check
0000      86: r..crl:          equ    $7d
0000      87: r..crlf:         equ    $9b
0000      88: r..space:        equ    $20
0000      89: r..bypassDOS:    equ    $15
0000      90: r..bypass:       equ    $ff
0000      91:
0000      92: l_frstscreenbyte: equ    r..space
0000      93: ;~~~~~
0000      94: ; The language the output file is in.
0000      95: ;
0000      96: ;
0000      97: ; 0 =    Undefined
0000      98: ; 1 =    English
0000      99: ; 2 =    German
0000     100: ;
0000     101: r..language:     equ    1
0000     102: ;~~~~~
0000     103:
0000     104: LOCKED          equ    %00000001
0000     105: RECEIVED        equ    %00000010
0000     106: AS_IS           equ    %00000100

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```

0000    107: UNLOCKED    equ    %11111110
0000    108: msgbase     equ    $40
0000    109:
0000    110:
0000    111:                .include    equates
0000    112:                .include    globals
0000    113:                .include    macros
0000    114:
4000    115:                .org    $4000
4000    116:
4000    117: win_start:
4000    118: header_info:
4000    119:                .include    header
42a7    120: ;
42a7    121: tammy:
42a7 a900  122:                lda    #$00
42a9 8552  123:                sta    $52
42ab    124:
42ab a210  125:                ldx    #disk1
42ad 20a650 126:                jsr    close
42b0 a220  127:                ldx    #disk2
42b2 20a650 128:                jsr    close
42b5    129:
42b5 a50a  130:                lda    comtab
42b7 18    131:                CLC
42b8 6903  132:                adc    # low ZCRNAME
42ba 8da143 133:                sta    cli.crunch+1
42bd a50b  134:                lda    comtab+1
42bf 6900  135:                adc    # high ZCRNAME
42c1 8da243 136:                sta    cli.crunch+2
42c4 20a043 137:                jsr    cli.crunch
42c7 d003  138:                bne    .get_parm1
42c9 4ca343 139:                jmp    parm_errors
42cc    140:
42cc    141: .get_parm1:
42cc a50a  142:                lda    comtab
42ce 18    143:                CLC
42cf 6921  144:                adc    # low COMFNAM
42d1 8582  145:                sta    s_ptr
42d3 a50b  146:                lda    comtab+1
42d5 6900  147:                adc    # high COMFNAM
42d7 8583  148:                sta    s_ptr+1
42d9    149:                mea    parm_1,d_ptr
42d9 a9a6  ----:                lda    #low parm_1
42db 8584  ----:                sta    d_ptr
42dd a945  ----:                lda    #high parm_1
42df 8585  ----:                sta    d_ptr + 1
42e1 20c64d 150:                jsr    tostr
42e4    151:
42e4    152:
42e4 20a043 153:                jsr    cli.crunch
42e7 d003  154:                bne    .get_parm2
42e9 4c2843 155:                jmp    .exit

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42ec      156:
42ec a50a  157: .get_parm2:      lda    comtab
42ee 18    158:                CLC
42ef 6921  159:                adc     # low COMFNAM
42f1 8582  160:                sta     s_ptr
42f3 a50b  161:                lda     comtab+1
42f5 6900  162:                adc     # high COMFNAM
42f7 8583  163:                sta     s_ptr+1
42f9      164:                mea     parm_2,d_ptr
42f9 a9a6  ----:      lda     #low parm_2
42fb 8584  ----:      sta     d_ptr
42fd a946  ----:      lda     #high parm_2
42ff 8585  ----:      sta     d_ptr + 1
4301 20c64d 165:                jsr     tostr
4304      166:
4304      167:
4304      168:                mea     parm_1,s_ptr
4304 a9a6  ----:      lda     #low parm_1
4306 8582  ----:      sta     s_ptr
4308 a945  ----:      lda     #high parm_1
430a 8583  ----:      sta     s_ptr + 1
430c      169:                mea     basename,d_ptr
430c a976  ----:      lda     #low basename
430e 8584  ----:      sta     d_ptr
4310 a96b  ----:      lda     #high basename
4312 8585  ----:      sta     d_ptr + 1
4314 209f4d 170:                jsr     toascii
4317      171:
4317      172:                mea     parm_2,s_ptr
4317 a9a6  ----:      lda     #low parm_2
4319 8582  ----:      sta     s_ptr
431b a946  ----:      lda     #high parm_2
431d 8583  ----:      sta     s_ptr + 1
431f 20be4a 173:                jsr     do_num
4322 8d8645 174:                sta     goto.error
4325 8e8745 175:                stx     goto.error+1
4328      176:
4328      177: .exit:
4328 ad1fd0 178:                lda     consol
432b c907  179:                cmp     #consol_any
432d f06e  180:                beq     .no_tell      ;be
432f      181:
432f 20334e 182:                jsr     printsi
4332 9b2074 183:                dc.b    $9b," this is my cli to par
434f 9b5061 184:                dc.b    $9b,"Parm_1 =",-1
4359      185:                mea     parm_1,pr_ptr
4359 a9a6  ----:      lda     #low parm_1
435b 8588  ----:      sta     pr_ptr
435d a945  ----:      lda     #high parm_1
435f 8589  ----:      sta     pr_ptr + 1
4361 20fa4f 186:                jsr     echos
4364      187:
4364 20334e 188:                jsr     printsi

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```

4367 9b5061 189:          dc.b  $9b,"Parm_2 =",-1
4371 ad8645 190:          lda   goto.error
4374 204c4b 191:          jsr   pr_byte
4377      192:
4377 20334e 193:          jsr   printsi
437a 9b4f75 194:          dc.b  $9b,"Output File =",-1
4389      195:          mea   parm_2,pr_ptr
4389 a9a6   ----:          lda   #low parm_2
438b 8588   ----:          sta   pr_ptr
438d a946   ----:          lda   #high parm_2
438f 8589   ----:          sta   pr_ptr + 1
4391 20fa4f 196:          jsr   echos
4394      197:
4394 20334e 198:          jsr   printsi
4397 9b9bff 199:          dc.b  $9b,$9b,-1
439a 204050 200:          jsr   get_key
439d      201:
439d      202: .no_tell:
439d 4ce352 203:          jmp   top
43a0      204:
43a0 4c0000 205: cli.crunch:      jmp   $0000
43a3      206:
43a3      207: parm_errors:
43a3      208:
43a3 20334e 209:          jsr   printsi
43a6 9b9b   210:          dc.b  $9B,$9B
43a8 205379 211:          dc.b  " Syntax for use:",$9b
43b9 204572 212:          dc.b  " Error Dn:>dir>fname.ext [
43da 205061 213:          dc.b  " Parm1 = 1-255", $9b
43e9      214:
43e9 9b     215:          dc.b  $9b
43ea ff     216:          dc.b  -1
43eb      217:
43eb 20334e 218:          jsr   printsi
43ee 9b9b   219:          dc.b  $9b,$9b
43f0 204669 220:          dc.b  " First Time Use Settings:"
440a 204572 221:          dc.b  " Error dn:>dir>Filename.ex
4428 204572 222:          dc.b  " Error Filename 0", $9b
443a 9b     223:          dc.b  $9b,
443b 507265 224:          dc.b  "Press any key to continue"
4456 ff     225:          dc.b  -1
4457 a901   226:          lda   #$01
4459 8d8645 227:          sta   goto.error
445c a900   228:          lda   #$00
445e 8d8745 229:          sta   goto.error+1
4461 204050 230:          jsr   get_key
4464      231: peekabyte:
4464      232:
4464 4ce352 233:          jmp   top
4467      234:
4467      235: ; based on info stored at the front of the file
4467      236:
4467      237: HEADERSIZE:      equ   406          ;si

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4467      238: INDEX_CHUNKS:      equ   10           ;si
4467      239:
4467 00    240: aborted:          dc.b   0
4468 00    241: invoker:          dc.b   0
4469 00    242: move_data:        dc.b   0
446a 00    243: nextmsg:          dc.b   0
446b      244: w_lastread:       ds.w   1           ;PRIVATE la
446d 0f    245: u_pagesize:       dc.b   15
446e 1a00   246: s_node:           dc.w   26           ; n
4470      247:
4470      248: s_today:          ds.b   14          ;today's da
447e      249: cur_date:         ds.b   15          ; Mon 13-Ma
448d      250: cur_time:         ds.b   15          ; 11:00:00a
449c      251: cur_month:        ds.b   1           ;1-12
449d      252: cur_day:          ds.b   1           ;1-31
449e      253: cur_year:         ds.b   1           ;1-99
449f      254: cur_hour:         ds.b   1           ;0-23
44a0      255: cur_minute:       ds.b   1           ;0-59
44a1      256: cur_second:       ds.b   1           ;0-59
44a2      257: cur_weekday:      ds.b   1           ;0=sunday,
44a3      258:
44a3 0100   259: s_himsg:          dc.w   1
44a5 0a00   260: usernum:          dc.w   10
44a7 0d5265 261: u_name:           dc.b   13,"RealDos Error"
44b5      262:                   ds.b   21          ;real name
44ca 28     263: u_vw:             dc.b   40          ;video wid
44cb      264: u_lastread:       ds.w   1           ;last read
44cd ffffff 265: u_qscan:          dc.w   $ffff,$ffff ;ma
44d1      266:
44d1 ffffff 267: u_flags:          dc.w   $ffff,$ffff ; 1
44d5 ffffff 268: u_seclvl:         dc.w   $ffff,$ffff ;security l
44d9      269: u_msgread:        ds.b   4           ;read messa
44dd      270: u_msgpost:        ds.b   4           ;post messa
44e1      271: u_msgedit:        ds.b   4           ;edit any m
44e5 ffffff 272: u_msgdel:         dc.w   $ffff,$ffff ;
44e9      273:
44e9      274: u_msgprint:       ds.b   4           ;print any
44ed      275: s_msgbdr:         ds.b   32          ;drives eac
450d      276: hi_msglo:         ds.b   32          ;PRIVATE 3
452d      277: hi_msgghi:        ds.b   32          ;PRIVATE
454d      278: u_handle:         ds.b   21          ;handle
4562      279: ;
4562 00     280: in_clock:         dc.b   0           ;set by the
4563      281: tdbuf:           ds.b   30          ;ti
4581 00     282: queue:           dc.b   0           ;stuff a ke
4582 00     283: qout:            dc.b   0           ;
4583 00     284: qin:            dc.b   0           ;
4584 00     285: rc:             dc.b   0           ; Return Co
4585 00     286: trans:          dc.b   0           ;0=atascii,
4586 0000   287: goto.error:      dc.w   0
4588      288: ;
4588      289: word:           ds.b   30          ;damn backw
45a6      290:

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45a6      291: parm_1:          ds.b  256
46a6      292: parm_2:          ds.b  256
47a6      293: parm_3:          ds.b  40
47ce      294: filename:        ds.b  40
47f6      295: in_str:         ds.b  80      ;
4846      296: instr:          ds.b  80      ;
4896      297: read_buff:       ds.b  512      ;PRIVATE ge
4a96      298: ;
4a96      299: ;    makes a CARD value from s_ptr, returned in A/X
4a96      300: ;    ~~~~~
4a96      301:
4a96 20e64a 302: valc:          jsr  length      ;ge
4a99 a8     303:          tay
4a9a c8     304:          iny
4a9b a99b   305:          lda  #$9b
4a9d 9182   306:          sta  (s_ptr),y
4a9f a582   307:          lda  s_ptr
4aa1 85f3   308:          sta  inbuff
4aa3 a583   309:          lda  s_ptr+1
4aa5 85f4   310:          sta  inbuff+1
4aa7 a901   311:          lda  #1
4aa9 85f2   312:          sta  cix
4aab 2000d8 313:          jsr  afp          ;as
4aae b00a   314:          bcs  .default
4ab0 20d2d9 315:          jsr  fpi          ;fl
4ab3 b005   316:          bcs  .default
4ab5 a5d4   317:          lda  fr0
4ab7 a6d5   318:          ldx  fr0+1
4ab9 60     319:          rts
4aba a900   320: .default:          lda  #0
4abc aa     321:          tax
4abd 60     322:          rts
4abe       323:
4abe       324: ;    makes a CARD value from s_ptr, returned in A/X
4abe       325: ;    ~~~~~
4abe 20e64a 326: do_num:          jsr  length
4ac1 a8     327:          tay
4ac2 c8     328:          iny
4ac3 a99b   329:          lda  #$9b
4ac5 9182   330:          sta  (s_ptr),y
4ac7 a582   331:          lda  s_ptr
4ac9 85f3   332:          sta  inbuff
4acb a583   333:          lda  s_ptr+1
4acd 85f4   334:          sta  inbuff+1
4acf a904   335:          lda  #4
4ad1 85f2   336:          sta  cix
4ad3 2000d8 337:          jsr  afp          ;as
4ad6 b00a   338:          bcs  .default
4ad8 20d2d9 339:          jsr  fpi          ;fl
4adb b005   340:          bcs  .default
4add a5d4   341:          lda  fr0
4adf a6d5   342:          ldx  fr0+1
4ae1 60     343:          rts

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4ae2 a900 344: .default:      lda  #0
4ae4 aa    345:                tax
4ae5 60    346:                rts
4ae6      347:
4ae6      348: ;      Return the length of string at s_ptr in accumulo
4ae6      349: ;      ~~~~~
4ae6      350:
4ae6 a000 351: length:      ldy  #0
4ae8 b182 352:                lda  (s_ptr),y
4aea 60    353:                rts
4aeb      354:
4aeb      355: ;      checks user security level pointed to by S_PTR to se
4aeb      356: ;      bit specified in the A register is ON. Returns MInu
4aeb      357: ;      user doesn't have the specified security level.
4aeb      358: ;      ~~~~~
4aeb      359:
4aeb 8c464b 360: seclvl:      sty  .tempy
4aee 8e474b 361:                stx  .tempx
4af1 c900 362:                cmp  #0      ;sec lvl of
4af3 f042 363:                beq  .passed  ;yes..they
4af5 a8    364:                tay          ;-1 fo
4af6 a980 365:                lda  #128
4af8 8d484b 366:                sta  .temp      ;initialize
4afb a900 367:                lda  #0
4afd 8d494b 368:                sta  .temp+1
4b00 8d4a4b 369:                sta  .temp+2
4b03 8d4b4b 370:                sta  .temp+3
4b06 88    371:                dey
4b07 f011 372:                beq  .mask      ;if it was
4b09 4e484b 373: .shloop:      lsr  .temp      ;shift bits
4b0c 6e494b 374:                ror  .temp+1
4b0f 6e4a4b 375:                ror  .temp+2
4b12 6e4b4b 376:                ror  .temp+3
4b15 88    377:                dey
4b16 d0f1 378:                bne  .shloop
4b18 a000 379:                ldy  #0
4b1a b9484b 380: .mask:        lda  .temp,y      ;now, AND o
4b1d 3182 381:                and  (s_ptr),y
4b1f 99484b 382:                sta  .temp,y
4b22 c8    383:                iny
4b23 c004 384:                cpy  #4
4b25 d0f3 385:                bne  .mask
4b27 ad484b 386: .check:        lda  .temp      ;ne
4b2a 0d494b 387:                ora  .temp+1      ; is > 0, t
4b2d 0d4a4b 388:                ora  .temp+2
4b30 0d4b4b 389:                ora  .temp+3
4b33 c900 390:                cmp  #0
4b35 f004 391:                beq  .failed
4b37 a900 392: .passed:      lda  #0
4b39 f002 393:                beq  .return
4b3b a980 394: .failed:      lda  #$80
4b3d 08    395: .return:      php
4b3e ac464b 396:                ldy  .tempy

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4b41 ae474b 397:          ldx  .tempx
4b44 28 398:          plp
4b45 60 399:          rts
4b46 400:
4b46 00 401: .tempy:    dc.b  0
4b47 00 402: .tempx:    dc.b  0
4b48 000000 403: .temp:    dc.b  0,0,0,0
4b4c 404:
4b4c 405:
4b4c 406:
4b4c 407:
4b4c 408: ;~~~~~
4b4c 409: ;Prints a byte or a card to the screen
4b4c 410: ;
4b4c 411: ;
4b4c 412: pr_byte:
4b4c a200 413:          ldx  #$00
4b4e 414: pr_card:
4b4e 85d4 415:          sta  fr0
4b50 86d5 416:          stx  fr0+1
4b52 a900 417:          lda  #$00
4b54 85f2 418:          sta  cix
4b56 20aad9 419:          jsr  ifp
4b59 20e6d8 420:          jsr  fasc
4b5c a000 421:          ldy  #$00
4b5e 422: .aprbloop:
4b5e b1f3 423:          lda  (inbuff),y
4b60 08 424:          php
4b61 297f 425:          and  #$7f
4b63 c8 426:          iny
4b64 20cc4f 427:          jsr  echo
4b67 28 428:          plp
4b68 10f4 429:          bpl  .aprbloop
4b6a 60 430:          rts
4b6b 431:
4b6b 432: ;   get_str  gets an input line into the specified s
4b6b 433: ;
4b6b 434: ;   input:  address of string in in_ptr
4b6b 435: ;           A - max length
4b6b 436: ;           X - mask (0=alpha/numeric, 1=numeric)
4b6b 437: ;           Y - allow return key only (1=yes)
4b6b 438: ;
4b6b 439: ;   length of inputted string is returned in the 0th pos
4b6b 440: ; ~~~~~
4b6b 441:
4b6b 68 442: get_str:    pla                ;en
4b6c 8588 443:          sta  pr_ptr
4b6e 68 444:          pla
4b6f 8589 445:          sta  pr_ptr+1
4b71 a001 446:          ldy  #1
4b73 b188 447:          lda  (pr_ptr),y        ;ge
4b75 8580 448:          sta  in_ptr
4b77 c8 449:          iny

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4b78 b188 450:      lda  (pr_ptr),y      ;
4b7a 8581 451:      sta  in_ptr+1
4b7c c8 452:        iny
4b7d b188 453:      lda  (pr_ptr),y      ;
4b7f 8da94b 454:     sta  .gsa
4b82 c8 455:        iny
4b83 b188 456:      lda  (pr_ptr),y      ;
4b85 8daa4b 457:     sta  .gsx
4b88 c8 458:        iny
4b89 b188 459:      lda  (pr_ptr),y      ;
4b8b 8dab4b 460:     sta  .gsy
4b8e a588 461:      lda  pr_ptr          ;no
4b90 18 462:        clc
4b91 6905 463:      adc  #5
4b93 8588 464:      sta  pr_ptr
4b95 a589 465:      lda  pr_ptr+1
4b97 6900 466:      adc  #0
4b99 48 467:        pha
4b9a a588 468:      lda  pr_ptr
4b9c 48 469:        pha
4b9d ada94b 470:     lda  .gsa
4ba0 aeaa4b 471:     ldx  .gsx
4ba3 acab4b 472:     ldy  .gsy
4ba6 4cac4b 473:     jmp  get_string
4ba9      474:
4ba9 00 475: .gsa:      dc.b 0
4baa 00 476: .gsx:      dc.b 0
4bab 00 477: .gsy:      dc.b 0
4bac      478:
4bac      479:
4bac c953 480: get_string:  cmp  #83          ;ma
4bae 9002 481:      bcc  .gsentry      ;ye
4bb0 a950 482:      lda  #80
4bb2 8dcf4c 483: .gsentry:  sta  .maxlth      ;sa
4bb5 8ed04c 484:      stx  .mask
4bb8 8cd14c 485:      sty  .return
4bbb      486:
4bbb a900 487:      lda  #0
4bbd 854d 488:      sta  attract
4bbf      489:
4bbf      490:
4bbf a580 491:      lda  in_ptr
4bc1 8dc94c 492:     sta  .address      ;hold addre
4bc4 a581 493:      lda  in_ptr+1      ; to input
4bc6 8dca4c 494:     sta  .address+1
4bc9 a900 495:      lda  #0
4bcb 8dd34c 496:     sta  .instr        ;zero lengt
4bce      497:
4bce 204050 498: .gsloop:  jsr  get_key      ;get a keyp
4bd1      499: ;      cmp  #"          ;can't allo
4bd1      500: ;      beq  .gsloop      ;yes, ignor
4bd1 c99b 501:      cmp  #$9b          ;carriage r
4bd3 d003 502:      bne  .nogs         ;nope

```

```

4bd5 4c7b4c 503:      jmp  .gscr      ;yes
4bd8 c90e 504: .nogs:      cmp  #14      ;treat ^N a
4bda d003 505:      bne  .not14
4bdc 4c7b4c 506:      jmp  .gscr
4bdf c97e 507: .not14:      cmp  #126      ;ba
4be1 f070 508:      beq  .bspace
4be3 c91e 509:      cmp  #30
4be5 f06c 510:      beq  .bspace
4be7 c918 511:      cmp  #24      ;^X?
4be9 d003 512:      bne  .nowipe
4beb 4c684c 513:      jmp  .wipeout
4bee 297f 514: .nowipe:      and  #$7f      ;strip inve
4bf0 8dd24c 515:      sta  .key      ;hold it
4bf3      516:
4bf3      517: ; now, see if it falls within requested mask
4bf3      518: ; ~~~~~
4bf3      519:
4bf3      520:
4bf3 aed04c 521:      ldx  .mask      ;get mask
4bf6 f004 522:      beq  .alphanum
4bf8 e001 523:      cpx  #1
4bfa f00b 524:      beq  .numeric
4bfc      525:
4bfc c920 526: .alphanum:      cmp  #32      ; < space?
4bfe 90ce 527:      bcc  .gsloop      ;yes, ignor
4c00 c97b 528:      cmp  #'z'+1      ; > 'z'
4c02 b0ca 529:      bcs  .gsloop      ;yes, ignor
4c04 4c124c 530:      jmp  .gsstore
4c07      531:
4c07 c930 532: .numeric:      cmp  #'0'      ; < '0'?
4c09 90c3 533:      bcc  .gsloop      ;yes, ignor
4c0b c93a 534:      cmp  #'9'+1      ; > '9'
4c0d b0bf 535:      bcs  .gsloop      ;yes, ignor
4c0f 4c124c 536:      jmp  .gsstore
4c12      537:
4c12 add34c 538: .gsstore:      lda  .instr      ;get length
4c15 cdcf4c 539:      cmp  .maxlth
4c18 f0b4 540:      beq  .gsloop      ;ignore it.
4c1a b0b2 541:      bcs  .gsloop      ; max lengt
4c1c a8 542:      tay
4c1d c8 543:      iny
4c1e add24c 544:      lda  .key
4c21 c920 545:      cmp  #32      ;is it a sp
4c23 d007 546:      bne  .notspc      ;nope
4c25 c001 547:      cpy  #1      ;1st char i
4c27 d003 548:      bne  .notspc
4c29 4cce4b 549:      jmp  .gsloop      ;yes..don't
4c2c 99d34c 550: .notspc:      sta  .instr,y      ;save key i
4c2f eed34c 551:      inc  .instr      ;increase l
4c32 add24c 552: .nohide:      lda  .key
4c35 20cc4f 553: .showit:      jsr  echo
4c38 adcf4c 554:      lda  .maxlth      ;one-key in
4c3b c901 555:      cmp  #1

```

```

4c3d d011 556:      bne .nohot      ;nope
4c3f add34c 557:      lda .instr
4c42 c901 558:      cmp #1          ;1 byte ent
4c44 d00a 559:      bne .nohot
4c46 add144 560:      lda u_flags
4c49 2908 561:      and #f_hotkey    ;user want
4c4b f003 562:      beq .nohot      ;nope..
4c4d 4c7b4c 563:      jmp .gscr        ;yes - auto
4c50 4cce4b 564: .nohot:      jmp .gsloop    ;ke
4c53      565:
4c53 add34c 566: .bspace:      lda .instr      ;can't back
4c56 c900 567:      cmp #0          ; if no len
4c58 d003 568:      bne .nt0
4c5a 4cce4b 569:      jmp .gsloop
4c5d ced34c 570: .nt0:      dec .instr      ;-1 to leng
4c60 a97e 571:      lda #126        ;output a B
4c62 20cc4f 572:      jsr echo
4c65 4cce4b 573:      jmp .gsloop
4c68      574:
4c68 add34c 575: .wipeout:      lda .instr      ;can't back
4c6b d003 576:      bne .wt0
4c6d 4cce4b 577:      jmp .gsloop
4c70 ced34c 578: .wt0:      dec .instr      ;-1 to leng
4c73 a97e 579:      lda #126        ;output a B
4c75 20cc4f 580:      jsr echo
4c78 4c684c 581:      jmp .wipeout    ;go until l
4c7b      582:
4c7b add34c 583: .gscr:      lda .instr      ;get length
4c7e d008 584:      bne .nonnull    ;its not nu
4c80 aed14c 585:      ldx .return     ;allow retu
4c83 d003 586:      bne .nonnull    ;yes..exit
4c85 4cce4b 587:      jmp .gsloop     ;nope..igno
4c88      588:
4c88      589: ;      done, so move our string into where they want it.
4c88      590: ;      ~~~~~
4c88      591:
4c88 a582 592: .nonnull:      lda s_ptr
4c8a 8dcb4c 593:      sta .holds
4c8d a583 594:      lda s_ptr+1
4c8f 8dcc4c 595:      sta .holds+1
4c92 a584 596:      lda d_ptr
4c94 8dcd4c 597:      sta .holdd
4c97 a585 598:      lda d_ptr+1
4c99 8dce4c 599:      sta .holdd+1
4c9c      600:      mea .instr,s_ptr
4c9c a9d3 ----:      lda #low .instr
4c9e 8582 ----:      sta s_ptr
4ca0 a94c ----:      lda #high .instr
4ca2 8583 ----:      sta s_ptr + 1
4ca4 adc94c 601:      lda .address
4ca7 8584 602:      sta d_ptr
4ca9 adca4c 603:      lda .address+1
4cac 8585 604:      sta d_ptr+1

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```

4cae 209451 605:      jsr  move_str    ;move to th
4cb1 adcb4c 606:      lda  .holds
4cb4 8582 607:      sta  s_ptr
4cb6 adcc4c 608:      lda  .holds+1
4cb9 8583 609:      sta  s_ptr+1
4cbb adcd4c 610:      lda  .holdd
4cbe 8584 611:      sta  d_ptr
4cc0 adce4c 612:      lda  .holdd+1
4cc3 8585 613:      sta  d_ptr+1
4cc5 add34c 614:      lda  .instr    ;return wit
4cc8 60 615:      rts
4cc9 616:
4cc9 617:
4cc9 618: .address:      ds.b 2
4ccb 619: .holds:        ds.b 2
4ccd 620: .holdd:        ds.b 2
4ccf 621: .maxlth:      ds.b 1
4cd0 622: .mask:        ds.b 1
4cd1 623: .return:      ds.b 1
4cd2 624: .key:         ds.b 1
4cd3 625: .instr:       ds.b 86
4d29 626:
4d29 627:
4d29 628: ;      Search the string pointed to by S_PTR for the subs
4d29 629: ;      pointed to by D_PTR. Returns a 0 if substring not
4d29 630: ;      ~~~~~
4d29 631:
4d29 a000 632: substr:      ldy  #0
4d2b b182 633:      lda  (s_ptr),y
4d2d 8d9d4d 634:      sta  .s_lth
4d30 b184 635:      lda  (d_ptr),y
4d32 8d9e4d 636:      sta  .d_lth
4d35 a582 637:      lda  s_ptr
4d37 8d594d 638:      sta  .comp+1
4d3a a583 639:      lda  s_ptr+1
4d3c 8d5a4d 640:      sta  .comp+2
4d3f a584 641:      lda  d_ptr
4d41 8d624d 642:      sta  .get+1
4d44 a585 643:      lda  d_ptr+1
4d46 8d634d 644:      sta  .get+2
4d49 a901 645:      lda  #1
4d4b 8d9c4d 646:      sta  .loc
4d4e a000 647:      ldy  #0
4d50 a200 648:      ldx  #0
4d52 20804d 649:      jsr  .up_str
4d55 208d4d 650:      jsr  .up_sub
4d58 651:
4d58 b9ffff 652: .comp:      lda  $ffff,y
4d5b 20ae50 653:      jsr  upcase
4d5e 8d9b4d 654:      sta  .temp
4d61 bdffff 655: .get:      lda  $ffff,x
4d64 20ae50 656:      jsr  upcase
4d67 cd9b4d 657:      cmp  .temp

```

```

4d6a f00b 658:      beq  .match
4d6c a201 659: .nomatch:      ldx  #1
4d6e ee9c4d 660:      inc  .loc
4d71 20804d 661:      jsr  .up_str
4d74 4c584d 662:      jmp  .comp
4d77 208d4d 663: .match:      jsr  .up_sub
4d7a 20804d 664:      jsr  .up_str
4d7d 4c584d 665:      jmp  .comp
4d80      666:
4d80 c8      667: .up_str:      iny
4d81 cc9d4d 668:      cpy  .s_lth
4d84 9006 669:      bcc  .xup
4d86 f004 670:      beq  .xup
4d88 68 671:      pla
4d89 68 672:      pla
4d8a a900 673:      lda  #0
4d8c 60 674: .xup:      rts
4d8d      675:
4d8d e8 676: .up_sub:      inx
4d8e ec9e4d 677:      cpx  .d_lth
4d91 9007 678:      bcc  .xsub
4d93 f005 679:      beq  .xsub
4d95 68 680:      pla
4d96 68 681:      pla
4d97 ad9c4d 682:      lda  .loc
4d9a 60 683: .xsub:      rts
4d9b      684:
4d9b 00 685: .temp:      dc.b 0
4d9c 00 686: .loc:      dc.b 0
4d9d 00 687: .s_lth:      dc.b 0
4d9e 00 688: .d_lth:      dc.b 0
4d9f      689:
4d9f      690: ;   Make an ASCII ($9b terminated) string out of a lth-b
4d9f      691: ;   ~~~~~
4d9f      692:
4d9f a000 693: toascii:      ldy  #0
4da1 b182 694:      lda  (s_ptr),y      ;ge
4da3 8dc54d 695:      sta  .lth
4da6 f019 696:      beq  .null
4da8 c8 697:      iny
4da9 eec54d 698:      inc  .lth
4dac b182 699: .loop:      lda  (s_ptr),y
4dae 88 700:      dey
4daf 9184 701:      sta  (d_ptr),y
4db1 c8 702:      iny
4db2 c8 703:      iny
4db3 ccc54d 704:      cpy  .lth
4db6 d0f4 705:      bne  .loop
4db8 acc54d 706: .done:      ldy  .lth
4dbb 88 707:      dey
4dbc a99b 708: .rtn:      lda  #$9b
4dbe 9184 709:      sta  (d_ptr),y
4dc0 60 710:      rts

```

```

4dc1 a000 711: .null:      ldy  #0
4dc3 f0f7 712:           beq  .rtn
4dc5      713:
4dc5 01   714: .lth:      dc.b  1
4dc6      715:
4dc6      716: ;   Make a length-byte string from an ASCII ($9b termina
4dc6      717: ;   ~~~~~
4dc6      718:
4dc6 a000 719: tostr:      ldy  #0
4dc8 b182 720: .tfe:      lda  (s_ptr),y      ;fi
4dca f007 721:           beq  .gotend
4dcc c99b 722:           cmp  #$9b
4dce f003 723:           beq  .gotend
4dd0 c8   724:           iny
4dd1 d0f5 725:           bne  .tfe
4dd3 8cee4d 726: .gotend:    sty  .lth
4dd6 c000 727:           cpy  #0
4dd8 f00c 728:           beq  .rtn
4dda a000 729:           ldy  #0
4ddc b182 730: .loop:      lda  (s_ptr),y
4dde c8   731:           iny
4ddf 9184 732:           sta  (d_ptr),y
4de1 ccee4d 733:           cpy  .lth
4de4 90f6 734:           bcc  .loop
4de6 a000 735: .rtn:      ldy  #0
4de8 adee4d 736:           lda  .lth
4deb 9184 737:           sta  (d_ptr),y
4ded 60   738:           rts
4dee      739:
4dee 01   740: .lth:      dc.b  1
4def      741:
4def      742:
4def      743: ;=====
4def      744: ;   These routines work very much like the filename crunch
4def      745: ;   SpartaDOS.  On consecutive calls to CRUNCH, the next
4def      746: ;   command line (pointed to by IN_PTR) will be placed int
4def      747: ;   If there are no more words on the command line, then C
4def      748: ;   with carry set.
4def      749: ;   When calling the parser for the first time on a new
4def      750: ;   MUST zero out the BUFOFF field.  Also, extraneous spac
4def      751: ;   compressed out of the input line, and the command word
4def      752: ;   to upper case.
4def      753: ;=====
4def      754:
4def      755:
4def a40a 756: crunch:      ldy  bufoff      ;ge
4df1 a200 757:           ldx  #0           ;zero stori
4df3      758:
4df3 b94648 759: .nonspc:     lda  instr,y      ;move buffo
4df6 c99b 760:           cmp  #$9b
4df8 f011 761:           beq  .nomore      ;end of lin
4dfa c920 762:           cmp  #32          ;= space?
4dfc f00a 763:           beq  .go_on       ;yep

```



```

4dfe c92c 764:      cmp    #','
4e00 f006 765:      beq    .go_on
4e02 c92d 766:      cmp    #'-'
4e04 f002 767:      beq    .go_on
4e06 d005 768:      bne    .gotone    ;found one
4e08 c8    769: .go_on:      iny
4e09 d0e8 770:      bne    .nonspc    ;keep looki
4e0b      771:
4e0b 38    772: .nomore:      sec          ;signal err
4e0c 60    773:      rts          ; and retur
4e0d      774:
4e0d b94648 775: .gotone:      lda    instr,y    ;get byte o
4e10 c99b 776:      cmp    #$9b
4e12 f016 777:      beq    .end        ;end of lin
4e14      778:
4e14 c920 779:      cmp    #32        ;space?
4e16 f012 780:      beq    .end        ;yes
4e18 c92c 781:      cmp    #','
4e1a f00e 782:      beq    .end
4e1c c92d 783:      cmp    #'-'
4e1e f00a 784:      beq    .end
4e20      785:
4e20 20ae50 786:      jsr    upcase
4e23 9d8845 787:      sta    word,x
4e26 e8    788:      inx
4e27 c8    789:      iny
4e28 d0e3 790:      bne    .gotone    ;keep going
4e2a      791:
4e2a 840a 792: .end:      sty    bufoff    ;save new b
4e2c a99b 793:      lda    #$9b        ;put null b
4e2e 9d8845 794:      sta    word,x
4e31 18    795:      clc
4e32 60    796: end_crunch:      rts
4e33      797:
4e33      798:
4e33      799:
4e33      800: ;-----
4e33      801: ;prints Routine macro
4e33      802: ;this is a slow print to the screen
4e33      803: ;usage jsr prints
4e33      804: ; .byte $9b," string to be printed",$ff
4e33      805: ;-----
4e33      806: ;
4e33      807: prints:
4e33 68    808:      pla
4e34 8d444e 809:      sta    .pstr+1
4e37 68    810:      pla
4e38 8d454e 811:      sta    .pstr+2
4e3b ee444e 812: .prsl:      inc    .pstr+1
4e3e d003 813:      bne    .pstr
4e40 ee454e 814:      inc    .pstr+2
4e43 adffff 815: .pstr:      lda    $ffff
4e46 c9ff 816:      cmp    #$ff

```

```

4e48 f006 817:          beq  .estri
4e4a 20894e 818:          jsr  fast_output
4e4d 4c3b4e 819:          jmp  .prsl
4e50 ad454e 820: .estri:      lda  .pstr+2
4e53 48 821:          pha
4e54 ad444e 822:          lda  .pstr+1
4e57 48 823:          pha
4e58 60 824:          rts
4e59      825: ;
4e59      826: ;
4e59      827: ;
4e59      828: ;
4e59      829: ;-----
4e59      830: ;actual screen handler
4e59      831: ;screen offset definitions
4e59      832: ;-----
4e59      833: scr_offset:
4e59 0000 834:          dc.w 0
4e5b 2800 835:          dc.w 40
4e5d 5000 836:          dc.w 80
4e5f 7800 837:          dc.w 120
4e61 a000 838:          dc.w 160
4e63 c800 839:          dc.w 200
4e65 f000 840:          dc.w 240
4e67 1801 841:          dc.w 280
4e69 4001 842:          dc.w 320
4e6b 6801 843:          dc.w 360
4e6d 9001 844:          dc.w 400
4e6f b801 845:          dc.w 440
4e71 e001 846:          dc.w 480
4e73 0802 847:          dc.w 520
4e75 3002 848:          dc.w 560
4e77 5802 849:          dc.w 600
4e79 8002 850:          dc.w 640
4e7b a802 851:          dc.w 680
4e7d d002 852:          dc.w 720
4e7f f802 853:          dc.w 760
4e81 2003 854:          dc.w 800
4e83 4803 855:          dc.w 840
4e85 7003 856:          dc.w 880
4e87 9803 857:          dc.w 920
4e89      858: ;;
4e89      859: ;sprintf:
4e89      860: ;echo:
4e89      861: fast_output:
4e89 855a 862:          sta  $5a
4e8b ad0407 863:          lda  sc.redirect
4e8e c902 864:          cmp  #print_p
4e90 f01f 865:          beq  .go_cio
4e92      866: .leo:
4e92 adff02 867:          lda  $02ff      ; CONTROL 1
4e95 c900 868:          cmp  #$00
4e97 d0f9 869:          bne  .leo

```

