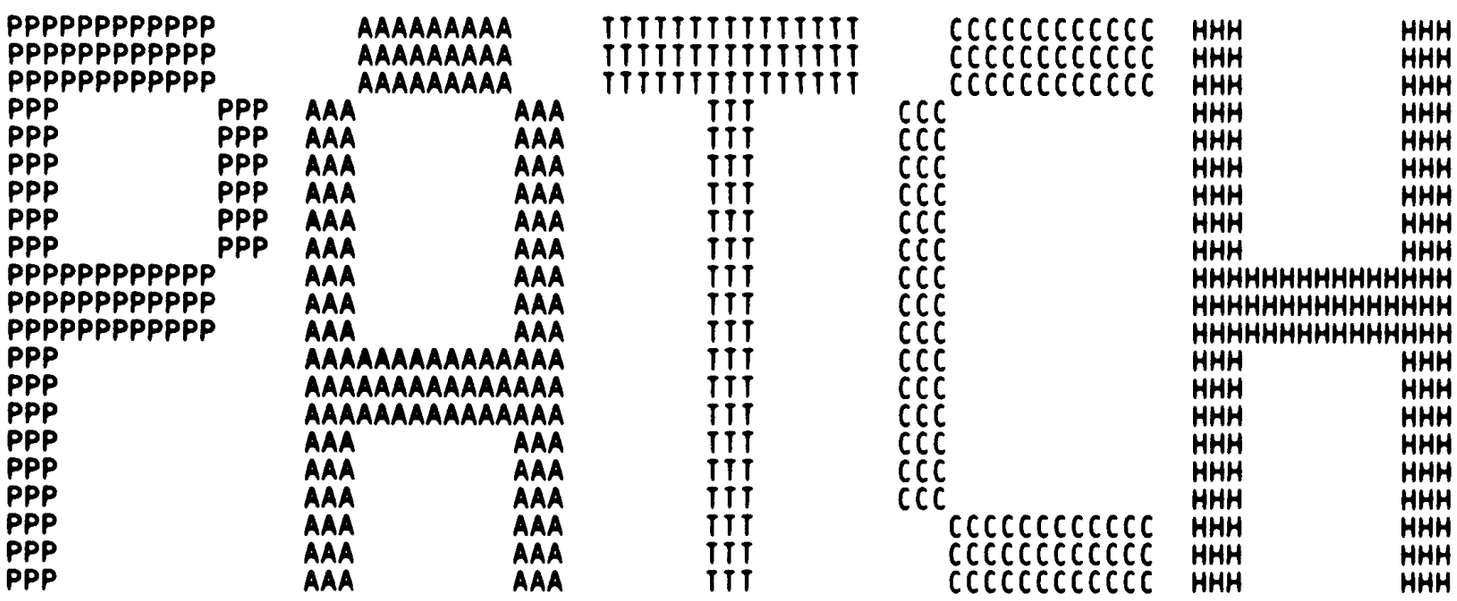
PPPPPPPPPPPP AAAAAAAAA TTTTTTTTTTTTTTT CCCCCCCCCCCC HHH HHH
PPP PPP AAA AAA TTT CCC HHH HHH
PPPPPPPPPPPP AAAAAAAAAAAAAAAA TTT CCC HHHHHHHHHHHHHHHH
PPP AAA AAA TTT CCC HHH HHH
PPP AAA AAA TTT CCCCCCCCCCCC HHH HHH

```
PPPPPPPP      AAAAAA    TTTTTTTTTT    AAAAAA      CCCCCCCC  TTTTTTTTTT
PPPPPPPP      AAAAAA    TTTTTTTTTT    AAAAAA      CCCCCCCC  TTTTTTTTTT
PP      PP   AA    AA       TT      AA    AA   CC              TT
PP      PP   AA    AA       TT      AA    AA   CC              TT
PP      PP   AA    AA       TT      AA    AA   CC              TT
PP      PP   AA    AA       TT      AA    AA   CC              TT
PPPPPPPP     AA    AA       TT      AA    AA   CC              TT
PPPPPPPP     AA    AA       TT      AA    AA   CC              TT
PP           AAAAAAAAAA     TT      AAAAAAAAAA   CC              TT
PP           AAAAAAAAAA     TT      AAAAAAAAAA   CC              TT
PP           AA    AA       TT      AA    AA   CC              TT          ....
PP           AA    AA       TT      AA    AA   CC              TT          ....
PP           AA    AA       TT      AA    AA     CCCCCCCC      TT          ....
PP           AA    AA       TT      AA    AA     CCCCCCCC      TT          ....

LL             IIIIII      SSSSSSSS
LL             IIIIII      SSSSSSSS
LL               II      SS
LL               II      SS
LL               II      SS
LL               II      SS
LL               II        SSSSSS
LL               II        SSSSSS
LL               II              SS
LL               II              SS
LL               II              SS
LL               II              SS
LLLLLLLLLL     IIIIII    SSSSSSSS
LLLLLLLLLL     IIIIII    SSSSSSSS
```

```
;  1          0001  0 MODULE PATACT (
;  2          0002  0                 ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = LONG_RELATIVE),
;  3          0003  0                 IDENT = 'V04-000') =
;  4          0004  1 BEGIN
;  5          0005  1
;  6          0006  1 !*****************************************************************************
;  7          0007  1 !*                                                                           *
;  8          0008  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                 *
;  9          0009  1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                   *
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; 20          0020  1 !*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT   *
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; 22          0022  1 !*                                                                           *
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; 24          0024  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                  *
; 25          0025  1 !*                                                                           *
; 26          0026  1 !*                                                                           *
; 27          0027  1 !*****************************************************************************
; 28          0028  1
; 29          0029  1 !++
; 30          0030  1 ! FACILITY:     PATCH
; 31          0031  1 !
; 32          0032  1 ! ABSTRACT:
; 33          0033  1 !
; 34          0034  1 !       End of command line action routine plus a few other parsing
; 35          0035  1 !       action routines.
; 36          0036  1 !
; 37          0037  1 ! ENVIRONMENT:  STARLET, user mode, interrupts disabled.
; 38          0038  1 !
; 39          0039  1 ! Version:      V02-029
; 40          0040  1 !
; 41          0041  1 ! History:
; 42          0042  1 !       Author:
; 43          0043  1 !               Carol Peters, 03 Jul 1976: Version 01
; 44          0044  1 !
; 45          0045  1 !
; 46          0046  1 ! MODIFIED BY:
; 47          0047  1 !
; 48          0048  1 !       V03-002 MCN0185         Maria del C. Nasr       07-Aug-1984
; 49          0049  1 !               Do not execute those commands that are invalid when
; 50          0050  1 !               patching in /ABSOLUTE context.  Return error message
; 51          0051  1 !               to user.
; 52          0052  1 !
; 53          0053  1 !       V03-001 MTR0012         Mike Rhodes             16-Aug-1982
; 54          0054  1 !               Modify file names to remove duplicate file name useage
; 55          0055  1 !               between code and require files.
; 56          0056  1 !
; 57          0057  1 !       V02-029 MTR0003         Mike Rhodes             03-Feb-1982
```

```
;    58          0058  1 !               Modify the SET PATCH_AREA/INITIALIZE logic to check for
;    59          0059  1 !               a minimum available patch area size of 12 bytes.  This
;    60          0060  1 !               allows 8 bytes for the descriptor plus 1 longword of data.
;    61          0061  1 !
;    62          0062  1 !       V02-028 MTR0002         Mike Rhodes             01-Oct-1981
;    63          0063  1 !               Add new qualifier to the SET PATCH_AREA command to allow
;    64          0064  1 !               the user to Initialize a descriptor within the patch area.
;    65          0065  1 !
;    66          0066  1 !               SET PATCH_AREA /INITIALIZE=Size_Expression Patch_Area_Address
;    67          0067  1 !
;    68          0068  1 !               The code for reconstructing the command line and writing
;    69          0069  1 !               it to the journal and/or command files as well as the
;    70          0070  1 !               PATCH command text area in the image are also included.
;    71          0071  1 !
;    72          0072  1 !       V02-027 MTR0001         Mike Rhodes             20-Aug-1981
;    73          0073  1 !               1.  Add new command, HELP.  The associated command verb
;    74          0074  1 !               HELP_CMD and action routine LBR$OUTPUT_HELP (plus its
;    75          0075  1 !               servent routines LIB$GET_INPUT and LIB$PUT_OUTPUT) have
;    76          0076  1 !               been added to the appropriate places.
;    77          0077  1 !
;    78          0078  1 !               2.  The procedure for writing command file entries has
;    79          0079  1 !               been modified to selectively make enrties only when the
;    80          0080  1 !               commands correspond to the current ECO level.  Also, the
;    81          0081  1 !               Evaluate, Examine, and Show commands are no longer written
;    82          0082  1 !               to the command file.  The respective action routines in
;    83          0083  1 !               WRITE_CMD have been set to <null> 0.
;    84          0084  1 !
;    85          0085  1 !       V02-026 KDM0042         Kathleen D. Morse       03-MAR-1981
;    86          0086  1 !               Fix spelling of current patch area message.
;    87          0087  1 !
;    88          0088  1 !       V02-025 PCG0001         Peter George            02-FEB-1981
;    89          0089  1 !               Add require statement for LIB$:PATDEF.REQ
;    90          0090  1 !
;    91          0091  1 !--
```

```
;    93          0092  1 FORWARD ROUTINE
;    94          0093  1           PAT$END_OF_CMD : NOVALUE,                  ! End of command processing routine
;    95          0094  1           PAT$END_OF_LINE : NOVALUE,                 ! End of command line processing routine
;    96          0095  1           PAT$PERFORM_CMD,                           ! Executes a patch command
;    97          0096  1           WRITE_CMD : NOVALUE,                       ! Writes command line to command file
;    98          0097  1           PAT$SET_OVERS : NOVALUE,                   ! Sets mode level to local or override level
;    99          0098  1           PAT$SET_COMQUAL: NOVALUE,                  ! Sets bit to indicate qualifier in command
;   100          0099  1           PAT$GET_COMQUAL : NOVALUE;                 ! Finds all command qualifiers specified
;   101          0100  1
;   102          0101  1 LIBRARY 'SYS$LIBRARY:LIB.L32';
;   103          0102  1 REQUIRE 'SRC$:PATPCT.REQ';
;   104          0142  1 REQUIRE 'SRC$:VXSMAC.REQ';
;   105          0207  1 REQUIRE 'SRC$:PATGEN.REQ';
;   106          0429  1 REQUIRE 'SRC$:BSTRUC.REQ';
;   107          0505  1 REQUIRE 'SRC$:DLLNAM.REQ';
;   108          0563  1 REQUIRE 'SRC$:LISTEL.REQ';
;   109          0605  1 REQUIRE 'LIB$:PATDEF.REQ';                           . Defines literals
;   110          0659  1 REQUIRE 'LIB$:PATMSG.REQ';
;   111          0833  1 REQUIRE 'SRC$:PATTER.REQ';
;   112          1040  1 REQUIRE 'SRC$:SYSSER.REQ';
```

```
;  R1072  1     SWITCHES LIST (SOURCE);
;  R1073  1
;  R1074  1     EXTERNAL ROUTINE
;  R1075  1              PAT$fao_out;            ! formats a line and outputs to the terminal
;  R1076  1
```

```
;  113     1122  1 REQUIRE 'SRC$:PREFIX.REQ';
;  114     1310  1 REQUIRE 'SRC$:PATPRE.REQ';
;  115     1473  1 REQUIRE 'SRC$:PATRTS.REQ';
;  116     2569  1 REQUIRE 'HELPDEF';                                  ! Help options value definitions.