```

4e99      870:
4e99 a55a 871:      lda  $5a
4e9b c920 872:      cmp  #32
4e9d 9004 873:      bcc  .do_look
4e9f c97d 874:      cmp  #125
4ea1 9013 875:      bcc  .do_here
4ea3 a000 876: .do_look:      ldy  #0
4ea5 b9ac4f 877: .lookup:      lda  .char_table,y
4ea8 f00c 878:      beq  .do_here
4eaa c55a 879:      cmp  $5a
4eac f003 880:      beq  .go_cio
4eae c8 881:      iny
4eaf d0f4 882:      bne  .lookup
4eb1      883:
4eb1      884:
4eb1 a55a 885: .go_cio:      lda  $5a
4eb3 4cbc4f 886:      jmp  putlocal
4eb6      887:
4eb6      888:
4eb6 a000 889: .do_here:      ldy  #0
4eb8 a55d 890:      lda  $5d
4eba 915e 891:      sta  ($5e),y
4ebc a55a 892:      lda  $5a
4ebe c99b 893:      cmp  #$9b
4ec0 f044 894:      beq  .docr
4ec2 208b4f 895: .notcr:      jsr  .get_adr
4ec5 a55a 896:      lda  $5a
4ec7 297f 897:      and  #$7f
4ec9 c920 898:      cmp  #32
4ecb 9007 899:      bcc  .add64
4ecd c960 900:      cmp  #96
4ecf 9009 901:      bcc  .sub32
4ed1 4cdd4e 902:      jmp  .asis
4ed4 18 903: .add64:      clc
4ed5 6940 904:      adc  #64
4ed7 4cdd4e 905:      jmp  .asis
4eda 38 906: .sub32:      sec
4edb e920 907:      sbc  #32
4edd 245a 908: .asis:      bit  $5a
4edf 1002 909:      bpl  .xxlate
4ee1 0980 910:      ora  #$80
4ee3 a000 911: .xxlate:      ldy  #0
4ee5 915e 912:      sta  ($5e),y
4ee7 e655 913:      inc  $55
4ee9 e663 914:      inc  $63
4eeb a555 915:      lda  $55
4eed c928 916:      cmp  #40
4eef b019 917:      bcs  .next_row
4ef1 c8 918:      iny
4ef2 b15e 919:      lda  ($5e),y
4ef4 855d 920:      sta  $5d
4ef6 0980 921:      ora  #$80
4ef8 aef002 922:      ldx  752

```

```

4efb d002 923:      bne  .nocurs1
4efd 915e 924:      sta  ($5e),y
4eff e65e 925: .nocurs1:      inc  $5e
4f01 d002 926:      bne  .nooav
4f03 e65f 927:      inc  $5e+1
4f05 60 928: .nooav:      rts
4f06 a900 929: .docr:      lda  #0
4f08 8563 930:      sta  $63
4f0a a552 931: .next_row:      lda  $52
4f0c 8555 932:      sta  $55
4f0e e654 933:      inc  $54
4f10 a454 934:      ldy  $54
4f12 c018 935:      cpy  #24
4f14 b013 936:      bcs  .scroll
4f16 208b4f 937:      jsr  .get_adr
4f19 a000 938:      ldy  #0
4f1b b15e 939:      lda  ($5e),y
4f1d 855d 940:      sta  $5d
4f1f aef002 941:      ldx  752
4f22 d004 942:      bne  .nocurs2
4f24 0980 943:      ora  #$80
4f26 915e 944:      sta  ($5e),y
4f28 60 945: .nocurs2:      rts
4f29 946:
4f29 c654 947: .scroll:      dec  $54
4f2b a558 948:      lda  $58
4f2d 8568 949:      sta  $68
4f2f 18 950:      clc
4f30 6928 951:      adc  #40
4f32 855e 952:      sta  $5e
4f34 a559 953:      lda  $58+1
4f36 8569 954:      sta  $68+1
4f38 6900 955:      adc  #0
4f3a 855f 956:      sta  $5e+1
4f3c a000 957:      ldy  #0
4f3e a203 958:      ldx  #3
4f40 b15e 959: .scloop:      lda  ($5e),y
4f42 9168 960:      sta  ($68),y
4f44 c8 961:      iny
4f45 d0f9 962:      bne  .scloop
4f47 e65f 963:      inc  $5e+1
4f49 e669 964:      inc  $68+1
4f4b ca 965:      dex
4f4c d0f2 966:      bne  .scloop
4f4e b15e 967: .scloop2:      lda  ($5e),y
4f50 9168 968:      sta  ($68),y
4f52 c8 969:      iny
4f53 c098 970:      cpy  #152
4f55 90f7 971:      bcc  .scloop2
4f57 a558 972:      lda  $58
4f59 18 973:      clc
4f5a 6998 974:      adc  #920&$ff
4f5c 855e 975:      sta  $5e

```

```

4f5e a559 976:      lda  $58+1
4f60 6903 977:      adc  #920/256
4f62 855f 978:      sta  $5e+1
4f64 a000 979:      ldy  #0
4f66 98    980:      tya
4f67 915e 981: .clear:      sta  ($5e),y
4f69 c8    982:      iny
4f6a c028 983:      cpy  #40
4f6c 90f9 984:      bcc  .clear
4f6e aef002 985:      ldx  752
4f71 d006 986:      bne  .nocurs3
4f73 a980 987:      lda  #$80
4f75 a455 988:      ldy  $55
4f77 915e 989:      sta  ($5e),y
4f79 a900 990: .nocurs3:      lda  #0
4f7b 855d 991:      sta  $5d
4f7d a55e 992:      lda  $5e
4f7f 18    993:      clc
4f80 6555 994:      adc  $55
4f82 855e 995:      sta  $5e
4f84 a55f 996:      lda  $5e+1
4f86 6900 997:      adc  #0
4f88 855f 998:      sta  $5e+1
4f8a 60    999:      rts
4f8b a554 1000: .get_adr:      lda  $54
4f8d 0a    1001:      asl
4f8e a8    1002:      tay
4f8f a558 1003:      lda  $58
4f91 18    1004:      clc
4f92 79594e 1005:      adc  scr_offset,y
4f95 855e 1006:      sta  $5e
4f97 a559 1007:      lda  $58+1
4f99 795a4e 1008:      adc  scr_offset+1,y
4f9c 855f 1009:      sta  $5e+1
4f9e a55e 1010:      lda  $5e
4fa0 18    1011:      clc
4fa1 6555 1012:      adc  $55
4fa3 855e 1013:      sta  $5e
4fa5 a55f 1014:      lda  $5e+1
4fa7 6900 1015:      adc  #0
4fa9 855f 1016:      sta  $5e+1
4fab 60    1017:      rts
4fac      1018: .char_table:
4fac 1b1c1d 1019:      dc.b  27,28,29,30,31,125,126,127
4fb4 9c9d9e 1020:      dc.b  156,157,158,159,253,254,255
4fbc      1021:
4fbc      1022:
4fbc      1023: putlocal:
4fbc a20b 1024:      ldx  #11
4fbe 8e4203 1025:      stx  $0342
4fc1 a200 1026:      ldx  #0
4fc3 8e4803 1027:      stx  $0348
4fc6 8e4903 1028:      stx  $0349

```

```

4fc9 4c56e4 1029:          jmp    $e456
4fcc      1030: ;
4fcc      1031: ;
4fcc      1032: ;-----
4fcc      1033: ; PRINT BYTE
4fcc      1034: ;-----
4fcc      1035: echo:
4fcc 85b8 1036: sprint:          sta    $b8
4fce a904 1037:          lda    #$04
4fd0 8d4a03 1038:          sta    $034a
4fd3 86b6 1039:          stx    $b6
4fd5 84b7 1040:          sty    $b7
4fd7 a206 1041:          ldx    #$06
4fd9 bd01e4 1042:          lda    $e400+1,x
4fdc 85b3 1043:          sta    $b3
4fde bd00e4 1044:          lda    $e400,x
4fe1 85b2 1045:          sta    $b2
4fe3 a5b8 1046:          lda    $b8
4fe5 20f44f 1047:          jsr    .a
4fe8 a6b6 1048:          ldx    $b6
4fea a4b7 1049:          ldy    $b7
4fec a90c 1050:          lda    #$0c
4fee 8d4a03 1051:          sta    $034a
4ff1 a5b8 1052:          lda    $b8
4ff3 60 1053:          rts
4ff4      1054: ;
4ff4 e6b2 1055: .a:          inc    $b2
4ff6 6cb200 1056:          jmp    ($b2)
4ff9 60 1057:          rts
4ffa      1058:
4ffa      1059: ; prints: prints string with address in PR_PTR, length by
4ffa      1060: ; ~~~~~
4ffa      1061:
4ffa      1062: echos:
4ffa a000 1063:          ldy    #0
4ffc b188 1064:          lda    (pr_ptr),y          ;ge
4ffe f017 1065:          beq    .xpri              ;ex
5000 8d1950 1066:          sta    .maxlth
5003 c8 1067:          iny
5004 8c1850 1068:          sty    .tempy
5007      1069:
5007 ac1850 1070: .pril:      ldy    .tempy
500a b188 1071:          lda    (pr_ptr),y
500c 20cc4f 1072:          jsr    echo
500f ee1850 1073: .prnext:    inc    .tempy
5012 ce1950 1074:          dec    .maxlth
5015 d0f0 1075:          bne    .pril
5017 60 1076: .xpri:      rts
5018      1077:
5018 01 1078: .tempy:      dc.b    1
5019 01 1079: .maxlth:     dc.b    1
501a      1080:
501a      1081:

```

```

501a    1082:
501a    1083: ;   lookup command in table (in s_ptr) and execute it
501a    1084: ;   ~~~~~
501a    1085:
501a 20ae50 1086: execute:      jsr  upcase
501d 8d3f50 1087:          sta  .key
5020 a000 1088:          ldy  #0
5022 b182 1089: .loop:      lda  (s_ptr),y
5024 f00a 1090:          beq  .found
5026 cd3f50 1091:          cmp  .key
5029 f005 1092:          beq  .found
502b c8 1093:          iny
502c c8 1094:          iny
502d c8 1095:          iny
502e d0f2 1096:          bne  .loop
5030 c8 1097: .found:      iny
5031 b182 1098:          lda  (s_ptr),y
5033 8d3d50 1099:          sta  .goaddr+1
5036 c8 1100:          iny
5037 b182 1101:          lda  (s_ptr),y
5039 8d3e50 1102:          sta  .goaddr+2
503c 4cffff 1103: .goaddr:     jmp  $ffff
503f 00 1104: .key:        dc.b  0
5040    1105:
5040    1106: ;-----
5040    1107: ; GET KEY ROUTEEN
5040    1108: ;this routeen get's one key and
5040    1109: ;return it to the accumulator
5040    1110: ;-----
5040    1111: ;
5040 86b6 1112: get_key:     stx  $b6
5042 84b7 1113:             sty  $b7
5044 204c50 1114:             jsr  .a
5047 a6b6 1115:             ldx  $b6
5049 a4b7 1116:             ldy  $b7
504b 60 1117:             rts
504c ad25e4 1118: .a:          lda  $e420+5
504f 48 1119:             pha
5050 ad24e4 1120:             lda  $e420+4
5053 48 1121:             pha
5054 60 1122:             rts
5055    1123:
5055    1124:
5055    1125:
5055 a99b 1126: cr_lf:      lda  #$9b
5057 20cc4f 1127:             jsr  echo
505a 60 1128:             rts
505b    1129:
505b    1130:
505b a904 1131: open_in:    lda  #4
505d 4c7950 1132:             jmp  do_open
5060    1133:
5060 a908 1134: open_out:   lda  #8

```

```

5062 4c7950 1135:      jmp  do_open
5065      1136:
5065 a909 1137: open_app:      lda  #9
5067 4c7950 1138:      jmp  do_open
506a      1139:
506a a90c 1140: open_updt:      lda  #12
506c 4c7950 1141:      jmp  do_open
506f      1142:
506f a906 1143: open_dir:      lda  #6
5071 4c7950 1144:      jmp  do_open
5074      1145:
5074 a914 1146: open_raw:      lda  #20      ;open raw d
5076 4c7950 1147:      jmp  do_open
5079      1148:
5079      1149: do_open:
5079 48 1150:      pha      ;open files
507a 8a 1151:      txa      ;
507b 48 1152:      pha
507c 20a650 1153:      jsr  close      ;make sure
507f 68 1154:      pla
5080 aa 1155:      tax
5081 68 1156:      pla
5082 9d4a03 1157:      sta  icaux1,x
5085 a903 1158:      lda  #ccopen
5087 9d4203 1159:      sta  iccom,x
508a a586 1160:      lda  fn_ptr
508c 9d4403 1161:      sta  icbal,x
508f a587 1162:      lda  fn_ptr+1
5091 9d4503 1163:      sta  icbah,x
5094 a950 1164:      lda  #80
5096 9d4803 1165:      sta  icbll,x
5099 a900 1166:      lda  #0
509b 9d4903 1167:      sta  icblh,x
509e a980 1168:      lda  #128      ;for long d
50a0 9d4b03 1169:      sta  icaux2,x
50a3 4c56e4 1170:      jmp  ciov
50a6      1171:
50a6 a90c 1172: close:      lda  #cccclose
50a8 9d4203 1173:      sta  iccom,x
50ab 4c56e4 1174:      jmp  ciov
50ae      1175:
50ae      1176:
50ae c961 1177: upcase:      cmp  #'a'
50b0 9009 1178:      bcc  xupcase
50b2 c97b 1179:      cmp  #'z'+1
50b4 f005 1180:      beq  xupcase
50b6 b003 1181:      bcs  xupcase
50b8 38 1182:      sec
50b9 e920 1183:      sbc  #32
50bb 60 1184: upcase:      rts
50bc      1185:
50bc      1186:
50bc c941 1187: locase:      cmp  #'A'

```



```

50be 9009 1188:      bcc  xlocase
50c0 c95b 1189:      cmp  #'Z'+1
50c2 f005 1190:      beq  xlocase
50c4 b003 1191:      bcs  xlocase
50c6 18 1192:      clc
50c7 6920 1193:      adc  #32
50c9 60 1194: xlocase:      rts
50ca 1195:
50ca 1196:
50ca 1197: ;    Compares the strings pointed to by s_ptr and d_ptr
50ca 1198: ;    Returns with equal set if true, not equal if false
50ca 1199: ;    The comparison IS NOT case-sensitive.
50ca 1200: ;    ~~~~~
50ca 1201:
50ca a000 1202: cmp_str:      ldy  #0          ;zero index
50cc b182 1203:      lda  (s_ptr),y      ;get length
50ce 8dfa50 1204:      sta  .lth
50d1 d184 1205:      cmp  (d_ptr),y      ;they match
50d3 d01f 1206:      bne  .noteq         ;nope
50d5 c900 1207:      cmp  #0            ;null strin
50d7 f01e 1208:      beq  .end           ;they match
50d9 c8 1209:      iny
50da b182 1210: .loop:      lda  (s_ptr),y      ;get next b
50dc 20ae50 1211:      jsr  upcase
50df 8dfb50 1212:      sta  .temp
50e2 b184 1213:      lda  (d_ptr),y      ;they match
50e4 20ae50 1214:      jsr  upcase
50e7 cdfb50 1215:      cmp  .temp
50ea d008 1216:      bne  .noteq         ;nope..
50ec ccfa50 1217:      cpy  .lth           ;end of str
50ef f006 1218:      beq  .end           ;yes -- the
50f1 c8 1219:      iny
50f2 d0e6 1220:      bne  .loop
50f4 a901 1221: .noteq:      lda  #1          ;se
50f6 60 1222:      rts
50f7 a900 1223: .end:      lda  #0          ;set BEQ
50f9 60 1224:      rts
50fa 01 1225: .lth:      dc.b  1
50fb 01 1226: .temp:     dc.b  1
50fc 1227:
50fc 1228:
50fc 206b4b 1229: y_or_n:      jsr  get_str
50ff 2651 1230:      dc.w  .temp
5101 010000 1231:      dc.b  1,0,0
5104 ad2751 1232:      lda  .temp+1
5107 20ae50 1233:      jsr  upcase
510a c959 1234:      cmp  #'Y'
510c f012 1235:      beq  .yes
510e c94e 1236:      cmp  #'N'
5110 f008 1237:      beq  .no
5112 a97e 1238:      lda  #126
5114 20cc4f 1239:      jsr  echo
5117 4cfc50 1240:      jmp  y_or_n          ;

```

```

511a 205550 1241: .no:      jsr   cr_lf
511d a94e 1242:      lda   #'N'
511f 60 1243:      rts
5120 205550 1244: .yes:      jsr   cr_lf
5123 a959 1245:      lda   #'Y'
5125 60 1246:      rts
5126 1247: .temp:      ds.b   2
5128 1248:
5128 1249: ; Concatenate the string at s_ptr onto the end of st
5128 1250: ; ~~~~~
5128 1251:
5128 a000 1252: concat:  ldy   #0
512a b182 1253:      lda   (s_ptr),y      ;get sourc
512c 8d6851 1254:      sta   .srclth
512f f02a 1255:      beq   .end           ;null stri
5131 b184 1256:      lda   (d_ptr),y      ;get dest
5133 8d6751 1257:      sta   .desty
5136 ee6651 1258:      inc   .srcy
5139 ee6751 1259:      inc   .desty
513c a001 1260:      ldy   #1             ;always st
513e 8c6651 1261:      sty   .srcy          ; the sour
5141 ac6651 1262: .loop:  ldy   .srcy
5144 b182 1263:      lda   (s_ptr),y      ;get byte
5146 ac6751 1264:      ldy   .desty
5149 9184 1265:      sta   (d_ptr),y      ;store int
514b ad6651 1266:      lda   .srcy
514e cd6851 1267:      cmp   .srclth        ;end of st
5151 f008 1268:      beq   .end           ;yes
5153 ee6651 1269:      inc   .srcy
5156 ee6751 1270:      inc   .desty         ;up indexe
5159 d0e6 1271:      bne   .loop         ;and keep
515b a000 1272: .end:   ldy   #0
515d b184 1273:      lda   (d_ptr),y      ;up the le
515f 18 1274:      clc                ; of the d
5160 6d6851 1275:      adc   .srclth
5163 9184 1276:      sta   (d_ptr),y
5165 60 1277:      rts
5166 1278:
5166 01 1279: .srcy:  dc.b   1
5167 01 1280: .desty: dc.b   1
5168 01 1281: .srclth: dc.b   1
5169 1282:
5169 1283: ; print a string to device in X register
5169 1284: ; from the string pointed to by pr_ptr.
5169 1285: ; ~~~~~
5169 1286:
5169 a000 1287: printsd: ldy   #0
516b b188 1288:      lda   (pr_ptr),y      ;install EOL at en
516d a8 1289:      tay
516e c8 1290:      iny
516f a99b 1291:      lda   #$9b
5171 9188 1292:      sta   (pr_ptr),y
5173 a909 1293:      lda   #ccputrec

```

```

5175 9d4203 1294:      sta  iccom,x
5178 a588  1295:      lda  pr_ptr
517a 18    1296:      clc
517b 6901  1297:      adc  #1          ;offset past lengt
517d 9d4403 1298:      sta  icbal,x
5180 a589  1299:      lda  pr_ptr+1
5182 6900  1300:      adc  #0
5184 9d4503 1301:      sta  icbah,x
5187 a950  1302:      lda  #80
5189 9d4803 1303:      sta  icbll,x
518c a900  1304:      lda  #0
518e 9d4903 1305:      sta  icblh,x      ;zero hi byte of l
5191 4c56e4 1306:      jmp  ciov          ;get the line
5194      1307:
5194      1308:
5194      1309:
5194      1310: ;      Move string pointed to by s_ptr to string pointed
5194      1311: ;      ~~~~~
5194      1312:
5194      1313:
5194 a000  1314: move_str:      ldy  #0
5196 b182  1315:      lda  (s_ptr),y      ;ge
5198 a8    1316:      tay          ;go
5199 b182  1317: .loop:      lda  (s_ptr),y
519b 9184  1318:      sta  (d_ptr),y
519d c000  1319:      cpy  #0
519f f004  1320:      beq  .done
51a1 88    1321:      dey
51a2 4c9951 1322:      jmp  .loop
51a5 60    1323: .done:      rts
51a6      1324:
51a6 ad6245 1325: timestamp:      lda  in_clock      ;hold curre
51a9 8de051 1326:      sta  .hold
51ac a901  1327:      lda  #1          ;signal for
51ae 8d6245 1328:      sta  in_clock      ; the TDLI
51b1 20fd51 1329:      jsr  waitvbi      ;make sure
51b4 a90d  1330:      lda  #13
51b6 8d7e44 1331:      sta  cur_date
51b9 a90a  1332:      lda  #10
51bb 8d8d44 1333:      sta  cur_time
51be 200a52 1334:      jsr  get_TD      ;get the da
51c1 ade051 1335:      lda  .hold      ;restore td
51c4 8d6245 1336:      sta  in_clock
51c7      1337:      mea  cur_date,s_ptr ;if date ha
51c7 a97e  ----:      lda  #low cur_date
51c9 8582  ----:      sta  s_ptr
51cb a944  ----:      lda  #high cur_date
51cd 8583  ----:      sta  s_ptr + 1
51cf      1338:      mea  s_today,d_ptr ;reset cal
51cf a970  ----:      lda  #low s_today
51d1 8584  ----:      sta  d_ptr
51d3 a944  ----:      lda  #high s_today
51d5 8585  ----:      sta  d_ptr + 1

```

```

51d7 20ca50 1339:      jsr  cmp_str
51da f003 1340:      beq  .noupd
51dc 209451 1341:      jsr  move_str
51df 60 1342: .noupd:      rts
51e0 1343:
51e0 00 1344: .hold:      dc.b 0
51e1 1345:
51e1 1346:
51e1 20a651 1347: showdate:      jsr  datestamp
51e4 1348:      mea  cur_date,pr_ptr
51e4 a97e ----:      lda  #low cur_date
51e6 8588 ----:      sta  pr_ptr
51e8 a944 ----:      lda  #high cur_date
51ea 8589 ----:      sta  pr_ptr + 1
51ec 4cfa4f 1349:      jmp  echos
51ef 1350:
51ef 1351:
51ef 20a651 1352: showtime:      jsr  datestamp
51f2 1353:      mea  cur_time,pr_ptr
51f2 a98d ----:      lda  #low cur_time
51f4 8588 ----:      sta  pr_ptr
51f6 a944 ----:      lda  #high cur_time
51f8 8589 ----:      sta  pr_ptr + 1
51fa 4cfa4f 1354:      jmp  echos
51fd 1355:
51fd 1356:
51fd 1357:
51fd 1358: ;      Wait for a VBI to occur
51fd 1359: ;      ~~~~~
51fd 1360:
51fd a514 1361: waitvbi:      lda  $14
51ff c514 1362: .lp1:      cmp  $14
5201 f0fc 1363:      beq  .lp1
5203 a514 1364:      lda  $14
5205 c514 1365: .lp2:      cmp  $14
5207 f0fc 1366:      beq  .lp2
5209 60 1367:      rts
520a 1368:
520a 1369: ;      get both the "formatted" and "unformatted" date
520a 1370: ;      ~~~~~
520a 1371:
520a ad01d3 1372: get_TD:      lda  portb
520d 48 1373:      pha
520e 29fe 1374:      and  #$FE
5210 8d01d3 1375:      sta  portb
5213 a0b2 1376:      ldy  #,tdbuff & $ff
5215 a252 1377:      ldx  #,tdbuff / 256
5217 20c9ff 1378:      jsr  $FFC9
521a 20c0ff 1379:      jsr  $FFC0
521d 68 1380:      pla
521e 8d01d3 1381:      sta  portb
5221 9009 1382:      bcc  .noerr
5223 1383:

```

```

5223 a900 1384: .error:          lda  #0
5225 8d7e44 1385:                sta  cur_date
5228 8d8d44 1386:                sta  cur_time
522b 60 1387:                rts
522c 1388:
522c 1389: ;    move the formatted date into cur_date, cur_time
522c 1390: ;    ~~~~~
522c 1391:
522c a000 1392: .noerr:          ldy  #0
522e a201 1393:                ldx  #1
5230 b96345 1394: .lp:          lda  tdbuf,y
5233 9d7e44 1395:                sta  cur_date,x
5236 e8 1396:                inx
5237 c8 1397:                iny
5238 c00d 1398:                cpy  #13
523a d0f4 1399:                bne  .lp
523c a201 1400:                ldx  #1
523e c8 1401:                iny
523f b96345 1402: .lp2:         lda  tdbuf,y
5242 9d8d44 1403:                sta  cur_time,x
5245 e8 1404:                inx
5246 c8 1405:                iny
5247 c018 1406:                cpy  #24
5249 d0f4 1407:                bne  .lp2
524b 1408:
524b 1409: ;    move the unformatted date into the byte fields
524b 1410: ;    ~~~~~
524b 1411:
524b a00d 1412:                ldy  #13
524d b10a 1413:                lda  (comtab),y
524f 8d9d44 1414:                sta  cur_day
5252 c8 1415:                iny
5253 b10a 1416:                lda  (comtab),y
5255 8d9c44 1417:                sta  cur_month
5258 c8 1418:                iny
5259 b10a 1419:                lda  (comtab),y
525b 8d9e44 1420:                sta  cur_year
525e c8 1421:                iny
525f b10a 1422:                lda  (comtab),y
5261 8d9f44 1423:                sta  cur_hour
5264 c8 1424:                iny
5265 b10a 1425:                lda  (comtab),y
5267 8da044 1426:                sta  cur_minute
526a c8 1427:                iny
526b b10a 1428:                lda  (comtab),y
526d 8da144 1429:                sta  cur_second
5270 1430:
5270 1431: ;    now, figure out what weekday it is
5270 1432: ;    ~~~~~
5270 1433:
5270 ad8044 1434:                lda  cur_date+2      ;2n
5273 c96f 1435:                cmp  #'o'
5275 f021 1436:                beq  .monday

```

```

5277 c965 1437:      cmp    #'e'
5279 f022 1438:      beq    .wednesday
527b c968 1439:      cmp    #'h'
527d f023 1440:      beq    .thursday
527f c972 1441:      cmp    #'r'
5281 f024 1442:      beq    .friday
5283 c961 1443:      cmp    #'a'
5285 f025 1444:      beq    .saturday
5287 ad7f44 1445: .tues_sun:      lda    cur_date+1
528a c954 1446:      cmp    #'T'
528c f005 1447:      beq    .tues
528e a900 1448: .sun:          lda    #0
5290 4cae52 1449:      jmp    .exit
5293 a902 1450: .tues:          lda    #2
5295 4cae52 1451:      jmp    .exit
5298 a901 1452: .monday:        lda    #1
529a 4cae52 1453:      jmp    .exit
529d a903 1454: .wednesday:     lda    #3
529f 4cae52 1455:      jmp    .exit
52a2 a904 1456: .thursday:      lda    #4
52a4 4cae52 1457:      jmp    .exit
52a7 a905 1458: .friday:        lda    #5
52a9 4cae52 1459:      jmp    .exit
52ac a906 1460: .saturday:      lda    #6
52ae 8da244 1461: .exit:          sta    cur_weekday
52b1 60 1462:      rts
52b2 1463:
52b2 1464: .tdbuff:        ds.b 30
52d0 1465:
52d0 1466:
52d0 1467:
52d0 1468:
52d0 00 1469: inv_hold:      dc.b 0
52d1 1470:
52d1 1471: good_get:
52d1 add052 1472:      lda    inv_hold
52d4 8d6844 1473:      sta    invoker
52d7 ad9380 1474:      lda    curbase
52da 8d9280 1475:      sta    override
52dd 207b53 1476:      jsr    getbase
52e0 4c3c56 1477:      jmp    b_a
52e3 1478: ;
52e3 1479:
52e3 1480: top:
52e3 ba 1481:      tsx
52e4 8eb880 1482:      stx    msgstack
52e7 a901 1483:      lda    #1
52e9 8d176f 1484:      sta    ed_amsmsg      ;f
52ec a982 1485:      lda    #m_data & $ff
52ee 8d186f 1486:      sta    ed_msgbuff
52f1 a98e 1487:      lda    #m_data / 256
52f3 8d196f 1488:      sta    ed_msgbuff+1
52f6 1489: ;;;;;;      mea    m_data,ed_msgbuff      ;po

```

```

52f6 20e66d 1490:      jsr  clear_thread      ;cl
52f9 a900 1491:      lda  #0
52fb 8d9380 1492:      sta  curbase
52fe 8d9080 1493:      sta  quickscan
5301 8d9180 1494:      sta  nonstop
5304 8d9d80 1495:      sta  lastsrch
5307 8d9e80 1496:      sta  keyword
530a      1497:
530a      1498:
530a      1499:
530a      1500:
530a      1501: ;      jsr  nextbase      ;fi
530a      1502:
530a      1503:
530a 8d9280 1504: .yequ:      sta  override
530d c900 1505:      cmp  #0
530f d038 1506:      bne  .got_base
5311 ad9080 1507:      lda  quickscan      ;sc
5314 1033 1508:      bpl  msgmain      ;no
5316 20334e 1509:      jsr  printsi
5319 4e6f20 1510:      dc.b  "No new text found in your
533a 626173 1511:      dc.b  "base list...",$9b,-1
5348 60 1512:      rts
5349      1513:
5349      1514: .got_base:
5349      1515: ;      jsr  printsi
5349      1516: ;      dc.b  "Going to base #",-1
5349      1517: ;      lda  override
5349      1518: ;      jsr  pr_byte
5349      1519: ;      jsr  cr_lf
5349      1520:
5349 207b53 1521: msgmain:      jsr  getbase
534c 203154 1522:      jsr  proc_base
534f 4c4953 1523:      jmp  msgmain
5352      1524:
5352      1525:
5352      1526: exitmsg:
5352 20226a 1527:      jsr  close_base
5355 aeb880 1528:      ldx  msgstack
5358 9a 1529:      txs
5359 60 1530:      rts
535a      1531:
535a      1532:
535a      1533:
535a      1534:
535a      1535:
535a      1536: msgerror:
535a 20334e 1537:      jsr  printsi
535d 9b4372 1538:      dc.b  $9b,"Critical Database error
5378 4c5253 1539:      jmp  exitmsg
537b      1540:
537b      1541:
537b      1542: ;~~~~~

```

```

537b 1543:
537b 1544:
537b 1545: getbase:
537b 20226a 1546:      jsr  close_base
537e 20146a 1547:      jsr  open_base
5381 1003 1548:      bpl  .noe1
5383 4c0954 1549:      jmp  .baseerr
5386 20276a 1550: .noe1:      jsr  readidx
5389 1003 1551:      bpl  .noe2
538b 4c0954 1552:      jmp  .baseerr
538e add282 1553: .noe2:      lda  i_maxmsgs
5391 d003 1554:      bne  .noe3
5393 4c0954 1555:      jmp  .baseerr
5396 1556: .noe3:
5396 add082 1557:      lda  i_totbytes
5399 8d1a6f 1558:      sta  ed_maxbytes      ;se
539c add182 1559:      lda  i_totbytes+1
539f 8d1b6f 1560:      sta  ed_maxbytes+1
53a2 add682 1561:      lda  i_graphics
53a5 8d1d6f 1562:      sta  ed_graphics      ;sa
53a8 1563:
53a8 1564:
53a8 1565: ;      update the system_hi_message table
53a8 1566: ;      ~~~~~
53a8 1567:
53a8 a001 1568:      ldy  #$01      ;inde
53aa 88 1569:      dey
53ab aed382 1570:      ldx  i_inuse      ;po
53ae bdd784 1571:      lda  i_msgnlo,x
53b1 1572: ;      sta  hi_msglo,y
53b1 bdd785 1573:      lda  i_msgnhi,x
53b4 1574: ;      sta  hi_msghi,y
53b4 1575:
53b4 1576: ;~~~~~right here~~~~~
53b4 1577: ;      lda  move_data
53b4 1578: ;      cmp  #'M'
53b4 1579: ;      beq  .ov1
53b4 20334e 1580:      jsr  printsi
53b7 9b5468 1581:      dc.b  $9b,"There are",-1
53c3 add382 1582:      lda  i_inuse
53c6 204c4b 1583:      jsr  pr_byte
53c9 20334e 1584:      jsr  printsi
53cc 206d65 1585:      dc.b  " messages",-1
53d8 20a26c 1586:      jsr  firnewmsg
53db c900 1587:      cmp  #0
53dd f014 1588:      beq  .nonew
53df 20334e 1589:      jsr  printsi
53e2 4e6577 1590:      dc.b  "New messages",$9b,-1
53f0 4c0054 1591:      jmp  .ov1
53f3 1592: .nonew:
53f3 20334e 1593:      jsr  printsi
53f6 4e6f6e 1594:      dc.b  "None new",$9b,-1
5400 add96b 1595: .ov1:      lda  asknum

```



```

5403 8d9380 1596:          sta  curbase
5406 a900  1597:          lda  #0
5408      1598:
5408      1599:
5408      1600: ;          lda  goto.error
5408      1601: ;          jsr  b_steve
5408      1602:
5408      1603:
5408 60   1604:          rts
5409 a240  1605: .baseerr:      ldx  #msgbase
540b 20a650 1606:          jsr  close
540e 20334e 1607:          jsr  printsi
5411 9b9b55 1608:          dc.b  $9b,$9b,"Unable to load Err
542e 4c5253 1609:          jmp  exitmsg
5431      1610:
5431      1611:
5431      1612:
5431      1613: ;~~~~~
5431      1614: ;
5431      1615: ;   The main processor for the message base areas.
5431      1616: ;
5431      1617: ;~~~~~
5431      1618:
5431 a901  1619: proc_base:      lda  #1
5433 8d9580 1620:          sta  verbose
5436 a900  1621:          lda  #0
5438 8db780 1622:          sta  topthread      ;no
543b 20e66d 1623:          jsr  clear_thread    ;cl
543e 20a26c 1624:          jsr  firnewmsg       ;fi
5441      1625:
5441 208258 1626:          jsr  b_steve
5444      1627:
5444 a8     1628:          tay
5445 c900  1629:          cmp  #0              ;fi
5447 f003  1630:          beq  .nonew          ;no
5449      1631:
5449      1632: ;          dey                ;ye
5449      1633:
5449 4c4f54 1634:          jmp  .gotone
544c acd382 1635: .nonew:          ldy  i_inuse
544f 8c9480 1636: .gotone:        sty  curmsg      ;sa
5452 a901  1637:          lda  #1
5454 8d9680 1638:          sta  steprate
5457 ad9080 1639:          lda  quickscan      ;qu
545a f005  1640:          beq  do_base         ;no
545c a99b  1641:          lda  #$9b
545e 20846e 1642:          jsr  stuff           ;ye
5461      1643:
5461      1644: do_base:
5461 ad9480 1645: .not_over:      lda  curmsg      ;ma
5464 cdd382 1646:          cmp  i_inuse          ; O
5467 f008  1647:          beq  dbinrng
5469 9006  1648:          bcc  dbinrng

```

```

546b add382 1649:      lda  i_inuse
546e 8d9480 1650:      sta  curmsg
5471 adb780 1651: dbinrng:      lda  topthread
5474 f019 1652:      beq  dbnoth
5476 20334e 1653:      jsr  printsi
5479 9b2854 1654:      dc.b $9b,"(Thread #",-1
5484 adb780 1655:      lda  topthread
5487 204c4b 1656:      jsr  pr_byte
548a a929 1657:      lda  #')'
548c 20cc4f 1658:      jsr  echo
548f      1659:
548f      1660: dbnoth:
548f 20334e 1661:      jsr  printsi
5492 9b5b44 1662:      dc.b $9b,"[DataBase #"-1
549f      1663: ;      lda  curbase
549f      1664: ;      jsr  pr_byte
549f 20334e 1665:      jsr  printsi
54a2 5d20ff 1666:      dc.b "]"",-1
54a5      1667: ;
54a5      1668: ; Adding new code
54a5      1669:
54a5 20334e 1670:      jsr  printsi
54a8 28ff 1671:      dc.b '(', -1
54aa ad9080 1672:      lda  quickscan      ;sc
54ad f006 1673:      beq  .dbNOscan
54af 20334e 1674:      jsr  printsi
54b2 512fff 1675:      dc.b "Q/", -1
54b5      1676: .dbNOscan:
54b5 ad9480 1677:      lda  curmsg
54b8 204c4b 1678:      jsr  pr_byte      ;50
54bb a92f 1679:      lda  #'/'
54bd 20cc4f 1680:      jsr  echo
54c0 add382 1681:      lda  i_inuse
54c3 204c4b 1682:      jsr  pr_byte
54c6 ad9680 1683:      lda  steprate
54c9 c9ff 1684:      cmp  #$ff
54cb d004 1685:      bne  dbplus
54cd a92d 1686:      lda  #'-'
54cf d002 1687:      bne  dbpr2
54d1 a92b 1688: dbplus:      lda  #'+'
54d3 20cc4f 1689: dbpr2:      jsr  echo
54d6 20334e 1690:      jsr  printsi
54d9 2920ff 1691:      dc.b ")",-1
54dc      1692:      mea  i_name,pr_ptr
54dc a9ba ----:      lda  #low i_name
54de 8588 ----:      sta  pr_ptr
54e0 a982 ----:      lda  #high i_name
54e2 8589 ----:      sta  pr_ptr + 1
54e4 20fa4f 1693:      jsr  echos
54e7 20334e 1694:      jsr  printsi
54ea 3a20ff 1695:      dc.b ":", -1
54ed      1696:
54ed      1697: ;      if we're in a non-stop scan, fake a c/r key

```

```

54ed      1698: ; ~~~~~
54ed      1699:
54ed ad9180 1700:      lda  nonstop
54f0 100e 1701:      bpl  .no_NON
54f2 a900 1702:      lda  #0
54f4 8d4648 1703:      sta  instr
54f7 205550 1704:      jsr  cr_lf
54fa 205550 1705:      jsr  cr_lf
54fd 4c0e55 1706:      jmp  db_force      ;fo
5500      1707:
5500 206b4b 1708: .no_NON:      jsr  get_str
5503 4648 1709:      dc.w  instr
5505 010001 1710:      dc.b  1,0,1
5508 205550 1711:      jsr  cr_lf      ; 2
550b 205550 1712:      jsr  cr_lf
550e ad4648 1713: db_force:      lda  instr      ;ju
5511 d004 1714:      bne  dbacmd      ;no
5513 a99b 1715:      lda  #$9b
5515 d006 1716:      bne  dbover
5517      1717: dbacmd:
5517      1718:
5517 ad4748 1719:      lda  instr+1
551a 20ae50 1720:      jsr  upcase
551d      1721: dbover:
551d 48 1722:      pha
551e      1723:      mea  basecmds,s_ptr
551e a9d2 ----:      lda  #low basecmds
5520 8582 ----:      sta  s_ptr
5522 a96e ----:      lda  #high basecmds
5524 8583 ----:      sta  s_ptr + 1
5526 68 1724:      pla
5527 201a50 1725:      jsr  execute
552a 4c6154 1726:      jmp  do_base
552d      1727:
552d      1728: b_bad:
552d 20334e 1729:      jsr  printsi
5530 576861 1730:      dc.b  "What! Enter ? for help",$
5549 60 1731:      rts
554a      1732:
554a      1733:
554a      1734: b_x:
554a      1735:
554a 20334e 1736:      jsr  printsi
554d 457869 1737:      dc.b  "Exiting Database...",$9b,-
5562 4c5253 1738:      jmp  exitmsg
5565      1739:
5565      1740:
5565 adb780 1741: b_cr:      lda  topthread
5568 f003 1742:      beq  .bcc1
556a 4ceb55 1743:      jmp  .thread
556d ad9680 1744: .bcc1:      lda  steprate
5570 300f 1745:      bmi  .backw
5572 ad9480 1746: .forw:      lda  curmsg      ;go

```

```

5575 cdd382 1747:      cmp    i_inuse
5578 b015 1748:      bcs    .atend
557a ee9480 1749:      inc    curmsg
557d 207367 1750:      jsr    showmsg
5580 60 1751:      rts
5581 ad9480 1752: .backw:      lda    curmsg
5584 c902 1753:      cmp    #2
5586 9007 1754:      bcc    .atend
5588 ce9480 1755:      dec    curmsg
558b 207367 1756:      jsr    showmsg
558e 60 1757:      rts
558f ad9080 1758: .atend:      lda    quickscan
5592 f000 1759:      beq    .no_QS      ;no
5594      1760:
5594      1761: .no_QS:
5594 20334e 1762:      jsr    printsi
5597 4e6f20 1763:      dc.b    "No more messages in this d
55bc ad9680 1764:      lda    steprate
55bf 3029 1765:      bmi    .nosay
55c1 20334e 1766:      jsr    printsi
55c4 287072 1767:      dc.b    "(press ""/"" for next base
55ea 60 1768: .nosay:      rts
55eb      1769:
55eb ad9480 1770: .thread:      lda    curmsg
55ee 20f86d 1771:      jsr    add_thread      ;ad
55f1 201a6e 1772:      jsr    nextchild      ;fi
55f4 c900 1773:      cmp    #0      ;fi
55f6 f007 1774:      beq    .nochild      ;no
55f8 8d9480 1775: .child:      sta    curmsg
55fb 207367 1776:      jsr    showmsg
55fe 60 1777:      rts
55ff 20e66d 1778: .nochild:      jsr    clear_thread      ;bl
5602 20334e 1779:      jsr    printsi
5605 456e64 1780:      dc.b    "End of thread"
5612 3b 1781:      dc.b    59      ;';'
5613 207265 1782:      dc.b    " returning to msg #",-1
5627 adb780 1783:      lda    topthread
562a 204c4b 1784:      jsr    pr_byte
562d 205550 1785:      jsr    cr_lf
5630 adb780 1786:      lda    topthread
5633 8d9480 1787:      sta    curmsg
5636 a900 1788:      lda    #0
5638 8db780 1789:      sta    topthread
563b 60 1790:      rts
563c      1791:
563c      1792:
563c 206b6d 1793: b_a:      jsr    check0
563f ad9480 1794:      lda    curmsg
5642 d003 1795:      bne    .goon
5644 4c6555 1796:      jmp    b_cr
5647 ad9580 1797: .goon:      lda    verbose      ;ho
564a 8d5c56 1798:      sta    .hold
564d a901 1799:      lda    #1

```

```

564f 8d9580 1800:      sta  verbose
5652 207367 1801:      jsr  showmsg      ;sh
5655 ad5c56 1802:      lda  .hold
5658 8d9580 1803:      sta  verbose
565b 60 1804:      rts
565c 00 1805: .hold:      dc.b  0
565d 1806:
565d 1807:
565d 1808:
565d a9ff 1809: b_b:      lda  #$ff      ;se
565f 8d9680 1810:      sta  steprate
5662 20334e 1811:      jsr  printsi
5665 526561 1812:      dc.b  "Read direction now BACKWAR
5682 adb780 1813:      lda  topthread
5685 f019 1814:      beq  .exit
5687 a900 1815:      lda  #0
5689 8db780 1816:      sta  topthread
568c 20334e 1817:      jsr  printsi
568f 287468 1818:      dc.b  "(thread broken)", $9b, -1
56a0 1819: .exit:
56a0 60 1820:      rts
56a1 1821:
56a1 1822:
56a1 1823:
56a1 206b6d 1824: b_d:      jsr  check0
56a4 207a66 1825:      jsr  getmsg
56a7 1826:      mea  u_msgdel, s_ptr
56a7 a9e5 ----:      lda  #low u_msgdel
56a9 8582 ----:      sta  s_ptr
56ab a944 ----:      lda  #high u_msgdel
56ad 8583 ----:      sta  s_ptr + 1
56af ad9380 1827:      lda  curbase      ;if
56b2 20eb4a 1828:      jsr  seclvl
56b5 1038 1829:      bpl  .cando
56b7 1830:      mea  m_from, s_ptr      ;if
56b7 a906 ----:      lda  #low m_from
56b9 8582 ----:      sta  s_ptr
56bb a98d ----:      lda  #high m_from
56bd 8583 ----:      sta  s_ptr + 1
56bf 1831:      mea  u_handle, d_ptr
56bf a94d ----:      lda  #low u_handle
56c1 8584 ----:      sta  d_ptr
56c3 a945 ----:      lda  #high u_handle
56c5 8585 ----:      sta  d_ptr + 1
56c7 20ca50 1832:      jsr  cmp_str
56ca f023 1833:      beq  .cando
56cc 1834: .nocando:
56cc 20334e 1835:      jsr  printsi
56cf 596f75 1836:      dc.b  "You can't delete this mess
56ee 60 1837:      rts
56ef 1838: .cando:
56ef 208366 1839:      jsr  showheader
56f2 20334e 1840:      jsr  printsi

```

```

56f5 9b4465 1841:      dc.b $9b,"Delete this message? ",
570c 20fc50 1842:      jsr y_or_n
570f c959 1843:      cmp #'Y'
5711 f001 1844:      beq .dodel
5713 60 1845:      rts
5714 ad9480 1846: .dodel:      lda curmsg
5717 20da6b 1847:      jsr delmsg
571a 204e6a 1848:      jsr writeidx
571d 20334e 1849:      jsr printsi
5720 9b4d65 1850:      dc.b $9b,"Message deleted",$9b,-
5732 adb780 1851:      lda topthread
5735 f019 1852:      beq .ex
5737 20334e 1853:      jsr printsi
573a 287468 1854:      dc.b "(thread broken)", $9b,-1
574b a900 1855:      lda #0
574d 8db780 1856:      sta topthread
5750 60 1857: .ex:      rts
5751 1858:
5751 1859:
5751 1860:
5751 206b6d 1861: b_e:      jsr check0
5754 207a66 1862:      jsr getmsg      ;ed
5757 1863:      mea u_msgedit,s_ptr
5757 a9e1 ----:      lda #low u_msgedit
5759 8582 ----:      sta s_ptr
575b a944 ----:      lda #high u_msgedit
575d 8583 ----:      sta s_ptr + 1
575f ad9380 1864:      lda curbase      ;if
5762 20eb4a 1865:      jsr seclvl
5765 1046 1866:      bpl .cando
5767 1867:      mea u_msgpost,s_ptr
5767 a9dd ----:      lda #low u_msgpost
5769 8582 ----:      sta s_ptr
576b a944 ----:      lda #high u_msgpost
576d 8583 ----:      sta s_ptr + 1
576f ad9380 1868:      lda curbase      ;ma
5772 20eb4a 1869:      jsr seclvl
5775 3015 1870:      bmi .nocando
5777 1871:      mea m_from,s_ptr      ;if
5777 a906 ----:      lda #low m_from
5779 8582 ----:      sta s_ptr
577b a98d ----:      lda #high m_from
577d 8583 ----:      sta s_ptr + 1
577f 1872:      mea u_handle,d_ptr
577f a94d ----:      lda #low u_handle
5781 8584 ----:      sta d_ptr
5783 a945 ----:      lda #high u_handle
5785 8585 ----:      sta d_ptr + 1
5787 20ca50 1873:      jsr cmp_str
578a f021 1874:      beq .cando
578c 1875: .nocando:
578c 20334e 1876:      jsr printsi
578f 596f75 1877:      dc.b "You can't edit this messag

```

```

57ac 60 1878:          rts
57ad      1879:
57ad      1880: .cando:
57ad ae4b8d 1881:          ldx  m_lines
57b0 e8 1882:          inx
57b1 8e417f 1883:          stx  linenum
57b4      1884:          mea  m_title,s_ptr
57b4 a9ec ----:          lda  #low m_title
57b6 8582 ----:          sta  s_ptr
57b8 a98c ----:          lda  #high m_title
57ba 8583 ----:          sta  s_ptr + 1
57bc      1885:          mea  ed_title,d_ptr
57bc a91f ----:          lda  #low ed_title
57be 8584 ----:          sta  d_ptr
57c0 a96f ----:          lda  #high ed_title
57c2 8585 ----:          sta  d_ptr + 1
57c4 209451 1886:          jsr  move_str
57c7      1887:          mea  m_to,s_ptr
57c7 a91b ----:          lda  #low m_to
57c9 8582 ----:          sta  s_ptr
57cb a98d ----:          lda  #high m_to
57cd 8583 ----:          sta  s_ptr + 1
57cf      1888:          mea  ed_toname,d_ptr
57cf a93e ----:          lda  #low ed_toname
57d1 8584 ----:          sta  d_ptr
57d3 a96f ----:          lda  #high ed_toname
57d5 8585 ----:          sta  d_ptr + 1
57d7 209451 1889:          jsr  move_str
57da ad498d 1890:          lda  m_width
57dd 8d1c6f 1891:          sta  ed_width
57e0 205d6f 1892:          jsr  msgedit          ;ge
57e3 8d4b8d 1893:          sta  m_lines
57e6 205550 1894:          jsr  cr_lf
57e9 ad4b8d 1895:          lda  m_lines
57ec d011 1896:          bne  .notabt
57ee 20334e 1897:          jsr  printsi
57f1 9b4162 1898:          dc.b  $9b,"Aborted...",$9b,-1
57fe 60 1899:          rts
57ff      1900: .notabt:
57ff      1901:
57ff ad1fd0 1902:          lda  consol
5802 c907 1903:          cmp  #$07
5804 d012 1904:          bne  .plop
5806      1905:          mea  u_seclvl,s_ptr
5806 a9d5 ----:          lda  #low u_seclvl
5808 8582 ----:          sta  s_ptr
580a a944 ----:          lda  #high u_seclvl
580c 8583 ----:          sta  s_ptr + 1
580e a920 1906:          lda  #32          ;if they have syso
5810 20eb4a 1907:          jsr  seclvl
5813 1003 1908:          bpl  .plop
5815 a901 1909:          lda  #1
5817 2c 1910:          dc.b  $2c

```

```

5818 a900 1911: .plop:      lda    #0    ; messase edited b
581a 8d4a8d 1912:      sta    m_edited
581d 20334e 1913:      jsr    printsi
5820 9b5265 1914:      dc.b    $9b,"Re-saving message...",
5836 a900 1915:      lda    #0    ;if
5838 8d4c8d 1916:      sta    m_node    ; n
583b 8d4d8d 1917:      sta    m_node+1
583e 8d4e8d 1918:      sta    m_nodename
5841 8d688d 1919:      sta    m_nodecity
5844 206e6e 1920:      jsr    clear_nodes    ;cl
5847 ad9480 1921:      lda    curmsg
584a 20a86a 1922:      jsr    writemsg    ;wr
584d 3003 1923:      bmi    .noidx
584f 204e6a 1924:      jsr    writeidx    ;re
5852      1925: .noidx:
5852 20334e 1926:      jsr    printsi
5855 446f6e 1927:      dc.b    "Done!",$9b,-1
585c 60 1928:      rts
585d      1929:
585d      1930:
585d a901 1931: b_f:      lda    #1    ;se
585f 8d9680 1932:      sta    steprate
5862 20334e 1933:      jsr    printsi
5865 526561 1934:      dc.b    "Read direction now FORWARD
5881 60 1935:      rts
5882      1936:
5882      1937:
5882      1938: b_steve:
5882 ad8645 1939:      lda    goto.error
5885 c900 1940:      cmp    #$00
5887 f013 1941:      beq    .exit
5889 ad8645 1942:      lda    goto.error
588c 8d9480 1943:      sta    curmsg
588f a900 1944:      lda    #$00
5891 8d8645 1945:      sta    goto.error
5894 a93f 1946:      lda    #$3f
5896 8dfc02 1947:      sta    $2fc
5899 ad9480 1948:      lda    curmsg
589c 60 1949: .exit:      rts
589d      1950:
589d      1951:
589d      1952:
589d      1953:
589d 206b6d 1954: b_j:      jsr    check0
58a0 20334e 1955:      jsr    printsi
58a3 4a756d 1956:      dc.b    "Jump to Error #",-1
58b3 20216d 1957:      jsr    getmsgnum
58b6      1958: ;      bcs    .exit
58b6 8d9480 1959:      sta    curmsg
58b9 207367 1960:      jsr    showmsg
58bc 60 1961: .exit:      rts
58bd      1962:
58bd      1963:

```



```

58bd 206b6d 1964: b_k:      jsr  check0
58c0 a900 1965:      lda  #0
58c2 8d9d80 1966:      sta  lastsrch
58c5 8d9e80 1967:      sta  keyword
58c8 20334e 1968:      jsr  printsi
58cb 456e74 1969:      dc.b "Enter a full or partial wor
58f0 666f72 1970:      dc.b "for: ",-1
58f6 206b4b 1971:      jsr  get_str
58f9 9e80 1972:      dc.w keyword
58fb 140001 1973:      dc.b 20,0,1
58fe 205550 1974:      jsr  cr_lf
5901 205550 1975:      jsr  cr_lf
5904 ad9e80 1976:      lda  keyword
5907 d010 1977:      bne  .goon
5909 20334e 1978:      jsr  printsi
590c 41626f 1979:      dc.b "Aborted...",$9b,-1
5918 60 1980:      rts
5919 4c1c59 1981: .goon:      jmp  b_c
591c 1982:
591c 1983:
591c 1984:
591c 206b6d 1985: b_c:      jsr  check0
591f a900 1986:      lda  #0
5921 8d6744 1987:      sta  aborted
5924 ad9e80 1988:      lda  keyword
5927 d003 1989:      bne  .gotkey
5929 4cbd58 1990:      jmp  b_k
592c 1991: .gotkey:
592c 20334e 1992:      jsr  printsi
592f 536561 1993:      dc.b "Searching..",-1
593b a92e 1994: .sloop:      lda  #'.'
593d 20cc4f 1995:      jsr  echo
5940 ad6744 1996:      lda  aborted
5943 f011 1997:      beq  .noabort
5945 20334e 1998:      jsr  printsi
5948 9b4162 1999:      dc.b $9b,"Aborted...",$9b,-1
5955 60 2000:      rts
5956 2001: .noabort:
5956 ad9d80 2002:      lda  lastsrch
5959 cdd382 2003:      cmp  i_inuse
595c 9003 2004:      bcc  .noend
595e 4cf659 2005:      jmp  .atend
5961 ee9d80 2006: .noend:      inc  lastsrch
5964 ad9480 2007:      lda  curmsg
5967 8d3b5a 2008:      sta  .hold
596a ad9d80 2009:      lda  lastsrch
596d 8d9480 2010:      sta  curmsg
5970 207a66 2011:      jsr  getmsg
5973 ad3b5a 2012:      lda  .hold
5976 8d9480 2013:
5979 2014:
5979 2015: ; now, search all fields for a match
5979 2016: ; ~~~~~

```

```

5979      2017:
5979      2018:          mea    keyword,d_ptr
5979 a99e ----:      lda    #low keyword
597b 8584 ----:      sta    d_ptr
597d a980 ----:      lda    #high keyword
597f 8585 ----:      sta    d_ptr + 1
5981      2019:          mea    m_title,s_ptr
5981 a9ec ----:      lda    #low m_title
5983 8582 ----:      sta    s_ptr
5985 a98c ----:      lda    #high m_title
5987 8583 ----:      sta    s_ptr + 1
5989 20294d 2020:      jsr    substr
598c d051 2021:      bne    .found
598e      2022:
598e      2023:          mea    m_from,s_ptr
598e a906 ----:      lda    #low m_from
5990 8582 ----:      sta    s_ptr
5992 a98d ----:      lda    #high m_from
5994 8583 ----:      sta    s_ptr + 1
5996 20294d 2024:      jsr    substr
5999 d044 2025:      bne    .found
599b      2026:
599b      2027:          mea    m_to,s_ptr
599b a91b ----:      lda    #low m_to
599d 8582 ----:      sta    s_ptr
599f a98d ----:      lda    #high m_to
59a1 8583 ----:      sta    s_ptr + 1
59a3 20294d 2028:      jsr    substr
59a6 d037 2029:      bne    .found
59a8      2030:
59a8      2031:          mea    m_time,s_ptr
59a8 a930 ----:      lda    #low m_time
59aa 8582 ----:      sta    s_ptr
59ac a98d ----:      lda    #high m_time
59ae 8583 ----:      sta    s_ptr + 1
59b0 20294d 2032:      jsr    substr
59b3 d02a 2033:      bne    .found
59b5      2034:
59b5      2035:          mea    m_date,s_ptr
59b5 a93b ----:      lda    #low m_date
59b7 8582 ----:      sta    s_ptr
59b9 a98d ----:      lda    #high m_date
59bb 8583 ----:      sta    s_ptr + 1
59bd 20294d 2036:      jsr    substr
59c0 d01d 2037:      bne    .found
59c2      2038:
59c2      2039:          mea    m_nodename,s_ptr
59c2 a94e ----:      lda    #low m_nodename
59c4 8582 ----:      sta    s_ptr
59c6 a98d ----:      lda    #high m_nodename
59c8 8583 ----:      sta    s_ptr + 1
59ca 20294d 2040:      jsr    substr
59cd d010 2041:      bne    .found

```

```

59cf      2042:
59cf      2043:          mea    m_nodcity,s_ptr
59cf a968 ----:      lda    #low m_nodcity
59d1 8582 ----:      sta    s_ptr
59d3 a98d ----:      lda    #high m_nodcity
59d5 8583 ----:      sta    s_ptr + 1
59d7 20294d 2044:      jsr    substr
59da d003 2045:      bne    .found
59dc      2046:
59dc 4c125a 2047:      jmp    .sr_msg
59df 205550 2048: .found:      jsr    cr_lf
59e2 ad9d80 2049:      lda    lastsrch
59e5 8d9480 2050:      sta    curmsg
59e8 a901 2051:      lda    #1
59ea 8d9680 2052:      sta    steprate
59ed a900 2053:      lda    #0
59ef 8db780 2054:      sta    tophthread
59f2 207367 2055:      jsr    showmsg
59f5 60 2056:      rts
59f6      2057: .atend:
59f6 20334e 2058:      jsr    printsi
59f9 9b9b 2059:      dc.b    $9b,$9b
59fb 4b6579 2060:      dc.b    "Keyword not found...",$9b,-
5a11 60 2061:      rts
5a12      2062:
5a12 a901 2063: .sr_msg:      lda    #1
5a14 8d3a5a 2064:      sta    .counter
5a17 ad3a5a 2065: .sr_loop:      lda    .counter
5a1a 204278 2066:      jsr    calcptr
5a1d a588 2067:      lda    pr_ptr
5a1f 8582 2068:      sta    s_ptr
5a21 a589 2069:      lda    pr_ptr+1
5a23 8583 2070:      sta    s_ptr+1
5a25 20294d 2071:      jsr    substr
5a28 d0b5 2072:      bne    .found
5a2a ee3a5a 2073:      inc    .counter
5a2d ad3a5a 2074:      lda    .counter
5a30 cd4b8d 2075:      cmp    m_lines
5a33 90e2 2076:      bcc    .sr_loop
5a35 f0e0 2077:      beq    .sr_loop
5a37 4c3b59 2078:      jmp    .sloop
5a3a      2079:
5a3a 00 2080: .counter:      dc.b    0
5a3b 00 2081: .hold:      dc.b    0
5a3c      2082:
5a3c      2083:
5a3c      2084:
5a3c 206b6d 2085: b_l:      jsr    check0
5a3f      2086:
5a3f      2087:          mea    u_msgdel,s_ptr      ;LO
5a3f a9e5 ----:      lda    #low u_msgdel
5a41 8582 ----:      sta    s_ptr
5a43 a944 ----:      lda    #high u_msgdel

```

```

5a45 8583 ----:      sta  s_ptr + 1
5a47 ad9380 2088:      lda  curbase      ;mu
5a4a 20eb4a 2089:      jsr  seclvl
5a4d 101f 2090:      bpl  .cando
5a4f 2091: .nocando:
5a4f 20334e 2092:      jsr  printsi
5a52 596f75 2093:      dc.b  "You can't lock messages!",
5a6b a980 2094:      lda  #$80
5a6d 60 2095:      rts
5a6e ac9480 2096: .cando:      ldy  curmsg
5a71 b9d783 2097:      lda  i_flag,y
5a74 0901 2098:      ora  #LOCKED
5a76 99d783 2099:      sta  i_flag,y
5a79 204e6a 2100:      jsr  writeidx
5a7c 20334e 2101:      jsr  printsi
5a7f 4d6573 2102:      dc.b  "Message is now LOCKED", $9b
5a96 60 2103:      rts
5a97 2104:
5a97 2105:
5a97 2106:
5a97 2107: b_m:
5a97 a900 2108:      lda  #$00
5a99 8db25a 2109:      sta  .count
5a9c ad1fd0 2110:      lda  consol
5a9f c907 2111:      cmp  #$07
5aa1 f00e 2112:      beq  .b
5aa3 2113: .a:
5aa3 20275b 2114:      jsr  b_n
5aa6 acb25a 2115:      ldy  .count
5aa9 c8 2116:      iny
5aaa 8cb25a 2117:      sty  .count
5aad c0ff 2118:      cpy  #255
5aaf d0f2 2119:      bne  .a
5ab1 60 2120: .b:      rts
5ab2 2121:
5ab2 2122:
5ab2 00 2123: .count:      dc.b  0
5ab3 2124:
5ab3 2125:
5ab3 2126:
5ab3 2127:
5ab3 2128:
5ab3 206b6d 2129: b_h:      jsr  check0
5ab6 20334e 2130:      jsr  printsi
5ab9 507269 2131:      dc.b  "Printing", $9b, $9b, -1
5ac4 20ef7d 2132:      jsr  print_msg
5ac7 60 2133:      rts
5ac8 2134:
5ac8 2135:
5ac8 2136:
5ac8 2137:
5ac8 2138: b_s:
5ac8 2139:      mea  basename, s_ptr

```

```

5ac8 a976 ----:    lda    #low basename
5aca 8582 ----:    sta    s_ptr
5acc a96b ----:    lda    #high basename
5ace 8583 ----:    sta    s_ptr + 1
5ad0 2140:        mea    parm_1,d_ptr
5ad0 a9a6 ----:    lda    #low parm_1
5ad2 8584 ----:    sta    d_ptr
5ad4 a945 ----:    lda    #high parm_1
5ad6 8585 ----:    sta    d_ptr + 1
5ad8 20c64d 2141:    jsr    tostr
5adb 2142:
5adb 2143:
5adb 20334e 2144:    jsr    printsi
5ade 9b9b44 2145:    dc.b    $9b,$9b,"Database File Name
5af3 203d3d 2146:    dc.b    " ==> "
5af8 ff 2147:        dc.b    -1
5af9 2148:        mea    parm_1,pr_ptr
5af9 a9a6 ----:    lda    #low parm_1
5afb 8588 ----:    sta    pr_ptr
5afd a945 ----:    lda    #high parm_1
5aff 8589 ----:    sta    pr_ptr + 1
5b01 20fa4f 2149:    jsr    echos
5b04 20334e 2150:    jsr    printsi
5b07 9b9b 2151:    dc.b    $9b,$9b
5b09 507265 2152:    dc.b    "Press any key to Continue"
5b23 204050 2153:    jsr    get_key
5b26 60 2154:        rts
5b27 2155:
5b27 2156:
5b27 2157: ;~~~~~
5b27 2158: ;    Build an auto message
5b27 2159: ;
5b27 2160: ;~~~~~
5b27 2161:
5b27 2162:
5b27 2163: b_N:
5b27 2164: .cando:
5b27 20334e 2165:    jsr    printsi
5b2a 4d616b 2166:    dc.b    "Making error code message"
5b45 ff 2167:        dc.b    -1
5b46 2168:
5b46 ac9480 2169:    ldy    curmsg
5b49 c8 2170:        iny
5b4a 98 2171:        tya
5b4b 201e5c 2172:    jsr    my.byte_sto
5b4e 2173:
5b4e a900 2174:    lda    #0        ;break any
5b50 8db780 2175:    sta    topthread
5b53 2176:
5b53 2177:
5b53 2178:    mea    my.realdos,s_ptr
5b53 a950 ----:    lda    #low my.realdos
5b55 8582 ----:    sta    s_ptr

```

```

5b57 a95c ----:      lda  #high my.realdos
5b59 8583 ----:      sta  s_ptr + 1
5b5b 2179:          mea  m_title,d_ptr
5b5b a9ec ----:      lda  #low m_title
5b5d 8584 ----:      sta  d_ptr
5b5f a98c ----:      lda  #high m_title
5b61 8585 ----:      sta  d_ptr + 1
5b63 209451 2180:    jsr  move_str
5b66 2181:
5b66 a900 2182: .goon:      lda  #0          ;br
5b68 8db780 2183:      sta  tophthead
5b6b 2184:
5b6b 2185:
5b6b 2186: .not_SYSOP:    mea  u_handle,s_ptr
5b6b a94d ----:      lda  #low u_handle
5b6d 8582 ----:      sta  s_ptr
5b6f a945 ----:      lda  #high u_handle
5b71 8583 ----:      sta  s_ptr + 1
5b73 2187:          mea  m_from,d_ptr
5b73 a906 ----:      lda  #low m_from
5b75 8584 ----:      sta  d_ptr
5b77 a98d ----:      lda  #high m_from
5b79 8585 ----:      sta  d_ptr + 1
5b7b 209451 2188:    jsr  move_str
5b7e 2189:
5b7e 2190: .a_SYSOP:
5b7e 2191:          mea  my.toall,s_ptr
5b7e a964 ----:      lda  #low my.toall
5b80 8582 ----:      sta  s_ptr
5b82 a95c ----:      lda  #high my.toall
5b84 8583 ----:      sta  s_ptr + 1
5b86 2192:          mea  m_to,d_ptr
5b86 a91b ----:      lda  #low m_to
5b88 8584 ----:      sta  d_ptr
5b8a a98d ----:      lda  #high m_to
5b8c 8585 ----:      sta  d_ptr + 1
5b8e 209451 2193:    jsr  move_str
5b91 2194:
5b91 a900 2195: .go2:      lda  #0
5b93 8d417f 2196:      sta  linenum
5b96 2197:          mea  m_title,s_ptr
5b96 a9ec ----:      lda  #low m_title
5b98 8582 ----:      sta  s_ptr
5b9a a98c ----:      lda  #high m_title
5b9c 8583 ----:      sta  s_ptr + 1
5b9e 2198:          mea  ed_title,d_ptr
5b9e a91f ----:      lda  #low ed_title
5ba0 8584 ----:      sta  d_ptr
5ba2 a96f ----:      lda  #high ed_title
5ba4 8585 ----:      sta  d_ptr + 1
5ba6 209451 2199:    jsr  move_str
5ba9 2200:
5ba9 2201:          mea  m_to,s_ptr

```

```

5ba9 a91b ----:      lda  #low m_to
5bab 8582 ----:      sta  s_ptr
5bad a98d ----:      lda  #high m_to
5baf 8583 ----:      sta  s_ptr + 1
5bb1 2202:          mea  ed_toname,d_ptr
5bb1 a93e ----:      lda  #low ed_toname
5bb3 8584 ----:      sta  d_ptr
5bb5 a96f ----:      lda  #high ed_toname
5bb7 8585 ----:      sta  d_ptr + 1
5bb9 209451 2203:      jsr  move_str
5bbc 2204:
5bbc 2205: ;~~~~~
5bbc 2206: ; Got the header built like I want
5bbc 2207:
5bbc 2208:
5bbc 20715c 2209:      jsr  my.get_message
5bbf 8d4b8d 2210:      sta  m_lines
5bc2 2211:
5bc2 2212:
5bc2 2213:
5bc2 ad1c6f 2214:      lda  ed_width
5bc5 8d498d 2215:      sta  m_width
5bc8 205550 2216:      jsr  cr_lf
5bcb ad4b8d 2217:      lda  m_lines
5bce 2218:
5bce 20334e 2219:      jsr  printsi
5bd1 9b5361 2220:      dc.b  $9b,"Saving message...",-1
5be4 a900 2221:      lda  #0
5be6 8d4c8d 2222:      sta  m_node
5be9 8d4d8d 2223:      sta  m_node+1
5bec 8d4e8d 2224:      sta  m_nodename
5bef 8d688d 2225:      sta  m_nodecity
5bf2 8d4a8d 2226:      sta  m_edited
5bf5 8d9980 2227:      sta  touser
5bf8 8d9a80 2228:      sta  touser+1
5bfb 8d9b80 2229:      sta  replymsg
5bfe 8d9c80 2230:      sta  replymsg+1
5c01 206e6e 2231:      jsr  clear_nodes      ;cl
5c04 ada544 2232:      lda  usernum
5c07 8d9780 2233:      sta  fromuser
5c0a ada644 2234:      lda  usernum+1
5c0d 8d9880 2235:      sta  fromuser+1
5c10 208d65 2236:      jsr  postmsg      ;wr
5c13 20334e 2237:      jsr  printsi
5c16 446f6e 2238:      dc.b  "Done!",$9b,-1
5c1d 60 2239:      rts
5c1e 2240: ;~~~~~
5c1e 2241: ;Prints a byte or a card to the screen
5c1e 2242: ;
5c1e 2243: ;
5c1e 2244: my.byte_sto:
5c1e a200 2245:      ldx  #$00
5c20 2246: my.card_sto:

```

```

5c20 85d4 2247:      sta  fr0
5c22 86d5 2248:      stx  fr0+1
5c24 a900 2249:      lda  #$00
5c26 85f2 2250:      sta  cix
5c28 20aad9 2251:     jsr  ifp
5c2b 20e6d8 2252:     jsr  fasc
5c2e a000 2253:     ldy  #$00
5c30      2254: .aprbloop:
5c30 b1f3 2255:      lda  (inbuff),y
5c32 08 2256:      php
5c33 297f 2257:      and  #$7f
5c35 99455c 2258:     sta  .err_num,y
5c38 c8 2259:      iny
5c39      2260: ;      jsr  echo
5c39 28 2261:      plp
5c3a 10f4 2262:     bpl  .aprbloop
5c3c 60 2263:      rts
5c3d      2264:
5c3d      2265:
5c3d      2266:
5c3d 0e4572 2267: .error:      dc.b  14,"Error #"
5c45 202020 2268: .err_num:    dc.b  "      ",$9b,$9b
5c50      2269:
5c50 135265 2270: my.realdos:  dc.b  19,"RealDos Error Codes"
5c64 0c5265 2271: my.toall:   dc.b  12,"RealDos User"
5c71      2272:
5c71      2273: ;~~~~~
5c71      2274: ;Here are the special routines I set up for this
5c71      2275: ;
5c71      2276: ;
5c71      2277:
5c71      2278:
5c71 adca44 2279: my.get_message:  lda  u_vw
5c74 8d1c6f 2280:      sta  ed_width      ;se
5c77      2281:
5c77 a901 2282:      lda  #$01
5c79 8d8445 2283:      sta  rc
5c7c ad176f 2284:      lda  ed_ams
5c7f f002 2285:     beq  .notmsg      ; change
5c81 a928 2286:      lda  #40
5c83 203379 2287: .notmsg:      jsr  header
5c86 a900 2288:      lda  #0      ;st
5c88 8d427f 2289:      sta  graphics
5c8b 8d4a7f 2290:      sta  did_wrap
5c8e 8dfa7f 2291:      sta  pasteline
5c91 a980 2292:      lda  #$80
5c93 8d437f 2293:      sta  wordwrap
5c96      2294:
5c96 ad417f 2295: my.newline:      lda  linenum      ;ma
5c99 d003 2296:      bne  .ok      ; g
5c9b ee417f 2297:      inc  linenum
5c9e      2298:
5c9e 204f77 2299: .ok:      jsr  cklength      ;ca

```