;  117     3160  1
;  118     3161  1 EXTERNAL ROUTINE
;  119     3162  1          LBR$OUTPUT_HELP,                           ! Interactive help facility
;  120     3163  1          LIB$GET_INPUT,                             ! Not currently required...here for future u
;  121     3164  1          LIB$PUT_OUTPUT,                            ! Writes the help text for LBR$OUTPUT_HELP
;  122     3165  1          PAT$ADD_PAL,                               ! Adds patch area to list
;  123     3166  1          PAT$ALIGN_CMD,                             ! Align command
;  124     3167  1          PAT$DELETE_PATH,                           ! Free up pathname storage
;  125     3168  1          PAT$CANC_MODULE,                           ! Cancels symbols for modules
;  126     3169  1          PAT$DEFINE_SYM,                            ! Define command
;  127     3170  1          PAT$DEPOSIT_CMD,                           ! Deposit command
;  128     3171  1          PAT$ECO_CMDS,                              ! Set eco level and check eco level commands
;  129     3172  1          PAT$EXAMINE_CMD,                           ! Examine command
;  130     3173  1          PAT$FAO_PUT,                               ! Formats an FAO line
;  131     3174  1          PAT$FIL_BUF,                               ! Updates and enlarges a buffer from a strin
;  132     3175  1          PAT$FREE_ARG,                              ! Frees elements of a command argument list
;  133     3176  1          PAT$FREERELEASE,                           ! Releases storage in dynamic allocation are
;  134     3177  1          PAT$INIT_MODES,                            ! Initializes modes
;  135     3178  1          PAT$MAP_ADDR : NOVALUE,                    ! Maps a virtual address
;  136     3179  1          PAT$OPEN_COMFIL : NOVALUE,                 ! Opens command file for output
;  137     3180  1          PAT$OUT_MEM_LOC,                           ! Outputs values to output device
;  138     3181  1          PAT$OUT_PAL_EXP,                           ! Outputs PATCH Area address and size expres
;  139     3182  1          PAT$REPLACE_CMD,                           ! Replace command
;  140     3183  1          PAT$RESET_DEF,                             ! Resets modes to initialization mode
;  141     3184  1          PAT$SAVE_SCOPE,                            ! Saves a current path name
;  142     3185  1          PAT$SET_CONTEXT,                           ! Initializes context bits
;  143     3186  1          PAT$SET_MODULE,                            ! Sets up symbols for modules
;  144     3187  1          PAT$SET_MOD_LST,                           ! Sets mode list
;  145     3188  1          PAT$SET_MOD_LVL,                           ! Sets mode pointer
;  146     3189  1          PAT$SET_NEW_MOD,                           ! Sets new modes
;  147     3190  1          PAT$SHOW_DEFAL,                            ! Show default command
;  148     3191  1          PAT$SHOW_MODULE,                           ! Show module command
;  149     3192  1          PAT$SHOW_SCOPE,                            ! Show scope command
;  150     3193  1          PAT$WRITE_EXP1 : NOVALUE,                  ! Writes expressions to the command file
;  151     3194  1          PAT$WRITEFILE : NOVALUE,                   ! Writes data to a file
;  152     3195  1          PAT$WRITE_INS : NOVALUE,                   ! Writes instruction-type command arguments
;  153     3196  1          PAT$WRITE_NAME : NOVALUE,                  ! Writes names to the command file
;  154     3197  1          PAT$WRTIMG : NOVALUE;                      ! Writes out new patched image
;  155     3198  1
;  156     3199  1 EXTERNAL
;  157     3200  1          PAT$GL_HELP_LIN : BLOCK [8,BYTE],          ! Global descriptor to remainder of command
;  158     3201  1          PAT$GB_MOD_PTR : REF VECTOR[,BYTE],        ! Current mode pointer
;  159     3202  1          PAT$GL_ECO_UPD : BITVECTOR,                ! Update qualifier eco mask
;  160     3203  1          PAT$GB_EXEC_CMD : BYTE,                    ! Indicator whether or not to execute patch
;  161     3204  1          PAT$GL_CSP_PTR : REF PATHNAME_VECTOR,      ! Current scope position
;  162     3205  1          PAT$GL_COMQUAL : BITVECTOR,                ! Command qualifier indicators
;  163     3206  1          PAT$GL_IHPPTR : REF BLOCK[,BYTE],          ! Pointer to patch section of image header
;  164     3207  1          PAT$CP_OUT_STR,                            ! Pointer to output buffer
;  165     3208  1          PAT$GL_BUF_SIZ,                            ! Size of data written into output buffer
;  166     3209  1          PAT$GL_COMRAB,                             ! Command file RAB
;  167     3210  1          PAT$GL_FLAGS : BITVECTOR [32],                                ! CLI flags
;  168     3211  1          PAT$GL_RLOC_BUF : BLOCK[,BYTE],            ! Descriptor for relocation buffer
;  169     3212  1          PAT$GL_TEMP_BUF : BLOCK[,BYTE],            ! Descriptor temporary deposit buffer
```

```
;  170     3213  1          PAT$GL_OLD_ASD : BLOCK[,BYTE],          ! Descriptor for old contents assembler dire
;  171     3214  1          PAT$GL_NEW_ASD : BLOCK[,BYTE],          ! Descriptor for new contents assembler dire
;  172     3215  1          PAT$GB_SUBST_IN : VECTOR[,BYTE],        ! Buffer for substitution instructions
;  173     3216  1          PAT$GL_FWRLHD,                          ! Forward Reference table listhead
;  174     3217  1          PAT$CP_INP_DSCS : REF VECTOR [, LONG],  ! Table of input string descriptors
;  175     3218  1          PAT$GB_TAKE_CMD: BYTE,                  ! Flag which says continue to accept command
;  176     3219  1          PAT$GL_CONTEXT: BITVECTOR,              ! Context word
;  177     3220  1          PAT$GL_HEAD_LST,                        ! Head of command argument list
;  178     3221  1          PAT$GL_JNLRAB,                          ! Journal file RAB
;  179     3222  1          PAT$GL_SEMAN1 : VECTOR,                 ! Token stack for parser
;  180     3223  1          PAT$GL_IMGHDR : REF BLOCK[,BYTE],       ! Image header pointer
;  181     3224  1          PAT$GL_PATAREA : REF BLOCK[,BYTE],      ! Patch area descriptor pointer
;  182     3225  1          PAT$GL_OLDLABLS,                        ! Pointer to listhead for old contents label
;  183     3226  1          PAT$GL_NEWLABLS,                        ! Pointer to listhead for new contents un-re
;  184     3227  1          PAT$GL_RLCLABLS,                        ! Pointer to listhead for new contents reloc
;  185     3228  1          PAT$GL_SYMTBPTR,                        ! Pointer to current symbol table listhead
;  186     3229  1          PAT$GL_SYMHEAD;                         ! Listhead for user-defined symbol table
;  187     3230  1
;  188     3231  1  !
;  189     3232  1  ! COMMAND VERB STRINGS
;  190     3233  1  !
;  191     3234  1  BIND
;  192     3235  1          ALIGN_CMD        =      UPLIT BYTE (%ASCIC 'AL ') : VECTOR[,BYTE],
;  193     3236  1          CANCEL_MODE_CMD  =      UPLIT BYTE (%ASCIC 'CA M') : VECTOR[,BYTE],
;  194     3237  1          CANCEL_MODU_CMD  =      UPLIT BYTE (%ASCIC 'CA MODU') : VECTOR[,BYTE],
;  195     3238  1          CAN_MOD_ALL_CMD  =      UPLIT BYTE (%ASCIC 'CA MODU /ALL') : VECTOR[,BYTE],
;  196     3239  1          CANCEL_SCO_CMD   =      UPLIT BYTE (%ASCIC 'CA SC') : VECTOR[,BYTE],
;  197     3240  1          CANCEL_PAT_CMD   =      UPLIT BYTE (%ASCIC 'CA PAT') : VECTOR[,BYTE],
;  198     3241  1          CHECK_N_ECO_CMD  =      UPLIT BYTE (%ASCIC 'CH NOT EC') : VECTOR[,BYTE],
;  199     3242  1          CHECK_ECO_CMD    =      UPLIT BYTE (%ASCIC 'CH EC') : VECTOR[,BYTE],
;  200     3243  1          DEFINE_CMD       =      UPLIT BYTE (%ASCIC 'DEF') : VECTOR[,BYTE],
;  201     3244  1          DELETE_CMD       =      UPLIT BYTE (%ASCIC 'DEL ') : VECTOR[,BYTE],
;  202     3245  1          DEPOSIT_CMD      =      UPLIT BYTE (%ASCIC 'D ') : VECTOR[,BYTE],
;  203     3246  1          EXAMINE_CMD      =      UPLIT BYTE (%ASCIC 'E ') : VECTOR[,BYTE],
;  204     3247  1          EVALUATE_CMD     =      UPLIT BYTE (%ASCIC 'EV') : VECTOR[,BYTE],
;  205     3248  1          EXIT_CMD         =      UPLIT BYTE (%ASCIC 'EXI') : VECTOR[,BYTE],
;  206     3249  1          HELP_CMD         =      UPLIT BYTE (%ASCIC 'H ') : VECTOR[,BYTE],
;  207     3250  1          INSERT_CMD       =      UPLIT BYTE (%ASCIC 'INSE ') : VECTOR[,BYTE],
;  208     3251  1          NAME_CMD         =      UPLIT BYTE (%ASCIC '!AD') : VECTOR[,BYTE],
;  209     3252  1          REPLACE_CMD      =      UPLIT BYTE (%ASCIC 'RE ') : VECTOR[,BYTE],
;  210     3253  1          SCO_NAM_CMD      =      UPLIT BYTE (%ASCIC '!AC') : VECTOR[,BYTE],
;  211     3254  1          SET_ECO_CMD      =      UPLIT BYTE (%ASCIC 'SE EC') : VECTOR[,BYTE],
;  212     3255  1          SET_MODE_CMD     =      UPLIT BYTE (%ASCIC 'SE M') : VECTOR[,BYTE],
;  213     3256  1          SET_MODU_CMD     =      UPLIT BYTE (%ASCIC 'SE MODU') : VECTOR[,BYTE],
;  214     3257  1          SET_MOD_ALL_CMD  =      UPLIT BYTE (%ASCIC 'SE MODU /ALL') : VECTOR[,BYTE],
;  215     3258  1          SET_PAT_CMD      =      UPLIT BYTE (%ASCIC 'SE PAT') : VECTOR[,BYTE],
;  216     3259  1          SET_SCO_CMD      =      UPLIT BYTE (%ASCIC 'SE SC') : VECTOR[,BYTE],
;  217     3260  1          SHOW_MODE_CMD    =      UPLIT BYTE (%ASCIC 'SH M') : VECTOR[,BYTE],
;  218     3261  1          SHOW_MODU_CMD    =      UPLIT BYTE (%ASCIC 'SH MODU') : VECTOR[,BYTE],
;  219     3262  1          SHOW_SCO_CMD     =      UPLIT BYTE (%ASCIC 'SH SC') : VECTOR[,BYTE],
;  220     3263  1          UPDATE_CMD       =      UPLIT BYTE (%ASCIC 'U') : VECTOR[,BYTE],
;  221     3264  1          VALUE_CMD        =      UPLIT BYTE (%ASCIC '^X!XL') : VECTOR[,BYTE],
;  222     3265  1          VERIFY_CMD       =      UPLIT BYTE (%ASCIC 'V ') : VECTOR[,BYTE],
;  223     3266  1
;  224     3267  1  !++
;  225     3268  1  ! Qualifiers for align command.
;  226     3269  1  !--
```

```
;  227     3270  1          ALIGN_QUAL_TBL  =       UPLIT BYTE (
;  228     3271  1                                                %ASCII '/BYT',
;  229     3272  1                                                %ASCII '/WOR',
;  230     3273  1                                                %ASCII '/LON',
;  231     3274  1                                                %ASCII '/QUA',
;  232     3275  1                                                %ASCII '/PAG'
;  233     3276  1                                                ) : VECTOR[,BYTE];
;  234     3277  1
;  235     3278  1 LITERAL
;  236     3279  1          ALIGN_QUAL_LNG = 4,                                   ! Length of align qualifiers
;  237     3280  1          NO_CASE_TABLE = 0,                                    ! Don't print CASE dispatch tables
;  238     3281  1          CASE_TABLE = 1,                                       ! Print CASE dispatch tables
;  239     3282  1          HELP_FLAGS =      HLP$M_PROCESS   OR                  ! Disallow HELP prompting only.