```

5ca1 2c427f 2300:      bit   graphics
5ca4 3009  2301:      bmi   .grmode
5ca6      2302:
5ca6 20334e 2303:      jsr   printsi
5ca9 9b3eff 2304:      dc.b  '$9b,>,-1
5cac 4cb55c 2305:      jmp   .nl1
5caf      2306:
5caf 20334e 2307: .grmode:      jsr   printsi
5cb2 9b14ff 2308:      dc.b  '$9b,20,-1      ;gr
5cb5      2309:
5cb5 ad417f 2310: .nl1:      lda   linenum
5cb8 c9fb  2311:      cmp   #251      ;on
5cba b00d  2312:      bcs   .maxedout
5cbc ad4f7f 2313:      lda   bytes_left+1
5cbf d014  2314:      bne   .notmaxed
5cc1 ad1c6f 2315:      lda   ed_width
5cc4 cd4e7f 2316:      cmp   bytes_left      ;mu
5cc7 900c  2317:      bcc   .notmaxed      ; w
5cc9      2318:
5cc9 a901  2319: .maxedout:      lda   #1
5ccb 8d507f 2320:      sta   msgline
5cce a92f  2321:      lda   #'/'
5cd0 8d517f 2322:      sta   msgline+1
5cd3 d00e  2323:      bne   .gotaline
5cd5 a900  2324: .notmaxed:      lda   #0
5cd7 8d497f 2325:      sta   autoreturn
5cda ad1c6f 2326:      lda   ed_width
5cdd 38    2327:      sec
5cde e902  2328:      sbc   #2
5ce0      2329:
5ce0      2330:
5ce0 204760 2331:      jsr   my.get_line
5ce3      2332:
5ce3      2333:
5ce3      2334:
5ce3 ad507f 2335: .gotaline:      lda   msgline
5ce6 c901  2336:      cmp   #1      ;lt
5ce8 d042  2337:      bne   .not2      ;no
5cea ad517f 2338:      lda   msgline+1
5ced c92f  2339:      cmp   #'/'      ;sl
5cef d006  2340:      bne   .not1
5cf1 20485d 2341:      jsr   my.do_edit
5cf4 4c965c 2342:      jmp   my.newline
5cf7      2343:
5cf7 c93f  2344: .not1:      cmp   #'?'
5cf9 d031  2345:      bne   .not2
5cfb 20334e 2346:      jsr   printsi
5cfe 4c696e 2347:      dc.b  "Line #",-1
5d05 ad417f 2348:      lda   linenum
5d08 204c4b 2349:      jsr   pr_byte
5d0b 20334e 2350:      jsr   printsi
5d0e 2c20ff 2351:      dc.b  ",",-1
5d11 ad4e7f 2352:      lda   bytes_left

```

```

5d14 ae4f7f 2353:      ldz  bytes_left+1
5d17 204e4b 2354:      jsr  pr_card
5d1a 20334e 2355:      jsr  printsi
5d1d 206279 2356:      dc.b  " bytes left",-1
5d29 4c965c 2357:      jmp  my.newline
5d2c 202878 2358: .not2:      jsr  movtobuff      ;mo
5d2f ee417f 2359:      inc  linenum
5d32      2360:      mea  msgline,s_ptr
5d32 a950 ----:      lda  #low msgline
5d34 8582 ----:      sta  s_ptr
5d36 a97f ----:      lda  #high msgline
5d38 8583 ----:      sta  s_ptr + 1
5d3a      2361:      mea  pasteline,d_ptr
5d3a a9fa ----:      lda  #low pasteline
5d3c 8584 ----:      sta  d_ptr
5d3e a97f ----:      lda  #high pasteline
5d40 8585 ----:      sta  d_ptr + 1
5d42 209451 2362:      jsr  move_str
5d45 4c965c 2363:      jmp  my.newline
5d48      2364:
5d48      2365:
5d48      2366: ; the message editing commands
5d48      2367: ; ~~~~~
5d48      2368:
5d48 20334e 2369: my.do_edit:      jsr  printsi
5d4b 7e5bff 2370:      dc.b  126,['',-1
5d4e ad417f 2371:      lda  linenum      ;'
5d51 38 2372:      sec
5d52 e901 2373:      sbc  #1
5d54 204c4b 2374:      jsr  pr_byte
5d57 20334e 2375:      jsr  printsi
5d5a 5d2045 2376:      dc.b  "]" Edit: ",-1
5d63 208262 2377:      jsr  my.auto_type      ;my
5d66 297f 2378:      and  #$7f
5d68 48 2379:      pha
5d69      2380:      mea  my.editcmds,s_ptr
5d69 a943 ----:      lda  #low my.editcmds
5d6b 8582 ----:      sta  s_ptr
5d6d a962 ----:      lda  #high my.editcmds
5d6f 8583 ----:      sta  s_ptr + 1
5d71 68 2381:      pla
5d72 201a50 2382:      jsr  execute
5d75 60 2383:      rts
5d76      2384:
5d76 a900 2385: my.e_s:      lda  #0
5d78 8d1e6f 2386:      sta  ed_savemode
5d7b 4c865d 2387:      jmp  my.save_msg
5d7e      2388:
5d7e a904 2389: my.e_u:      lda  #AS_IS
5d80 8d1e6f 2390:      sta  ed_savemode
5d83 4c865d 2391:      jmp  my.save_msg
5d86      2392:
5d86 200477 2393: my.save_msg:      jsr  cklines

```

```

5d89 20334e 2394:      jsr  printsi
5d8c 536176 2395:      dc.b  "Save", $9b, -1
5d92 ce417f 2396:      dec  linenum      ;l
5d95 20d57c 2397:      jsr  stripcrs
5d98 68      2398:      pla
5d99 68      2399:      pla
5d9a 68      2400:      pla
5d9b 68      2401:      pla
5d9c ad1c6f 2402:      lda  ed_width
5d9f c928    2403:      cmp  #40
5da1 f005    2404:      beq  .exit
5da3 a950    2405:      lda  #80
5da5 8d1c6f 2406:      sta  ed_width
5da8 ad417f 2407: .exit:      lda  linenum
5dab 60      2408:      rts
5dac        2409:
5dac        2410:
5dac 200477 2411: my.e_r:      jsr  cklines
5daf 202777 2412:      jsr  ckmax
5db2 20334e 2413:      jsr  printsi
5db5 7e7e7e 2414:      dc.b  126,126,126,126,126,126,126
5dc0 ad417f 2415:      lda  linenum
5dc3 c965    2416:      cmp  #101
5dc5 9005    2417:      bcc  .not100
5dc7 a97e    2418:      lda  #126
5dc9 20cc4f 2419:      jsr  echo
5dcc c90b    2420: .not100:      cmp  #11
5dce 9005    2421:      bcc  .enough
5dd0 a97e    2422:      lda  #126
5dd2 20cc4f 2423:      jsr  echo
5dd5 a93e    2424: .enough:      lda  #'>'
5dd7 20cc4f 2425:      jsr  echo
5dda ad417f 2426:      lda  linenum
5ddd 38      2427:      sec
5dde e901    2428:      sbc  #1
5de0 204278 2429:      jsr  calcptr
5de3 a588    2430:      lda  pr_ptr
5de5 8582    2431:      sta  s_ptr
5de7 a589    2432:      lda  pr_ptr+1
5de9 8583    2433:      sta  s_ptr+1
5deb 20fa4f 2434:      jsr  echos
5dee        2435:      mea  msgline, d_ptr
5dee a950    ----:      lda  #low msgline
5df0 8584    ----:      sta  d_ptr
5df2 a97f    ----:      lda  #high msgline
5df4 8585    ----:      sta  d_ptr + 1
5df6 209451 2436:      jsr  move_str
5df9        2437:
5df9 202878 2438:      jsr  movtobuff      ;mo
5dfc ee417f 2439:      inc  linenum
5dff 60      2440:      rts
5e00        2441:
5e00        2442: my.e_a:

```

```

5e00 20334e 2443:      jsr  printsi
5e03 41626f 2444:      dc.b  "Abort...You sure? ",-1
5e16 20fc50 2445:      jsr  y_or_n
5e19 c959 2446:      cmp  #'Y'
5e1b d017 2447:      bne  .xea
5e1d 68 2448:      pla
5e1e 68 2449:      pla
5e1f 68 2450:      pla
5e20 68 2451:      pla
5e21 a980 2452:      lda  #$80
5e23 8d8445 2453:      sta  rc
5e26 ad1c6f 2454:      lda  ed_width
5e29 c928 2455:      cmp  #40
5e2b f005 2456:      beq  .exit
5e2d a950 2457:      lda  #80
5e2f 8d1c6f 2458:      sta  ed_width
5e32 a900 2459: .exit:      lda  #0
5e34 60 2460: .xea:      rts
5e35 2461:
5e35 2462: my.e_qmark:
5e35 2463:
5e35 60 2464:      rts
5e36 2465:
5e36 2466:
5e36 2467:
5e36 2468:
5e36 2469: my.e_b:
5e36 20334e 2470:      jsr  printsi
5e39 426567 2471:      dc.b  "Begin Over...You sure? ",-
5e51 20fc50 2472:      jsr  y_or_n
5e54 c959 2473:      cmp  #'Y'
5e56 d008 2474:      bne  .xea
5e58 a901 2475:      lda  #1
5e5a 8d417f 2476:      sta  linenum
5e5d 207e5e 2477:      jsr  my.e_sl
5e60 60 2478: .xea:      rts
5e61 2479:
5e61 2480:
5e61 20334e 2481: my.e_c:      jsr  printsi
5e64 7d9b20 2482:      dc.b  125,$9b,',-1
5e68 ad417f 2483:      lda  linenum
5e6b 8d7d5e 2484:      sta  .temp
5e6e a901 2485:      lda  #1
5e70 8d417f 2486:      sta  linenum
5e73 20a679 2487:      jsr  header2
5e76 ad7d5e 2488:      lda  .temp
5e79 8d417f 2489:      sta  linenum
5e7c 60 2490:      rts
5e7d 00 2491: .temp:      dc.b  0
5e7e 2492:
5e7e 2493:
5e7e a97d 2494: my.e_sl:      lda  #125
5e80 20cc4f 2495:      jsr  echo

```

```

5e83 60 2496:      rts
5e84      2497:
5e84 200477 2498: my.e_d:      jsr  cklines
5e87 20334e 2499:      jsr  printsi
5e8a 44656c 2500:      dc.b  "Delete",-1
5e92 ad417f 2501:      lda  linenum
5e95 38 2502:      sec
5e96 e901 2503:      sbc  #1
5e98 8d457f 2504:      sta  def_1
5e9b 8d467f 2505:      sta  def_2
5e9e 207078 2506:      jsr  get_nums
5ea1 ad447f 2507:      lda  nums
5ea4 f010 2508:      beq  .delerr
5ea6 20a877 2509:      jsr  del_lines
5ea9 20334e 2510:      jsr  printsi
5eac 202d20 2511:      dc.b  "- Done!",-1
5eb5 60 2512:      rts
5eb6      2513: .delerr:
5eb6 20334e 2514:      jsr  printsi
5eb9 202d20 2515:      dc.b  "- No lines deleted!",-1
5ece 60 2516:      rts
5ecf      2517:
5ecf 200477 2518: my.e_e:      jsr  cklines
5ed2 202777 2519:      jsr  ckmax
5ed5 20334e 2520:      jsr  printsi
5ed8 456469 2521:      dc.b  "Edit",-1
5ede ad417f 2522:      lda  linenum
5ee1 38 2523:      sec
5ee2 e901 2524:      sbc  #1
5ee4 8d457f 2525:      sta  def_1
5ee7 8d467f 2526:      sta  def_2
5eea 207078 2527:      jsr  get_nums
5eed 20334e 2528:      jsr  printsi
5ef0 9b9b2d 2529:      dc.b  "$9b,$9b,'",-1
5ef4 ad477f 2530:      lda  fromline
5ef7 204278 2531:      jsr  calcptr
5efa 20db7d 2532:      jsr  movepaste      ;mo
5efd 20fa4f 2533:      jsr  echos
5f00 20334e 2534:      jsr  printsi
5f03 9b2bff 2535:      dc.b  "$9b,'+',-1
5f06 a980 2536:      lda  #$80
5f08 8d497f 2537:      sta  autoreturn
5f0b a900 2538:      lda  #0
5f0d 8d4a7f 2539:      sta  did_wrap
5f10 ad1c6f 2540:      lda  ed_width
5f13 38 2541:      sec
5f14 e902 2542:      sbc  #2
5f16 204760 2543:      jsr  my.get_line
5f19 ad507f 2544:      lda  msgline
5f1c f036 2545:      beq  .nochg
5f1e      2546:
5f1e      2547: ; delete old line from the buffer, then insert the n
5f1e      2548: ; ~~~~~

```

```

5f1e      2549:
5f1e ae417f 2550:      ldz   linenum
5f21 ca    2551:      dex
5f22 ec477f 2552:      cpx   fromline
5f25 f013   2553:      beq   .noexp
5f27      2554:
5f27 ad477f 2555:      lda   fromline
5f2a 8d487f 2556:      sta   toline      ;
5f2d 202c7d 2557:      jsr   contract
5f30 ad477f 2558:      lda   fromline
5f33 ae507f 2559:      ldz   msgline      ;g
5f36 e8     2560:      inx
5f37 20727d 2561:      jsr   expand      ;
5f3a ad477f 2562: .noexp:      lda   fromline
5f3d 204278 2563:      jsr   calcptr      ;p
5f40 a588   2564:      lda   pr_ptr
5f42 8584   2565:      sta   d_ptr
5f44 a589   2566:      lda   pr_ptr+1
5f46 8585   2567:      sta   d_ptr+1
5f48      2568:      mea   msgline,s_ptr
5f48 a950   ----:      lda   #low msgline
5f4a 8582   ----:      sta   s_ptr
5f4c a97f   ----:      lda   #high msgline
5f4e 8583   ----:      sta   s_ptr + 1
5f50 209451 2569:      jsr   move_str
5f53 60     2570:      rts
5f54      2571:
5f54      2572: .nochg:
5f54 20334e 2573:      jsr   printsi
5f57 4c696e 2574:      dc.b  "Line unchanged...",-1
5f69 60     2575:      rts
5f6a      2576:
5f6a 200477 2577: my.e_i:      jsr   cklines
5f6d 202777 2578:      jsr   ckmax
5f70 20334e 2579:      jsr   printsi
5f73 496e73 2580:      dc.b  "Insert Before",-1
5f82 ad417f 2581:      lda   linenum
5f85 38     2582:      sec
5f86 e901   2583:      sbc   #1
5f88 8d457f 2584:      sta   def_1
5f8b 8d467f 2585:      sta   def_2
5f8e 207078 2586:      jsr   get_nums
5f91      2587:
5f91 20334e 2588:      jsr   printsi
5f94 9b9b2b 2589:      dc.b  "$9b,$9b,'+',-1
5f98 a980   2590:      lda   #$80
5f9a 8d497f 2591:      sta   autoreturn
5f9d a900   2592:      lda   #0
5f9f 8d4a7f 2593:      sta   did_wrap
5fa2 8dfa7f 2594:      sta   pasteline
5fa5 ad1c6f 2595:      lda   ed_width
5fa8 38     2596:      sec
5fa9 e902   2597:      sbc   #2

```

```

5fab 204760 2598:          jsr  my.get_line
5fae      2599:
5fae ad477f 2600:          lda  fromline
5fb1 ae507f 2601:          ldx  msgline          ;g
5fb4 e8     2602:          inx
5fb5 20727d 2603:          jsr  expand          ;
5fb8 ad477f 2604:          lda  fromline
5fbb 204278 2605:          jsr  calcptr          ;p
5fbe a588   2606:          lda  pr_ptr
5fc0 8584   2607:          sta  d_ptr
5fc2 a589   2608:          lda  pr_ptr+1
5fc4 8585   2609:          sta  d_ptr+1
5fc6      2610:          mea  msgline,s_ptr
5fc6 a950   ----:          lda  #low msgline
5fc8 8582   ----:          sta  s_ptr
5fca a97f   ----:          lda  #high msgline
5fcc 8583   ----:          sta  s_ptr + 1
5fce 209451 2611:          jsr  move_str
5fd1 ee417f 2612:          inc  linenum          ;+
5fd4 60     2613:          rts
5fd5      2614:
5fd5      2615:
5fd5      2616:
5fd5      2617:
5fd5 200477 2618: my.e_l:          jsr  cklines
5fd8 20334e 2619:          jsr  printsi
5fdb 4c6973 2620:          dc.b  "List",-1
5fe1 a901   2621:          lda  #1
5fe3 8d457f 2622:          sta  def_1
5fe6 ad417f 2623:          lda  linenum
5fe9 38     2624:          sec
5fea e901   2625:          sbc  #1
5fec 8d467f 2626:          sta  def_2
5fef 207078 2627:          jsr  get_nums
5ff2 a900   2628:          lda  #0
5ff4 4cda77 2629:          jmp  listmsg
5ff7      2630:
5ff7 200477 2631: my.e_n:          jsr  cklines
5ffa 20334e 2632:          jsr  printsi
5ffd 4c6973 2633:          dc.b  "List",-1
6003 a901   2634:          lda  #1
6005 8d457f 2635:          sta  def_1
6008 ad417f 2636:          lda  linenum
600b 38     2637:          sec
600c e901   2638:          sbc  #1
600e 8d467f 2639:          sta  def_2
6011 207078 2640:          jsr  get_nums
6014 a901   2641:          lda  #1
6016 4cda77 2642:          jmp  listmsg
6019      2643:
6019      2644:
6019 200477 2645: my.e_f:          jsr  cklines
601c 20457a 2646:          jsr  formheader

```

```

601f a901 2647:      lda  #1
6021 8d477f 2648:      sta  fromline
6024 ad417f 2649:      lda  linenum
6027 38 2650:      sec
6028 e901 2651:      sbc  #1
602a 8d487f 2652:      sta  toline
602d a900 2653:      lda  #0
602f 4cda77 2654:      jmp  listmsg
6032 2655:
6032 2656: my.e_bad:
6032 20334e 2657:      jsr  printsi
6035 456e74 2658:      dc.b  "Enter ? for help",-1
6046 60 2659:      rts
6047 2660:
6047 2661:
6047 2662:
6047 8d4062 2663: my.get_line:      sta  .maxlth      ;s
604a a900 2664:      lda  #0
604c 8d507f 2665:      sta  msgline      ;z
604f 8d4b7f 2666:      sta  pasteidx
6052 2667:
6052 2668: ;      if a word wrap occurred, move it in
6052 2669: ;      ~~~~~
6052 2670:
6052 ad4a7f 2671:      lda  did_wrap
6055 f014 2672:      beq  .no_wrap
6057 a000 2673:      ldy  #0
6059 b9a57f 2674: .mvwrap:      lda  wrapword,y      ;ge
605c f00d 2675:      beq  .no_wrap
605e 99517f 2676:      sta  msgline+1,y
6061 20cc4f 2677:      jsr  echo
6064 ee507f 2678:      inc  msgline      ;+
6067 c8 2679:      iny
6068 4c5960 2680:      jmp  .mvwrap
606b 2681:
606b a900 2682: .no_wrap:      lda  #0
606d 8d4a7f 2683:      sta  did_wrap
6070 208262 2684: .gsloop:      jsr  my.auto_type
6073 c95c 2685:      cmp  #"
6075 f0f9 2686:      beq  .gsloop      ;y
6077 c99b 2687:      cmp  #$9b
6079 d003 2688:      bne  .not_cr      ;n
607b 4c3361 2689:      jmp  .gscr
607e 2690:
607e 48 2691: .not_cr:      pha
607f 203762 2692:      jsr  .doclrcr      ;cl
6082 2c497f 2693:      bit  autoreturn      ;au
6085 3019 2694:      bmi  .notone      ;n
6087 ae507f 2695:      ldx  msgline      ;i
608a d014 2696:      bne  .notone      ;n
608c 297f 2697:      and  #$7f
608e c92f 2698:      cmp  #'
6090 f004 2699:      beq  .go_edit

```



```

6092 c93f 2700:      cmp  #'?'
6094 d00a 2701:      bne  .notone      ;n
6096      2702:
6096 8d517f 2703: .go_edit:      sta  msgline+1
6099 a901 2704:      lda  #1
609b 8d507f 2705:      sta  msgline
609e 68 2706:      pla
609f 60 2707:      rts
60a0      2708:
60a0 68 2709: .notone:      pla
60a1 c97e 2710:      cmp  #126
60a3 f04f 2711:      beq  .bspace
60a5      2712:
60a5 2c427f 2713:      bit  graphics
60a8 1006 2714:      bpl  .not_grm
60aa 8d4162 2715:      sta  .key
60ad 4cee60 2716:      jmp  .gsstore
60b0      2717:
60b0 c91e 2718: .not_grm:      cmp  #30
60b2 d003 2719:      bne  .not30
60b4 4cf460 2720:      jmp  .bspace
60b7 c918 2721: .not30:      cmp  #24
60b9 d003 2722:      bne  .not24
60bb 4c0961 2723:      jmp  .wipeout
60be c97f 2724: .not24:      cmp  #127
60c0 d003 2725:      bne  .not127
60c2 4c1c61 2726:      jmp  .tab
60c5 c90c 2727: .not127:      cmp  #12
60c7 d003 2728:      bne  .not12
60c9 4c4c61 2729:      jmp  .paste      ;
60cc c917 2730: .not12:      cmp  #23
60ce d003 2731:      bne  .not23
60d0 4c6461 2732:      jmp  .pasteword
60d3 c90e 2733: .not23:      cmp  #14
60d5 d003 2734:      bne  .not14
60d7 4c8361 2735:      jmp  .handle      ;y
60da c912 2736: .not14:      cmp  #18
60dc d003 2737:      bne  .not18
60de 4c9c61 2738:      jmp  .name
60e1 297f 2739: .not18:      and  #$7f
60e3 8d4162 2740:      sta  .key
60e6      2741:
60e6      2742: ; now, see if it falls within requested mask
60e6      2743: ; ~~~~~
60e6      2744:
60e6 c920 2745: .notauto:      cmp  #32
60e8 9086 2746:      bcc  .gsloop      ;y
60ea c97b 2747:      cmp  #'z'+1      ;
60ec b082 2748:      bcs  .gsloop      ;y
60ee      2749:
60ee 20b561 2750: .gsstore:      jsr  .store_it      ;sa
60f1 4cd161 2751:      jmp  .check_ww      ;se
60f4      2752:

```

```

60f4 ad507f 2753: .bspace:      lda  msgline          ;ca
60f7 c900 2754:          cmp  #0
60f9 d003 2755:          bne  .bs1
60fb 4c7060 2756:          jmp  .gsloop
60fe ce507f 2757: .bs1:      dec  msgline          ;-
6101 a97e 2758:          lda  #126
6103 20cc4f 2759:          jsr  echo
6106 4c7060 2760:          jmp  .gsloop
6109      2761:
6109 ad507f 2762: .wipeout:  lda  msgline          ;g
610c d003 2763:          bne  .wipe1
610e 4c7060 2764:          jmp  .gsloop          ;d
6111 ce507f 2765: .wipe1:    dec  msgline
6114 a97e 2766:          lda  #126
6116 20cc4f 2767:          jsr  echo
6119 4c0961 2768:          jmp  .wipeout
611c      2769:
611c a920 2770: .tab:      lda  #' '
611e 8d4162 2771:          sta  .key
6121 20b561 2772:          jsr  .store_it
6124 20b561 2773:          jsr  .store_it
6127 20b561 2774:          jsr  .store_it
612a 20b561 2775:          jsr  .store_it
612d 20b561 2776:          jsr  .store_it
6130 4cd161 2777:          jmp  .check_ww          ;se
6133      2778:
6133      2779: .gscr:
6133 ee3f62 2780:          inc  .number
6136 ad3f62 2781:          lda  .number
6139 c903 2782:          cmp  #$03
613b 900b 2783:          bcc  .pok
613d a92f 2784:          lda  #/'
613f 8d517f 2785:          sta  msgline+1
6142 a901 2786:          lda  #1
6144 8d507f 2787:          sta  msgline
6147 60 2788:          rts
6148      2789: .pok:
6148 ad507f 2790:          lda  msgline          ;r
614b 60 2791:          rts
614c      2792:
614c ac4b7f 2793: .paste:    ldy  pasteidx
614f ccfa7f 2794:          cpy  pasteline          ;pa
6152 b00d 2795:          bcs  .paignore          ;ye
6154 c8 2796:          iny
6155 8c4b7f 2797:          sty  pasteidx
6158 b9fa7f 2798:          lda  pasteline,y          ;ge
615b 8d4162 2799:          sta  .key
615e 4cee60 2800:          jmp  .gsstore
6161 4c7060 2801: .paignore: jmp  .gsloop          ;ig
6164      2802:
6164      2803:
6164 ac4b7f 2804: .pasteword: ldy  pasteidx
6167 ccfa7f 2805:          cpy  pasteline          ;pa

```

```

616a b014 2806:      bcs  .pwignore      ;ye
616c c8  2807:      iny
616d 8c4b7f 2808:      sty  pasteidx
6170 b9fa7f 2809:      lda  pasteline,y      ;ge
6173 8d4162 2810:      sta  .key
6176 20b561 2811:      jsr  .store_it
6179 ad4162 2812:      lda  .key
617c c920  2813:      cmp  #' '
617e d0e4  2814:      bne  .pasteword      ;ke
6180 4cd161 2815: .pwignore:      jmp  .check_ww      ;en
6183      2816:
6183      2817:
6183 a201  2818: .handle:      ldx  #1
6185 4c9261 2819:      jmp  .hannx
6188 bd4d45 2820: .halp:      lda  u_handle,x
618b 8d4162 2821:      sta  .key
618e 20b561 2822:      jsr  .store_it
6191 e8  2823:      inx
6192 ec4d45 2824: .hannx:      cpx  u_handle
6195 90f1  2825:      bcc  .halp
6197 f0ef  2826:      beq  .halp
6199 4cd161 2827:      jmp  .check_ww
619c      2828:
619c a201  2829: .name:      ldx  #1
619e 4cab61 2830:      jmp  .namnx
61a1 bda744 2831: .nalp:      lda  u_name,x
61a4 8d4162 2832:      sta  .key
61a7 20b561 2833:      jsr  .store_it
61aa e8  2834:      inx
61ab eca744 2835: .namnx:      cpx  u_name
61ae 90f1  2836:      bcc  .nalp
61b0 f0ef  2837:      beq  .nalp
61b2 4cd161 2838:      jmp  .check_ww
61b5      2839:
61b5 ad507f 2840: .store_it:      lda  msgline      ;g
61b8 cd4062 2841:      cmp  .maxlth
61bb f013  2842:      beq  .xsi
61bd b011  2843:      bcs  .xsi
61bf a8  2844:      tay
61c0 c8  2845:      iny
61c1 ad4162 2846:      lda  .key
61c4 99507f 2847:      sta  msgline,y      ;sa
61c7 ee507f 2848:      inc  msgline      ;i
61ca ad4162 2849:      lda  .key
61cd 20cc4f 2850:      jsr  echo
61d0 60  2851: .xsi:      rts
61d1      2852:
61d1 2c427f 2853: .check_ww:      bit  graphics      ;do
61d4 301d  2854:      bmi  .xck_ww      ;
61d6 2c497f 2855:      bit  autoreturn      ;au
61d9 3018  2856:      bmi  .xck_ww      ;n
61db ad437f 2857:      lda  wordwrap
61de f013  2858:      beq  .xck_ww

```

```

61e0 ad507f 2859:          lda  msgline
61e3 cd4062 2860:          cmp  .maxlth          ;a
61e6 900b 2861:          bcc  .xck_ww          ;n
61e8      2862:
61e8      2863: ;    first, find last space in the line
61e8      2864: ;    ~~~~~
61e8      2865:
61e8 a8 2866:          tay
61e9 b9507f 2867: .cwwfs:          lda  msgline,y
61ec c920 2868:          cmp  #' '
61ee f006 2869:          beq  .gotspace        ;ye
61f0 88 2870:          dey
61f1 d0f6 2871:          bne  .cwwfs
61f3 4c7060 2872: .xck_ww:        jmp  .gsloop          ;n
61f6      2873:
61f6      2874:
61f6      2875:
61f6      2876: ;    now, erase and move the last word into WRAPWORD
61f6      2877: ;    ~~~~~
61f6      2878:
61f6 cc507f 2879: .gotspace:      cpy  msgline          ;s
61f9 d006 2880:          bne  .no_lc            ;
61fb ce507f 2881:          dec  msgline          ;y
61fe 4c3361 2882:          jmp  .gscr
6201 8c4262 2883: .no_lc:        sty  .wwstart
6204 c8 2884:          iny
6205      2885:
6205 a900 2886:          lda  #0
6207 aa 2887:          tax
6208 9da57f 2888: .clword:      sta  wrapword,x
620b e8 2889:          inx
620c e052 2890:          cpx  #82
620e d0f8 2891:          bne  .clword
6210      2892:
6210 a200 2893:          ldx  #0
6212 b9507f 2894: .gslp:        lda  msgline,y          ;mo
6215 9da57f 2895:          sta  wrapword,x
6218 a97e 2896:          lda  #126
621a 20cc4f 2897:          jsr  echo
621d c8 2898:          iny
621e e8 2899:          inx
621f ce507f 2900:          dec  msgline          ;-
6222 ad507f 2901:          lda  msgline
6225 cd4262 2902:          cmp  .wwstart
6228 f002 2903:          beq  .doneww
622a b0e6 2904:          bcs  .gslp
622c a901 2905: .doneww:      lda  #1
622e 8d4a7f 2906:          sta  did_wrap
6231 ce507f 2907:          dec  msgline          ;r
6234 4c3361 2908:          jmp  .gscr
6237      2909:
6237      2910: .doclrcr:
6237 48 2911:          pha

```

```

6238 a900 2912:          lda  #$00
623a 8d3f62 2913:          sta  .number
623d 68 2914:          pla
623e 60 2915:          rts
623f 2916:
623f 2917:
623f 00 2918: .number:      dc.b  0
6240 01 2919: .maxlth:      dc.b  1
6241 01 2920: .key:         dc.b  1
6242 01 2921: .wwstart:     dc.b  1
6243 2922:
6243 2923:
6243 2924:
6243 53 2925: my.editecmds: dc.b  'S'
6244 765d 2926:          dc.w  my.e_s
6246 55 2927:          dc.b  'U'
6247 7e5d 2928:          dc.w  my.e_u
6249 41 2929:          dc.b  'A'
624a 005e 2930:          dc.w  my.e_a
624c 42 2931:          dc.b  'B'
624d 365e 2932:          dc.w  my.e_b
624f 43 2933:          dc.b  'C'
6250 615e 2934:          dc.w  my.e_c
6252 44 2935:          dc.b  'D'
6253 845e 2936:          dc.w  my.e_d
6255 45 2937:          dc.b  'E'
6256 cf5e 2938:          dc.w  my.e_e
6258 46 2939:          dc.b  'F'
6259 1960 2940:          dc.w  my.e_f
625b 49 2941:          dc.b  'T'
625c 6a5f 2942:          dc.w  my.e_i
625e 4c 2943:          dc.b  'L'
625f d55f 2944:          dc.w  my.e_l
6261 4e 2945:          dc.b  'N'
6262 f75f 2946:          dc.w  my.e_n
6264 52 2947:          dc.b  'R'
6265 ac5d 2948:          dc.w  my.e_r
6267 2f 2949:          dc.b  '/'
6268 7e5e 2950:          dc.w  my.e_sl
626a 00 2951:          dc.b  0
626b 3260 2952:          dc.w  my.e_bad
626d 2953:
626d 2954:
626d 2955: ;-----
626d 2956: ; GET KEY ROUTEEN
626d 2957: ;this routeen get's one key and
626d 2958: ;return it to the accumulator
626d 2959: ;-----
626d 2960: ;
626d 86b6 2961: my.get_key:   stx  $b6
626f 84b7 2962:          sty  $b7
6271 207962 2963:          jsr  .a
6274 a6b6 2964:          ldx  $b6

```

```

6276 a4b7 2965:          ldy  $b7
6278 60   2966:          rts
6279 ad25e4 2967: .a:          lda  $e420+5
627c 48   2968:          pha
627d ad24e4 2969:          lda  $e420+4
6280 48   2970:          pha
6281 60   2971:          rts
6282      2972:
6282      2973:
6282      2974:
6282      2975: my.auto_type:
6282 8ca362 2976:          sty  .y
6285 8ea462 2977:          stx  .x
6288      2978:
6288 aca562 2979:          ldy  .cur_pos
628b b9a662 2980:          lda  my.auto,y
628e c8   2981:          iny
628f 8ca562 2982:          sty  .cur_pos
6292 aea462 2983:          ldx  .x
6295 c023  2984:          cpy  #my.auto.end-my.auto+1
6297 9005  2985:          bcc  .done
6299 a000  2986:          ldy  #$00
629b 8ca562 2987:          sty  .cur_pos
629e aca362 2988: .done:          ldy  .y
62a1 60   2989:          rts
62a2      2990:
62a2 23   2991: .leng:          dc.b  my.auto.end-my.auto+1
62a3 00   2992: .y:            dc.b  0
62a4 00   2993: .x:            dc.b  0
62a5 00   2994: .cur_pos:      dc.b  0
62a6      2995:
62a6      2996:
62a6      2997:
62a6      2998: my.auto:
62a6 9b   2999:          dc.b  $9b
62a7 457272 3000:          dc.b  "Error Messages can be edit
62c3 9b9b  3001:          dc.b  $9b,$9b
62c5 2f73  3002:          dc.b  "/"s"
62c7 9b   3003:          dc.b  $9b
62c8      3004: my.auto.end:   ds.b  0
62c8      3005:
62c8      3006:
62c8 00   3007: my.mnum:       dc.b  0
62c9      3008:
62c9      3009: ;
62c9      3010: ;end of special routines
62c9      3011: ;
62c9      3012:
62c9      3013:
62c9      3014:
62c9      3015:
62c9      3016:
62c9      3017:

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62c9      3018:
62c9      3019:
62c9      3020:
62c9      3021:
62c9      3022:
62c9      3023:
62c9      3024:
62c9 206b6d 3025: b_u:      jsr  check0
62cc ac9480 3026: .cando:      ldy  curmsg
62cf b9d783 3027:      lda  i_flag,y
62d2 29fe 3028:      and  #UNLOCKED
62d4 99d783 3029:      sta  i_flag,y
62d7 204e6a 3030:      jsr  writeidx
62da 20334e 3031:      jsr  printsi
62dd 4d6573 3032:      dc.b  "Message is now UNLOCKED", $
62f6 60 3033:      rts
62f7      3034:
62f7      3035:
62f7      3036:
62f7 206b6d 3037: b_minus:      jsr  check0
62fa ad9480 3038:      lda  curmsg
62fd c902 3039:      cmp  #2
62ff 9007 3040:      bcc  .error
6301 ce9480 3041:      dec  curmsg
6304 207367 3042:      jsr  showmsg
6307 60 3043:      rts
6308 4c6555 3044: .error:      jmp  b_cr
630b      3045:
630b      3046:
630b      3047:
630b      3048:
630b 206b6d 3049: b_plus:      jsr  check0
630e ad9480 3050:      lda  curmsg      ;ma
6311 cdd382 3051:      cmp  i_inuse      ; O
6314 9003 3052:      bcc  .inrange
6316 4c6555 3053: .error:      jmp  b_cr
6319 ee9480 3054: .inrange:      inc  curmsg
631c 207367 3055:      jsr  showmsg
631f 60 3056:      rts
6320      3057:
6320      3058:
6320      3059:
6320      3060:
6320      3061:
6320      3062: b_z:
6320 20334e 3063: .cando:      jsr  printsi
6323 4e6577 3064:      dc.b  "New Name: ", -1
632e 206b4b 3065:      jsr  get_str
6331 ba82 3066:      dc.w  i_name
6333 140000 3067:      dc.b  20,0,0
6336 205550 3068:      jsr  cr_lf
6339 204e6a 3069:      jsr  writeidx
633c 20334e 3070:      jsr  printsi

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```

633f 4e616d 3071:      dc.b  "Name changed!",$9b,-1
634e 60      3072:      rts
634f      3073:
634f      3074: b_qmark:
634f 20334e 3075:      jsr  Prints
6352 7d      3076:      dc.b  $7d
6353 bcd2e5 3077:      dc.b  <+128>,"<Return>"
635b 207265 3078:      dc.b  " reads the next message",$
6373      3079:
6373 dbc1dd 3080:      dc.b  <+128>,"[A]"
6376 526561 3081:      dc.b  "Read the current message a
6395 dbc2dd 3082:      dc.b  <+128>,"[B]"
6398 536574 3083:      dc.b  "Set read direction to back
63b7 dbaddd 3084:      dc.b  <+128>,"[-]"
63ba 536574 3085:      dc.b  "Set read direction to back
63d9      3086: ;      dc.b  <+128>,"[D]"
63d9      3087: ;      dc.b  "Delete the current message
63d9 dbc5dd 3088:      dc.b  <+128>,"[E]"
63dc 456469 3089:      dc.b  "Edit the current message",
63f5 dbc6dd 3090:      dc.b  <+128>,"[F]"
63f8 536574 3091:      dc.b  "Set read direction to forw
6416      3092:
6416      3093:
6416 dbabdd 3094:      dc.b  <+128>,"[+]"
6419 526561 3095:      dc.b  "Read Next Message",$9b
642b      3096: ;      dc.b  <+128>,"[G]"
642b      3097: ;      dc.b  "Goto a certain message num
642b dbcadd 3098:      dc.b  <+128>,"[J]"
642e 476f74 3099:      dc.b  "Goto a certain message num
644c dbccdd 3100:      dc.b  <+128>,"[L]"
644f 4c6f63 3101:      dc.b  "Lock the current message",
6468 dbc3ef 3102:      dc.b  <+128>,"[Consol+M]"
6472 4d616b 3103:      dc.b  "Make Basic Database",$9b
6486 dbcedd 3104:      dc.b  <+128>,"[N]"
6489 506f73 3105:      dc.b  "Position at first new mess
64a7      3106: ;      dc.b  <+128>,"[P]"
64a7      3107: ;      dc.b  "Post a new message",$9b
64a7      3108: ;      dc.b  <+128>,"[Q]"
64a7      3109: ;      dc.b  "Quit reading current threa
64a7      3110: ;      dc.b  <+128>,"[R]"
64a7      3111: ;      dc.b  "Reply to the current messa
64a7 dbd3dd 3112:      dc.b  <+128>,"[S]"
64aa 205368 3113:      dc.b  " Show Current Database Fil
64cb      3114: ;      dc.b  <+128>,"[T]"
64cb      3115: ;      dc.b  "See thread of current mess
64cb dbd5dd 3116:      dc.b  <+128>,"[U]"
64ce 556e6c 3117:      dc.b  "Unlock the current message
64e9 dbd6dd 3118:      dc.b  <+128>,"[V]"
64ec 546f67 3119:      dc.b  "Toggle Video Width",$9b
64ff dbd8dd 3120:      dc.b  <+128>,"[X]"
6502 457869 3121:      dc.b  "Exit back to the main menu
651d dbcbdd 3122:      dc.b  <+128>,"[K]"
6520 536561 3123:      dc.b  "Search for a keyword",$9b

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6535 dbc3dd 3124:      dc.b  <+128>,"[C]"
6538 436f6e 3125:      dc.b  "Continue keyword search",$
6550 dbdadd 3126:      dc.b  <+128>,"[Z]"
6553 636861 3127:      dc.b  "change message base name",
656c 9b9b 3128:      dc.b  $9b,$9b
656e 507265 3129:      dc.b  "Press any Key to Continue"
6588 ff 3130:      dc.b  -1
6589 204050 3131:      jsr   get_key
658c 60 3132:      rts
658d 3133:
658d 3134:
658d 3135:
658d 3136:
658d 3137:
658d 3138:
658d 3139:
658d 3140:
658d 3141: postmsg:
658d 3142: ;      jsr   message_hi      ; G
658d 3143:
658d 3144:
658d add382 3145:      lda   i_inuse      ;is
6590 cdd282 3146:      cmp   i_maxmsgs
6593 9015 3147:      bcc   .notfull     ;no
6595 3148:
6595 a001 3149:      ldy   #1           ;ye
6597 b9d783 3150: .pdel:  lda   i_flag,y     ;th
659a 2901 3151:      and   #LOCKED
659c f008 3152:      beq   .pd1         ;no
659e c8 3153:      iny
659f ccd382 3154:      cpy   i_inuse
65a2 90f3 3155:      bcc   .pdel
65a4 a001 3156:      ldy   #1           ;al
65a6 98 3157: .pd1:  tya           ;#
65a7 20da6b 3158:      jsr   delmsg
65aa 3159:
65aa 205066 3160: .notfull: jsr   openslot     ;fi
65ad 8d4d66 3161:      sta   .slot        ; a
65b0 3162:
65b0 eed382 3163:      inc   i_inuse      ;in
65b3 acd382 3164:      ldy   i_inuse
65b6 3165:
65b6 ada344 3166:      lda   s_himsg
65b9 99d784 3167:      sta   i_msgnlo,y    ;ms
65bc 8d4e66 3168:      sta   .newhi
65bf ada444 3169:      lda   s_himsg+1     ;
65c2 99d785 3170:      sta   i_msgnhi,y
65c5 8d4f66 3171:      sta   .newhi+1
65c8 eea344 3172:      inc   s_himsg       ;
65cb d003 3173:      bne   .ov1
65cd eea444 3174:      inc   s_himsg+1
65d0 3175: .ov1:
65d0 ad4d66 3176:      lda   .slot

```

```

65d3 99d782 3177:      sta  i_msgptr,y
65d6 ad9780 3178:      lda  fromuser
65d9 99d788 3179:      sta  i_fromlo,y
65dc ad9880 3180:      lda  fromuser+1
65df 99d789 3181:      sta  i_fromhi,y
65e2 ad9980 3182:      lda  touser
65e5 99d786 3183:      sta  i_tolo,y
65e8 ad9a80 3184:      lda  touser+1
65eb 99d787 3185:      sta  i_tohi,y
65ee ad9b80 3186:      lda  replymsg
65f1 99d78a 3187:      sta  i_replylo,y
65f4 ad9c80 3188:      lda  replymsg+1
65f7 99d78b 3189:      sta  i_replyhi,y
65fa ad1e6f 3190:      lda  ed_savemode
65fd 99d783 3191:      sta  i_flag,y      ;cl
6600      3192:
6600 20a651 3193: .zz1:      jsr  datestamp
6603      3194:      mea  cur_date,s_ptr
6603 a97e ----:      lda  #low cur_date
6605 8582 ----:      sta  s_ptr
6607 a944 ----:      lda  #high cur_date
6609 8583 ----:      sta  s_ptr + 1
660b      3195:      mea  m_date,d_ptr
660b a93b ----:      lda  #low m_date
660d 8584 ----:      sta  d_ptr
660f a98d ----:      lda  #high m_date
6611 8585 ----:      sta  d_ptr + 1
6613 209451 3196:      jsr  move_str
6616      3197:      mea  cur_time,s_ptr
6616 a98d ----:      lda  #low cur_time
6618 8582 ----:      sta  s_ptr
661a a944 ----:      lda  #high cur_time
661c 8583 ----:      sta  s_ptr + 1
661e      3198:      mea  m_time,d_ptr
661e a930 ----:      lda  #low m_time
6620 8584 ----:      sta  d_ptr
6622 a98d ----:      lda  #high m_time
6624 8585 ----:      sta  d_ptr + 1
6626 209451 3199:      jsr  move_str
6629      3200:
6629      3201:
6629 eed482 3202:      inc  i_posted      ;+1
662c d003 3203:      bne  .nv2
662e eed582 3204:      inc  i_posted+1
6631      3205: .nv2:
6631 add382 3206:      lda  i_inuse
6634 20a86a 3207:      jsr  writemsg      ;wr
6637 3013 3208:      bmi  .noidx
6639 204e6a 3209:      jsr  writeidx      ;re
663c ae9380 3210:      ldx  curbase
663f ca 3211:      dex
6640 ad4e66 3212:      lda  .newhi      ;up
6643 9d0d45 3213:      sta  hi_msglo,x      ; b

```

```

6646 ad4f66 3214:          lda  .newhi+1
6649 9d2d45 3215:          sta  hi_msghi,x
664c      3216: .noidx:
664c      3217: ;          jsr  message_hi          ; o
664c      3218:
664c 60    3219:          rts
664d      3220:
664d 00    3221: .slot:          dc.b  0
664e 0000 3222: .newhi:          dc.b  0,0
6650      3223:
6650      3224:
6650      3225:
6650      3226: ;    find an open slot in the index area
6650      3227: ;    ~~~~~
6650      3228:
6650      3229:
6650 a200 3230: openslot:      ldx  #0
6652 e8    3231: .outloop:      inx
6653 ecd282 3232:          cpx  i_maxmsgs
6656 9005 3233:          bcc  .goon
6658 f003 3234:          beq  .goon
665a a9f0 3235: .notfound:     lda  #$f0          ;sh
665c 60    3236:          rts          ; (
665d a000 3237: .goon:         ldy  #0
665f c8    3238: .inloop:      iny
6660 ccd382 3239:          cpy  i_inuse
6663 9005 3240:          bcc  .goon2
6665 f003 3241:          beq  .goon2
6667 4c7766 3242:          jmp  .match          ;fo
666a b9d782 3243: .goon2:        lda  i_msgptr,y
666d 8d7966 3244:          sta  .temp
6670 ec7966 3245:          cpx  .temp          ;fo
6673 d0ea 3246:          bne  .inloop          ;no
6675 f0db 3247:          beq  .outloop          ;ye
6677 8a    3248: .match:        txa
6678 60    3249:          rts
6679 00    3250: .temp:         dc.b  0
667a      3251:
667a      3252:
667a      3253:
667a      3254:
667a      3255: ;    read the message header in curmsg
667a      3256: ;    ~~~~~
667a      3257:
667a      3258: getmsg:
667a ad9480 3259:          lda  curmsg
667d 20756a 3260:          jsr  readmsg          ;re
6680 08    3261:          php
6681 28    3262:          plp
6682 60    3263:          rts          ;er
6683      3264:
6683      3265:
6683      3266:

```

```

6683      3267: ;    show the message header in Accum.
6683      3268: ;    ~~~~~
6683      3269:
6683 a900 3270: showheader:      lda  #0
6685 8d6744 3271:                sta  aborted
6688 8d6a44 3272:                sta  nextmsg
668b ad9480 3273:                lda  curmsg
668e 8d6167 3274:                sta  .mnum
6691      3275:
6691 a97d 3276:                lda  #$7d
6693 20cc4f 3277:                jsr  echo
6696 20a442 3278:                jsr  tammy-3          ; d
6699      3279:
6699      3280:
6699 205550 3281:                jsr  cr_lf
669c a908 3282:                lda  #8
669e 8d8f80 3283:                sta  line_count      ;he
66a1 ac6167 3284:                ldy  .mnum
66a4 b9d783 3285:                lda  i_flag,y        ;th
66a7 2901 3286:                and  #LOCKED
66a9 f013 3287:                beq  .nolock          ;no
66ab ee8f80 3288:                inc  line_count
66ae 20334e 3289:                jsr  printsi
66b1 2a4c6f 3290:                dc.b  "*Locked*",$9b,-1
66bb 206267 3291:                jsr  .ck_abort
66be      3292: .nolock:
66be 20334e 3293:                jsr  printsi
66c1      3294: ;                dc.b  "Message: ",-1
66c1 457272 3295:                dc.b  "Error: #",-1
66ca ad6167 3296:                lda  .mnum
66cd 204c4b 3297:                jsr  pr_byte
66d0      3298: ;                jsr  printsi
66d0      3299: ;                dc.b  " (#",-1
66d0      3300: ;                ldy  .mnum
66d0      3301: ;                lda  i_msgnhi,y
66d0      3302: ;                tax
66d0      3303: ;                lda  i_msgnlo,y
66d0      3304: ;                jsr  pr_card
66d0      3305: ;                lda  #' )'
66d0      3306: ;                jsr  echo
66d0      3307:
66d0      3308: ;                ldy  .mnum
66d0      3309: ;                lda  i_replylo,y
66d0      3310: ;                ora  i_replyhi,y
66d0      3311: ;                beq  .norep
66d0      3312: ;                jsr  printsi
66d0      3313: ;                dc.b  " - Reply to #",-1
66d0      3314: ;                ldy  .mnum
66d0      3315: ;                lda  i_replyhi,y
66d0      3316: ;                tax
66d0      3317: ;                lda  i_replylo,y
66d0      3318: ;                jsr  findparent
66d0      3319: ;                jsr  pr_card

```

```

66d0 205550 3320: .norep:      jsr  cr_lf
66d3 206267 3321:      jsr  .ck_abort
66d6 20334e 3322:      jsr  printsi
66d9 546974 3323:      dc.b  "Title: ",-1
66e1      3324:      mea  m_title,pr_ptr
66e1 a9ec ----:      lda  #low m_title
66e3 8588 ----:      sta  pr_ptr
66e5 a98c ----:      lda  #high m_title
66e7 8589 ----:      sta  pr_ptr + 1
66e9 20fa4f 3325:      jsr  echos
66ec      3326:
66ec 206267 3327:      jsr  .ck_abort
66ef      3328: ;      jsr  printsi
66ef      3329: ;      dc.b  $9b
66ef      3330: ;      dc.b  " Author: ",-1
66ef      3331: ;      mea  m_from,pr_ptr
66ef      3332: ;      jsr  echos
66ef      3333:
66ef      3334: ;      jsr  .ck_abort
66ef      3335: ;      jsr  printsi
66ef      3336: ;      dc.b  $9b
66ef      3337: ;      dc.b  " To: ",-1
66ef      3338: ;      mea  m_to,pr_ptr
66ef      3339: ;      jsr  echos
66ef      3340: ;      ldy  .mnum
66ef      3341: ;      lda  i_flag,y      ;be
66ef      3342: ;      and  #RECEIVED
66ef      3343: ;      beq  .norecv      ;no
66ef      3344: ;      jsr  printsi
66ef      3345: ;      dc.b  " (Recvd)",-1
66ef      3346:
66ef 206267 3347: .norecv:      jsr  .ck_abort
66f2      3348: ;      jsr  printsi
66f2      3349: ;      dc.b  $9b
66f2      3350: ;      dc.b  " Posted: ",-1
66f2      3351: ;      mea  m_date,pr_ptr
66f2      3352: ;      jsr  echos
66f2      3353: ;      jsr  printsi
66f2      3354: ;      dc.b  " at ",-1
66f2      3355: ;      mea  m_time,pr_ptr
66f2      3356: ;      jsr  echos
66f2      3357: ;      jsr  .ck_abort
66f2      3358: ;      jsr  printsi
66f2      3359: ;      dc.b  $9b
66f2      3360: ;      dc.b  "Replies: ",-1
66f2      3361: ;      lda  .mnum
66f2      3362: ;      jsr  numreplies      ;re
66f2      3363: ;      jsr  pr_byte
66f2      3364:
66f2 ad4a8d 3365:      lda  m_edited      ;be
66f5 f011 3366:      beq  .noedit      ;no
66f7 20334e 3367:      jsr  printsi
66fa 205b3e 3368:      dc.b  " [> Edited <]",-1

```

```

6708      3369: .noedit:
6708      3370:
6708 205550 3371:      jsr  cr_lf
670b 206267 3372:      jsr  .ck_abort
670e ad4c8d 3373:      lda  m_node      ;fr
6711 0d4d8d 3374:      ora  m_node+1
6714 f006 3375:      beq  .no_node      ;no
6716 ee8f80 3376:      inc  line_count      ;he
6719 ee8f80 3377:      inc  line_count      ;
671c      3378: ;      jsr  printsi
671c      3379: ;      dc.b  " Origin: ",-1
671c      3380: ;      mea  m_nodename,pr_ptr
671c      3381: ;      jsr  echos
671c      3382: ;      jsr  cr_lf
671c      3383: ;      jsr  printsi
671c      3384: ;      dc.b  "      ",-1
671c      3385: ;      mea  m_nodecity,pr_ptr
671c      3386: ;      jsr  echos
671c      3387: ;      jsr  cr_lf
671c      3388:
671c      3389: ;      see if we need to mark this as 'received'
671c      3390: ;      ~~~~~
671c      3391:
671c ac6167 3392: .no_node:      ldy  .mnum
671f b9d783 3393:      lda  i_flag,y      ;al
6722 2902 3394:      and  #RECEIVED
6724 d03a 3395:      bne  .xit      ;ye
6726 ada544 3396:      lda  usernum
6729 0da644 3397:      ora  usernum+1      ;do
672c f032 3398:      beq  .xit
672e      3399:
672e      3400:      mea  u_handle,s_ptr
672e a94d ----:      lda  #low u_handle
6730 8582 ----:      sta  s_ptr
6732 a945 ----:      lda  #high u_handle
6734 8583 ----:      sta  s_ptr + 1
6736      3401:      mea  m_to,d_ptr
6736 a91b ----:      lda  #low m_to
6738 8584 ----:      sta  d_ptr
673a a98d ----:      lda  #high m_to
673c 8585 ----:      sta  d_ptr + 1
673e 20ca50 3402:      jsr  cmp_str      ;na
6741 d01d 3403:      bne  .xit      ;no
6743      3404:      mea  u_seclvl,s_ptr
6743 a9d5 ----:      lda  #low u_seclvl
6745 8582 ----:      sta  s_ptr
6747 a944 ----:      lda  #high u_seclvl
6749 8583 ----:      sta  s_ptr + 1
674b a920 3405:      lda  #32      ;if they have syso
674d 20eb4a 3406:      jsr  seclvl
6750 100e 3407:      bpl  .xit
6752 ac6167 3408:      ldy  .mnum
6755 b9d783 3409:      lda  i_flag,y

```

```

6758 0902 3410:      ora  #RECEIVED
675a 99d783 3411:      sta  i_flag,y      ;ma
675d 204e6a 3412:      jsr  writeidx
6760 60 3413: .xit:      rts
6761 00 3414: .mnum:      dc.b 0
6762 ad6744 3415: .ck_abort:      lda  aborted
6765 d006 3416:      bne  .quit
6767 ad6a44 3417:      lda  nextmsg
676a d001 3418:      bne  .quit
676c 60 3419:      rts
676d 68 3420: .quit:      pla
676e 68 3421:      pla
676f 205550 3422:      jsr  cr_lf
6772 60 3423:      rts
6773 3424:
6773 3425:
6773 3426:
6773 3427: ; read/display the message currently in CURMSG
6773 3428: ; ~~~~~
6773 3429:
6773 3430: showmsg:
6773 207a66 3431:      jsr  getmsg      ;re
6776 add144 3432:      lda  u_flags
6779 2904 3433:      and  #f_clear      ;ne
677b f00c 3434:      beq  .nocl      ;no
677d add144 3435:      lda  u_flags
6780 2902 3436:      and  #f_nonstop      ;do
6782 d005 3437:      bne  .nocl
6784 a97d 3438:      lda  #125
6786 20cc4f 3439:      jsr  echo
6789 208366 3440: .nocl:      jsr  showheader      ;sh
678c ad9580 3441:      lda  verbose      ;sh
678f d00b 3442:      bne  .show_msg      ;no
6791 ad6a44 3443:      lda  nextmsg      ;hi
6794 f005 3444:      beq  .bye_bye      ;no
6796 a99b 3445:      lda  #$9b      ;fo
6798 20846e 3446:      jsr  stuff
679b 60 3447: .bye_bye:      rts      ;ye
679c 3448:
679c 3449: .show_msg:
679c 202168 3450:      jsr  disp_msg      ;di
679f ac9480 3451:      ldy  curmsg      ;if
67a2 b9d785 3452:      lda  i_msgnhi,y      ;
67a5 cd6c44 3453:      cmp  w_lastread+1
67a8 f004 3454:      beq  .cklo
67aa 9016 3455:      bcc  .noupdate
67ac b008 3456:      bcs  .update
67ae b9d784 3457: .cklo:      lda  i_msgnlo,y
67b1 cd6b44 3458:      cmp  w_lastread
67b4 900c 3459:      bcc  .noupdate
67b6 b9d784 3460: .update:      lda  i_msgnlo,y
67b9 8d6b44 3461:      sta  w_lastread
67bc b9d785 3462:      lda  i_msgnhi,y

```

```

67bf 8d6c44 3463:      sta  w_lastread+1
67c2 ad6744 3464: .noupdate:  lda  aborted      ;di
67c5 d010 3465:      bne  .abt      ; y
67c7 ad6a44 3466:      lda  nextmsg      ;sa
67ca d003 3467:      bne  .next
67cc 4c1a68 3468:      jmp  .exit
67cf a99b 3469: .next:      lda  #$9b      ;fo
67d1 20846e 3470:      jsr  stuff
67d4 4c1a68 3471:      jmp  .exit
67d7 ad9180 3472: .abt:      lda  nonstop      ;in
67da f03e 3473:      beq  .exit      ;no
67dc 20334e 3474:      jsr  printsi
67df 9b9b 3475:      dc.b $9b,$9b
67e1 41626f 3476:      dc.b "Abort quickscan? ",-1
67f3 20fc50 3477:      jsr  y_or_n
67f6 c959 3478:      cmp  #'Y'
67f8 d020 3479:      bne  .exit
67fa 20334e 3480:      jsr  printsi
67fd 9b5175 3481:      dc.b $9b,"Quickscan aborted.", $9b
6812 a900 3482:      lda  #0
6814 8d9080 3483:      sta  quickscan
6817 8d9180 3484:      sta  nonstop
681a      3485: .exit:
681a 205550 3486:      jsr  cr_lf
681d 20c369 3487:      jsr  up_lines
6820 60 3488:      rts
6821      3489:
6821      3490:
6821 a901 3491: disp_msg:      lda  #1
6823 8d8b69 3492:      sta  counter
6826 a900 3493:      lda  #0
6828 8d8c69 3494:      sta  widflag
682b ad498d 3495:      lda  m_width
682e 8d1c6f 3496:      sta  ed_width
6831 205550 3497:      jsr  cr_lf
6834 ac9480 3498:      ldy  curmsg
6837 b9d783 3499:      lda  i_flag,y
683a 2904 3500:      and  #AS_IS
683c d01b 3501:      bne  .asis
683e adca44 3502:      lda  u_vw
6841 c928 3503:      cmp  #40
6843 f00a 3504:      beq  .vw40
6845 ad498d 3505: .vw80:      lda  m_width
6848 c950 3506:      cmp  #80
684a f00d 3507:      beq  .asis
684c 4c8368 3508:      jmp  show40to80
684f ad498d 3509: .vw40:      lda  m_width
6852 c928 3510:      cmp  #40
6854 f003 3511:      beq  .asis
6856 4c1269 3512:      jmp  show80to40
6859 4c5c68 3513: .asis:      jmp  showasis
685c      3514:
685c      3515:

```



```

685c    3516: ;    Show the message exactly as it is stored..
685c    3517: ;    ~~~~~
685c    3518:
685c ad6744 3519: showasis:      lda    aborted
685f d021  3520:                bne    .abt
6861 ad6a44 3521:                lda    nextmsg
6864 d01c  3522:                bne    .abt
6866 ad8b69 3523:                lda    counter
6869 204278 3524:                jsr    calcptr
686c 20fa4f 3525:                jsr    echos
686f 205550 3526:                jsr    cr_lf
6872 20c369 3527:                jsr    up_lines
6875 ee8b69 3528:                inc    counter
6878 ad8b69 3529:                lda    counter
687b cd4b8d 3530:                cmp    m_lines
687e 90dc  3531:                bcc    showasis
6880 f0da  3532:                beq    showasis
6882 60    3533: .abt:          rts
6883      3534:
6883      3535:
6883      3536: ;    Show a 40 column message to an 80-column user
6883      3537: ;    ~~~~~
6883      3538:
6883 ad6744 3539: show40to80:    lda    aborted
6886 d048  3540:                bne    .abt
6888 ad6a44 3541:                lda    nextmsg
688b d043  3542:                bne    .abt
688d ad8b69 3543:                lda    counter
6890 204278 3544:                jsr    calcptr
6893 a000  3545:                ldy    #0
6895 b188  3546:                lda    (pr_ptr),y
6897 f038  3547:                beq    .forcecr
6899 c8    3548: iny
689a b188  3549:                lda    (pr_ptr),y
689c c920  3550:                cmp    #' '
689e f04a  3551:                beq    .asis
68a0 ad8c69 3552:                lda    widflag
68a3 f016  3553:                beq    .nosp
68a5 a920  3554:                lda    #' '
68a7 20cc4f 3555:                jsr    echo
68aa 20fa4f 3556:                jsr    echos
68ad 205550 3557:                jsr    cr_lf
68b0 20c369 3558:                jsr    up_lines
68b3 a900  3559:                lda    #0
68b5 8d8c69 3560:                sta    widflag
68b8 4cc368 3561:                jmp    .nxtline
68bb 20fa4f 3562: .nosp:         jsr    echos
68be a901  3563:                lda    #1
68c0 8d8c69 3564:                sta    widflag
68c3 ee8b69 3565: .nxtline:      inc    counter
68c6 ad8b69 3566:                lda    counter
68c9 cd4b8d 3567:                cmp    m_lines
68cc 90b5  3568:                bcc    show40to80

```

```

68ce f0b3 3569:      beq  show40to80
68d0 60 3570: .abt:      rts
68d1 3571:
68d1 205550 3572: .forcecr:      jsr  cr_lf
68d4 20c369 3573:      jsr  up_lines
68d7 ad8c69 3574:      lda  widflag
68da f006 3575:      beq  .ok
68dc 205550 3576:      jsr  cr_lf
68df 20c369 3577:      jsr  up_lines
68e2 a900 3578: .ok:      lda  #0
68e4 8d8c69 3579:      sta  widflag
68e7 4cc368 3580:      jmp  .nxtline
68ea 3581:
68ea ad8c69 3582: .asis:      lda  widflag
68ed f006 3583:      beq  .ok2
68ef 205550 3584:      jsr  cr_lf
68f2 20c369 3585:      jsr  up_lines
68f5 20fa4f 3586: .ok2:      jsr  echos
68f8 a901 3587:      lda  #1
68fa 8d8c69 3588:      sta  widflag
68fd 4cc368 3589:      jmp  .nxtline
6900 3590:
6900 3591:
6900 ad8c69 3592: up_width:      lda  widflag
6903 f009 3593:      beq  .up1
6905 a900 3594:      lda  #0
6907 8d8c69 3595:      sta  widflag
690a 205550 3596:      jsr  cr_lf
690d 60 3597:      rts
690e ee8c69 3598: .up1:      inc  widflag
6911 60 3599:      rts
6912 3600:
6912 3601:
6912 3602:
6912 3603: ; Show an 80 column message to a 40-column user
6912 3604: ; ~~~~~
6912 3605:
6912 ad6744 3606: show80to40:      lda  aborted
6915 d01b 3607:      bne  .abt
6917 ad6a44 3608:      lda  nextmsg
691a d016 3609:      bne  .abt
691c ad8b69 3610:      lda  counter
691f 204278 3611:      jsr  calcptr
6922 203369 3612:      jsr  out40
6925 ee8b69 3613:      inc  counter
6928 ad8b69 3614:      lda  counter
692b cd4b8d 3615:      cmp  m_lines
692e 90e2 3616:      bcc  show80to40
6930 f0e0 3617:      beq  show80to40
6932 60 3618: .abt:      rts
6933 3619:
6933 3620:
6933 a588 3621: out40:      lda  pr_ptr

```

```

6935 8582 3622:      sta  s_ptr
6937 a589 3623:      lda  pr_ptr+1
6939 8583 3624:      sta  s_ptr+1
693b      3625:      mea  msgline,d_ptr
693b a950 ----:      lda  #low msgline
693d 8584 ----:      sta  d_ptr
693f a97f ----:      lda  #high msgline
6941 8585 ----:      sta  d_ptr + 1
6943 209451 3626:      jsr  move_str
6946 ad507f 3627:      lda  msgline      ;if
6949 c925 3628:      cmp  #37
694b b004 3629:      bcs  .do_format
694d 208d69 3630: .go_out:      jsr  print_40
6950 60 3631:      rts
6951      3632:
6951 a001 3633: .do_format:      ldy  #1
6953 a201 3634:      ldx  #1
6955 e8 3635: .loop:      inx
6956 c8 3636:      iny
6957 cc507f 3637:      cpy  msgline
695a 9005 3638:      bcc  .notEOF
695c f003 3639:      beq  .notEOF
695e 4c4d69 3640:      jmp  .go_out
6961 e026 3641: .notEOF:      cpx  #38
6963 90f0 3642:      bcc  .loop
6965      3643:
6965      3644: ;      Back up Y register to a space, install EOL
6965      3645: ;      ~~~~~
6965      3646:
6965 b9507f 3647: .unwrap:      lda  msgline,y
6968 c95c 3648:      cmp  #"      ;mea
696a d003 3649:      bne  .notsl
696c 4c4d69 3650:      jmp  .go_out
696f c920 3651: .notsl:      cmp  #' '
6971 f008 3652:      beq  .gotit
6973 88 3653:      dey
6974 c002 3654:      cpy  #2
6976 b0ed 3655:      bcs  .unwrap
6978 4c4d69 3656:      jmp  .go_out
697b a201 3657: .gotit:      ldx  #1
697d a95c 3658:      lda  #"
697f 99507f 3659:      sta  msgline,y
6982 a901 3660:      lda  #1
6984 8d8a69 3661:      sta  .did_wrap
6987 4c5569 3662:      jmp  .loop
698a      3663:
698a 00 3664: .did_wrap:      dc.b 0
698b      3665:
698b 00 3666: counter:      dc.b 0
698c 00 3667: widflag:      dc.b 0
698d      3668:
698d      3669:
698d      3670:

```

```

698d 3671: ; output a 80 column line while checking for variabl
698d 3672: ; ~~~~~
698d 3673:
698d a900 3674: print_40: lda #0
698f 8dbc69 3675: sta .idx
6992 ee6c69 3676: .loop: inc .idx
6995 ac6c69 3677: ldy .idx
6998 cc507f 3678: cpy msgline ;do
699b 9009 3679: bcc .notdone
699d f007 3680: beq .notdone
699f 205550 3681: .done: jsr cr_lf
69a2 20c369 3682: jsr up_lines
69a5 60 3683: rts
69a6 b9507f 3684: .notdone: lda msgline,y ;ne
69a9 c95c 3685: cmp #"
69ab d009 3686: bne .not_cr
69ad 205550 3687: .var_cr: jsr cr_lf
69b0 20c369 3688: jsr up_lines
69b3 4c9269 3689: jmp .loop
69b6 20cc4f 3690: .not_cr: jsr echo
69b9 4c9269 3691: jmp .loop
69bc 3692:
69bc 00 3693: .idx: dc.b 0
69bd 3694:
69bd 3695:
69bd 3696: ; routines to keep track of the "lines per page"
69bd 3697: ; ~~~~~
69bd 3698:
69bd a900 3699: zero_lines: lda #0
69bf 8d8f80 3700: sta line_count
69c2 60 3701: rts
69c3 3702:
69c3 3703:
69c3 ad9180 3704: up_lines: lda nonstop ;do
69c6 d04a 3705: bne .exit ; v
69c8 ad6d44 3706: lda u_pagesize ;ze
69cb f045 3707: beq .exit
69cd 38 3708: sec
69ce e901 3709: sbc #1
69d0 8d136a 3710: sta .temp
69d3 ee8f80 3711: inc line_count ;+1
69d6 ad8f80 3712: lda line_count
69d9 cd136a 3713: cmp .temp
69dc 9034 3714: bcc .exit ;no
69de 20334e 3715: jsr printsi
69e1 dbadcd 3716: dc.b <+128>,"[-More-] "
69ea ff 3717: dc.b -1
69eb a900 3718: lda #0
69ed 8d8f80 3719: sta line_count
69f0 204050 3720: jsr get_key ;ge
69f3 20334e 3721: jsr printsi
69f6 7e207e 3722: dc.b 126,',126 ;[
69f9 7e207e 3723: dc.b 126,',126 ;-

```

```

69fc 7e207e 3724:      dc.b 126,',126      ;M
69ff 7e207e 3725:      dc.b 126,',126      ;o
6a02 7e207e 3726:      dc.b 126,',126      ;r
6a05 7e207e 3727:      dc.b 126,',126      ;e
6a08 7e207e 3728:      dc.b 126,',126      ;-
6a0b 7e207e 3729:      dc.b 126,',126      ;]
6a0e 7e207e 3730:      dc.b 126,',126,-1    ;'
6a12 60   3731: .exit:      rts
6a13      3732:
6a13 00   3733: .temp:      dc.b 0
6a14      3734:
6a14      3735:
6a14      3736:
6a14      3737:
6a14      3738: ;    open the message base in A reg
6a14      3739: ;    ~~~~~
6a14      3740:
6a14      3741: open_base:
6a14      3742:      mea  basename,fn_ptr    ;op
6a14 a976 ----:      lda  #low basename
6a16 8586 ----:      sta  fn_ptr
6a18 a96b ----:      lda  #high basename
6a1a 8587 ----:      sta  fn_ptr + 1
6a1c a240 3743:      ldx  #msgbase
6a1e 206a50 3744:      jsr  open_updt          ;op
6a21 60   3745:      rts
6a22      3746:
6a22 a240 3747: close_base:      ldx  #msgbase
6a24 4ca650 3748:      jmp  close
6a27      3749:
6a27      3750:
6a27      3751:
6a27      3752:
6a27      3753: ;    Read index record.
6a27      3754: ;    ~~~~~
6a27      3755:
6a27 a240 3756: readidx:      ldx  #msgbase
6a29 204e6b 3757:      jsr  point0            ;to
6a2c a907 3758:      lda  #ccgetch
6a2e 9d4203 3759:      sta  iccom,x
6a31 a9ba 3760:      lda  #i_buff & $ff
6a33 9d4403 3761:      sta  icbal,x
6a36 a982 3762:      lda  #i_buff / 256
6a38 9d4503 3763:      sta  icbah,x
6a3b a900 3764:      lda  #0
6a3d 9d4803 3765:      sta  icbll,x
6a40 a90a 3766:      lda  #INDEX_CHUNKS      ;al
6a42 9d4903 3767:      sta  icblh,x
6a45 2056e4 3768:      jsr  ciov
6a48 1003 3769:      bpl  .ok
6a4a 4c5a53 3770:      jmp  msgerror
6a4d 60   3771: .ok:      rts
6a4e      3772:

```

```

6a4e 3773:
6a4e 3774:
6a4e 3775: ;      Write index file.
6a4e 3776: ;      ~~~~~
6a4e 3777:
6a4e a240 3778: writeidx:      ldx  #msgbase
6a50 204e6b 3779:      jsr  point0
6a53 a90b 3780:      lda  #ccputch
6a55 9d4203 3781:      sta  iccom,x
6a58 a9ba 3782:      lda  #i_buff & $ff
6a5a 9d4403 3783:      sta  icbal,x
6a5d a982 3784:      lda  #i_buff / 256
6a5f 9d4503 3785:      sta  icbah,x
6a62 a900 3786:      lda  #0
6a64 9d4803 3787:      sta  icbll,x
6a67 a90a 3788:      lda  #INDEX_CHUNKS      ;al
6a69 9d4903 3789:      sta  icblh,x
6a6c 2056e4 3790:      jsr  ciov
6a6f 1003 3791:      bpl  .ok
6a71 4c5a53 3792:      jmp  msgerror
6a74 60 3793: .ok:      rts
6a75 3794:
6a75 3795:
6a75 3796:
6a75 3797: ;      Read message number in Accum.
6a75 3798: ;      ~~~~~
6a75 3799:
6a75 a8 3800: readmsg:      tay
6a76 b9d782 3801:      lda  i_msgptr,y      ;ge
6a79 20f56a 3802:      jsr  pointmsg      ; a
6a7c 1001 3803:      bpl  .ptok
6a7e 60 3804:      rts
6a7f a240 3805: .ptok:      ldx  #msgbase
6a81 a907 3806:      lda  #ccgetch
6a83 9d4203 3807:      sta  iccom,x
6a86 a9ec 3808:      lda  #m_buff & $ff
6a88 9d4403 3809:      sta  icbal,x
6a8b a98c 3810:      lda  #m_buff / 256
6a8d 9d4503 3811:      sta  icbah,x
6a90 a900 3812:      lda  #0
6a92 9d4803 3813:      sta  icbll,x
6a95 adcf82 3814:      lda  i_chunks
6a98 9d4903 3815:      sta  icblh,x
6a9b 2056e4 3816:      jsr  ciov
6a9e 1007 3817:      bpl  .eof
6aa0 c088 3818:      cpy  #136      ;EO
6aa2 f003 3819:      beq  .eof
6aa4 4c5a53 3820:      jmp  msgerror
6aa7 60 3821: .eof:      rts
6aa8 3822:
6aa8 3823:
6aa8 3824:
6aa8 3825: ;      Write the message number in accumulator.

```