;  240     3283  1                            HLP$M_GROUP     OR                ! Default Logical Name Table searching to
;  241     3284  1                            HLP$M_SYSTEM;                     !       Process, Group, and System.
```

```
;  243          3285  1 GLOBAL ROUTINE PAT$END_OF_CMD (SEMSP) : NOVALUE =
;  244          3286  1
;  245          3287  1 !++
;  246          3288  1 ! FUNCTIONAL DESCRIPTION:
;  247          3289  1 !
;  248          3290  1 !       Resets all PATCH context that is exclusive to a single PATCH command.
;  249          3291  1 !       This includes resetting default modes from single line overrides back
;  250          3292  1 !       to the actual default modes and resetting a large number of context bits.
;  251          3293  1 !
;  252          3294  1 !       This routine also releases any storage associated with parameters
;  253          3295  1 !       stored for this command, more specifically for commands which
;  254          3296  1 !       build descriptors for symbolic names.  It also releases any storage
;  255          3297  1 !       used for assembler directive tables, forward reference tables, and
;  256          3298  1 !       temporary deposit buffers.
;  257          3299  1 !
;  258          3300  1 ! CALLING SEQUENCE:
;  259          3301  1 !
;  260          3302  1 !       PAT$END_OF_CMD (SEMSP)
;  261          3303  1 !
;  262          3304  1 ! INPUTS:
;  263          3305  1 !
;  264          3306  1 !       SEMSP - Offset to command verb token on parse stack
;  265          3307  1 !
;  266          3308  1 ! IMPLICIT INPUTS:
;  267          3309  1 !
;  268          3310  1 !       PAT$GL_RLOC_BUF - Descriptor for relocation buffer, if used
;  269          3311  1 !       PAT$GL_TEMP_BUF - Descriptor for temporary buffer used on depositing
;  270          3312  1 !                         new values into memory
;  271          3313  1 !       PAT$GL_OLD_ASD - Descriptor for old contents assembler directive table
;  272          3314  1 !       PAT$GL_NEW_ASD - Descriptor for new contents assembler directive table
;  273          3315  1 !       PAT$GL_FWRCHD - Listhead for ForWard Reference table for instructions
;  274          3316  1 !       PAT$GL_OLDLABLS - Pointer to listhead for old contents label list
;  275          3317  1 !       PAT$GL_NEWLABLS - Pointer to listhead for new contents un-relocated label list
;  276          3318  1 !       PAT$GL_RLCLABLS - Pointer to listhead for new contents relocated label list
;  277          3319  1 !       PAT$GL_SYMTBPTR - Pointer to current symbol table listhead
;  278          3320  1 !       PAT$GL_SYMHEAD - Pointer to user-defined symbol table listhead
;  279          3321  1 !
;  280          3322  1 ! OUTPUTS:
;  281          3323  1 !
;  282          3324  1 !       none
;  283          3325  1 !
;  284          3326  1 ! IMPLICIT OUTPUTS:
;  285          3327  1 !
;  286          3328  1 !       none
;  287          3329  1 !
;  288          3330  1 ! ROUTINE VALUE:
;  289          3331  1 !
;  290          3332  1 !       none
;  291          3333  1 !
;  292          3334  1 ! SIDE EFFECTS:
;  293          3335  1 !
;  294          3336  1 !       Defaults are re-established.
;  295          3337  1 !       Any free storage used in symbolic name descriptors, forward reference
;  296          3338  1 !       tables, and symbolic label lists is released.
;  297          3339  1 !
;  298          3340  1 !--
;  299          3341  1
```

```
;  300          3342  2 BEGIN
;  301          3343  2
;  302          3344  2 LOCAL
;  303          3345  2         POINTER,                                        ! Pointer to current command parameter
;  304          3346  2         DESC_PTR : REF BLOCK[,BYTE];                    ! Pointer to symbolic name descriptor
;  305          3347  2
;  306          3348  2 !++
;  307          3349  2 ! This routine guarantees the internal consistency
;  308          3350  2 ! of PATCH, and must succeed or give up.
;  309          3351  2 !--
;  310          3352  2 PAT$GL_SYMTBPTR = .PAT$GL_SYMHEAD;                      ! Reset the current symbol table to be user-
;  311          3353  2 PAT$INIT_MODES (OVERRIDE_MODE, USER_DEF_MODE);
;  312          3354  2 PAT$SET_MOD_LVL (USER_DEF_MODE);
;  313          3355  2 PAT$SET_CONTEXT ();
;  314          3356  2 PAT$GB_SUBST_IN[0] = 0;                                 ! Allow no substitution instructions
;  315          3357  2 PAT$GL_COMQUAL = 0;                                     ! Set no qualifiers specified
;  316          3358  2
;  317          3359  2 !++
;  318          3360  2 ! Now release any symbolic name descriptors used for this command.  The commands
;  319          3361  2 ! which have these string descriptors are:  ALIGN, SET MODULE, CANCEL MODULE,
;  320          3362  2 ! and DEFINE.
;  321          3363  2 !--
;  322          3364  2 IF (.PAT$GL_SEMAN1[.SEMSP] EQL ALIGN_TOKEN) OR
;  323          3365  2    (.PAT$GL_SEMAN1[.SEMSP] EQL DEFINE_TOKEN) OR
;  324          3366  3    (.PAT$GL_CONTEXT[MODULE_BIT])
;  325          3367  2 THEN
;  326          3368  3         BEGIN
;  327          3369  3         POINTER = .PAT$GL_HEAD_LST;
;  328          3370  3         WHILE .POINTER NEQA 0
;  329          3371  3         DO
;  330          3372  4                 BEGIN
;  331          3373  4                 DESC_PTR = .LIST_ELEM_EXP1(.POINTER);
;  332          3374  4                 PAT$FREERELEASE(.DESC_PTR, ((.DESC_PTR[DSC$W_LENGTH] + 3) /A_LONGWORD) + 2);
;  333          3375  4                 POINTER = .LIST_ELEM_FLINK(.POINTER);
;  334          3376  3                 END;
;  335          3377  2         END;
;  336          3378  2
;  337          3379  2 !++
;  338          3380  2 ! Free all storage used in argument accumulation and pathname building.
;  339          3381  2 !--
;  340          3382  2 PAT$FREE_ARG ();
;  341          3383  2 PAT$DELETE_PATH ();
;  342          3384  2
;  343          3385  2 !++
;  344          3386  2 ! Now release any temporary buffer storage used to deposit new values
;  345          3387  2 ! into memory.  This is for commands REPLACE, INSERT, and DEPOSIT.
;  346          3388  2 !--
;  347          3389  3 IF (.PAT$GL_TEMP_BUF[DSC$W_LENGTH] NEQ 0)
;  348          3390  2 THEN
;  349          3391  3         BEGIN
;  350          3392  3         PAT$FREERELEASE ( .PAT$GL_TEMP_BUF[DSC$A_POINTER],
;  351          3393  3                           (.PAT$GL_TEMP_BUF[DSC$W_LENGTH] + 3)/4);
;  352          3394  3         PAT$GL_TEMP_BUF[DSC$W_LENGTH] = 0;
;  353          3395  3         PAT$GL_TEMP_BUF[DSC$A_POINTER] = 0;
;  354          3396  2         END;
;  355          3397  2
;  356          3398  2 !++
```

```
;  357     3399  2 ! Now release any relocation buffer storage used to deposit new instructions
;  358     3400  2 ! into memory.  This is for commands REPLACE and INSERT.
;  359     3401  2 !--
;  360     3402  3 IF (.PAT$GL_RLOC_BUF[DSC$W_LENGTH] NEQ 0)
;  361     3403  2 THEN
;  362     3404  3         BEGIN
;  363     3405  3         PAT$FREERELEASE ( .PAT$GL_RLOC_BUF[DSC$A_POINTER],
;  364     3406  3                           (.PAT$GL_RLOC_BUF[DSC$W_LENGTH] + 3)/4);
;  365     3407  3         PAT$GL_RLOC_BUF[DSC$W_LENGTH] = 0;
;  366     3408  3         PAT$GL_RLOC_BUF[DSC$A_POINTER] = 0;
;  367     3409  2         END;
;  368     3410  2
;  369     3411  2 !++
;  370     3412  2 ! Now release any temporary buffer storage used for the new contents assembler
;  371     3413  2 ! directive table.
;  372     3414  2 !--
;  373     3415  3 IF (.PAT$GL_NEW_ASD[DSC$W_LENGTH] NEQ 0)
;  374     3416  2 THEN
;  375     3417  3         BEGIN
;  376     3418  3         PAT$FREERELEASE ( .PAT$GL_NEW_ASD[DSC$A_POINTER],
;  377     3419  3                           (.PAT$GL_NEW_ASD[DSC$W_LENGTH] + 3)/4);
;  378     3420  3         PAT$GL_NEW_ASD[DSC$W_LENGTH] = 0;
;  379     3421  3         PAT$GL_NEW_ASD[DSC$A_POINTER] = 0;
;  380     3422  2         END;
;  381     3423  2
;  382     3424  2 !++
;  383     3425  2 ! Now release any temporary buffer storage used for the old contents assembler
;  384     3426  2 ! directive table.
;  385     3427  2 !--
;  386     3428  3 IF (.PAT$GL_OLD_ASD[DSC$W_LENGTH] NEQ 0)
;  387     3429  2 THEN
;  388     3430  3         BEGIN
;  389     3431  3         PAT$FREERELEASE ( .PAT$GL_OLD_ASD[DSC$A_POINTER],
;  390     3432  3                           (.PAT$GL_OLD_ASD[DSC$W_LENGTH] + 3)/4);
;  391     3433  3         PAT$GL_OLD_ASD[DSC$W_LENGTH] = 0;
;  392     3434  3         PAT$GL_OLD_ASD[DSC$A_POINTER] = 0;
;  393     3435  2         END;
;  394     3436  2
;  395     3437  2 !++
;  396     3438  2 ! There may also be some ForWard Reference table (FWR) to be released.
;  397     3439  2 !--
;  398     3440  3 WHILE (.PAT$GL_FWRLHD NEQA 0)
;  399     3441  2 DO
;  400     3442  3         BEGIN
;  401     3443  3         LOCAL
;  402     3444  3                 TEMP_PTR : REF BLOCK[,BYTE];
;  403     3445  3         TEMP_PTR = .PAT$GL_FWRLHD;
;  404     3446  3         PAT$GL_FWRLHD = .TEMP_PTR[FWR$L_FLINK];
;  405     3447  3         PAT$FREERELEASE(.TEMP_PTR, (FWR$C_SIZE + 3)/4);
;  406     3448  2         END;
;  407     3449  2
;  408     3450  2 !++
;  409     3451  2 ! Now release any space used temporarily for symbolic instruction labels on
;  410     3452  2 ! old contents of locations.
;  411     3453  2 !--
;  412     3454  3 WHILE (.DLL_RLINK(.PAT$GL_OLDLABLS) NEQA .PAT$GL_OLDLABLS)
;  413     3455  2 DO
```

```
;   414          3456  3          BEGIN
;   415          3457  3          POINTER = .DLL_RLINK(.PAT$GL_OLDLABLS);
;   416          3458  3          DLL_RLINK(.PAT$GL_OLDLABLS) = .DLL_RLINK(.POINTER);
;   417          3459  3          PAT$FREERELEASE(.POINTER, (.SYM_CHCOUNT(.POINTER) + 1 + 3)/4 + OVERHEAD_SYM - 1);
;   418          3460  2          END;
;   419          3461  2
;   420          3462  2 !++
;   421          3463  2 ! Now release any space used temporarily for un-relocated symbolic instruction
;   422          3464  2 ! labels on new contents of locations.