```

6aa8      3826: ; ~~~~~
6aa8      3827:
6aa8 a8    3828: writemsg:      tay
6aa9 b9d782 3829:      lda i_msgptr,y      ;ge
6aac 20f56a 3830:      jsr pointmsg        ; a
6aaf 1001 3831:      bpl .ptok
6ab1 60    3832:      rts
6ab2 a240 3833: .ptok:      ldx #msgbase
6ab4 a90b 3834:      lda #ccputch
6ab6 9d4203 3835:      sta iccom,x
6ab9 a9ec 3836:      lda #m_buff & $ff
6abb 9d4403 3837:      sta icbal,x
6abe a98c 3838:      lda #m_buff / 256
6ac0 9d4503 3839:      sta icbah,x
6ac3 a900 3840:      lda #0
6ac5 9d4803 3841:      sta icbl1,x
6ac8 adcf82 3842:      lda i_chunks
6acb 9d4903 3843:      sta icblh,x
6ace 2056e4 3844:      jsr ciov
6ad1 1003 3845:      bpl .ok
6ad3 4c5a53 3846:      jmp msgerror
6ad6 60    3847: .ok:      rts
6ad7      3848:
6ad7      3849:
6ad7      3850: pointerr:
6ad7 20334e 3851:      jsr printsi
6ada 9b2043 3852:      dc.b $9b," Critical base error!",
6af2 4c5253 3853:      jmp exitmsg
6af5      3854:
6af5      3855:
6af5      3856: ; point to the message in A
6af5      3857: ; ~~~~~
6af5      3858:
6af5 a8    3859: pointmsg:      tay      ;sl
6af6 c900 3860:      cmp #0      ;0
6af8 f007 3861:      beq .error
6afa cdd282 3862:      cmp i_maxmsgs      ;in
6afd 9005 3863:      bcc .inrange
6aff f003 3864:      beq .inrange
6b01 4cd76a 3865: .error:      jmp pointerr
6b04 a900 3866: .inrange:      lda #0
6b06 8d4b6b 3867:      sta .point
6b09 8d4d6b 3868:      sta .point+2
6b0c a90a 3869:      lda #INDEX_CHUNKS      ;al
6b0e 8d4c6b 3870:      sta .point+1
6b11 4c266b 3871:      jmp .noc1      ;ch
6b14 ad4c6b 3872: .loop:      lda .point+1
6b17 18    3873:      clc
6b18 6dcf82 3874:      adc i_chunks      ;#
6b1b 8d4c6b 3875:      sta .point+1
6b1e ad4d6b 3876:      lda .point+2
6b21 6900 3877:      adc #0
6b23 8d4d6b 3878:      sta .point+2

```

```

6b26 88 3879: .noc1:      dey
6b27 d0eb 3880:          bne .loop
6b29      3881:
6b29      3882:
6b29      3883: ;    now, do the point command
6b29      3884: ;    ~~~~~
6b29      3885:
6b29 a240 3886: .pt:      ldx  #msgbase
6b2b a925 3887:          lda  #37
6b2d 9d4203 3888:          sta  iccom,x
6b30 ad4b6b 3889:          lda  .point
6b33 9d4c03 3890:          sta  $34c,x
6b36 ad4c6b 3891:          lda  .point+1
6b39 9d4d03 3892:          sta  $34d,x
6b3c ad4d6b 3893:          lda  .point+2
6b3f 9d4e03 3894:          sta  $34e,x
6b42 2056e4 3895:          jsr  ciov
6b45 1003 3896:          bpl  .okp
6b47 4c5a53 3897:          jmp  msgerror
6b4a 60 3898: .okp:      rts
6b4b      3899:
6b4b 000000 3900: .point:    dc.b  0,0,0
6b4e      3901:
6b4e      3902:
6b4e a925 3903: point0:    lda  #37
6b50 9d4203 3904:          sta  iccom,x
6b53 a900 3905:          lda  #0
6b55 9d4c03 3906:          sta  $34c,x
6b58 9d4d03 3907:          sta  $34d,x
6b5b 9d4e03 3908:          sta  $34e,x
6b5e 2056e4 3909:          jsr  ciov
6b61 1003 3910:          bpl  .ok
6b63 4c5a53 3911:          jmp  msgerror
6b66 60 3912: .ok:      rts
6b67      3913:
6b67      3914:
6b67      3915:
6b67 c900 3916: ckmrangle: cmp  #0
6b69 f007 3917:          beq  .bad
6b6b cdd382 3918:          cmp  i_inuse      ;ma
6b6e f004 3919:          beq  .ok
6b70 9002 3920:          bcc  .ok
6b72 38 3921: .bad:      sec
6b73 60 3922:          rts
6b74 18 3923: .ok:      clc
6b75 60 3924:          rts
6b76      3925:
6b76      3926:
6b76      3927:
6b76      3928:
6b76 44313a 3929: basename:  dc.b  "D1:>real>error.dat",$9b
6b89      3930:          ds.b  80
6bd9      3931:

```



```

6bd9      3932:
6bd9 00    3933: asknum:          dc.b  0
6bda      3934:
6bda      3935:
6bda      3936:
6bda      3937: ;   delete the message number in A from the index
6bda      3938: ;   ~~~~~
6bda      3939:
6bda c900  3940: delmsg:          cmp    #0
6bdc d001  3941:                  bne    .not0
6bde 60    3942:                  rts
6bdf cdd382 3943: .not0:          cmp    i_inuse    ;deleting 1
6be2 d004  3944:                  bne    .notlast    ;nope
6be4 ced382 3945:                  dec    i_inuse    ;yes...just
6be7 60    3946:                  rts            ; (last msg
6be8 cdd382 3947: .notlast:      cmp    i_inuse
6beb 9001  3948:                  bcc    .godel
6bed 60    3949:                  rts
6bee a8    3950: .godel:        tay
6bef b9d784 3951:                  lda    i_msgnlo,y    ;sa
6bf2 8d6b6c 3952:                  sta    .msgnum
6bf5 b9d785 3953:                  lda    i_msgnhi,y
6bf8 8d6c6c 3954:                  sta    .msgnum+1
6bfb b9d882 3955: .moveup:      lda    i_msgptr+1,y    ;now,
6bfe 99d782 3956:                  sta    i_msgptr,y
6c01 b9d883 3957:                  lda    i_flag+1,y
6c04 99d783 3958:                  sta    i_flag,y
6c07 b9d884 3959:                  lda    i_msgnlo+1,y
6c0a 99d784 3960:                  sta    i_msgnlo,y
6c0d b9d885 3961:                  lda    i_msgnhi+1,y
6c10 99d785 3962:                  sta    i_msgnhi,y
6c13 b9d886 3963:                  lda    i_tolo+1,y
6c16 99d786 3964:                  sta    i_tolo,y
6c19 b9d887 3965:                  lda    i_tohi+1,y
6c1c 99d787 3966:                  sta    i_tohi,y
6c1f b9d888 3967:                  lda    i_fromlo+1,y
6c22 99d788 3968:                  sta    i_fromlo,y
6c25 b9d889 3969:                  lda    i_fromhi+1,y
6c28 99d789 3970:                  sta    i_fromhi,y
6c2b b9d88a 3971:                  lda    i_replylo+1,y
6c2e 99d78a 3972:                  sta    i_replylo,y
6c31 b9d88b 3973:                  lda    i_replyhi+1,y
6c34 99d78b 3974:                  sta    i_replyhi,y
6c37 c8    3975:                  iny            ;do
6c38 ccd382 3976:                  cpy    i_inuse
6c3b 90be  3977:                  bcc    .moveup    ;no
6c3d      3978:
6c3d      3979: ;   now, remove any 'replies' to this message
6c3d      3980: ;   ~~~~~
6c3d      3981:
6c3d a001  3982:                  ldy    #1
6c3f b9d78a 3983: .loop:          lda    i_replylo,y
6c42 cd6b6c 3984:                  cmp    .msgnum

```

```

6c45 d010 3985:      bne .next
6c47 b9d78b 3986:      lda i_replyhi,y
6c4a cd6c6c 3987:      cmp .msgnum+1
6c4d d008 3988:      bne .next
6c4f a900 3989: .match:      lda #0
6c51 99d78a 3990:      sta i_replylo,y
6c54 99d78b 3991:      sta i_replyhi,y
6c57 c8 3992: .next:      iny
6c58 ccd382 3993:      cpy i_inuse
6c5b 90e2 3994:      bcc .loop
6c5d ced382 3995:      dec i_inuse      ;in
6c60      3996:
6c60      3997: ; Move the "current msg" pointer back one.. (a
6c60      3998: ; ~~~~~
6c60      3999:
6c60 ad9480 4000:      lda curmsg
6c63 c902 4001:      cmp #2
6c65 9003 4002:      bcc .nodec
6c67 ce9480 4003:      dec curmsg
6c6a 60 4004: .nodec:      rts
6c6b      4005:
6c6b 0000 4006: .msgnum:      dc.b 0,0
6c6d      4007:
6c6d      4008:
6c6d      4009:
6c6d      4010: ; calc the number of replies to the msg number in A
6c6d      4011: ; ~~~~~
6c6d      4012:
6c6d a8 4013: numreplies:      tay      ;y
6c6e a900 4014:      lda #0
6c70 8d9e6c 4015:      sta .replies      ;nu
6c73 b9d784 4016:      lda i_msgnlo,y      ;th
6c76 8d9f6c 4017:      sta .target      ; a
6c79 b9d785 4018:      lda i_msgnhi,y
6c7c 8da06c 4019:      sta .target+1
6c7f b9d78a 4020: .loop:      lda i_replylo,y
6c82 cd9f6c 4021:      cmp .target
6c85 d00b 4022:      bne .next
6c87 b9d78b 4023:      lda i_replyhi,y
6c8a cda06c 4024:      cmp .target+1
6c8d d003 4025:      bne .next
6c8f ee9e6c 4026: .match:      inc .replies
6c92 c8 4027: .next:      iny
6c93 ccd382 4028:      cpy i_inuse
6c96 f0e7 4029:      beq .loop
6c98 90e5 4030:      bcc .loop
6c9a ad9e6c 4031:      lda .replies      ;nu
6c9d 60 4032:      rts
6c9e      4033:
6c9e 00 4034: .replies:      dc.b 0
6c9f 00 4035: .target:      dc.b 0
6ca0 00 4036: .mnum:      dc.b 0
6ca1 00 4037: .idx:      dc.b 0

```

```

6ca2 4038:
6ca2 4039:
6ca2 4040: ; find the first NEW message
6ca2 4041: ; ~~~~~
6ca2 4042:
6ca2 a001 4043: firnewmsg: ldy #1 ;y
6ca4 adcc44 4044: .loop: lda u_lastread+1
6ca7 d9d785 4045: cmp i_msgnhi,y
6caa f005 4046: beq .cklo
6cac 900e 4047: bcc .gotone
6cae 4cbe6c 4048: jmp .next
6cb1 adcb44 4049: .cklo: lda u_lastread
6cb4 d9d784 4050: cmp i_msgnlo,y
6cb7 9003 4051: bcc .gotone
6cb9 4cbe6c 4052: jmp .next
6cbc 98 4053: .gotone: tya
6cbd 60 4054: rts
6cbe c8 4055: .next: iny
6cbf ccd382 4056: cpy i_inuse
6cc2 f0e0 4057: beq .loop
6cc4 90de 4058: bcc .loop
6cc6 a900 4059: lda #0
6cc8 60 4060: rts
6cc9 4061:
6cc9 4062:
6cc9 4063: ; find the parent message of the msg in A,X
6cc9 4064: ; ~~~~~
6cc9 4065:
6cc9 8df36c 4066: findparent: sta .temp
6ccc 8ef46c 4067: stx .temp+1
6ccf a000 4068: ldy #0
6cd1 f014 4069: beq .next
6cd3 b9d784 4070: .fp1: lda i_msgnlo,y
6cd6 cdf36c 4071: cmp .temp
6cd9 d00c 4072: bne .next
6cdb b9d785 4073: lda i_msgnhi,y
6cde cdf46c 4074: cmp .temp+1
6ce1 d004 4075: bne .next
6ce3 98 4076: .match: tya
6ce4 a200 4077: ldx #0
6ce6 60 4078: rts
6ce7 c8 4079: .next: iny
6ce8 ccd382 4080: cpy i_inuse
6ceb f0e6 4081: beq .fp1
6ced 90e4 4082: bcc .fp1
6cef a900 4083: lda #0
6cf1 aa 4084: tax
6cf2 60 4085: rts
6cf3 0000 4086: .temp: dc.b 0,0
6cf5 4087:
6cf5 4088:
6cf5 4089:
6cf5 4090:

```

```

6cf5      4091:
6cf5      4092: ;   find the FIRST reply to the msg number in A
6cf5      4093: ;   ~~~~~
6cf5      4094:
6cf5 a8    4095: findreply:      tay                ;y
6cf6 b9d784 4096:      lda  i_msgnlo,y      ;th
6cf9 8d1f6d 4097:      sta  .target          ; a
6cfc b9d785 4098:      lda  i_msgnhi,y
6cff 8d206d 4099:      sta  .target+1
6d02 b9d78a 4100: .loop:      lda  i_replylo,y
6d05 cd1f6d 4101:      cmp  .target
6d08 d00a   4102:      bne  .next
6d0a b9d78b 4103:      lda  i_replyhi,y
6d0d cd206d 4104:      cmp  .target+1
6d10 d002   4105:      bne  .next
6d12 98     4106: .match:      tya
6d13 60     4107:      rts
6d14 c8     4108: .next:      iny
6d15 ccd382 4109:      cpy  i_inuse
6d18 f0e8   4110:      beq  .loop
6d1a 90e6   4111:      bcc  .loop
6d1c a900   4112:      lda  #0
6d1e 60     4113:      rts
6d1f      4114:
6d1f 00     4115: .target:      dc.b  0
6d20 00     4116: .mnum:        dc.b  0
6d21      4117:
6d21      4118:
6d21      4119: ;   get a message number from the user - returns carry
6d21      4120: ;   ~~~~~
6d21      4121:
6d21 206b4b 4122: getmsgnum:    jsr  get_str
6d24 4648   4123:      dc.w  instr
6d26 030101 4124:      dc.b  3,1,1
6d29 205550 4125:      jsr  cr_lf
6d2c ad4648 4126:      lda  instr
6d2f d002   4127:      bne  .noex
6d31 38     4128:      sec
6d32 60     4129:      rts
6d33      4130: .noex:      mea  instr,s_ptr      ;st
6d33 a946   ----:      lda  #low instr
6d35 8582   ----:      sta  s_ptr
6d37 a948   ----:      lda  #high instr
6d39 8583   ----:      sta  s_ptr + 1
6d3b 20964a 4131:      jsr  valc
6d3e 8d6a6d 4132:      sta  .temp
6d41 20676b 4133:      jsr  ckmrage
6d44 b005   4134:      bcs  .badnum
6d46 ad6a6d 4135:      lda  .temp              ;re
6d49 18     4136:      clc
6d4a 60     4137:      rts
6d4b      4138: .badnum:
6d4b 20334e 4139:      jsr  printsi

```

```

6d4e 9b496e 4140:          dc.b  $9b,"Invalid message number
6d68 38 4141:          sec
6d69 60 4142:          rts
6d6a 00 4143: .temp:      dc.b  0
6d6b 4144:
6d6b 4145:
6d6b 4146:
6d6b 4147:
6d6b 4148: check0:
6d6b 4149: ;          jsr  message_hi  ; check the
6d6b add382 4150:          lda  i_inuse
6d6e d02b 4151:          bne  .ok1
6d70 20334e 4152:          jsr  printsi
6d73 546865 4153:          dc.b  "There are no messages in th
6d98 68 4154:          pla
6d99 68 4155:          pla
6d9a 60 4156:          rts
6d9b ad9480 4157: .ok1:      lda  curmsg
6d9e d003 4158:          bne  .exit
6da0 ee9480 4159:          inc  curmsg
6da3 60 4160: .exit:     rts
6da4 4161:
6da4 4162:
6da4 4163:
6da4 adca44 4164: get_message:  lda  u_vw
6da7 8d1c6f 4165:          sta  ed_width      ;se
6daa 4c5d6f 4166:          jmp  msghedit
6dad 4167:
6dad 4168:
6dad 4169:
6dad 4170:
6dad 4171: ;    IN_THREAD: checks to see if the message number in
6dad 4172: ;           A,X is currently in the thread stack.
6dad 4173: ;    returns: carry clear if in the thread.
6dad 4174: ;    ~~~~~
6dad 4175:
6dad 8de46d 4176: in_thread:  sta  .num
6db0 8ee56d 4177:          stx  .num+1
6db3 0de56d 4178:          ora  .num+1
6db6 f01c 4179:          beq  .not_in
6db8 a000 4180:          ldy  #0
6dba f010 4181:          beq  .next
6dbc b9ba80 4182: .loop:     lda  stacklo,y
6dbf cde46d 4183:          cmp  .num
6dc2 d008 4184:          bne  .next
6dc4 b9ba81 4185:          lda  stackhi,y
6dc7 cde56d 4186:          cmp  .num+1
6dca f010 4187:          beq  .foundit      ;fo
6dcc c8 4188: .next:     iny
6dcd ccb980 4189:          cpy  threadidx      ;do
6dd0 90ea 4190:          bcc  .loop
6dd2 f0e8 4191:          beq  .loop
6dd4 ade46d 4192: .not_in:   lda  .num

```

```

6dd7 aee56d 4193:          ldx  .num+1
6dda 38 4194:          sec
6ddb 60 4195:          rts
6ddc ade46d 4196: .foundit:      lda  .num
6ddf aee56d 4197:          ldx  .num+1
6de2 18 4198:          clc
6de3 60 4199:          rts
6de4 0000 4200: .num:          dc.b  0,0
6de6 4201:
6de6 4202:
6de6 4203: ;    CLEAR_THREAD - clear out the thread data
6de6 4204: ;    ~~~~~
6de6 4205:
6de6 a000 4206: clear_thread:  ldy  #0
6de8 8cb980 4207:          sty  threadidx
6deb 98 4208:          tya
6dec 99ba80 4209: .lp:          sta  stacklo,y
6def 99ba81 4210:          sta  stackhi,y
6df2 c8 4211:          iny
6df3 c0fb 4212:          cpy  #251
6df5 d0f5 4213:          bne  .lp
6df7 60 4214:          rts
6df8 4215:
6df8 4216: ;    ADD_THREAD: add the message number in A to the sta
6df8 4217: ;    ~~~~~
6df8 4218:
6df8 a8 4219: add_thread:    tay
6df9 b9d784 4220:          lda  i_msgnlo,y
6dfc 8d186e 4221:          sta  .temp
6dff b9d785 4222:          lda  i_msgnhi,y
6e02 8d196e 4223:          sta  .temp+1
6e05 eeb980 4224:          inc  threadidx
6e08 acb980 4225:          ldy  threadidx
6e0b ad186e 4226:          lda  .temp
6e0e 99ba80 4227:          sta  stacklo,y
6e11 ad196e 4228:          lda  .temp+1
6e14 99ba81 4229:          sta  stackhi,y
6e17 60 4230:          rts
6e18 0000 4231: .temp:        dc.b  0,0
6e1a 4232:
6e1a 4233:
6e1a 4234:
6e1a 4235: ;    nextchild: returns the message number of the next
6e1a 4236: ;    message in A. Returns 0 if no child f
6e1a 4237: ;    ~~~~~
6e1a 4238:
6e1a ad9480 4239: nextchild:    lda  curmsg          ;st
6e1d 8d466e 4240:          sta  .idx
6e20 4c326e 4241:          jmp  .next
6e23 ac466e 4242: .loop:        ldy  .idx
6e26 b9d78b 4243:          lda  i_replyhi,y          ;hi
6e29 aa 4244:          tax
6e2a b9d78a 4245:          lda  i_replylo,y          ;lo

```

```

6e2d 20ad6d 4246:      jsr  in_thread      ;is
6e30 9010  4247:      bcc  .found         ;ye
6e32 ee466e 4248: .next:      inc  .idx
6e35 ad466e 4249:      lda  .idx
6e38 cdd382 4250:      cmp  i_inuse
6e3b 90e6  4251:      bcc  .loop
6e3d f0e4  4252:      beq  .loop
6e3f a900  4253: .notfound:  lda  #0
6e41 60    4254:      rts
6e42 ad466e 4255: .found:      lda  .idx
6e45 60    4256:      rts
6e46 00    4257: .idx:      dc.b  0
6e47      4258:
6e47      4259:
6e47      4260:
6e47      4261:
6e47      4262: ;   findtop - find the ultimate parent of the message
6e47      4263: ;   ~~~~~
6e47      4264:
6e47 8d6d6e 4265: findtop:    sta  .msg
6e4a ac6d6e 4266: .lp:      ldy  .msg
6e4d b9d78a 4267:      lda  i_replylo,y
6e50 19d78b 4268:      ora  i_replyhi,y
6e53 f014  4269:      beq  .done
6e55 b9d78b 4270:      lda  i_replyhi,y
6e58 aa    4271:      tax
6e59 b9d78a 4272:      lda  i_replylo,y
6e5c 20c96c 4273:      jsr  findparent
6e5f 8d6d6e 4274:      sta  .msg
6e62 c900  4275:      cmp  #0
6e64 d0e4  4276:      bne  .lp
6e66 a900  4277:      lda  #0            ;sh
6e68 60    4278:      rts
6e69 ad6d6e 4279: .done:      lda  .msg
6e6c 60    4280:      rts
6e6d 00    4281: .msg:      dc.b  0
6e6e      4282:
6e6e      4283:
6e6e      4284:
6e6e      4285: ;   nextbase - find next base (that they can access)
6e6e      4286: ;   ~~~~~
6e6e      4287:
6e6e      4288: ;nextbase:      lda  curbase
6e6e      4289: ;               sta  .idx
6e6e      4290: ;               jmp  .next
6e6e      4291: ;.loop:          ldy  .idx
6e6e      4292: ;               dey          ;-1
6e6e      4293: ;               lda  s_msgbdr,y      ;is
6e6e      4294: ;               beq  .next          ;no
6e6e      4295: ;
6e6e      4296: ;               mea  u_msgread,s_ptr  ;ca
6e6e      4297: ;               lda  .idx
6e6e      4298: ;               jsr  seclvl

```

```

6e6e 4299: ;      bmi .next      ;no
6e6e 4300: ;
6e6e 4301: ;      mea  u_qscan,s_ptr  ;do
6e6e 4302: ;      lda  .idx          ; b
6e6e 4303: ;      jsr  seclvl
6e6e 4304: ;      bmi  .next      ;no
6e6e 4305: ;
6e6e 4306: ;      ldy  .idx          ;re
6e6e 4307: ;      dey
6e6e 4308: ;      lda  u_lastread+1    ;is
6e6e 4309: ;      cmp  hi_msgghi,y    ; n
6e6e 4310: ;      bcc  .gotone      ;ye
6e6e 4311: ;      beq  .cklo
6e6e 4312: ;      jmp  .next      ;no
6e6e 4313: ;.cklo:      lda  u_lastread
6e6e 4314: ;      cmp  hi_msgglo,y
6e6e 4315: ;      bcs  .next
6e6e 4316: ;.gotone:    lda  .idx      ;re
6e6e 4317: ;      rts
6e6e 4318: ;.next:      inc  .idx
6e6e 4319: ;      lda  .idx
6e6e 4320: ;      cmp  #32
6e6e 4321: ;      bcc  .loop
6e6e 4322: ;      lda  #0
6e6e 4323: ;      rts
6e6e 4324: ;
6e6e 4325: ;.idx:      dc.b  0
6e6e 4326: ;
6e6e 4327: ;
6e6e 4328: ;
6e6e a000 4329: clear_nodes:  ldy  #0      ;cl
6e70 98 4330:      tya
6e71 99828d 4331: .loop:      sta  m_nodelist,y
6e74 c8 4332:      iny
6e75 d0fa 4333:      bne  .loop
6e77 ad6e44 4334:      lda  s_node      ;an
6e7a 8d828d 4335:      sta  m_nodelist    ; n
6e7d ad6f44 4336:      lda  s_node+1
6e80 8d838d 4337:      sta  m_nodelist+1
6e83 60 4338:      rts
6e84 4339:
6e84 4340:
6e84 4341:
6e84 8d8145 4342: stuff:      sta  queue      ;st
6e87 a900 4343:      lda  #0      ; k
6e89 8d8245 4344:      sta  qout
6e8c a901 4345:      lda  #1
6e8e 8d8345 4346:      sta  qin
6e91 60 4347:      rts
6e92 4348:
6e92 4349:
6e92 4350:
6e92 4351:

```



```

6e92      4352: ;
6e92      4353: ;   print the byte currently in Accum.
6e92      4354: ;   ~~~~~
6e92      4355: ;
6e92 a200 4356: out_byte:      ldx    #0
6e94 86d5 4357: out_card:      stx    fr0+1
6e96      4358:
6e96 85d4 4359: out_num:      sta    fr0
6e98 20aad9 4360:      jsr    ifp      ;fl
6e9b 20e6d8 4361:      jsr    fasc     ;to
6e9e a000 4362:      ldy    #0
6ea0 8cc86e 4363:      sty    .tempy
6ea3 acc86e 4364: .prbloop:    ldy    .tempy
6ea6 b1f3 4365:      lda    (inbuff),y
6ea8 08 4366:      php
6ea9 297f 4367:      and    #$7f      ;la
6eab 99c96e 4368:      sta    .tempy+1,y
6eae eec86e 4369:      inc    .tempy
6eb1 28 4370:      plp
6eb2 10ef 4371:      bpl    .prbloop
6eb4      4372:      mea    .tempy,s_ptr
6eb4 a9c8 ----:      lda    #low .tempy
6eb6 8582 ----:      sta    s_ptr
6eb8 a96e ----:      lda    #high .tempy
6eba 8583 ----:      sta    s_ptr + 1
6ebc      4373:      mea    parm_1,d_ptr
6ebc a9a6 ----:      lda    #low parm_1
6ebe 8584 ----:      sta    d_ptr
6ec0 a945 ----:      lda    #high parm_1
6ec2 8585 ----:      sta    d_ptr + 1
6ec4 209451 4374:      jsr    move_str
6ec7 60 4375:      rts
6ec8      4376: .tempy:      ds.b    10
6ed2      4377:
6ed2      4378: ;
6ed2      4379: ;
6ed2      4380: ;
6ed2      4381: ;;-----
6ed2      4382:
6ed2      4383: basecmds:
6ed2 41 4384:      dc.b    'A'      ;show again
6ed3 3c56 4385:      dc.w    b_a
6ed5 42 4386:      dc.b    'B'      ;go backward
6ed6 5d56 4387:      dc.w    b_b
6ed8 43 4388:      dc.b    'C'      ;continue s
6ed9 1c59 4389:      dc.w    b_c
6edb      4390: ;      dc.b    'D'      ;delete
6edb      4391: ;      dc.w    b_d
6edb 45 4392:      dc.b    'E'      ;edit
6edc 5157 4393:      dc.w    b_e
6ede 46 4394:      dc.b    'F'      ;go forward
6edf 5d58 4395:      dc.w    b_f
6ee1 48 4396:      dc.b    'H'      ;hardcopy o

```

```

6ee2 b35a 4397:      dc.w  b_h
6ee4 4a 4398:      dc.b  'J'      ;jump to ms
6ee5 9d58 4399:      dc.w  b_j
6ee7 4b 4400:      dc.b  'K'      ;keyword se
6ee8 bd58 4401:      dc.w  b_k
6eea 4c 4402:      dc.b  'L'      ;lock messa
6eeb 3c5a 4403:      dc.w  b_l
6eed 4d 4404:      dc.b  'M'      ;Make Basic
6eee 975a 4405:      dc.w  b_m
6ef0 4e 4406:      dc.b  'N'      ;new messag
6ef1 275b 4407:      dc.w  b_n
6ef3 4408: ;      dc.b  'P'      ;post a mes
6ef3 4409: ;      dc.w  b_p
6ef3 4410: ;      dc.b  'Q'      ;quit threa
6ef3 4411: ;      dc.w  b_q
6ef3 4412: ;      dc.b  'R'      ;reply to m
6ef3 4413: ;      dc.w  b_r
6ef3 53 4414:      dc.b  'S'      ;show repli
6ef4 c85a 4415:      dc.w  b_s
6ef6 4416: ;      dc.b  'T'      ;top of thr
6ef6 4417: ;      dc.w  b_t
6ef6 55 4418:      dc.b  'U'      ;unlock mes
6ef7 c962 4419:      dc.w  b_u
6ef9 56 4420:      dc.b  'V'      ; Video Wid
6efa c975 4421:      dc.w  e_V
6efc 58 4422:      dc.b  'X'      ;exit
6efd 4a55 4423:      dc.w  b_x
6eff 5a 4424:      dc.b  'Z'      ;change bas
6f00 2063 4425:      dc.w  b_z
6f02 9b 4426:      dc.b  '$9b      ;read next
6f03 6555 4427:      dc.w  b_cr
6f05 3f 4428:      dc.b  '?'      ;help
6f06 4f63 4429:      dc.w  b_qmark
6f08 2d 4430:      dc.b  '-'      ;go backwar
6f09 f762 4431:      dc.w  b_minus
6f0b 3c 4432:      dc.b  '<'      ;go backwar
6f0c f762 4433:      dc.w  b_minus
6f0e 2b 4434:      dc.b  '+'      ;go forward
6f0f 0b63 4435:      dc.w  b_plus
6f11 3e 4436:      dc.b  '>'      ;go forward
6f12 0b63 4437:      dc.w  b_plus
6f14 4438: ;      dc.b  '*'      ;base list
6f14 4439: ;      dc.w  b_ast
6f14 4440: ;      dc.b  '/'      ;next new b
6f14 4441: ;      dc.w  b_slash
6f14 4442: ;      dc.b  '@'      ;mark this
6f14 4443: ;      dc.w  b_at
6f14 4444: ;      dc.b  '='      ;Goto a msg
6f14 4445: ;      dc.w  b_eq
6f14 4446:
6f14 00 4447:      dc.b  0
6f15 2d55 4448:      dc.w  b_bad
6f17 4449: ;

```

```

6f17      4450:
6f17      4451:
6f17      4452: ed_ams:      ds.b  1      ;is this a
6f18      4453: ed_msgbuff:    ds.w  1      ;pointer to
6f1a      4454: ed_maxbytes:   ds.w  1      ;max bytes
6f1c 28    4455: ed_width:     dc.b  40      ;max width
6f1d      4456: ed_graphics:   ds.b  1      ;$80=allow
6f1e      4457: ed_savemode:   ds.b  1      ;will eithe
6f1f      4458: ed_title:      ds.b  31      ;title of t
6f3e      4459: ed_toname:     ds.b  31      ;title of t
6f5d      4460:
6f5d      4461:
6f5d      4462: msgedit:
6f5d a901  4463:          lda  #$01
6f5f 8d8445 4464:          sta  rc
6f62 ad176f 4465:          lda  ed_ams
6f65 f00c  4466:          beq  .notmsg      ; change
6f67 ad1c6f 4467:          lda  ed_width
6f6a c928  4468:          cmp  #40
6f6c f005  4469:          beq  .notmsg
6f6e a94d  4470:          lda  #77
6f70 8d1c6f 4471:          sta  ed_width
6f73 203379 4472: .notmsg:   jsr  header
6f76 a900  4473:          lda  #0
6f78 8d427f 4474:          sta  graphics
6f7b 8d4a7f 4475:          sta  did_wrap
6f7e 8dfa7f 4476:          sta  pasteline
6f81 a980  4477:          lda  #$80
6f83 8d437f 4478:          sta  wordwrap
6f86      4479:
6f86 ad417f 4480: newline:   lda  linenum      ;m
6f89 d003  4481:          bne  .ok
6f8b ee417f 4482:          inc  linenum
6f8e      4483:
6f8e 204f77 4484: .ok:       jsr  cklength
6f91 2c427f 4485:          bit  graphics
6f94 3009  4486:          bmi  .grmode
6f96      4487:
6f96 20334e 4488:          jsr  printsi
6f99 9b3eff 4489:          dc.b  $9b,>,-1
6f9c 4ca56f 4490:          jmp  .nl1
6f9f      4491:
6f9f 20334e 4492: .grmode:   jsr  printsi
6fa2 9b14ff 4493:          dc.b  $9b,20,-1      ;gr
6fa5      4494:
6fa5 ad417f 4495: .nl1:      lda  linenum
6fa8 c9fb  4496:          cmp  #251
6faa b00d  4497:          bcs  .maxedout
6fac ad4f7f 4498:          lda  bytes_left+1
6faf d014  4499:          bne  .notmaxed
6fb1 ad1c6f 4500:          lda  ed_width
6fb4 cd4e7f 4501:          cmp  bytes_left      ;mu
6fb7 900c  4502:          bcc  .notmaxed      ; w

```

```

6fb9      4503:
6fb9 a901 4504: .maxedout:      lda  #1
6fbb 8d507f 4505:      sta  msgline
6fbe a92f 4506:      lda  #'/'
6fc0 8d517f 4507:      sta  msgline+1
6fc3 d00e 4508:      bne  .gotaline
6fc5 a900 4509: .notmaxed:      lda  #0
6fc7 8d497f 4510:      sta  autoreturn
6fca ad1c6f 4511:      lda  ed_width
6fcd 38 4512:      sec
6fce e902 4513:      sbc  #2
6fd0 20d97a 4514:      jsr  get_line
6fd3      4515:
6fd3 ad507f 4516: .gotaline:      lda  msgline
6fd6 c901 4517:      cmp  #1
6fd8 d042 4518:      bne  .not2
6fda ad517f 4519:      lda  msgline+1
6fdd c92f 4520:      cmp  #'/'
6fdf d006 4521:      bne  .not1
6fe1 203870 4522:      jsr  do_edit      ;y
6fe4 4c866f 4523:      jmp  newline
6fe7      4524:
6fe7 c93f 4525: .not1:      cmp  #'?'
6fe9 d031 4526:      bne  .not2
6feb 20334e 4527:      jsr  printsi
6fee 4c696e 4528:      dc.b  "Line #",-1
6ff5 ad417f 4529:      lda  linenum
6ff8 204c4b 4530:      jsr  pr_byte
6ffb 20334e 4531:      jsr  printsi
6ffe 2c20ff 4532:      dc.b  ",",-1
7001 ad4e7f 4533:      lda  bytes_left
7004 ae4f7f 4534:      ldx  bytes_left+1
7007 204e4b 4535:      jsr  pr_card
700a 20334e 4536:      jsr  printsi
700d 206279 4537:      dc.b  " bytes left",-1
7019 4c866f 4538:      jmp  newline
701c 202878 4539: .not2:      jsr  movtobuff      ;mo
701f ee417f 4540:      inc  linenum
7022      4541:      mea  msgline,s_ptr
7022 a950 ----:      lda  #low msgline
7024 8582 ----:      sta  s_ptr
7026 a97f ----:      lda  #high msgline
7028 8583 ----:      sta  s_ptr + 1
702a      4542:      mea  pasteline,d_ptr
702a a9fa ----:      lda  #low pasteline
702c 8584 ----:      sta  d_ptr
702e a97f ----:      lda  #high pasteline
7030 8585 ----:      sta  d_ptr + 1
7032 209451 4543:      jsr  move_str
7035 4c866f 4544:      jmp  newline
7038      4545:
7038      4546:
7038      4547: ; the message editing commands

```