;   423          3465  2 !--
;   424          3466  3 WHILE (.DLL_RLINK(.PAT$GL_NEWLABLS) NEQA .PAT$GL_NEWLABLS)
;   425          3467  2 DO
;   426          3468  3          BEGIN
;   427          3469  3          POINTER = .DLL_RLINK(.PAT$GL_NEWLABLS);
;   428          3470  3          DLL_RLINK(.PAT$GL_NEWLABLS) = .DLL_RLINK(.POINTER);
;   429          3471  3          PAT$FREERELEASE(.POINTER, (.SYM_CHCOUNT(.POINTER) + 1 + 3)/4 + OVERHEAD_SYM - 1);
;   430          3472  2          END;
;   431          3473  2
;   432          3474  2 !++
;   433          3475  2 ! Now release any space used temporarily for relocated symbolic instruction
;   434          3476  2 ! labels on old contents of locations.
;   435          3477  2 !--
;   436          3478  3 WHILE (.DLL_RLINK(.PAT$GL_RLCLABLS) NEQA .PAT$GL_RLCLABLS)
;   437          3479  2 DO
;   438          3480  3          BEGIN
;   439          3481  3          POINTER = .DLL_RLINK(.PAT$GL_RLCLABLS);
;   440          3482  3          DLL_RLINK(.PAT$GL_RLCLABLS) = .DLL_RLINK(.POINTER);
;   441          3483  3          PAT$FREERELEASE(.POINTER, (.SYM_CHCOUNT(.POINTER) + 1 + 3)/4 + OVERHEAD_SYM - 1);
;   442          3484  2          END;
;   443          3485  1 END;


                                                                .TITLE  PATACT
                                                                .IDENT  \V04-000\

                                                                .PSECT  _PAT$PLIT,NOWRT,NOEXE,0                                 61

                                                    20  4C  41  03  00000 P.AAA:  .ASCII  <3>\AL \                                 ;
                                                4D  20  41  43  04  00004 P.AAB:  .ASCII  <4>\CA M\                                 ;  61
                                            55  44  4F  4D  20  41  43  07  00009 P.AAC:  .ASCII  <7>\CA MODU\                        ;  58
4C  4C  41  2F  20  55  44  4F  4D  20  41  43  0C  00011 P.AAD:  .ASCII  <12>\CA MODU /ALL\                                          ;
                                        43  53  20  41  43  05  0001E P.AAE:  .ASCII  <5>\CA SC\                                     ;
                                    54  41  50  20  41  43  06  00024 P.AAF:  .ASCII  <6>\CA PAT\                                    ;
                            43  45  20  54  4F  4E  20  48  43  09  0002B P.AAG:  .ASCII  <9>\CH NOT EC\                            ;
                                        43  45  20  48  43  05  00035 P.AAH:  .ASCII  <5>\CH EC\                                    ;
                                                46  45  44  03  0003B P.AAI:  .ASCII  <3>\DEF\                                     ;
                                            20  4C  45  44  04  0003F P.AAJ:  .ASCII  <4>\DEL \                                    ;
                                                    20  44  02  00044 P.AAK:  .ASCII  <2>\D \                                      ;
                                                    20  45  02  00047 P.AAL:  .ASCII  <2>\E \                                      ;
                                                    56  45  02  0004A P.AAM:  .ASCII  <2>\EV\                                      ;
                                                49  58  45  03  0004D P.AAN:  .ASCII  <3>\EXI\                                     ;
                                                    20  48  02  00051 P.AAO:  .ASCII  <2>\H \                                      ;
                                        20  45  53  4E  49  05  00054 P.AAP:  .ASCII  <5>\INSE \                                    ;
                                                44  41  21  03  0005A P.AAQ:  .ASCII  <3>\!AD\                                     ;
                                                20  45  52  03  0005E P.AAR:  .ASCII  <3>\RE \                                     ;
                                                43  41  21  03  00062 P.AAS:  .ASCII  <3>\!AC\                                     ;
                                        43  45  20  45  53  05  00066 P.AAT:  .ASCII  <5>\SE EC\                                    ;
```

```
                                                 4D 20 45 53 04  0006C P.AAU:   .ASCII  <4>\SE M\
                                           55 44 4F 4D 20 45 53 07  00071 P.AAV:   .ASCII  <7>\SE MODU\
                                     4C 4C 41 2F 20 55 44 4F 4D 20 45 53 0C  00079 P.AAW:   .ASCII  <12>\SE MODU /ALL\
                                                    54 41 50 20 45 53 06  00086 P.AAX:   .ASCII  <6>\SE PAT\
                                                    43 53 20 45 53 05  0008D P.AAY:   .ASCII  <5>\SE SC\
                                                 4D 20 48 53 04  00093 P.AAZ:   .ASCII  <4>\SH M\
                                           55 44 4F 4D 20 48 53 07  00098 P.ABA:   .ASCII  <7>\SH MODU\
                                                    43 53 20 48 53 05  000A0 P.ABB:   .ASCII  <5>\SH SC\
                                                             55 01  000A6 P.ABC:   .ASCII  <1>\U\
                                                    4C 58 21 58 5E 05  000A8 P.ABD:   .ASCII  <5>\^X!XL\
                                                             20 56 02  000AE P.ABE:   .ASCII  <2>\V \
                                                       54 59 42 2F  000B1 P.ABF:   .ASCII  \/BYT\
                                                       52 4F 57 2F  000B5          .ASCII  \/WOR\
                                                       4E 4F 4C 2F  000B9          .ASCII  \/LON\
                                                       41 55 51 2F  000BD          .ASCII  \/QUA\
                                                       47 41 50 2F  000C1          .ASCII  \/PAG\

ISE$C_SIZE==            20
TXT$C_SIZE==            4
PAL$C_SIZE==            16
ASD$C_SIZE==            9
FWR$C_SIZE==            24
ALIGN_CMD=              P.AAA
CANCEL_MODE_CMD=        P.AAB
CANCEL_MODU_CMD=        P.AAC
CAN_MOD_ALL_CMD=        P.AAD
CANCEL_SCO_CMD=         P.AAE
CANCEL_PAT_CMD=         P.AAF
CHECK_N_ECO_CMD=        P.AAG
CHECK_ECO_CMD=          P.AAH
DEFINE_CMD=             P.AAI
DELETE_CMD=             P.AAJ
DEPOSIT_CMD=            P.AAK
EXAMINE_CMD=            P.AAL
EVALUATE_CMD=           P.AAM
EXIT_CMD=               P.AAN
HELP_CMD=               P.AAO
INSERT_CMD=             P.AAP
NAME_CMD=               P.AAQ
REPLACE_CMD=            P.AAR
SCO_NAM_CMD=            P.AAS
SET_ECO_CMD=            P.AAT
SET_MODE_CMD=           P.AAU
SET_MODU_CMD=           P.AAV
SET_MOD_ALL_CMD=        P.AAW
SET_PAT_CMD=            P.AAX
SET_SCO_CMD=            P.AAY
SHOW_MODE_CMD=          P.AAZ
SHOW_MODU_CMD=          P.ABA
SHOW_SCO_CMD=           P.ABB
UPDATE_CMD=             P.ABC
VALUE_CMD=              P.ABD
VERIFY_CMD=             P.ABE
ALIGN_QUAL_TBL=         P.ABF
                .EXTRN  PAT$FAO_OUT, LBR$OUTPUT_HELP
                .EXTRN  LIB$GET_INPUT, LIB$PUT_OUTPUT
                .EXTRN  PAT$ADD_PAL, PAT$ALIGN_CMD
```

```
                        .EXTRN  PAT$DELETE_PATH
                        .EXTRN  PAT$CANC_MODULE
                        .EXTRN  PAT$DEFINE_SYM, PAT$DEPOSIT_CMD
                        .EXTRN  PAT$ECO_CMDS, PAT$EXAMINE_CMD
                        .EXTRN  PAT$FAO_PUT, PAT$FILL_BUF
                        .EXTRN  PAT$FREE_ARG, PAT$FREERELEASE
                        .EXTRN  PAT$INIT_MODES, PAT$MAP_ADDR
                        .EXTRN  PAT$OPEN_COMFIL
                        .EXTRN  PAT$OUT_MEM_LOC
                        .EXTRN  PAT$OUT_PAL_EXP
                        .EXTRN  PAT$REPLACE_CMD
                        .EXTRN  PAT$RESET_DEF, PAT$SAVE_SCOPE
                        .EXTRN  PAT$SET_CONTEXT
                        .EXTRN  PAT$SET_MODULE, PAT$SET_MOD_LST
                        .EXTRN  PAT$SET_MOD_LVL
                        .EXTRN  PAT$SET_NEW_MOD
                        .EXTRN  PAT$SHOW_DEFAL, PAT$SHOW_MODULE
                        .EXTRN  PAT$SHOW_SCOPE, PAT$WRITE_EXP1
                        .EXTRN  PAT$WRITEFILE, PAT$WRITE_INS
                        .EXTRN  PAT$WRITE_NAME, PAT$WRTIMG
                        .EXTRN  PAT$GL_HELP_LIN
                        .EXTRN  PAT$GB_MOD_PTR, PAT$GL_ECO_UPD
                        .EXTRN  PAT$GB_EXEC_CMD
                        .EXTRN  PAT$GL_CSP_PTR, PAT$GL_COMQUAL
                        .EXTRN  PAT$GL_IHPPTR, PAT$CP_OUT_STR
                        .EXTRN  PAT$GL_BUF_SIZ, PAT$GL_COMRAB
                        .EXTRN  PAT$GL_FLAGS, PAT$GL_RLOC_BUF
                        .EXTRN  PAT$GL_TEMP_BUF
                        .EXTRN  PAT$GL_OLD_ASD, PAT$GL_NEW_ASD
                        .EXTRN  PAT$GB_SUBST_IN
                        .EXTRN  PAT$GL_FWRLHD, PAT$CP_INP_DSCS
                        .EXTRN  PAT$GB_TAKE_CMD
                        .EXTRN  PAT$GL_CONTEXT, PAT$GL_HEAD_LST
                        .EXTRN  PAT$GL_JNLRAB, PAT$GL_SEMANT
                        .EXTRN  PAT$GL_IMGHDR, PAT$GL_PATAREA
                        .EXTRN  PAT$GL_OLDLABLS
                        .EXTRN  PAT$GL_NEWLABLS
                        .EXTRN  PAT$GL_RLCLABLS
                        .EXTRN  PAT$GL_SYMTBPTR
                        .EXTRN  PAT$GL_SYMHEAD
                        .WEAK   ACCESS_CHECK

                        .PSECT  _PAT$CODE,NOWRT,2

                    03FC 00000          .ENTRY  PAT$END_OF_CMD, Save R2,R3,R4,R5,R6,R7,R8,- ; 3285
                                                R9                                          ;
          59 00000000G   00   9E 00002  MOVAB   PAT$GL_FWRLHD, R9                           ;
          58 00000000G   00   9E 00009  MOVAB   PAT$GL_OLD_ASD, R8                         ;
          57 00000000G   00   9E 00010  MOVAB   PAT$GL_NEW_ASD, R7                         ;
          56 00000000G   00   9E 00017  MOVAB   PAT$GL_RLOC_BUF, R6                       ;
          55 00000000G   00   9E 0001E  MOVAB   PAT$GL_TEMP_BUF, R5                       ;
          54 00000000G   00   9E 00025  MOVAB   PAT$FREERELEASE, R4                       ;
00000000G 00 00000000G   00   D0 0002C  MOVL    PAT$GL_SYMHEAD, PAT$GL_SYMTBPTR           ; 3352
                         01   DD 00037  PUSHL   #1                                        ; 3353
                         02   DD 00039  PUSHL   #2                                        ;
00000000G 00             02   FB 0003B  CALLS   #2, PAT$INIT_MODES                        ;
                         01   DD 00042  PUSHL   #1                                        ; 3354
```

```
                00000000G  00          01  FB 00044          CALLS   #1, PAT$SET_MOD_LVL                          ;
                00000000G  00          00  FB 0004B          CALLS   #0, PAT$SET_CONTEXT                         ; 3355
                        00000000G      00  94 00052          CLRB    PAT$GB_SUBST_IN                             ; 3356
                        00000000G      00  D4 00058          CLRL    PAT$GL_COMQUAL                              ; 3357
                50          04         AC  D0 0005E          MOVL    SEMSP, R0                                   ; 3364
                50 00000000G00040      D0  D0 00062          MOVL    PAT$GL_SEMAN1[R0], R0                       ;
                01                     50  D1 0006A          CMPL    R0, #1                                      ;
                                       0D  13 0006D          BEQL    1$                                          ;
                05                     50  D1 0006F          CMPL    R0, #5                                      ; 3365
                                       08  13 00072          BEQL    1$                                          ;
                        00000000G      00  95 00074          TSTB    PAT$GL_CONTEXT                              ; 3366
                                       23  18 0007A          BGEQ    3$                                          ;
                52 00000000G           00  D0 0007C 1$:      MOVL    PAT$GL_HEAD_LST, POINTER                    ; 3369
                                       1A  13 00083 2$:      BEQL    3$                                          ; 3370
                53          04         A2  D0 00085          MOVL    4(POINTER), DESC_PTR                        ; 3373
                50                     63  3C 00089          MOVZWL  (DESC_PTR), R0                              ; 3374
                50                     03  C0 0008C          ADDL2   #3, R0                                      ;
                50                     04  C6 0008F          DIVL2   #4, R0                                      ;
                            02         A0  9F 00092          PUSHAB  2(R0)                                       ;
                                       53  DD 00095          PUSHL   DESC_PTR                                    ;
                64                     02  FB 00097          CALLS   #2, PAT$FREERELEASE                         ;
                52                     62  D0 0009A          MOVL    (POINTER), POINTER                          ; 3375
                                       E4  11 0009D          BRB     2$                                          ; 3370
                00000000G  00          00  FB 0009F 3$:      CALLS   #0, PAT$FREE_ARG                            ; 3382
                00000000G  00          00  FB 000A6          CALLS   #0, PAT$DELETE_PATH                         ; 3383
                50                     65  3C 000AD          MOVZWL  PAT$GL_TEMP_BUF, R0                         ; 3389
                                       12  13 000B0          BEQL    4$                                          ;
                50                     03  C0 000B2          ADDL2   #3, R0                                      ; 3393
             7E 50                     04  C7 000B5          DIVL3   #4, R0, -(SP)                               ;
                            04         A5  DD 000B9          PUSHL   PAT$GL_TEMP_BUF+4                           ; 3392
                64                     02  FB 000BC          CALLS   #2, PAT$FREERELEASE                         ;
                                       65  B4 000BF          CLRW    PAT$GL_TEMP_BUF                             ; 3394
                            04         A5  D4 000C1          CLRL    PAT$GL_TEMP_BUF+4                           ; 3395
                50                     66  3C 000C4 4$:      MOVZWL  PAT$GL_RLOC_BUF, R0                         ; 3402
                                       12  13 000C7          BEQL    5$                                          ;
                50                     03  C0 000C9          ADDL2   #3, R0                                      ; 3406
             7E 50                     04  C7 000CC          DIVL3   #4, R0, -(SP)                               ;
                            04         A6  DD 000D0          PUSHL   PAT$GL_RLOC_BUF+4                           ; 3405
                64                     02  FB 000D3          CALLS   #2, PAT$FREERELEASE                         ;
                                       66  B4 000D6          CLRW    PAT$GL_RLOC_BUF                             ; 3407
                            04         A6  D4 000D8          CLRL    PAT$GL_RLOC_BUF+4                           ; 3408
                50                     67  3C 000DB 5$:      MOVZWL  PAT$GL_NEW_ASD, R0                          ; 3415
                                       12  13 000DE          BEQL    6$                                          ;
                50                     03  C0 000E0          ADDL2   #3, R0                                      ; 3419
             7E 5C                     04  C7 000E3          DIVL3   #4, R0, -(SP)                               ;
                            04         A7  DD 000E7          PUSHL   PAT$GL_NEW_ASD+4                            ; 3418
                64                     02  FB 000EA          CALLS   #2, PAT$FREERELEASE                         ;
                                       67  B4 000ED          CLRW    PAT$GL_NEW_ASD                              ; 3420
                            04         A7  D4 000EF          CLRL    PAT$GL_NEW_ASD+4                            ; 3421
                50                     68  3C 000F2 6$:      MOVZWL  PAT$GL_OLD_ASD, R0                          ; 3428
                                       12  13 000F5          BEQL    7$                                          ;
                50                     03  C0 000F7          ADDL2   #3, R0                                      ; 3432
             7E 50                     04  C7 000FA          DIVL3   #4, R0, -(SP)                               ;
                            04         A8  DD 000FE          PUSHL   PAT$GL_OLD_ASD+4                            ; 3431
                64                     02  FB 00101          CALLS   #2, PAT$FREERELEASE                         ;
                                       68  B4 00104          CLRW    PAT$GL_OLD_ASD                              ; 3433
                            04         A8  D4 00106          CLRL    PAT$GL_OLD_ASD+4                            ; 3434
```

```
                50              69  D0 00109 7$:     MOVL    PAT$GL_FWRLHD, R0                       ; 3440
                                0C  13 0010C         BEQL    8$                                      ;
                69              60  D0 0010E         MOVL    (TEMP_PTR), PAT$GL_FWRLHD               ; 3446
                                06  DD 00111         PUSHL   #6                                      ; 3447
                                50  DD 00113         PUSHL   TEMP_PTR                                ;
                64              02  FB 00115         CALLS   #2, PAT$FREERELEASE                     ;
                                EF  11 00118         BRB     7$                                      ; 3440
                50 00000000G    00  D0 0011A 8$:     MOVL    PAT$GL_OLDLABLS, R0                     ; 3454
                50              60  D1 00121         CMPL    (R0), R0                                ;
                                1A  13 00124         BEQL    9$                                      ;
                52              60  D0 00126         MOVL    (R0), POINTER                           ; 3457
                60              62  D0 00129         MOVL    (POINTER), (R0)                         ; 3458
                50          0C  A2  9A 0012C         MOVZBL  12(POINTER), R0                         ; 3459
                50              04  C0 00130         ADDL2   #4, R0                                  ;
                50              04  C6 00133         DIVL2   #4, R0                                  ;
                            03  A0  9F 00136         PUSHAB  3(R0)                                   ;
                                52  DD 00139         PUSHL   POINTER                                 ;
                64              02  FB 0013B         CALLS   #2, PAT$FREERFLEASE                     ;
                                DA  11 0013E         BRB     8$                                      ; 3454
                50 00000000G    00  D0 00140 9$:     MOVL    PAT$GL_NEWLABLS, R0                     ; 3466
                50              60  D1 00147         CMPL    (R0), R0                                ;
                                1A  13 0014A         BEQL    10$                                     ;
                52              60  D0 0014C         MOVL    (R0), POINTER                           ; 3469
                60              62  D0 0014F         MOVL    (POINTER), (R0)                         ; 3470
                50          0C  A2  9A 00152         MOVZBL  12(POINTER), R0                         ; 3471
                50              04  C0 00156         ADDL2   #4, R0                                  ;
                50              04  C6 00159         DIVL2   #4, R0                                  ;
                            03  A0  9F 0015C         PUSHAB  3(R0)                                   ;
                                52  DD 0015F         PUSHL   POINTER                                 ;
                64              02  FB 00161         CALLS   #2, PAT$FREERELEASE                     ;
                                DA  11 00164         BRB     9$                                      ; 3466
                50 00000000G    00  D0 00166 10$:    MOVL    PAT$GL_RLCLABLS, R0                     ; 3478
                50              60  D1 0016D         CMPL    (R0), R0                                ;
                                1A  13 00170         BEQL    11$                                     ;
                52              60  D0 00172         MOVL    (R0), POINTER                           ; 3481
                60              62  D0 00175         MOVL    (POINTER), (R0)                         ; 3482
                50          0C  A2  9A 00178         MOVZBL  12(POINTER), R0                         ; 3483
                50              04  C0 0017C         ADDL2   #4, R0                                  ;
                50              04  C6 0017F         DIVL2   #4, R0                                  ;
                            03  A0  9F 00182         PUSHAB  3(R0)                                   ;
                                52  DD 00185         PUSHL   POINTER                                 ;
                64              02  FB 00187         CALLS   #2, PAT$FREERELEASE                     ;
                                DA  11 0018A         BRB     10$                                     ; 3478
                                    04 0018C 11$:    RET                                             ; 3485

; Routine Size:  397 bytes,    Routine Base:  _PAT$CODE + 0000
```

```
;  445          3486  1 GLOBAL ROUTINE PAT$END_OF_LINE (SEMSP) : NOVALUE =
;  446          3487  1
;  447          3488  1 !++
;  448          3489  1 ! FUNCTIONAL DESCRIPTION:
;  449          3490  1 !
;  450          3491  1 !       Calls the PAT$END_OF_CMD to reset all patch context that is
;  451          3492  1 !       exclusive to a singe PATCH command.  This includes resetting default
;  452          3493  1 !       modes from single line overrides back to the actual default modes and
;  453          3494  1 !       resetting a large number of context bits.  In addition, any free
;  454          3495  1 !       storage required temporarily is released.
;  455          3496  1 !
;  456          3497  1 !       Also, the command line buffer is released.
;  457          3498  1 !
;  458          3499  1 ! CALLING SEQUENCE:
;  459          3500  1 !
;  460          3501  1 !       PAT$END_OF_LINE (SEMSP)
;  461          3502  1 !
;  462          3503  1 ! INPUTS:
;  463          3504  1 !
;  464          3505  1 !       SEMSP - Offset to command verb on parse stack
;  465          3506  1 !
;  466          3507  1 ! IMPLICIT INPUTS:
;  467          3508  1 !
;  468          3509  1 !       PAT$CP_INP_DSCS - Address of vector of command line buffer descriptors,
;  469          3510  1 !                         first longword of which is count of descriptors
;  470          3511  1 !
;  471          3512  1 ! OUTPUTS:
;  472          3513  1 !
;  473          3514  1 !       none
;  474          3515  1 !
;  475          3516  1 ! IMPLICIT OUTPUTS:
;  476          3517  1 !
;  477          3518  1 !       none
;  478          3519  1 !
;  479          3520  1 ! ROUTINE VALUE:
;  480          3521  1 !
;  481          3522  1 !       none
;  482          3523  1 !
;  483          3524  1 ! SIDE EFFECTS:
;  484          3525  1 !
;  485          3526  1 !       Defaults are reestablished.  The command line buffer space is released.
;  486          3527  1 !
;  487          3528  1 !--
;  488          3529  1
;  489          3530  2 BEGIN
;  490          3531  2
;  491          3532  2 LOCAL
;  492          3533  2         temp_loc;
;  493          3534  2
;  494          3535  2 !++
;  495          3536  2 ! This routine guarantees the internal consistency
;  496          3537  2 ! of PATCH, and must succeed or give up.
;  497          3538  2 !--
;  498          3539  2 PAT$END_OF_CMD(.SEMSP);
;  499          3540  2
;  500          3541  2 !++
;  501          3542  2 ! Now release the command line buffer space.