```

7038      4548: ;      ~~~~~
7038      4549:
7038 20334e 4550: do_edit:      jsr  printsi
703b 7e5bff 4551:      dc.b  126,['',-1
703e ad417f 4552:      lda   linenum      ;'
7041 38      4553:      sec
7042 e901      4554:      sbc   #1
7044 204c4b 4555:      jsr  pr_byte
7047 20334e 4556:      jsr  printsi
704a 5d2045 4557:      dc.b  "]" Edit: ",-1
7053 204050 4558:      jsr  get_key
7056 297f      4559:      and   #$7f
7058 48      4560:      pha
7059      4561:      mea  editcmds,s_ptr
7059 a959 ----:      lda  #low editcmds
705b 8582 ----:      sta  s_ptr
705d a980 ----:      lda  #high editcmds
705f 8583 ----:      sta  s_ptr + 1
7061 68      4562:      pla
7062 201a50 4563:      jsr  execute
7065 60      4564:      rts
7066      4565:
7066 a900      4566: e_s:      lda  #0
7068 8d1e6f 4567:      sta  ed_savemode
706b 4c7670 4568:      jmp  save_msg
706e      4569:
706e a904      4570: e_u:      lda  #AS_IS      ;
7070 8d1e6f 4571:      sta  ed_savemode
7073 4c7670 4572:      jmp  save_msg
7076      4573:
7076 200477 4574: save_msg:  jsr  cklines
7079 20334e 4575:      jsr  printsi
707c 536176 4576:      dc.b  "Save",$9b,-1
7082 ce417f 4577:      dec  linenum      ;l
7085 20d57c 4578:      jsr  stripcrs
7088 68      4579:      pla
7089 68      4580:      pla
708a 68      4581:      pla
708b 68      4582:      pla
708c ad1c6f 4583:      lda  ed_width
708f c928      4584:      cmp  #40
7091 f005      4585:      beq  .exit
7093 a950      4586:      lda  #80
7095 8d1c6f 4587:      sta  ed_width
7098 ad417f 4588: .exit:      lda  linenum
709b 60      4589:      rts
709c      4590:
709c      4591:
709c 200477 4592: e_r:      jsr  cklines
709f 202777 4593:      jsr  ckmax
70a2 20334e 4594:      jsr  printsi
70a5 7e7e7e 4595:      dc.b  126,126,126,126,126,126,126
70b0 ad417f 4596:      lda  linenum

```

```

70b3 c965 4597:      cmp    #101
70b5 9005 4598:      bcc    .not100
70b7 a97e 4599:      lda    #126
70b9 20cc4f 4600:     jsr    echo
70bc c90b 4601: .not100:      cmp    #11
70be 9005 4602:      bcc    .enough
70c0 a97e 4603:      lda    #126
70c2 20cc4f 4604:     jsr    echo
70c5 a93e 4605: .enough:      lda    #'>'
70c7 20cc4f 4606:     jsr    echo
70ca ad417f 4607:     lda    linenum
70cd 38 4608:      sec
70ce e901 4609:      sbc    #1
70d0 204278 4610:     jsr    calcptr
70d3 a588 4611:      lda    pr_ptr
70d5 8582 4612:      sta    s_ptr
70d7 a589 4613:      lda    pr_ptr+1
70d9 8583 4614:      sta    s_ptr+1
70db 20fa4f 4615:     jsr    echos
70de 4616:      mea    msgline,d_ptr
70de a950 ----:      lda    #low msgline
70e0 8584 ----:      sta    d_ptr
70e2 a97f ----:      lda    #high msgline
70e4 8585 ----:      sta    d_ptr + 1
70e6 209451 4617:     jsr    move_str
70e9 4618:
70e9 202878 4619:     jsr    movtobuff      ;mo
70ec ee417f 4620:     inc    linenum
70ef 60 4621:      rts
70f0 4622:
70f0 4623: e_a:
70f0 20334e 4624:     jsr    printsi
70f3 41626f 4625:     dc.b    "Abort...You sure? ",-1
7106 20fc50 4626:     jsr    y_or_n
7109 c959 4627:     cmp    #'Y'
710b d017 4628:     bne    .xea
710d 68 4629:     pla
710e 68 4630:     pla
710f 68 4631:     pla
7110 68 4632:     pla
7111 a980 4633:     lda    #$80
7113 8d8445 4634:     sta    rc
7116 ad1c6f 4635:     lda    ed_width
7119 c928 4636:     cmp    #40
711b f005 4637:     beq    .exit
711d a950 4638:     lda    #80
711f 8d1c6f 4639:     sta    ed_width
7122 a900 4640: .exit:      lda    #0
7124 60 4641: .xea:      rts
7125 4642:
7125 4643:
7125 4644: e_b:
7125 20334e 4645:     jsr    printsi

```

```

7128 426567 4646:      dc.b  "Begin Over...You sure? ",-
7140 20fc50 4647:      jsr  y_or_n
7143 c959 4648:      cmp  #'Y'
7145 d008 4649:      bne  .xea
7147 a901 4650:      lda  #1
7149 8d417f 4651:      sta  linenum
714c 206d71 4652:      jsr  e_sl
714f 60 4653: .xea:      rts
7150 4654:
7150 4655:
7150 20334e 4656: e_c:      jsr  printsi
7153 7d9b20 4657:      dc.b  125,$9b,' ',-1
7157 ad417f 4658:      lda  linenum
715a 8d6c71 4659:      sta  .temp
715d a901 4660:      lda  #1
715f 8d417f 4661:      sta  linenum
7162 20a679 4662:      jsr  header2
7165 ad6c71 4663:      lda  .temp
7168 8d417f 4664:      sta  linenum
716b 60 4665:      rts
716c 00 4666: .temp:      dc.b  0
716d 4667:
716d 4668:
716d a97d 4669: e_sl:      lda  #125
716f 20cc4f 4670:      jsr  echo
7172 60 4671:      rts
7173 4672:
7173 200477 4673: e_d:      jsr  cklines
7176 20334e 4674:      jsr  printsi
7179 44656c 4675:      dc.b  "Delete",-1
7181 ad417f 4676:      lda  linenum
7184 38 4677:      sec
7185 e901 4678:      sbc  #1
7187 8d457f 4679:      sta  def_1
718a 8d467f 4680:      sta  def_2
718d 207078 4681:      jsr  get_nums
7190 ad447f 4682:      lda  nums
7193 f010 4683:      beq  .delerr
7195 20a877 4684:      jsr  del_lines
7198 20334e 4685:      jsr  printsi
719b 202d20 4686:      dc.b  " - Done!",-1
71a4 60 4687:      rts
71a5 4688: .delerr:
71a5 20334e 4689:      jsr  printsi
71a8 202d20 4690:      dc.b  " - No lines deleted!",-1
71bd 60 4691:      rts
71be 4692:
71be 200477 4693: e_e:      jsr  cklines
71c1 202777 4694:      jsr  ckmax
71c4 20334e 4695:      jsr  printsi
71c7 456469 4696:      dc.b  "Edit",-1
71cd ad417f 4697:      lda  linenum
71d0 38 4698:      sec

```

```

71d1 e901 4699:      sbc    #1
71d3 8d457f 4700:      sta    def_1
71d6 8d467f 4701:      sta    def_2
71d9 207078 4702:      jsr    get_nums
71dc 20334e 4703:      jsr    printsi
71df 9b9b2d 4704:      dc.b   $9b,$9b,'-',1
71e3 ad477f 4705:      lda    fromline
71e6 204278 4706:      jsr    calcptr
71e9 20db7d 4707:      jsr    movepaste      ;mo
71ec 20fa4f 4708:      jsr    echos
71ef 20334e 4709:      jsr    printsi
71f2 9b2bff 4710:      dc.b   $9b,'+',-1
71f5 a980 4711:      lda    #$80
71f7 8d497f 4712:      sta    autoreturn
71fa a900 4713:      lda    #0
71fc 8d4a7f 4714:      sta    did_wrap
71ff ad1c6f 4715:      lda    ed_width
7202 38 4716:      sec
7203 e902 4717:      sbc    #2
7205 20d97a 4718:      jsr    get_line
7208 ad507f 4719:      lda    msgline
720b f036 4720:      beq    .nochg
720d 4721:
720d 4722: ; delete old line from the buffer, then insert the n
720d 4723: ; ~~~~~
720d 4724:
720d ae417f 4725:      ldx    linenum
7210 ca 4726:      dex          ;if
7211 ec477f 4727:      cpx    fromline
7214 f013 4728:      beq    .noexp
7216 4729:
7216 ad477f 4730:      lda    fromline
7219 8d487f 4731:      sta    toline      ;
721c 202c7d 4732:      jsr    contract
721f ad477f 4733:      lda    fromline
7222 ae507f 4734:      ldx    msgline      ;g
7225 e8 4735:      inx
7226 20727d 4736:      jsr    expand      ;
7229 ad477f 4737: .noexp:      lda    fromline
722c 204278 4738:      jsr    calcptr      ;p
722f a588 4739:      lda    pr_ptr
7231 8584 4740:      sta    d_ptr
7233 a589 4741:      lda    pr_ptr+1
7235 8585 4742:      sta    d_ptr+1
7237 4743:      mea    msgline,s_ptr
7237 a950 ----:      lda    #low msgline
7239 8582 ----:      sta    s_ptr
723b a97f ----:      lda    #high msgline
723d 8583 ----:      sta    s_ptr + 1
723f 209451 4744:      jsr    move_str
7242 60 4745:      rts
7243 4746:
7243 4747: .nochg:

```



```

7243 20334e 4748:      jsr  printsi
7246 4c696e 4749:      dc.b  "Line unchanged...",-1
7258 60    4750:      rts
7259    4751:
7259 200477 4752: e_i:      jsr  cklines
725c 202777 4753:      jsr  ckmax
725f 20334e 4754:      jsr  printsi
7262 496e73 4755:      dc.b  "Insert Before",-1
7271 ad417f 4756:      lda  linenum
7274 38    4757:      sec
7275 e901   4758:      sbc  #1
7277 8d457f 4759:      sta  def_1
727a 8d467f 4760:      sta  def_2
727d 207078 4761:      jsr  get_nums
7280    4762:
7280 20334e 4763:      jsr  printsi
7283 9b9b2b 4764:      dc.b  $9b,$9b,'+',-1
7287 a980   4765:      lda  #$80
7289 8d497f 4766:      sta  autoreturn
728c a900   4767:      lda  #0
728e 8d4a7f 4768:      sta  did_wrap
7291 8dfa7f 4769:      sta  pasteline
7294 ad1c6f 4770:      lda  ed_width
7297 38    4771:      sec
7298 e902   4772:      sbc  #2
729a 20d97a 4773:      jsr  get_line
729d    4774:
729d ad477f 4775:      lda  fromline
72a0 ae507f 4776:      ldx  msgline          ;g
72a3 e8    4777:      inx
72a4 20727d 4778:      jsr  expand          ;
72a7 ad477f 4779:      lda  fromline
72aa 204278 4780:      jsr  calcptr        ;p
72ad a588   4781:      lda  pr_ptr
72af 8584   4782:      sta  d_ptr
72b1 a589   4783:      lda  pr_ptr+1
72b3 8585   4784:      sta  d_ptr+1
72b5    4785:      mea  msgline,s_ptr
72b5 a950   ----:      lda  #low msgline
72b7 8582   ----:      sta  s_ptr
72b9 a97f   ----:      lda  #high msgline
72bb 8583   ----:      sta  s_ptr + 1
72bd 209451 4786:      jsr  move_str
72c0 ee417f 4787:      inc  linenum        ;+
72c3 60    4788:      rts
72c4    4789:
72c4    4790:
72c4    4791:
72c4    4792:
72c4 200477 4793: e_l:      jsr  cklines
72c7 20334e 4794:      jsr  printsi
72ca 4c6973 4795:      dc.b  "List",-1
72d0 a901   4796:      lda  #1

```

```

72d2 8d457f 4797:      sta  def_1
72d5 ad417f 4798:      lda  linenum
72d8 38 4799:      sec
72d9 e901 4800:      sbc  #1
72db 8d467f 4801:      sta  def_2
72de 207078 4802:      jsr  get_nums
72e1 a900 4803:      lda  #0
72e3 4cda77 4804:      jmp  listmsg
72e6 4805:
72e6 200477 4806: e_n:      jsr  cklines
72e9 20334e 4807:      jsr  printsi
72ec 4c6973 4808:      dc.b  "List",-1
72f2 a901 4809:      lda  #1
72f4 8d457f 4810:      sta  def_1
72f7 ad417f 4811:      lda  linenum
72fa 38 4812:      sec
72fb e901 4813:      sbc  #1
72fd 8d467f 4814:      sta  def_2
7300 207078 4815:      jsr  get_nums
7303 a901 4816:      lda  #1
7305 4cda77 4817:      jmp  listmsg
7308 4818:
7308 4819:
7308 200477 4820: e_f:      jsr  cklines
730b 20457a 4821:      jsr  formheader
730e a901 4822:      lda  #1
7310 8d477f 4823:      sta  fromline
7313 ad417f 4824:      lda  linenum
7316 38 4825:      sec
7317 e901 4826:      sbc  #1
7319 8d487f 4827:      sta  toline
731c a900 4828:      lda  #0
731e 4cda77 4829:      jmp  listmsg
7321 4830:
7321 4831:
7321 4832: e_qmark:
7321 4833:
7321 20334e 4834:      jsr  printsi
7324 7d9b 4835:      dc.b  $7d,$9b
7326 9b2041 4836:      dc.b  $9b," All commands are prec
734b 9b2020 4837:      dc.b  $9b," in the first positio
736d 4838:
736d 9b2020 4839:      dc.b  $9b," "
7370 dbc1dd 4840:      dc.b  <+128>,"[A]"
7373 204162 4841:      dc.b  " Abort this text and exit"
738c 9b2020 4842:      dc.b  $9b," "
738f dbc2dd 4843:      dc.b  <+128>,"[B]"
7392 204265 4844:      dc.b  " Begin this text over agai
73ad 9b2020 4845:      dc.b  $9b," "
73b0 dbc3dd 4846:      dc.b  <+128>,"[C]"
73b3 204469 4847:      dc.b  " Display a columnar headin
73ce 9b2020 4848:      dc.b  $9b," "
73d1 dbc5dd 4849:      dc.b  <+128>,"[E]"

```

```

73d4 204564 4850:      dc.b  " Edit an individual line"
73ec 9b2020 4851:      dc.b  $9b," "
73ef dbc6dd 4852:      dc.b  <+128>,"[F]"
73f2 20466f 4853:      dc.b  " Formatted listing of mess
740f 9b2020 4854:      dc.b  $9b," "
7412 dbc7dd 4855:      dc.b  <+128>,"[G]"
7415 20546f 4856:      dc.b  " Toggle graphics mode on /
7433 9b2020 4857:      dc.b  $9b," "
7436 dbc9dd 4858:      dc.b  <+128>,"[I]"
7439 20496e 4859:      dc.b  " Insert a new line"
744b 9b2020 4860:      dc.b  $9b," "
744e dbccdd 4861:      dc.b  <+128>,"[L]"
7451 204c69 4862:      dc.b  " List the message"
7462 9b2020 4863:      dc.b  $9b," "
7465 dbcedd 4864:      dc.b  <+128>,"[N]"
7468 204c69 4865:      dc.b  " List the message with num
7486 9b2020 4866:      dc.b  $9b," "
7489 dbd2dd 4867:      dc.b  <+128>,"[R]"
748c 205265 4868:      dc.b  " Repeat the last input lin
74a7 9b2020 4869:      dc.b  $9b," "
74aa dbd3dd 4870:      dc.b  <+128>,"[S]"
74ad 205361 4871:      dc.b  " Save this message and exi
74c8 9b2020 4872:      dc.b  $9b," "
74cb dbd5dd 4873:      dc.b  <+128>,"[U]"
74ce 20556e 4874:      dc.b  " Unformatted Save and exi
74e9 9b2020 4875:      dc.b  $9b," "
74ec dbd6dd 4876:      dc.b  <+128>,"[V]"
74ef 20546f 4877:      dc.b  " Toggle Video width 40 / 8
750a 9b2020 4878:      dc.b  $9b," "
750d dbd7dd 4879:      dc.b  <+128>,"[W]"
7510 20546f 4880:      dc.b  " Toggle word wrap on and o
752c 9b2020 4881:      dc.b  $9b," "
752f dbafdd 4882:      dc.b  <+128>,"[X]"
7532 20436c 4883:      dc.b  " Clear the screen"
7543 9b2020 4884:      dc.b  $9b," "
754e dbc3ef 4885:      dc.b  <+128>,"[Control Keys]"
755c 9b 4886:      dc.b  $9b
755d 9b5e4c 4887:      dc.b  $9b,"^L - Pastes a Letter f
7582 9b5e57 4888:      dc.b  $9b,"^W - Pastes a Word f
75a7 9b2050 4889:      dc.b  $9b," Press any key to cont
75c5 204050 4890:      jsr  get_key
75c8 60 4891:      rts
75c9 4892:
75c9 4893:
75c9 4894:
75c9 4895: ;~~~~~
75c9 4896: ;This will toggle between 40 and 80 column that was added
75c9 4897: ;
75c9 4898: ;~~~~~
75c9 4899: e_v:
75c9 20334e 4900:      jsr  printsi
75cc 9b2049 4901:      dc.b  $9b," In",-1
75d2 ad1c6f 4902:      lda  ed_width

```

```

75d5 c928 4903:      cmp    #40
75d7 f018 4904:      beq    .do80
75d9 c950 4905:      cmp    #80
75db f005 4906:      beq    .do40
75dd c94d 4907:      cmp    #77
75df f001 4908:      beq    .do40
75e1 60 4909:      rts
75e2 4910:
75e2 a928 4911: .do40:      lda    #40
75e4 8d1c6f 4912:      sta    ed_width
75e7 20334e 4913:      jsr    printsi
75ea 343020 4914:      dc.b   "40",-1
75ee 4cfd75 4915:      jmp    .exit
75f1 4916:
75f1 a94d 4917: .do80:      lda    #77
75f3 8d1c6f 4918:      sta    ed_width
75f6 20334e 4919:      jsr    printsi
75f9 383020 4920:      dc.b   "80",-1
75fd 20334e 4921: .exit:      jsr    printsi
7600 436f6c 4922:      dc.b   "Column Mode "
760c ceef7 4923:      dc.b   <+128>,"Now"
760f ff 4924:      dc.b   -1
7610 60 4925:      rts
7611 4926:
7611 4927:
7611 4928:
7611 4929:
7611 4930:
7611 ad1d6f 4931: e_g:      lda    ed_graphics
7614 301f 4932:      bmi    .ok
7616 20334e 4933:      jsr    printsi
7619 477261 4934:      dc.b   "Graphics not allowed here!"
7634 60 4935:      rts
7635 ad8545 4936: .ok:      lda    trans
7638 d03c 4937:      bne    .nocando
763a ad427f 4938:      lda    graphics
763d f01c 4939:      beq    .gon
763f 20334e 4940: .goff:      jsr    printsi
7642 477261 4941:      dc.b   "Graphics mode off!",-1
7655 a900 4942:      lda    #0
7657 8d427f 4943:      sta    graphics
765a 60 4944:      rts
765b 20334e 4945: .gon:      jsr    printsi
765e 477261 4946:      dc.b   "Graphics mode on!",-1
7670 a980 4947:      lda    #$80
7672 8d427f 4948:      sta    graphics
7675 60 4949:      rts
7676 20334e 4950: .nocando:      jsr    printsi
7679 596f75 4951:      dc.b   "You're not in ATASCII mode"
7695 60 4952:      rts
7696 4953:
7696 4954:
7696 ad427f 4955: e_w:      lda    graphics

```

```

7699 d034 4956:      bne  .nocando
769b ad437f 4957:      lda  wordwrap
769e f018 4958:      beq  .gon
76a0 20334e 4959: .goff:      jsr  printsi
76a3 576f72 4960:      dc.b  "Word wrap off!",-1
76b2 a900 4961:      lda  #0
76b4 8d437f 4962:      sta  wordwrap
76b7 60 4963:      rts
76b8 20334e 4964: .gon:      jsr  printsi
76bb 576f72 4965:      dc.b  "Word wrap on!",-1
76c9 a980 4966:      lda  #$80
76cb 8d437f 4967:      sta  wordwrap
76ce 60 4968:      rts
76cf 20334e 4969: .nocando:   jsr  printsi
76d2 4e6f74 4970:      dc.b  "Not while in Graphics mode
76ee 60 4971:      rts
76ef 4972:
76ef 4973:
76ef 4974:
76ef 4975: e_bad:
76ef 20334e 4976:      jsr  printsi
76f2 456e74 4977:      dc.b  "Enter ? for help",-1
7703 60 4978:      rts
7704 4979:
7704 4980:
7704 4981:
7704 ad417f 4982: cklines:   lda  linenum
7707 c902 4983:      cmp  #2
7709 b01b 4984:      bcs  .xck
770b 20334e 4985:      jsr  printsi
770e 4e6f20 4986:      dc.b  "No lines entered yet!",-1
7724 68 4987:      pla
7725 68 4988:      pla
7726 60 4989: .xck:      rts
7727 4990:
7727 4991:
7727 ad417f 4992: ckmax:     lda  linenum
772a c9fb 4993:      cmp  #251
772c b00d 4994:      bcs  .maxedout
772e ad4f7f 4995:      lda  bytes_left+1
7731 d01b 4996:      bne  .notmaxed
7733 ad1c6f 4997:      lda  ed_width
7736 cd4e7f 4998:      cmp  bytes_left      ;mu
7739 9013 4999:      bcc  .notmaxed      ; w
773b 20334e 5000: .maxedout: jsr  printsi
773e 4e6f20 5001:      dc.b  "No room left!",-1
774c 68 5002:      pla
774d 68 5003:      pla
774e 60 5004: .notmaxed: rts
774f 5005:
774f 5006:
774f 5007: ; see if they are within five lines of maximum
774f 5008: ; ~~~~~

```

```

774f      5009:
774f 20eb7c 5010: cklength:      jsr  total_bytes      ;ca
7752 ad1a6f 5011:      lda  ed_maxbytes
7755 38      5012:      sec
7756 ed4c7f 5013:      sbc  tot_bytes
7759 8d4e7f 5014:      sta  bytes_left
775c ad1b6f 5015:      lda  ed_maxbytes+1      ;ca
775f ed4d7f 5016:      sbc  tot_bytes+1
7762 8d4f7f 5017:      sta  bytes_left+1
7765      5018:
7765 ad417f 5019:      lda  linenum
7768 c9f6      5020:      cmp  #246
776a d018      5021:      bne  .notnear
776c 20334e 5022:      jsr  printsi
776f 9b4a75 5023:      dc.b  $9b,"Just 5 lines left!",-1
7783 60      5024:      rts
7784 ad4f7f 5025: .notnear:      lda  bytes_left+1
7787 d01e      5026:      bne  .exit
7789 20334e 5027:      jsr  printsi
778c 9b4c65 5028:      dc.b  $9b,"Less than 255 bytes lef
77a7      5029: .exit:
77a7 60      5030:      rts
77a8      5031:
77a8      5032:
77a8      5033:
77a8      5034:
77a8      5035: ;      delete lines from FROMLINE to TOLINE (inclusive)
77a8      5036: ;      ~~~~~
77a8      5037:
77a8 ae417f 5038: del_lines:      ldx  linenum
77ab ca      5039:      dex
77ac 8ed977 5040:      stx  .numlines      ;if
77af ad487f 5041:      lda  toline      ;
77b2 cdd977 5042:      cmp  .numlines
77b5 9007      5043:      bcc  .notend
77b7 ad477f 5044:      lda  fromline
77ba 8d417f 5045:      sta  linenum
77bd 60      5046:      rts
77be ad487f 5047: .notend:      lda  toline
77c1 38      5048:      sec
77c2 ed477f 5049:      sbc  fromline
77c5 18      5050:      clc
77c6 6901      5051:      adc  #1
77c8 8dd977 5052:      sta  .numlines      ;#
77cb 202c7d 5053:      jsr  contract
77ce ad417f 5054:      lda  linenum
77d1 38      5055:      sec
77d2 edd977 5056:      sbc  .numlines
77d5 8d417f 5057:      sta  linenum      ;u
77d8 60      5058:      rts
77d9      5059:
77d9 00      5060: .numlines:      dc.b  0
77da      5061:

```

```

77da      5062:
77da 8d2678 5063: listmsg:      sta  .nums
77dd 205550 5064:          jsr  cr_lf
77e0 205550 5065:          jsr  cr_lf
77e3 a900 5066:          lda  #0
77e5 8d6744 5067:          sta  aborted
77e8 ad477f 5068:          lda  fromline
77eb 8d2778 5069:          sta  .counter
77ee ad2678 5070: .loop:      lda  .nums
77f1 f00f 5071:          beq  .nonums          ;n
77f3 ad2778 5072:          lda  .counter
77f6 204c4b 5073:          jsr  pr_byte
77f9 20334e 5074:          jsr  printsi
77fc 3a20ff 5075:          dc.b  " ",-1
77ff 4c0778 5076:          jmp  .over
7802 20334e 5077: .nonums:    jsr  printsi
7805 20ff 5078:          dc.b  " ",-1
7807 ad2778 5079: .over:      lda  .counter
780a 204278 5080:          jsr  calcptr
780d 20fa4f 5081:          jsr  echos
7810 205550 5082:          jsr  cr_lf
7813 ad6744 5083:          lda  aborted
7816 d00d 5084:          bne  .abt
7818 ee2778 5085:          inc  .counter
781b ad2778 5086:          lda  .counter
781e cd487f 5087:          cmp  toline
7821 90cb 5088:          bcc  .loop
7823 f0c9 5089:          beq  .loop
7825 60 5090: .abt:      rts
7826 00 5091: .nums:      dc.b  0
7827 00 5092: .counter:   dc.b  0
7828      5093:
7828      5094:
7828      5095:
7828      5096: ;   move the line at MSGLINE into the buffer (at LINEN
7828      5097: ;   ~~~~~
7828      5098:
7828 ad417f 5099: movtobuff:  lda  linenum
782b 204278 5100:          jsr  calcptr          ;p
782e a588 5101:          lda  pr_ptr
7830 8584 5102:          sta  d_ptr
7832 a589 5103:          lda  pr_ptr+1
7834 8585 5104:          sta  d_ptr+1
7836      5105:          mea  msgline,s_ptr
7836 a950 ----:          lda  #low msgline
7838 8582 ----:          sta  s_ptr
783a a97f ----:          lda  #high msgline
783c 8583 ----:          sta  s_ptr + 1
783e 209451 5106:          jsr  move_str
7841 60 5107:          rts
7842      5108:
7842      5109:
7842      5110: ;   set PR_PTR to point to the message line number in

```

```

7842      5111: ; ~~~~~
7842      5112:
7842 8d6f78 5113: calcptr:      sta  .lnum
7845 ad186f 5114:      lda  ed_msgbuff
7848 8588 5115:      sta  pr_ptr      ;
784a ad196f 5116:      lda  ed_msgbuff+1
784d 8589 5117:      sta  pr_ptr+1
784f a200 5118:      ldx  #0
7851 f015 5119:      beq  .nextln
7853 a000 5120: .loop:      ldy  #0
7855 b188 5121:      lda  (pr_ptr),y      ;ge
7857 18 5122:      clc
7858 6588 5123:      adc  pr_ptr
785a 8588 5124:      sta  pr_ptr
785c a589 5125:      lda  pr_ptr+1
785e 6900 5126:      adc  #0
7860 8589 5127:      sta  pr_ptr+1
7862 e688 5128:      inc  pr_ptr
7864 d002 5129:      bne  .nextln
7866 e689 5130:      inc  pr_ptr+1
7868 e8 5131: .nextln:      inx
7869 ec6f78 5132:      cpx  .lnum
786c 90e5 5133:      bcc  .loop
786e 60 5134: .done:      rts
786f 00 5135: .lnum:      dc.b  0
7870      5136:
7870      5137:
7870      5138:
7870      5139: ; gets two numbers from the user. Returns with from
7870      5140: ; set to the defaults (def_1 and def_2) if necessary
7870      5141: ; done if (1) the user just hits return, or (2) the
7870      5142: ; enters an invalid line number.
7870      5143: ; ~~~~~
7870      5144:
7870      5145:
7870 a900 5146: get_nums:      lda  #0
7872 8d447f 5147:      sta  nums
7875 ad457f 5148:      lda  def_1
7878 8d477f 5149:      sta  fromline
787b ad467f 5150:      lda  def_2
787e 8d487f 5151:      sta  toline
7881 206b4b 5152:      jsr  get_str
7884 4f80 5153:      dc.w  numline
7886 070001 5154:      dc.b  7,0,1
7889      5155:      mea  numline,s_ptr
7889 a94f ----:      lda  #low numline
788b 8582 ----:      sta  s_ptr
788d a980 ----:      lda  #high numline
788f 8583 ----:      sta  s_ptr + 1
7891      5156:      mea  instr,d_ptr
7891 a946 ----:      lda  #low instr
7893 8584 ----:      sta  d_ptr
7895 a948 ----:      lda  #high instr

```



```

7897 8585 ----:      sta  d_ptr + 1
7899 209f4d 5157:      jsr  toascii      ;m
789c a900  5158:      lda  #0
789e 850a  5159:      sta  bufoff
78a0      5160:
78a0 20ef4d 5161:      jsr  crunch      ;ge
78a3 9003  5162:      bcc  .ok1
78a5 4cf578 5163:      jmp  .exit
78a8 ee447f 5164: .ok1:      inc  nums
78ab      5165:      mea  word,s_ptr    ;ma
78ab a988 ----:      lda  #low word
78ad 8582 ----:      sta  s_ptr
78af a945 ----:      lda  #high word
78b1 8583 ----:      sta  s_ptr + 1
78b3      5166:      mea  in_str,d_ptr
78b3 a9f6 ----:      lda  #low in_str
78b5 8584 ----:      sta  d_ptr
78b7 a947 ----:      lda  #high in_str
78b9 8585 ----:      sta  d_ptr + 1
78bb 20c64d 5167:      jsr  tostr
78be      5168:      mea  in_str,s_ptr
78be a9f6 ----:      lda  #low in_str
78c0 8582 ----:      sta  s_ptr
78c2 a947 ----:      lda  #high in_str
78c4 8583 ----:      sta  s_ptr + 1
78c6 20964a 5169:      jsr  valc
78c9 8d477f 5170:      sta  fromline
78cc      5171:
78cc 20ef4d 5172:      jsr  crunch      ;
78cf b024  5173:      bcs  .exit
78d1 ee447f 5174:      inc  nums
78d4      5175:      mea  word,s_ptr    ;ma
78d4 a988 ----:      lda  #low word
78d6 8582 ----:      sta  s_ptr
78d8 a945 ----:      lda  #high word
78da 8583 ----:      sta  s_ptr + 1
78dc      5176:      mea  in_str,d_ptr
78dc a9f6 ----:      lda  #low in_str
78de 8584 ----:      sta  d_ptr
78e0 a947 ----:      lda  #high in_str
78e2 8585 ----:      sta  d_ptr + 1
78e4 20c64d 5177:      jsr  tostr
78e7      5178:      mea  in_str,s_ptr
78e7 a9f6 ----:      lda  #low in_str
78e9 8582 ----:      sta  s_ptr
78eb a947 ----:      lda  #high in_str
78ed 8583 ----:      sta  s_ptr + 1
78ef 20964a 5179:      jsr  valc
78f2 8d487f 5180:      sta  toline      ;
78f5      5181:
78f5 ad477f 5182: .exit:      lda  fromline
78f8 f005  5183:      beq  .n1err
78fa cd417f 5184:      cmp  linenum

```

```

78fd 9006 5185:      bcc  .n1ok
78ff ad457f 5186: .n1err:      lda  def_1
7902 8d477f 5187:      sta  fromline
7905 ad487f 5188: .n1ok:      lda  toline
7908 f005 5189:      beq  .n2err
790a cd417f 5190:      cmp  linenum
790d 9006 5191:      bcc  .n2ok
790f ad467f 5192: .n2err:      lda  def_2
7912 8d487f 5193:      sta  toline
7915 ad447f 5194: .n2ok:      lda  nums
7918 c901 5195:      cmp  #1
791a d006 5196:      bne  .asis
791c ad477f 5197:      lda  fromline
791f 8d487f 5198:      sta  toline
7922 ad487f 5199: .asis:      lda  toline      ;
7925 cd477f 5200:      cmp  fromline
7928 f008 5201:      beq  .as1
792a b006 5202:      bcs  .as1
792c ad477f 5203:      lda  fromline
792f 8d487f 5204:      sta  toline
7932 60 5205: .as1:      rts
7933 5206:
7933 5207:
7933 5208:
7933 5209:
7933 5210: header:
7933 a97d 5211:      lda  #$7d
7935 20cc4f 5212:      jsr  echo
7938 20a442 5213:      jsr  tammy-3
793b 20334e 5214:      jsr  printsi
793e 9b 5215:      dc.b  $9b
793f 202f20 5216:      dc.b  " / to Enter Edit Mode
7966 203f20 5217:      dc.b  " ? for Current Line No
798d 205469 5218:      dc.b  " Title: ",-1
7996 5219:      mea  ed_title,pr_ptr
7996 a91f ----:      lda  #low ed_title
7998 8588 ----:      sta  pr_ptr
799a a96f ----:      lda  #high ed_title
799c 8589 ----:      sta  pr_ptr + 1
799e 20fa4f 5220:      jsr  echos
79a1 ad3e6f 5221:      lda  ed_toname
79a4 f000 5222:      beq  header2
79a6 5223: ;      jsr  printsi
79a6 5224: ;      dc.b  $9b
79a6 5225: ;      dc.b  " To: ",-1
79a6 5226: ;      mea  ed_toname,pr_ptr
79a6 5227: ;      jsr  echos
79a6 20334e 5228: header2:      jsr  printsi
79a9 9b 5229:      dc.b  $9b
79aa 202d2d 5230:      dc.b  " -----1-----2-----+
79d2 ad1c6f 5231:      lda  ed_width
79d5 c928 5232:      cmp  #40
79d7 f037 5233:      beq  .col40

```

```

79d9 20334e 5234:      jsr  printsi
79dc 2d342d 5235:      dc.b  "-4-----5-----6---
7a02 ad1c6f 5236:      lda  ed_width
7a05 c950  5237:      cmp  #80
7a07 d007  5238:      bne  .col40
7a09 20334e 5239:      jsr  printsi
7a0c 2d2d2d 5240:      dc.b  "---",-1
7a10 ad417f 5241: .col40:      lda  linenum
7a13 c902  5242:      cmp  #2
7a15 902d  5243:      bcc  .xhead
7a17 20334e 5244:      jsr  printsi
7a1a 9b2042 5245:      dc.b  "$9b," Beginning edit at lin
7a3b ad417f 5246:      lda  linenum
7a3e 204c4b 5247:      jsr  pr_byte
7a41 205550 5248:      jsr  cr_lf
7a44 60    5249: .xhead:      rts
7a45      5250:
7a45      5251:
7a45      5252: ;   fake header for the "formatted list" command
7a45      5253: ;   ~~~~~
7a45      5254:
7a45 ad176f 5255: formheader:  lda  ed_amsg
7a48 d006  5256:      bne  .goon
7a4a a97d  5257:      lda  #125
7a4c 20cc4f 5258:      jsr  echo
7a4f 60    5259:      rts
7a50 20334e 5260: .goon:      jsr  printsi
7a53 7d9b  5261:      dc.b  125,$9b
7a55 4d6573 5262:      dc.b  "Message: 0 (#0)",$9b
7a65 202054 5263:      dc.b  " Title: ",-1
7a6f      5264:      mea  ed_title,pr_ptr
7a6f a91f  ----:      lda  #low ed_title
7a71 8588  ----:      sta  pr_ptr
7a73 a96f  ----:      lda  #high ed_title
7a75 8589  ----:      sta  pr_ptr + 1
7a77 20fa4f 5265:      jsr  echos
7a7a 20334e 5266:      jsr  printsi
7a7d 9b    5267:      dc.b  $9b
7a7e 204175 5268:      dc.b  " Author: ",-1
7a88      5269:      mea  u_handle,pr_ptr
7a88 a94d  ----:      lda  #low u_handle
7a8a 8588  ----:      sta  pr_ptr
7a8c a945  ----:      lda  #high u_handle
7a8e 8589  ----:      sta  pr_ptr + 1
7a90 20fa4f 5270:      jsr  echos
7a93 20334e 5271:      jsr  printsi
7a96 9b    5272:      dc.b  $9b
7a97 202020 5273:      dc.b  " To: ",-1
7aa1      5274:      mea  ed_toname,pr_ptr
7aa1 a93e  ----:      lda  #low ed_toname
7aa3 8588  ----:      sta  pr_ptr
7aa5 a96f  ----:      lda  #high ed_toname
7aa7 8589  ----:      sta  pr_ptr + 1

```