```

```
;  502          3543  2 !--
;  503          3544  2 INCR LOOP FROM 1 TO .PAT$CP_INP_DSCS[0]*2 BY 2
;  504          3545  2 DO
;  505          3546  2         IF .PAT$CP_INP_DSCS[.LOOP] NEQ 0
;  506          3547  2         THEN
;  507          3548  3                 BEGIN
;  508          3549  3                 PAT$FREERELEASE (.PAT$CP_INP_DSCS [.LOOP+1],
;  509          3550  3                                 (.PAT$CP_INP_DSCS [.LOOP] + 3) / 4);
;  510          3551  3                 PAT$CP_INP_DSCS [.LOOP] = 0;
;  511          3552  3                 PAT$CP_INP_DSCS [.LOOP+1] = 0;
;  512          3553  3                 END
;  513          3554  2         ELSE
;  514          3555  2                 RETURN;
;  515          3556  1 END;

                                                001C 00000          .ENTRY  PAT$END_OF_LINE, Save R2,R3,R4                  ; 3486
                                    54 00000000G   00   9E 00002    MOVAB   PAT$CP_INP_DSCS, R4                             ;
                                             04    AC   DD 00009    PUSHL   SEMSP                                           ; 3539
                                    FE62    CF           01   FB 0000C    CALLS   #1, PAT$END_OF_CMD                      ;
                                    50              64   D0 00011    MOVL    PAT$CP_INP_DSCS, R0                     ; 3544
                                53              60   01   78 00014    ASHL    #1, (R0), R3                            ;
                                                52   01   CE 00018    MNEGL   #1, LOOP                                ;
                                                26   11 0001B        BRB     2$                                      ;
                                                50   64   D0 0001D 1$:  MOVL    PAT$CP_INP_DSCS, R0                     ; 3546
                                                   6042   D5 00020    TSTL    (R0)[LOOP]                              ;
                                                     24   13 00023    BEQL    3$                                      ;
                                        51             6042   03   C1 00025    ADDL3   #3, (R0)[LOOP], R1              ; 3550
                                        7E               51   04   C7 0002A    DIVL3   #4, R1, -(SP)                   ;
                                                      04 A042   DD 0002E    PUSHL   4(R0)[LOOP]                     ; 3549
                                            00000000G   00   02   FB 00032    CALLS   #2, PAT$FREERELEASE             ;
                                                50   64   D0 00039    MOVL    PAT$CP_INP_DSCS, R0                     ; 3551
                                                   6042   D4 0003C    CLRL    (R0)[LOOP]                              ;
                                                      04 A042   D4 0003F    CLRL    4(R0)[LOOP]                     ; 3552
                                FFD4            52   02   53   F1 00043 2$:  ACBL    R3, #2, LOOP, 1$                ; 3546
                                                     04 00049 3$:  RET                                                  ; 3556

; Routine Size:  74 bytes,    Routine Base:  _PAT$CODE + 018D
```

```
;  517          3557  1 GLOBAL ROUTINE PAT$PERFORM_CMD (SEMSP) =
;  518          3558  1
;  519          3559  1 !++
;  520          3560  1 ! FUNCTIONAL DESCRIPTION:
;  521          3561  1 !
;  522          3562  1 !       Action routine for a single PATCH command.  Based on the command verb
;  523          3563  1 !       various routines are called to execute the command.  After the command
;  524          3564  1 !       is executed, a cleanup is done to reset the "one line" modes to the
;  525          3565  1 !       default modes and reset the context switches.  The command line is
;  526          3566  1 !       written to the output command file, if one is being created.
;  527          3567  1 !
;  528          3568  1 ! CALLING SEQUENCE:
;  529          3569  1 !
;  530          3570  1 !       PAT$PERFORM_CMD ()
;  531          3571  1 !
;  532          3572  1 ! INPUTS:
;  533          3573  1 !
;  534          3574  1 !       SEMSP - Offset in parse stack which holds current verb token
;  535          3575  1 !
;  536          3576  1 ! IMPLICIT INPUTS:
;  537          3577  1 !
;  538          3578  1 !       none
;  539          3579  1 !
;  540          3580  1 ! OUTPUTS:
;  541          3581  1 !
;  542          3582  1 !       TRUE or FALSE, depending on whether parsing is to continue or not.
;  543          3583  1 !
;  544          3584  1 ! IMPLICIT OUTPUTS:
;  545          3585  1 !
;  546          3586  1 !       none
;  547          3587  1 !
;  548          3588  1 ! ROUTINE VALUE:
;  549          3589  1 !
;  550          3590  1 !        TRUE or FALSE
;  551          3591  1 !
;  552          3592  1 ! SIDE EFFECTS:
;  553          3593  1 !
;  554          3594  1 !       A PATCH command is actually executed.
;  555          3595  1 !
;  556          3596  1 !--
;  557          3597  1
;  558          3598  2 BEGIN
;  559          3599  2
;  560          3600  2 LOCAL
;  561          3601  2         BIT_NUMBER,                                     ! ECO bit number
;  562          3602  2         ECO[VL_PTR : REF BITVECTOR,                     ! Pointer to ECO bits in image header
;  563          3603  2         OUTPUT_BUF : VECTOR[NO_OF_INP_CHARS,BYTE],      ! Buffer for journal file output
;  564          3604  2         ISE_PTR;                                        ! Pointer to image section descriptor
;  565          3605  2
;  566          3606  2 !++
;  567          3607  2 ! If the /UPDATE qualifier was specified, then the execute command indicator,
;  568          3608  2 ! PAT$GB_EXEC_CMD, may be set to FALSE indicating the current patch session
;  569          3609  2 ! should be skipped.  If this is the case, then don't bother to execute the
;  570          3610  2 ! command unless it is a new "SET ECO" level, indicating a new patch session.
;  571          3611  2 ! If /UPDATE was not specified, then the execute command indicator is always
;  572          3612  2 ! TRUE.  In this case, execute the complete command.  In all cases, the "EXIT"
;  573          3613  2 ! command must be executed.
```

```
;  574          3614  2 !--
;  575          3615  2 IF (.PAT$GB_EXEC_CMD) OR
;  576          3616  2    (.PAT$GL_CONTEXT[SET_ECO]) OR
;  577          3617  2    (.PAT$GL_SEMAN1[.SEMSP] EQL EXIT_TOKEN)
;  578          3618  2 THEN
;  579          3619  3         BEGIN
;  580          3620  3         CASE .PAT$GL_SEMAN1 [.SEMSP] FROM ALIGN_TOKEN TO VERIFY_TOKEN OF
;  581          3621  3
;  582          3622  3         SET
;  583          3623  3
;  584          3624  3         [ALIGN_TOKEN]:
;  585          3625  3                 IF .PAT$GL_FLAGS [PAT$S_ABSOLUTE]
;  586          3626  3                 THEN
;  587          3627  3                     SIGNAL (PAT$_INVCMDABS)
;  588          3628  3                 ELSE
;  589          3629  3                     PAT$ALIGN_CMD ();
;  590          3630  3
;  591          3631  3         [CANCEL_TOKEN]:
;  592          3632  3                 IF .PAT$GL_CONTEXT[MODE_BIT]
;  593          3633  3                 THEN
;  594          3634  3                     PAT$RESET_DEF()
;  595          3635  3                 ELSE
;  596          3636  3
;  597          3637  3                 IF .PAT$GL_FLAGS [PAT$S_ABSOLUTE]
;  598          3638  3                 THEN
;  599          3639  3                     SIGNAL (PAT$_INVCMDABS)
;  600          3640  3                 ELSE
;  601          3641  3
;  602          3642  3                 SELECTONE TRUE OF
;  603          3643  3                 SET
;  604          3644  3
;  605          3645  3                 [.PAT$GL_CONTEXT[PAT_AREA_BIT]]:
;  606          3646  3                         PAT$GL_PATAREA = CH$PTR(PAT$GL_IHPPTR[IHP$L_RW_PATSIZ], 0);
;  607          3647  3
;  608          3648  3                 [.PAT$GL_CONTEXT[MODULE_BIT]]:
;  609          3649  3                         PAT$CANC_MODULE();
;  610          3650  3
;  611          3651  3                 [.PAT$GL_CONTEXT[SCOPE_BIT]]:
;  612          3652  3                         PAT$SAVE_SCOPE(FALSE);
;  613          3653  3                 TES;
;  614          3654  3
;  615          3655  3         [CHECK_TOKEN]:
;  616          3656  3                 IF .PAT$GL_FLAGS [PAT$S_ABSOLUTE]
;  617          3657  3                 THEN
;  618          3658  3                     SIGNAL (PAT$_INVCMDABS)
;  619          3659  3                 ELSE
;  620          3660  3                     PAT$ECO_CMDS ();
;  621          3661  3
;  622          3662  3         [CREATE_TOKEN]:
;  623          3663  3                 PAT$OPEN_COMFIL(0, 0);
;  624          3664  3
;  625          3665  3         [DEFINE_TOKEN]:
;  626          3666  4                 BEGIN
;  627          3667  4
;  628          3668  4                 LOCAL
;  629          3669  4                         POINTER;
;  630          3670  4
```

```
;  631          3671  4                POINTER = .PAT$GL_HEAD_LST;
;  632          3672  5                WHILE (.POINTER NEQ 0)
;  633          3673  4                DO
;  634          3674  5                        BEGIN
;  635          3675  5                        PAT$DEFINE_SYM (.LIST_ELEM_EXP1 (.POINTER), .LIST_ELEM_EXP2 (.POINTER), TRUE);
;  636          3676  5                        POINTER = .LIST_ELEM_FLINK (.POINTER);
;  637          3677  4                        END;
;  638          3678  3                END;
;  639          3679  3
;  640          3680  3            [DELETE_TOKEN]:
;  641          3681  4                BEGIN
;  642          3682  4                PAT$GL_CONTEXT [DELETE_BIT] = TRUE;
;  643          3683  4                PAT$DEPOSIT_CMD ();
;  644          3684  3                END;
;  645          3685  3
;  646          3686  3            [DEPOSIT_TOKEN]:
;  647          3687  3                PAT$DEPOSIT_CMD ();
;  648          3688  3
;  649          3689  3            [EXAMINE_TOKEN]:
;  650          3690  4                BEGIN
;  651          3691  4                PAT$GL_CONTEXT [EXAMINE_BIT] = TRUE;
;  652          3692  4                PAT$EXAMINE_CMD ();
;  653          3693  3                END;
;  654          3694  3
;  655          3695  3            [EVALUATE_TOKEN]:
;  656          3696  4                BEGIN
;  657          3697  4                LOCAL
;  658          3698  4                        POINTER;
;  659          3699  4                POINTER = .PAT$GL_HEAD_LST;
;  660          3700  5                WHILE (.POINTER NEQ 0)
;  661          3701  4                DO
;  662          3702  5                        BEGIN
;  663          3703  5                        PAT$OUT_MEM_LOC (LIST_ELEM_EXP1 (.POINTER), 0, CASE_TABLE);
;  664          3704  5                        POINTER = .LIST_ELEM_FLINK (.POINTER);
;  665          3705  4                        END;
;  666          3706  3                END;
;  667          3707  3
;  668          3708  3            [EXIT_TOKEN]:
;  669          3709  4                BEGIN
;  670          3710  4                PAT$GB_TAKE_CMD = FALSE;
;  671          3711  4                IF (.PAT$GL_FLAGS AND PAT$M_UPDATE) NEQ 0
;  672          3712  4                THEN
;  673          3713  5                        BEGIN
;  674          3714  5                        ECOLVL_PTR = CH$PTR(PAT$GL_IHPPTR[IHP$L_ECO1], 0);
;  675          3715  5                        INCR BIT_NUMBER FROM PAT$K_MIN_ECO-1 TO PAT$K_MAX_ECO-1
;  676          3716  5                        DO
;  677          3717  5                                IF .PAT$GL_ECO_UPD[.BIT_NUMBER]
;  678          3718  5                                THEN
;  679          3719  5                                        IF NOT .ECOLVL_PTR[.BIT_NUMBER]
;  680          3720  5                                        THEN
;  681          3721  5                                                SIGNAL(PAT$_NOUPDATE, 1, .BIT_NUMBER+1);
;  682          3722  4                        END;
;  683          3723  3                END;
;  684          3724  3
;  685          3725  3            [HELP_TOKEN]:
;  686          3726  3                LBR$OUTPUT_HELP (LIB$PUT_OUTPUT,,PAT$GL_HELP_LIN, %ASCID 'PATCHHELP', %REF (HELP_FLAGS), LIB
;  687          3727  3
```

```
;  688          3728  3          [INSERT_TOKEN]:
;  689          3729  4                  BEGIN
;  690          3730  5                  IF (NOT .PAT$GB_MOD_PTR[MODE_INSTRUC])
;  691          3731  4                  THEN
;  692          3732  4                          SIGNAL(PAT$_INVCMDABS);
;  693          3733  4                  PAT$GL_CONTEXT [INSERT_BIT] = TRUE;
;  694          3734  4                  PAT$REPLACE_CMD ();
;  695          3735  3                  END;
;  696          3736  3
;  697          3737  3          [REPLACE_TOKEN]:
;  698          3738  3                  PAT$REPLACE_CMD ();
;  699          3739  3
;  700          3740  3          [SET_TOKEN]:
;  701          3741  3                  IF .PAT$GL_CONTEXT[MODE_BIT]
;  702          3742  3                  THEN
;  703          3743  4                          BEGIN
;  704          3744  4                          !++
;  705          3745  4                          ! The "SET MODE" command verb must be written to the
;  706          3746  4                          ! indirect command file here as the modes to be "SET"
;  707          3747  4                          ! are output in PAT$SET_MOD_LST and the information
;  708          3748  4                          ! lost.  Therefore, only the "EXIT" to the "NEW>" prompt
;  709          3749  4                          ! will be output in the routine, WRITE_CMD.