```

7aa9 20fa4f 5275:      jsr  echos
7aac 20334e 5276:      jsr  printsi
7aaf 9b 5277:      dc.b  $9b
7ab0 20506f 5278:      dc.b  " Posted: ",-1
7aba 20e151 5279:      jsr  showdate
7abd 20334e 5280:      jsr  printsi
7ac0 206174 5281:      dc.b  " at ",-1
7ac5 20ef51 5282:      jsr  showtime
7ac8 20334e 5283:      jsr  printsi
7acb 9b5265 5284:      dc.b  $9b,"Replies: 0",$9b,-1
7ad8 60 5285:      rts
7ad9 5286:
7ad9 5287:
7ad9 5288:
7ad9 8dd27c 5289: get_line:      sta  .maxlth      ;s
7adc a900 5290:      lda  #0
7ade 8d507f 5291:      sta  msgline      ;z
7ae1 8d4b7f 5292:      sta  pasteidx
7ae4 5293:
7ae4 5294: ;   if a word wrap occurred, move it in
7ae4 5295: ;   ~~~~~
7ae4 5296:
7ae4 ad4a7f 5297:      lda  did_wrap
7ae7 f014 5298:      beq  .no_wrap
7ae9 a000 5299:      ldy  #0
7aeb b9a57f 5300: .mvwrap:      lda  wrapword,y      ;ge
7aee f00d 5301:      beq  .no_wrap
7af0 99517f 5302:      sta  msgline+1,y
7af3 20cc4f 5303:      jsr  echo
7af6 ee507f 5304:      inc  msgline      ;+
7af9 c8 5305:      iny
7afa 4ceb7a 5306:      jmp  .mvwrap
7afd 5307:
7afd a900 5308: .no_wrap:      lda  #0
7aff 8d4a7f 5309:      sta  did_wrap
7b02 204050 5310: .gsloop:      jsr  get_key      ;g
7b05 c95c 5311:      cmp  #"
7b07 f0f9 5312:      beq  .gsloop      ;y
7b09 c99b 5313:      cmp  #$9b
7b0b d003 5314:      bne  .not_cr      ;n
7b0d 4cc57b 5315:      jmp  .gscr
7b10 5316:
7b10 48 5317: .not_cr:      pha
7b11 20c97c 5318:      jsr  .doclrcr      ;cl
7b14 2c497f 5319:      bit  autoreturn      ;au
7b17 3019 5320:      bmi  .notone      ;n
7b19 ae507f 5321:      ldx  msgline      ;i
7b1c d014 5322:      bne  .notone      ;n
7b1e 297f 5323:      and  #$7f
7b20 c92f 5324:      cmp  #'/'
7b22 f004 5325:      beq  .go_edit
7b24 c93f 5326:      cmp  #'?'
7b26 d00a 5327:      bne  .notone      ;n

```

```

7b28      5328:
7b28 8d517f 5329: .go_edit:      sta  msgline+1
7b2b a901  5330:      lda  #1
7b2d 8d507f 5331:      sta  msgline
7b30 68    5332:      pla
7b31 60    5333:      rts
7b32      5334:
7b32 68    5335: .notone:      pla
7b33 c97e  5336:      cmp  #126
7b35 f04f  5337:      beq  .bspace
7b37      5338:
7b37 2c427f 5339:      bit  graphics
7b3a 1006  5340:      bpl  .not_grm
7b3c 8dd37c 5341:      sta  .key
7b3f 4c807b 5342:      jmp  .gsstore
7b42      5343:
7b42 c91e  5344: .not_grm:      cmp  #30
7b44 d003  5345:      bne  .not30
7b46 4c867b 5346:      jmp  .bspace
7b49 c918  5347: .not30:      cmp  #24
7b4b d003  5348:      bne  .not24
7b4d 4c9b7b 5349:      jmp  .wipeout
7b50 c97f  5350: .not24:      cmp  #127
7b52 d003  5351:      bne  .not127
7b54 4cae7b 5352:      jmp  .tab
7b57 c90c  5353: .not127:      cmp  #12
7b59 d003  5354:      bne  .not12
7b5b 4cde7b 5355:      jmp  .paste          ;
7b5e c917  5356: .not12:      cmp  #23
7b60 d003  5357:      bne  .not23
7b62 4cf67b 5358:      jmp  .pasteword
7b65 c90e  5359: .not23:      cmp  #14
7b67 d003  5360:      bne  .not14
7b69 4c157c 5361:      jmp  .handle          ;y
7b6c c912  5362: .not14:      cmp  #18
7b6e d003  5363:      bne  .not18
7b70 4c2e7c 5364:      jmp  .name
7b73 297f  5365: .not18:      and  #$7f
7b75 8dd37c 5366:      sta  .key          ;ho
7b78      5367:
7b78      5368: ;    now, see if it falls within requested mask
7b78      5369: ;    ~~~~~
7b78      5370:
7b78 c920  5371: .notauto:      cmp  #32          ; <
7b7a 9086  5372:      bcc  .gsloop          ;y
7b7c c97b  5373:      cmp  #'z'+1          ;
7b7e b082  5374:      bcs  .gsloop          ;y
7b80      5375:
7b80 20477c 5376: .gsstore:      jsr  .store_it      ;sa
7b83 4c637c 5377:      jmp  .check_ww          ;se
7b86      5378:
7b86 ad507f 5379: .bspace:      lda  msgline          ;c
7b89 c900  5380:      cmp  #0

```

```

7b8b d003 5381:      bne  .bs1
7b8d 4c027b 5382:      jmp  .gsloop
7b90 ce507f 5383: .bs1:      dec  msgline      ;-
7b93 a97e 5384:      lda  #126
7b95 20cc4f 5385:      jsr  echo
7b98 4c027b 5386:      jmp  .gsloop
7b9b      5387:
7b9b ad507f 5388: .wipeout:      lda  msgline      ;g
7b9e d003 5389:      bne  .wipe1
7ba0 4c027b 5390:      jmp  .gsloop      ;d
7ba3 ce507f 5391: .wipe1:      dec  msgline
7ba6 a97e 5392:      lda  #126
7ba8 20cc4f 5393:      jsr  echo
7bab 4c9b7b 5394:      jmp  .wipeout
7bae      5395:
7bae a920 5396: .tab:      lda  #' '
7bb0 8dd37c 5397:      sta  .key
7bb3 20477c 5398:      jsr  .store_it
7bb6 20477c 5399:      jsr  .store_it
7bb9 20477c 5400:      jsr  .store_it
7bbc 20477c 5401:      jsr  .store_it
7bbf 20477c 5402:      jsr  .store_it
7bc2 4c637c 5403:      jmp  .check_ww      ;se
7bc5      5404:
7bc5      5405: .gscr:
7bc5 eed17c 5406:      inc  .number
7bc8 add17c 5407:      lda  .number
7bcb c903 5408:      cmp  #$03
7bcd 900b 5409:      bcc  .pok
7bcf a92f 5410:      lda  # '/'
7bd1 8d517f 5411:      sta  msgline+1
7bd4 a901 5412:      lda  #1
7bd6 8d507f 5413:      sta  msgline
7bd9 60 5414:      rts
7bda      5415: .pok:
7bda ad507f 5416:      lda  msgline      ;r
7bdd 60 5417:      rts
7bde      5418:
7bde ac4b7f 5419: .paste:      ldy  pasteidx
7be1 ccfa7f 5420:      cpy  pasteline      ;pa
7be4 b00d 5421:      bcs  .paignore      ;ye
7be6 c8 5422:      iny
7be7 8c4b7f 5423:      sty  pasteidx
7bea b9fa7f 5424:      lda  pasteline,y      ;ge
7bed 8dd37c 5425:      sta  .key
7bf0 4c807b 5426:      jmp  .gsstore
7bf3 4c027b 5427: .paignore:      jmp  .gsloop      ;i
7bf6      5428:
7bf6      5429:
7bf6 ac4b7f 5430: .pasteword:      ldy  pasteidx
7bf9 ccfa7f 5431:      cpy  pasteline      ;pa
7bfc b014 5432:      bcs  .pwignore      ;ye
7bfe c8 5433:      iny

```

```

7bff 8c4b7f 5434:      sty  pasteidx
7c02 b9fa7f 5435:      lda  pasteline,y      ;ge
7c05 8dd37c 5436:      sta  .key
7c08 20477c 5437:      jsr  .store_it
7c0b add37c 5438:      lda  .key
7c0e c920 5439:      cmp  #' '
7c10 d0e4 5440:      bne  .pasteword      ;ke
7c12 4c637c 5441: .pwignore:      jmp  .check_ww      ;en
7c15 5442:
7c15 5443:
7c15 a201 5444: .handle:      ldx  #1
7c17 4c247c 5445:      jmp  .hannx
7c1a bd4d45 5446: .halp:      lda  u_handle,x
7c1d 8dd37c 5447:      sta  .key
7c20 20477c 5448:      jsr  .store_it
7c23 e8 5449:      inx
7c24 ec4d45 5450: .hannx:      cpx  u_handle
7c27 90f1 5451:      bcc  .halp
7c29 f0ef 5452:      beq  .halp
7c2b 4c637c 5453:      jmp  .check_ww
7c2e 5454:
7c2e a201 5455: .name:      ldx  #1
7c30 4c3d7c 5456:      jmp  .namnx
7c33 bda744 5457: .nalp:      lda  u_name,x
7c36 8dd37c 5458:      sta  .key
7c39 20477c 5459:      jsr  .store_it
7c3c e8 5460:      inx
7c3d eca744 5461: .namnx:      cpx  u_name
7c40 90f1 5462:      bcc  .nalp
7c42 f0ef 5463:      beq  .nalp
7c44 4c637c 5464:      jmp  .check_ww
7c47 5465:
7c47 ad507f 5466: .store_it:      lda  msgline      ;g
7c4a cdd27c 5467:      cmp  .maxlth
7c4d f013 5468:      beq  .xsi
7c4f b011 5469:      bcs  .xsi
7c51 a8 5470:      tay
7c52 c8 5471:      iny
7c53 add37c 5472:      lda  .key
7c56 99507f 5473:      sta  msgline,y      ;sa
7c59 ee507f 5474:      inc  msgline      ;i
7c5c add37c 5475:      lda  .key
7c5f 20cc4f 5476:      jsr  echo
7c62 60 5477: .xsi:      rts
7c63 5478:
7c63 2c427f 5479: .check_ww:      bit  graphics
7c66 301d 5480:      bmi  .xck_ww      ;
7c68 2c497f 5481:      bit  autoreturn      ;au
7c6b 3018 5482:      bmi  .xck_ww      ;n
7c6d ad437f 5483:      lda  wordwrap
7c70 f013 5484:      beq  .xck_ww
7c72 ad507f 5485:      lda  msgline
7c75 cdd27c 5486:      cmp  .maxlth      ;a

```

```

7c78 900b 5487:          bcc  .xck_ww          ;n
7c7a      5488:
7c7a      5489: ;    first, find last space in the line
7c7a      5490: ;    ~~~~~
7c7a      5491:
7c7a a8 5492:          tay
7c7b b9507f 5493: .cwwfs:      lda  msgline,y
7c7e c920 5494:          cmp  #' '
7c80 f006 5495:          beq  .gotspace          ;ye
7c82 88 5496:          dey
7c83 d0f6 5497:          bne  .cwwfs
7c85 4c027b 5498: .xck_ww:      jmp  .gsloop          ;n
7c88      5499:
7c88      5500:
7c88      5501:
7c88      5502: ;    now, erase and move the last word into WRAPWORD
7c88      5503: ;    ~~~~~
7c88      5504:
7c88 cc507f 5505: .gotspace:      cpy  msgline          ;s
7c8b d006 5506:          bne  .no_lc          ;
7c8d ce507f 5507:          dec  msgline          ;y
7c90 4cc57b 5508:          jmp  .gscr
7c93 8cd47c 5509: .no_lc:        sty  .wwstart
7c96 c8 5510:          iny
7c97      5511:
7c97 a900 5512:          lda  #0
7c99 aa 5513:          tax
7c9a 9da57f 5514: .clword:      sta  wrapword,x
7c9d e8 5515:          inx
7c9e e052 5516:          cpx  #82
7ca0 d0f8 5517:          bne  .clword
7ca2      5518:
7ca2 a200 5519:          ldx  #0
7ca4 b9507f 5520: .gslp:      lda  msgline,y          ;mo
7ca7 9da57f 5521:          sta  wrapword,x
7caa a97e 5522:          lda  #126
7cac 20cc4f 5523:          jsr  echo
7caf c8 5524:          iny
7cb0 e8 5525:          inx
7cb1 ce507f 5526:          dec  msgline          ;-
7cb4 ad507f 5527:          lda  msgline
7cb7 cdd47c 5528:          cmp  .wwstart
7cba f002 5529:          beq  .doneww
7cbc b0e6 5530:          bcs  .gslp
7cbe a901 5531: .doneww:      lda  #1
7cc0 8d4a7f 5532:          sta  did_wrap
7cc3 ce507f 5533:          dec  msgline          ;r
7cc6 4cc57b 5534:          jmp  .gscr
7cc9      5535:
7cc9      5536: .doclrcr:
7cc9 48 5537:          pha
7cca a900 5538:          lda  #$00
7ccc 8dd17c 5539:          sta  .number

```



```

7ccf 68 5540:          pla
7cd0 60 5541:          rts
7cd1      5542:
7cd1      5543:
7cd1 00 5544: .number:      dc.b  0
7cd2 01 5545: .maxlth:      dc.b  1
7cd3 01 5546: .key:         dc.b  1
7cd4 01 5547: .wwstart:     dc.b  1
7cd5      5548:
7cd5      5549:
7cd5      5550: ;    remove any blank lines from the end of the msg
7cd5      5551: ;    ~~~~~
7cd5      5552:
7cd5 ad417f 5553: stripers:     lda  linenum          ;g
7cd8 f00f 5554:          beq  .done
7cda 204278 5555:          jsr  calcptr             ;p
7cdd a000 5556:          ldy  #0
7cdf b188 5557:          lda  (pr_ptr),y          ;an
7ce1 d006 5558:          bne  .done
7ce3 ce417f 5559:          dec  linenum
7ce6 4cd57c 5560:          jmp  stripers
7ce9 60 5561: .done:       rts
7cea 00 5562: .temp:      dc.b  0
7ceb      5563:
7ceb      5564:
7ceb      5565:
7ceb      5566: ;    calculate the total # of bytes in this message
7ceb      5567: ;    and place the total into "tot_bytes".
7ceb      5568: ;    ~~~~~
7ceb      5569:
7ceb ad186f 5570: total_bytes:  lda  ed_msgbuff      ;po
7cee 8582 5571:          sta  s_ptr
7cf0 ad196f 5572:          lda  ed_msgbuff+1
7cf3 8583 5573:          sta  s_ptr+1
7cf5 ad417f 5574:          lda  linenum             ;i
7cf8 c902 5575:          cmp  #2
7cfa 901d 5576:          bcc  .exit
7cfc a201 5577:          ldx  #1
7cfe a000 5578: .loop:      ldy  #0
7d00 b182 5579:          lda  (s_ptr),y           ;ge
7d02 18 5580:          clc
7d03 6582 5581:          adc  s_ptr
7d05 8582 5582:          sta  s_ptr
7d07 a583 5583:          lda  s_ptr+1
7d09 6900 5584:          adc  #0
7d0b 8583 5585:          sta  s_ptr+1
7d0d e682 5586:          inc  s_ptr
7d0f d002 5587:          bne  .noovf
7d11 e683 5588:          inc  s_ptr+1
7d13 e8 5589: .noovf:     inx
7d14 ec417f 5590:          cpx  linenum
7d17 90e5 5591:          bcc  .loop
7d19 a582 5592: .exit:      lda  s_ptr

```

```

7d1b 38 5593:          sec
7d1c ed186f 5594:          sbc  ed_msgbuff      ;to
7d1f 8d4c7f 5595:          sta  tot_bytes
7d22 a583 5596:          lda  s_ptr+1
7d24 ed196f 5597:          sbc  ed_msgbuff+1
7d27 8d4d7f 5598:          sta  tot_bytes+1
7d2a 60 5599:          rts
7d2b 00 5600: .count:          dc.b  0
7d2c 5601:
7d2c 5602:
7d2c 5603:
7d2c 5604: ;    Contract (delete) the buffer down, starting at the
7d2c 5605: ;    line number in FROMLINE to the line number in TOLI
7d2c 5606: ;    Note: the delete is INCLUSIVE...
7d2c 5607: ;    ~~~~~
7d2c 5608:
7d2c ad477f 5609: contract:      lda  fromline
7d2f 204278 5610:          jsr  calcptr          ;s
7d32 a588 5611:          lda  pr_ptr
7d34 8582 5612:          sta  s_ptr
7d36 a589 5613:          lda  pr_ptr+1
7d38 8583 5614:          sta  s_ptr+1
7d3a ad487f 5615:          lda  toline
7d3d 18 5616:          clc
7d3e 6901 5617:          adc  #1
7d40 204278 5618:          jsr  calcptr          ;g
7d43 a588 5619:          lda  pr_ptr
7d45 8584 5620:          sta  d_ptr
7d47 a589 5621:          lda  pr_ptr+1
7d49 8585 5622:          sta  d_ptr+1
7d4b ad417f 5623:          lda  linenum          ;n
7d4e 204278 5624:          jsr  calcptr          ;
7d51 a000 5625:          ldy  #0
7d53 b184 5626: .cloop:      lda  (d_ptr),y
7d55 9182 5627:          sta  (s_ptr),y
7d57 e682 5628:          inc  s_ptr
7d59 d002 5629:          bne  .nov1
7d5b e683 5630:          inc  s_ptr+1
7d5d e684 5631: .nov1:      inc  d_ptr
7d5f d002 5632:          bne  .nov2
7d61 e685 5633:          inc  d_ptr+1
7d63 a585 5634: .nov2:      lda  d_ptr+1          ;g
7d65 c589 5635:          cmp  pr_ptr+1
7d67 d0ea 5636:          bne  .cloop
7d69 a584 5637:          lda  d_ptr
7d6b c588 5638:          cmp  pr_ptr
7d6d d0e4 5639:          bne  .cloop
7d6f 60 5640:          rts
7d70 5641:
7d70 00 5642: .lth:      dc.b  0
7d71 00 5643: .start:    dc.b  0
7d72 5644:
7d72 5645:

```

```

7d72      5646:
7d72      5647: ;   Expand (insert) the buffer outwards starting at th
7d72      5648: ;   line number in A for the number of bytes in X.
7d72      5649: ;   ~~~~~
7d72      5650:
7d72 8dd97d 5651: expand:          sta  .start
7d75 8eda7d 5652:          stx  .size
7d78 ad417f 5653:          lda  linenum
7d7b 204278 5654:          jsr  calcptr          ;f
7d7e a588 5655:          lda  pr_ptr
7d80 38 5656:          sec
7d81 e901 5657:          sbc  #1
7d83 8582 5658:          sta  s_ptr
7d85 a589 5659:          lda  pr_ptr+1
7d87 e900 5660:          sbc  #0
7d89 8583 5661:          sta  s_ptr+1
7d8b      5662:
7d8b a582 5663:          lda  s_ptr
7d8d 18 5664:          clc
7d8e 6dda7d 5665:          adc  .size
7d91 8584 5666:          sta  d_ptr
7d93 a583 5667:          lda  s_ptr+1
7d95 6900 5668:          adc  #0
7d97 8585 5669:          sta  d_ptr+1
7d99      5670:
7d99 add97d 5671:          lda  .start          ;
7d9c 204278 5672:          jsr  calcptr
7d9f a588 5673:          lda  pr_ptr
7da1 38 5674:          sec
7da2 e901 5675:          sbc  #1
7da4 8588 5676:          sta  pr_ptr
7da6 a589 5677:          lda  pr_ptr+1
7da8 e900 5678:          sbc  #0
7daa 8589 5679:          sta  pr_ptr+1
7dac      5680:
7dac a000 5681:          ldy  #0
7dae b182 5682: .eloop:          lda  (s_ptr),y
7db0 9184 5683:          sta  (d_ptr),y
7db2 a582 5684:          lda  s_ptr
7db4 38 5685:          sec
7db5 e901 5686:          sbc  #1
7db7 8582 5687:          sta  s_ptr
7db9 a583 5688:          lda  s_ptr+1
7dbb e900 5689:          sbc  #0
7dbd 8583 5690:          sta  s_ptr+1
7dbf a584 5691:          lda  d_ptr
7dc1 38 5692:          sec
7dc2 e901 5693:          sbc  #1
7dc4 8584 5694:          sta  d_ptr
7dc6 a585 5695:          lda  d_ptr+1
7dc8 e900 5696:          sbc  #0
7dca 8585 5697:          sta  d_ptr+1
7dcc a583 5698:          lda  s_ptr+1          ;g

```

```

7dce c589 5699:      cmp    pr_ptr+1
7dd0 d0dc 5700:      bne    .eloop
7dd2 a582 5701:      lda    s_ptr
7dd4 c588 5702:      cmp    pr_ptr
7dd6 d0d6 5703:      bne    .eloop
7dd8 60 5704:      rts
7dd9      5705:
7dd9 00 5706: .start:      dc.b    0
7dda 00 5707: .size:      dc.b    0
7ddb      5708:
7ddb      5709:
7ddb      5710:
7ddb a588 5711: movepaste:  lda    pr_ptr
7ddd 8582 5712:      sta    s_ptr
7ddf a589 5713:      lda    pr_ptr+1
7de1 8583 5714:      sta    s_ptr+1
7de3      5715:      mea    pasteline,d_ptr
7de3 a9fa ----:      lda    #low pasteline
7de5 8584 ----:      sta    d_ptr
7de7 a97f ----:      lda    #high pasteline
7de9 8585 ----:      sta    d_ptr + 1
7deb 209451 5716:      jsr    move_str
7dee 60 5717:      rts
7def      5718:
7def 207a66 5719: print_msg:  jsr    getmsg          ;read it fr
7df2      5720:      mea    .P_dev,fn_ptr
7df2 a921 ----:      lda    #low .P_dev
7df4 8586 ----:      sta    fn_ptr
7df6 a97f ----:      lda    #high .P_dev
7df8 8587 ----:      sta    fn_ptr + 1
7dfa a220 5721:      ldx    #disk_2
7dfc 206050 5722:      jsr    open_out      ;open P: as
7dff 1019 5723:      bpl    .op_ok        ;worked..
7e01 20334e 5724:      jsr    printsi      ; and give
7e04 507269 5725:      dc.b    "Printer is offline!",$9b,-1
7e19 60 5726:      rts
7e1a      5727: .op_ok:      mea    .null,pr_ptr      ;print 2 bl
7e1a a924 ----:      lda    #low .null
7e1c 8588 ----:      sta    pr_ptr
7e1e a97f ----:      lda    #high .null
7e20 8589 ----:      sta    pr_ptr + 1
7e22 20e27e 5728:      jsr    .print
7e25      5729:      mea    .null,pr_ptr
7e25 a924 ----:      lda    #low .null
7e27 8588 ----:      sta    pr_ptr
7e29 a97f ----:      lda    #high .null
7e2b 8589 ----:      sta    pr_ptr + 1
7e2d 20e27e 5730:      jsr    .print
7e30      5731:
7e30      5732: ; print the header of the message
7e30      5733: ; ~~~~~
7e30      5734:
7e30      5735:      mea    .title,s_ptr

```

```

7e30 a926 ----:    lda    #low .title
7e32 8582 ----:    sta    s_ptr
7e34 a97f ----:    lda    #high .title
7e36 8583 ----:    sta    s_ptr + 1
7e38      5736:    mea    in_str,d_ptr
7e38 a9f6 ----:    lda    #low in_str
7e3a 8584 ----:    sta    d_ptr
7e3c a947 ----:    lda    #high in_str
7e3e 8585 ----:    sta    d_ptr + 1
7e40 209451 5737:    jsr    move_str
7e43      5738:    mea    m_title,s_ptr
7e43 a9ec ----:    lda    #low m_title
7e45 8582 ----:    sta    s_ptr
7e47 a98c ----:    lda    #high m_title
7e49 8583 ----:    sta    s_ptr + 1
7e4b 202851 5739:    jsr    concat
7e4e      5740:    mea    in_str,pr_ptr
7e4e a9f6 ----:    lda    #low in_str
7e50 8588 ----:    sta    pr_ptr
7e52 a947 ----:    lda    #high in_str
7e54 8589 ----:    sta    pr_ptr + 1
7e56 20e27e 5741:    jsr    .print
7e59      5742:
7e59      5743:    mea    .author,s_ptr
7e59 a92f ----:    lda    #low .author
7e5b 8582 ----:    sta    s_ptr
7e5d a97f ----:    lda    #high .author
7e5f 8583 ----:    sta    s_ptr + 1
7e61      5744:    mea    in_str,d_ptr
7e61 a9f6 ----:    lda    #low in_str
7e63 8584 ----:    sta    d_ptr
7e65 a947 ----:    lda    #high in_str
7e67 8585 ----:    sta    d_ptr + 1
7e69 209451 5745:    jsr    move_str
7e6c      5746:    mea    m_from,s_ptr
7e6c a906 ----:    lda    #low m_from
7e6e 8582 ----:    sta    s_ptr
7e70 a98d ----:    lda    #high m_from
7e72 8583 ----:    sta    s_ptr + 1
7e74 202851 5747:    jsr    concat
7e77      5748:    mea    in_str,pr_ptr
7e77 a9f6 ----:    lda    #low in_str
7e79 8588 ----:    sta    pr_ptr
7e7b a947 ----:    lda    #high in_str
7e7d 8589 ----:    sta    pr_ptr + 1
7e7f 20e27e 5749:    jsr    .print
7e82      5750:
7e82      5751:    mea    .to,s_ptr
7e82 a938 ----:    lda    #low .to
7e84 8582 ----:    sta    s_ptr
7e86 a97f ----:    lda    #high .to
7e88 8583 ----:    sta    s_ptr + 1
7e8a      5752:    mea    in_str,d_ptr

```

```

7e8a a9f6 ----:    lda  #low in_str
7e8c 8584 ----:    sta  d_ptr
7e8e a947 ----:    lda  #high in_str
7e90 8585 ----:    sta  d_ptr + 1
7e92 209451 5753:    jsr  move_str
7e95 5754:    mea  m_to,s_ptr
7e95 a91b ----:    lda  #low m_to
7e97 8582 ----:    sta  s_ptr
7e99 a98d ----:    lda  #high m_to
7e9b 8583 ----:    sta  s_ptr + 1
7e9d 202851 5755:    jsr  concat
7ea0 5756:    mea  in_str,pr_ptr
7ea0 a9f6 ----:    lda  #low in_str
7ea2 8588 ----:    sta  pr_ptr
7ea4 a947 ----:    lda  #high in_str
7ea6 8589 ----:    sta  pr_ptr + 1
7ea8 20e27e 5757:    jsr  .print
7eab 5758:
7eab 5759:    mea  .null,pr_ptr      ;blank line
7eab a924 ----:    lda  #low .null
7ead 8588 ----:    sta  pr_ptr
7eaf a97f ----:    lda  #high .null
7eb1 8589 ----:    sta  pr_ptr + 1
7eb3 20e27e 5760:    jsr  .print
7eb6 5761:
7eb6 5762:
7eb6 5763: ;    now print the body of the message
7eb6 5764: ;    ~~~~~
7eb6 5765:
7eb6 a901 5766:    lda  #1
7eb8 8d207f 5767:    sta  .counter
7ebb ad207f 5768: .loop:    lda  .counter      ;get curren
7ebe 204278 5769:    jsr  calcptr      ;point to i
7ec1 20e27e 5770:    jsr  .print      ;print this
7ec4 ee207f 5771:    inc  .counter
7ec7 ad207f 5772:    lda  .counter
7eca cd4b8d 5773:    cmp  m_lines
7ecd 90ec 5774:    bcc  .loop
7ecf f0ea 5775:    beq  .loop
7ed1 5776: .done:    mea  .null,pr_ptr      ;blank line
7ed1 a924 ----:    lda  #low .null
7ed3 8588 ----:    sta  pr_ptr
7ed5 a97f ----:    lda  #high .null
7ed7 8589 ----:    sta  pr_ptr + 1
7ed9 20e27e 5777:    jsr  .print
7edc a220 5778:    ldx  #disk_2
7ede 20a650 5779:    jsr  close
7ee1 60 5780:    rts
7ee2 5781:
7ee2 5782:
7ee2 a588 5783: .print:    lda  pr_ptr
7ee4 8582 5784:    sta  s_ptr
7ee6 a589 5785:    lda  pr_ptr+1      ;move it to

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```

7ee8 8583 5786:      sta  s_ptr+1
7eea      5787:      mea  instr,d_ptr
7eea a946 ----:      lda  #low instr
7eec 8584 ----:      sta  d_ptr
7eee a948 ----:      lda  #high instr
7ef0 8585 ----:      sta  d_ptr + 1
7ef2 209451 5788:      jsr  move_str
7ef5      5789:      mea  instr,pr_ptr
7ef5 a946 ----:      lda  #low instr
7ef7 8588 ----:      sta  pr_ptr
7ef9 a948 ----:      lda  #high instr
7efb 8589 ----:      sta  pr_ptr + 1
7efd a220 5790:      ldx  #disk_2
7eff 206951 5791:      jsr  printsd      ;print this
7f02 3001 5792:      bmi  .pr_error      ;damn!
7f04 60 5793:      rts
7f05 a220 5794: .pr_error: ldx  #disk_2
7f07 20a650 5795:      jsr  close
7f0a 20334e 5796:      jsr  printsi
7f0d 507269 5797:      dc.b  "Printer error!",$9b,-1
7f1d 68 5798:      pla
7f1e 68 5799:      pla
7f1f 60 5800:      rts
7f20      5801:
7f20 00 5802: .counter: dc.b  0
7f21 503a00 5803: .P_dev:  dc.b  "P:",0
7f24 0120 5804: .null:    dc.b  1,''
7f26 082054 5805: .title:  dc.b  8," Title: "
7f2f 084175 5806: .author:  dc.b  8," Author: "
7f38 082020 5807: .to:     dc.b  8," To: "
7f41      5808:
7f41      5809:
7f41      5810:
7f41      5811:
7f41      5812:
7f41      5813:
7f41      5814:
7f41      5815:
7f41      5816: linenum:      ds.b  1
7f42      5817: graphics:      ds.b  1      ;$8
7f43      5818: wordwrap:      ds.b  1      ;$8
7f44      5819: nums:         ds.b  1      ;#
7f45      5820: def_1:        ds.b  1      ;de
7f46      5821: def_2:        ds.b  1      ;de
7f47      5822: fromline:      ds.b  1
7f48      5823: toline:        ds.b  1
7f49      5824: autoreturn:    ds.b  1
7f4a      5825: did_wrap:      ds.b  1      ;di
7f4b      5826: pasteidx:      ds.b  1      ;in
7f4c      5827: tot_bytes:     ds.b  2      ;to
7f4e      5828: bytes_left:    ds.b  2      ;to
7f50      5829:
7f50      5830: msgline:      ds.b  85

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7fa5      5831: wrapword:      ds.b  85
7ffa      5832: pasteline:      ds.b  85      ;li
804f      5833: numline:       ds.b  10
8059      5834:
8059 53    5835: editcmds:      dc.b  'S'
805a 6670  5836:                dc.w  e_s
805c 55    5837:                dc.b  'U'
805d 6e70  5838:                dc.w  e_u
805f 41    5839:                dc.b  'A'
8060 f070  5840:                dc.w  e_a
8062 42    5841:                dc.b  'B'
8063 2571  5842:                dc.w  e_b
8065 43    5843:                dc.b  'C'
8066 5071  5844:                dc.w  e_c
8068 44    5845:                dc.b  'D'
8069 7371  5846:                dc.w  e_d
806b 45    5847:                dc.b  'E'
806c be71  5848:                dc.w  e_e
806e 46    5849:                dc.b  'F'
806f 0873  5850:                dc.w  e_f
8071 49    5851:                dc.b  'T'
8072 5972  5852:                dc.w  e_i
8074 4c    5853:                dc.b  'L'
8075 c472  5854:                dc.w  e_l
8077 4e    5855:                dc.b  'N'
8078 e672  5856:                dc.w  e_n
807a 57    5857:                dc.b  'W'
807b 9676  5858:                dc.w  e_w
807d 52    5859:                dc.b  'R'
807e 9c70  5860:                dc.w  e_r
8080 47    5861:                dc.b  'G'
8081 1176  5862:                dc.w  e_g
8083 2f    5863:                dc.b  '/'
8084 6d71  5864:                dc.w  e_sl
8086 56    5865:                dc.b  'V'
8087 c975  5866:                dc.w  e_V
8089 3f    5867:                dc.b  '?'
808a 2173  5868:                dc.w  e_qmark
808c 00    5869:                dc.b  0
808d ef76  5870:                dc.w  e_bad
808f      5871:
808f      5872:
808f      5873:
808f      5874:
808f      5875:
808f      5876:
808f      5877:
808f 00    5878: line_count:    dc.b  0      ;number of
8090      5879:
8090 00    5880: quickscan:     dc.b  0      ;invoked wi
8091 00    5881: nonstop:       dc.b  0      ;non-stop s
8092 00    5882: override:      dc.b  0      ;if >0, do
8093 01    5883: curbase:       dc.b  1      ;base we're

```



```

8094 01 5884: curmsg:          dc.b 1      ;cu
8095 00 5885: verbose:        dc.b 0      ;if 0, only
8096 00 5886: steprate:       dc.b 0      ;added to i
8097    5887:
8097 0000 5888: fromuser:     dc.b 0,0
8099 0000 5889: touser:       dc.b 0,0
809b 0000 5890: replymsg:     dc.b 0,0
809d    5891:
809d 00 5892: lastsrch:      dc.b 0
809e    5893: keyword:       ds.b 25
80b7    5894:
80b7 00 5895: topthread:     dc.b 0      ;message #
80b8 00 5896: msgstack:      dc.b 0      ;stack poin
80b9 00 5897: threadidx:     dc.b 0      ;index into
80ba    5898: stacklo:       ds.b 256
81ba    5899: stackhi:       ds.b 256
82ba    5900:
82ba    5901: ;   Message base INDEX layout (125 messages max allowe
82ba    5902: ;   ~~~~~
82ba    5903:
82ba    5904:
82ba    5905: i_buff:         ds.b 0      ;re
82ba    5906: i_name:         ds.b 21     ;na
82cf    5907: i_chunks:       ds.b 1      ;number of
82d0    5908: i_totbytes:     ds.b 2      ;max bytes
82d2 ff 5909: i_maxmsgs:      dc.b 255    ;max mess
82d3 ff 5910: i_inuse:        dc.b 255    ;number o
82d4 ff00 5911: i_posted:     dc.w 255    ;total msg
82d6    5912: i_graphics:     ds.b 1      ;$80=allow
82d7    5913: i_msgptr:       ds.b 256    ; 250 messa
83d7    5914: i_flag:         ds.b 256    ;lo
84d7    5915: i_msgnlo:       ds.b 256    ; messages
85d7    5916: i_msgnhi:       ds.b 256    ;
86d7    5917: i_tolo:         ds.b 256    ;to
87d7    5918: i_tohi:         ds.b 256    ;
88d7    5919: i_fromlo:       ds.b 256    ;from user
89d7    5920: i_fromhi:       ds.b 256    ;
8ad7    5921: i_replylo:      ds.b 256    ;message nu
8bd7    5922: i_replyhi:      ds.b 256    ; hi
8cd7    5923: i_filler:       ds.b 21     ;fill out t
8cec    5924:
8cec    5925:
8cec    5926: ;   Message base DATA layout
8cec    5927: ;   ~~~~~
8cec    5928:
8cec    5929: m_buff:         ds.b 0      ;re
8cec    5930: m_title:        ds.b 26     ;title of t
8d06    5931: m_from:         ds.b 21     ;who it's f
8d1b    5932: m_to:           ds.b 21     ;who it's t
8d30    5933: m_time:         ds.b 11     ;th
8d3b    5934: m_date:         ds.b 14     ;th
8d49    5935: m_width:        ds.b 1      ;40 or 80 c
8d4a    5936: m_edited:       ds.b 1      ;edited?

```

```
8d4b 5937: m_lines:      ds.b  1      ;# lines th
8d4c 5938: m_node:          ds.b  2      ;no
8d4e 5939: m_nodename:        ds.b 26      ;node's nam
8d68 5940: m_nodecity:        ds.b 26      ;node's cit
8d82 5941: m_nodelist:        ds.b 256     ;nodes that
8e82 5942: m_data:            ds.b 2200    ;th
971a 5943:
971a 5944:
971a 5945:
971a 5946:                ds.b 0
971a 5947: win_end:
971a 5948:                .end
```

End assembly: no errors