;  710          3750  4                          !--
;  711          3751  4                          PAT$WRITEFILE(.SET_MODE_CMD[0], SET_MODE_CMD[1], PAT$GL_COMRAB);
;  712          3752  4                          PAT$SET_MOD_LST (USER_DEF_MODE);
;  713          3753  4                          END
;  714          3754  3                  ELSE
;  715          3755  3
;  716          3756  3                  IF .PAT$GL_FLAGS [PAT$S_ABSOLUTE]
;  717          3757  3                  THEN
;  718          3758  3                      SIGNAL (PAT$_INVCMDABS)
;  719          3759  3                  ELSE
;  720          3760  3
;  721          3761  3                  SELECTONE TRUE OF
;  722          3762  3                  SET
;  723          3763  3
;  724          3764  3                  [.PAT$GL_CONTEXT[SCOPE_BIT]]:
;  725          3765  3                          PAT$SAVE_SCOPE (TRUE);
;  726          3766  3
;  727          3767  3                  [.PAT$GL_CONTEXT[SET_ECO]]:
;  728          3768  3                          PAT$ECO_CMDS ();
;  729          3769  3
;  730          3770  3                  [.PAT$GL_CONTEXT[PAT_AREA_BIT]]:
;  731          3771  3
;  732          3772  4                          BEGIN
;  733          3773  4                          PAT$MAP_ADDR(.LIST_ELEM_EXP1(.PAT$GL_HEAD_LST),
;  734          3774  4                                          PAT$GL_PATAREA, ISE_PTR);
;  735          3775  4                          !++
;  736          3776  4                          !The SET PATCH_AREA command may have a /INITIALIZE=size expression
;  737          3777  4                          !qualifier included.  If its present, then check first that the size
;  738          3778  4                          !value is not larger than the patch area.  If size is to big then, we
;  739          3779  4                          !assure that sufficient space exists to accomodate the patch area
;  740          3780  4                          !descriptor plus a longword (12 bytes).  If space does exists then we
;  741          3781  4                          !set the default size to the size of the unused portion of the patch
;  742          3782  4                          !area image section, informing the user of course.  Else, we signal
;  743          3783  4                          !an informative error message stating the address and amount of space
;  744          3784  4                          !available.  Next, check to make sure that the patch area has not already
```

```
;  745          3785  4                !been initialized.  If it has, issue a warning to the user and set up the
;  746          3786  4                !descriptor info.  If it has not been previously initialized then take the
;  747          3787  4                !size value and insert it into the first long word of the patch area and
;  748          3788  4                !set the second long word to point to the succeeding long word (eg. .+4).
;  749          3789  4                !
;  750          3790  4                !*** NOTE ***  The size value that is inserted into the first long word
;  751          3791  4                ! is reduced by 8 (the size of the descriptor) to reflect the fact that
;  752          3792  4                ! we have eaten up this space with the descriptor.
;  753          3793  4                !
;  754          3794  4                !       Also note, that since the address of the patch area is synomous
;  755          3795  4                ! with the address of the patch area descriptor, updating the pointer
;  756          3796  4                ! PAT$GL_PATAREA is not necessary.
;  757          3797  4                !--
;  758          3798  4
;  759          3799  4                        IF (.PAT$GL_CONTEXT [INIT_PAT_BIT]) THEN
;  760          3800  5                                BEGIN
;  761          3801  5                                BIND    PATCH_AREA = .PAT$GL_PATAREA : VECTOR [, LONG],
;  762          3802  5                                        FIRST_AVAIL_ADR = LIST_ELEM_EXP1[.PAT$GL_HEAD_LST],
;  763          3803  5                                        INITIAL_SIZE = LIST_ELEM_EXP2[.PAT$GL_HEAD_LST];
;  764          3804  5
;  765          3805  5                                LOCAL
;  766          3806  5                                        AVAIL_BYTE_CNT,                         !Number of available
;  767          3807  5                                        ISD_PTR : REF BLOCK [, BYTE];           !Points to the curre
;  768          3808  5
;  769          3809  5                                ISD_PTR = CH$PTR (.ISE_PTR, ISE$C_SIZE);
;  770          3810  6                                AVAIL_BYTE_CNT = (.ISD_PTR[ISD$W_PAGCNT] * 512)
;  771          3811  5                                                - (.FIRST_AVAIL_ADR - (.ISD_PTR[ISD$L_VPNPFC] * 512)
;  772          3812  5
;  773          3813  5                                IF (.AVAIL_BYTE_CNT LSS 12) THEN                !Can we accomodate t
;  774          3814  6                                        BEGIN                                   ! a longword (total
;  775          3815  6                                        SIGNAL (PAT$_NOPATAREA, 2, .FIRST_AVAIL_ADR, .AVAIL_BYTE_CNT
;  776          3816  6                                        PAT$END_OF_LINE (.SEMSP);               !Clean up after ours
;  777          3817  6                                        RETURN FALSE                            !Go process next com
;  778          3818  5                                        END;
;  779          3819  5
;  780          3820  5                                IF ((.INITIAL_SIZE LEQ 0) OR (.INITIAL_SIZE GTR .AVAIL_BYTE_CNT)) TH
;  781          3821  6                                        BEGIN                                   !Set the default pat
;  782          3822  6                                        INITIAL_SIZE = .AVAIL_BYTE_CNT;         !available space in
;  783          3823  6                                        IF (.PATCH_AREA[0] LEQ 0) THEN          !Should the user be
;  784          3824  6                                         SIGNAL(PAT$_BADINITSZ, 1, .INITIAL_SIZE - 8);!YES, they wil
;  785          3825  5                                        END;                                    !signalling the adju
;  786          3826  5
;  787          3827  5
;  788          3828  5                                IF (.PATCH_AREA[0] LEQ 0) THEN
;  789          3829  6                                        BEGIN                                   !Initialize a descri
;  790          3830  6                                        PATCH_AREA[0] = .INITIAL_SIZE - 8;      !area in the first t
;  791          3831  6                                        PATCH_AREA[1] = .FIRST_AVAIL_ADR + 8;   !patch area.  Adjust
;  792          3832  6                                        END                                     !address values to r
;  793          3833  5                                ELSE
;  794          3834  5                                        SIGNAL (PAT$_PREVINIT);                 !Patch Area was prev
;  795          3835  5
;  796          3836  4                                END;
;  797          3837  4
;  798          3838  4                PAT$ADD_PAL(.PAT$GL_PATAREA[DSC$A_POINTER],
;  799          3839  4                        .PAT$GL_PATAREA[DSC$A_POINTER]+.PAT$GL_PATAREA[DSC$W_LENGTH],
;  800          3840  4                        PAL$K_ADD_PAREA);
;  801          3841  3        END;
```

```
;  802          3842  3
;  803          3843  3                [.PAT$GL_CONTEXT[MODULE_BIT]]:
;  804          3844  3                        PAT$SET_MODULE(0);
;  805          3845  3                TES;
;  806          3846  3
;  807          3847  3            [SHOW_TOKEN]:
;  808          3848  3
;  809          3849  3                IF .PAT$GL_CONTEXT[MODE_BIT]
;  810          3850  3                THEN
;  811          3851  3                    PAT$SHOW_DEFAL ()
;  812          3852  3                ELSE
;  813          3853  3
;  814          3854  3                IF .PAT$GL_FLAGS [PAT$S_ABSOLUTE]
;  815          3855  3                THEN
;  816          3856  3                    SIGNAL (PAT$_INVCMDABS)
;  817          3857  3                ELSE
;  818          3858  3
;  819          3859  3                SELECTONE TRUE OF
;  820          3860  3                SET
;  821          3861  3
;  822          3862  3                [.PAT$GL_CONTEXT[SCOPE_BIT]]:
;  823          3863  3                        PAT$SHOW_SCOPE ();
;  824          3864  3
;  825          3865  3                [.PAT$GL_CONTEXT[MODULE_BIT]]:
;  826          3866  3                        PAT$SHOW_MODULE();
;  827          3867  3
;  828          3868  3                [.PAT$GL_CONTEXT[PAT_AREA_BIT]]:
;  829          3869  4                        BEGIN
;  830        P 3870  4                        $FAO_TT_OUT('current patch area size:   !XL',
;  831          3871  4                                    .PAT$GL_PATAREA[DSC$W_LENGTH]);
;  832        P 3872  4                        $FAO_TT_OUT('current patch area address:        !XL',
;  833          3873  4                                    .PAT$GL_PATAREA[DSC$A_POINTER]);
;  834          3874  3                        END;
;  835          3875  3                TES;
;  836          3876  3
;  837          3877  3            [UPDATE_TOKEN]:
;  838          3878  3                    PAT$WRTIMG();
;  839          3879  3
;  840          3880  3            [VERIFY_TOKEN]:
;  841          3881  4                    BEGIN
;  842          3882  4                    PAT$GL_CONTEXT[VERIFY_BIT] = TRUE;
;  843          3883  4                    PAT$REPLACE_CMD ();
;  844          3884  3                    END;
;  845          3885  3
;  846          3886  3            [OUTRANGE]:
;  847          3887  3                    IF .PAT$GL_SEMAN1[.SEMSP] EQL EOL_TOKEN
;  848          3888  3                    THEN
;  849          3889  4                        BEGIN
;  850          3890  4                        PAT$END_OF_LINE (.SEMSP);
;  851          3891  4                        RETURN FALSE
;  852          3892  3                        END;
;  853          3893  3
;  854          3894  3            TES;
;  855          3895  2            END;
;  856          3896  2
;  857          3897  2 !++
;  858          3898  2 ! Now output the command to the appended patch command text.  Since the command
```

```
;  859          3899  2 ! has already been successfully executed, call WRITE_CMD to reconstruct the
;  860          3900  2 ! command and write it to the command file, if desired.  PAT$WRITEFILE
;  861          3901  2 ! handles output to the command file and to the appended patch command text
;  862          3902  2 ! buffers, PAT$GL_TXTxxxx.
;  863          3903  2 !--
;  864          3904  2 WRITE_CMD(.SEMSP);
;  865          3905  2
;  866          3906  2 !++
;  867          3907  2 ! Check for end of command line.  If this is the end of the command line, then
;  868          3908  2 ! prompt for another command otherwise process the next command in this command
;  869          3909  2 ! line.
;  870          3910  2 !--
;  871          3911  3 IF (.PAT$GL_SEMAN1 [.SEMSP + PAT$K_SPOS_ONE] EQL EOL_TOKEN)
;  872          3912  2 THEN
;  873          3913  3         BEGIN
;  874          3914  3         PAT$END_OF_LINE(.SEMSP);
;  875          3915  3         RETURN FALSE;
;  876          3916  3         END
;  877          3917  2 ELSE
;  878          3918  2         PAT$END_OF_CMD (.SEMSP);
;  879          3919  2
;  880          3920  2 RETURN TRUE;
;  881          3921  1 END;
; INFO#212                 Li:3726
; Null expression appears in value-required context


                                                                                .PSECT  _PAT$PLIT,NOWRT,NOEXE,0

                                                                        000C5           .BLKB   3
                00  00  00  50  4C  45  48  48  43  54  41  50    000C8 P.ABH:  .ASCII  \PATCHHELP\<0><0><0>                      ;
                                                  010E0009      000D4 P.ABG:  .LONG   17694729                                ;
                                                  00000000'     000D8         .ADDRESS P.ABH                                  ;
                                                        1C      000DC P.ABI:  .BYTE   28                                      ;
61  20  68  63  74  61  70  20  74  6E  65  72  72  75  63  63  000DD         .ASCII  \current patch area size:\<9>\!XL\      ;
        4C  58  21  09  3A  65  7A  69  73  20  61  65  72      000EC                                                           ;
                                                        1F      000F9 P.ABJ:  .BYTE   31                                      ;
61  20  68  63  74  61  70  20  74  6E  65  72  72  75  63  63  000FA         .ASCII  \current patch area address:\<9>\!XL\   ;
58  21  09  3A  73  73  65  72  64  64  61  20  61  65  72  4C  00109                                                         ;
                                                                00118                                                         ;


                                                                                .PSECT  _PAT$CODE,NOWRT,2

                                                        0FFC 00000              .ENTRY  PAT$PERFORM_CMD, Save R2,R3,R4,R5,R6,R7,R8,-; 3557
                                                                                        R9,R10,R11                                ;
                                                5B 00000000'    EF  9E  00002   MOVAB   P.ABG, R11                            ;
                                                5A 00000000G    00  9E  00009   MOVAB   LIB$SIGNAL, R10                      ;
                                                59 00000000G    00  9E  00010   MOVAB   PAT$GL_PATAREA, R9                    ;
                                                58 00000000G    00  9E  00017   MOVAB   PAT$GL_FLAGS, R8                     ;
                                                57 00000000G    00  9E  0001E   MOVAB   PAT$GL_CONTEXT, R7                   ;
                                                5E      FF74    CE  9E  00025   MOVAB   -140(SP), SP                         ;
                                                13 00000000G    00  E8  0002A   BLBS    PAT$GB_EXEC_CMD, 1$                   ; 3615
                        0E      02      A7              02  E0  00031   BBS     #2, PAT$GL_CONTEXT+2, 1$                      ; 3616
                                                50      04  AC  D0  00036   MOVL    SEMSP, R0                             ; 3617
```

```
                                    0A 00000000G0040  D1 0003A          CMPL    PAT$GL_SEMAN1[R0], #10                          ;
                                       75  12 00042                   BNEQ    7$                                              ;
                                    54       04   AC  D0 00044 1$:     MOVL    SEMSP, R4                                       ; 3620
                                    50 00000000G0044  D0 00048          MOVL    PAT$GL_SEMAN1[R4], R0                           ;
                                    10          01    50  CF 00050     CASEL   R0, #1, #16                                     ;
                007A                0070            003B      002E    00054 2$:  .WORD  3$-2$,-                                 ;
                00BB                00A5            00A0      0085    0005C              4$-2$,-                                ;
                0134                010E            00D7      00AE    00064              9$-2$,-                                ;
                02B8                025C            0150      02C5    0006C              11$-2$,-                               ;
                                                              02C1    00074              13$-2$,-                               ;
                                                                                         15$-2$,-                               ;
                                                                                         16$-2$,-                               ;
                                                                                         19$-2$,-                               ;
                                                                                         17$-2$,-                               ;
                                                                                         21$-2$,-                               ;
                                                                                         25$-2$,-                               ;
                                                                                         27$-2$,-                               ;
                                                                                         54$-2$,-                               ;
                                                                                         29$-2$,-                               ;
                                                                                         46$-2$,-                               ;
                                                                                         52$-2$,-                               ;
                                                                                         53$-2$                                 ;
                    00000063    8F              50  D1 00076          CMPL    R0, #99                                         ; 3887
                                                58  12 0007D          BNEQ    12$                                             ;
                                              01CB  31 0007F          BRW     39$                                             ; 3890
                  3E                          68    06  E0 00082 3$:  BBS     #6, PAT$GL_FLAGS, 9$                            ; 3625
                    00000000G                 00    00  FB 00086      CALLS   #0, PAT$ALIGN_CMD                               ; 3629
                                                48  11 0008D          BRB     12$                                             ; 3625
                                              09    67  E9 0008F 4$:  BLBC    PAT$GL_CONTEXT, 5$                              ; 3632
                    00000000G                 00    00  FB 00092      CALLS   #0, PAT$RESET_DEF                               ; 3634
                                                72  11 00099          BRB     18$                                             ;
                  25                          68    06  E0 0009B 5$:  BBS     #6, PAT$GL_FLAGS, 9$                            ; 3637
                  0A          02              A7    03  E1 0009F      BBC     #3, PAT$GL_CONTEXT+2, 6$                        ; 3645
                  69 00000000G                00    10  C1 000A4      ADDL3   #16, PAT$GL_IHPPTR, PAT$GL_PATAREA              ; 3646
                                                5F  11 000AC          BRB     18$                                             ;
                                                67  95 000AE 6$:     TSTB    PAT$GL_CONTEXT                                  ; 3648
                                                09  18 000B0          BGEQ    8$                                              ;
                    00000000G                 00    00  FB 000B2      CALLS   #0, PAT$CANC_MODULE                             ; 3649
                                                52  11 000B9 7$:     BRB     18$                                             ;
                                              4E          02    A7  E9 000BB 8$:  BLBC    PAT$GL_CONTEXT+2, 18$                 ; 3651
                                                7E  D4 000BF          CLRL    -(SP)                                           ; 3652
                                           010F  31 000C1             BRW     32$                                             ;
                  03                          68    06  E1 000C4 9$:  BBC     #6, PAT$GL_FLAGS, 10$                           ; 3656
                                           01F5  31 000C8             BRW     48$                                             ;
                                           0113  31 000CB 10$:        BRW     35$                                             ;
                                                7E  7C 000CE 11$:     CLRQ    -(SP)                                           ; 3663
                    00000000G                 00    02  FB 000D0      CALLS   #2, PAT$OPEN_COMFIL                             ;
                                                34  11 000D7 12$:     BRB     18$                                             ;
                                              52 00000000G  00  D0 000D9 13$:  MOVL    PAT$GL_HEAD_LST, POINTER                ; 3671
                                                7E  13 000E0 14$:     BEQL    24$                                             ; 3672
                                                01  DD 000E2          PUSHL   #1                                              ; 3675
                                              7E          04    A2  7D 000E4      MOVQ    4(POINTER), -(SP)                   ;
                    00000000G                 00    03  FB 000E8      CALLS   #3, PAT$DEFINE_SYM                              ;
                                                52  D0 000EF          MOVL    (POINTER), POINTER                              ; 3676
                                                EC  11 000F2          BRB     14$                                             ; 3672
                                                  02    A7    40  8F  88 000F4 15$:  BISB2   #64, PAT$GL_CONTEXT+2           ; 3682
                    00000000G                 00    00  FB 000F9 16$:  CALLS   #0, PAT$DEPOSIT_CMD                           ; 3687
```

```
                                   5E  11 00100      BRB     24$                                       ;
          01   A7                  01  88 00102 17$: BISB2   #1, PAT$GL_CONTEXT+1                      ; 3691
    00000000G  00                  00  FB 00106      CALLS   #0, PAT$EXAMINE_CMD                       ; 3692
                                   77  11 0010D 18$: BRB     26$                                       ; 3620
               52 00000000G        00  D0 0010F 19$: MOVL    PAT$GL_HEAD_LST, POINTER                  ; 3699
                                   6E  13 00116 20$: BEQL    26$                                       ; 3700
                                   01  DD 00118      PUSHL   #1                                        ; 3703
                                   7E  D4 0011A      CLRL    -(SP)                                     ;
                          04       A2  9F 0011C      PUSHAB  4(POINTER)                                ;
    00000000G  00                  03  FB 0011F      CALLS   #3, PAT$OUT_MEM_LOC                       ;
               52                  62  D0 00126      MOVL    (POINTER), POINTER                        ; 3704
                                   EB  11 00129      BRB     20$                                       ; 3700
                  00000000G        00  94 0012B 21$: CLRB    PAT$GB_TAKE_CMD                           ; 3710
51             68                  04  E1 00131      BBC     #4, PAT$GL_FLAGS, 26$                     ; 3711
               53 00000000G        00  D0 00135      MOVL    PAT$GL_IHPPTR, ECOLVL_PTR                 ; 3714
                                   52  D4 0013C      CLRL    BIT_NUMBER                                ; 3715
12  00000000G  00                  52  E1 0013E 22$: BBC     BIT_NUMBER, PAT$GL_ECO_UPD, 23$           ; 3717
0E             63                  52  E0 00146      BBS     BIT_NUMBER, (ECOLVL_PTR), 23$             ; 3719
                          01       A2  9F 0014A      PUSHAB  1(BIT_NUMBER)                             ; 3721
                                   01  DD 0014D      PUSHL   #1                                        ;
                  006D801B         8F  DD 0014F      PUSHL   #7176219                                  ;
               6A                  03  FB 00155      CALLS   #3, LIB$SIGNAL                            ;
DE             52 0000007F         8F  F3 00158 23$: AOBLEQ  #127, BIT_NUMBER, 22$                     ; 3717
                                   78  11 00160 24$: BRB     33$                                       ; 3620
                  00000000G        00  9F 00162 25$: PUSHAB  LIB$GET_INPUT                             ; 3726
          04   AE                  0E  D0 00168      MOVL    #14, 4(SP)                                ;
                          04       AE  9F 0016C      PUSHAB  4(SP)                                     ;
                                   5B  DD 0016F      PUSHL   R11                                       ;
                  00000000G        00  9F 00171      PUSHAB  PAT$GL_HELP_LIN                           ;
                                   7E  D4 00177      CLRL    -(SP)                                     ;
                  00000000G        00  9F 00179      PUSHAB  LIB$PUT_OUTPUT                            ;
    00000000G  00                  06  FB 0017F      CALLS   #6, LBR$OUTPUT_HELP                       ;
                                   60  11 00186 26$: BRB     36$                                       ;
               50 00000000G        00  D0 00188 27$: MOVL    PAT$GB_MOD_PTR, R0                        ; 3730
               09          03      A0  E8 0018F      BLBS    3(R0), 28$                                ;
                  006DBE82         8F  DD 00193      PUSHL   #7192194                                  ; 3732
               6A                  01  FB 00199      CALLS   #1, LIB$SIGNAL                            ;
          02   A7          80      8F  88 0019C 28$: BISB2   #128, PAT$GL_CONTEXT+2                    ; 3733
                         0175      31 001A1          BRW     54$                                       ; 3738
               1F                  67  E9 001A4 29$: BLBC    PAT$GL_CONTEXT, 30$                       ; 3741
                  00000000G        00  9F 001A7      PUSHAB  PAT$GL_COMRAB                             ; 3751
                          99       AB  9F 001AD      PUSHAB  SET_MODE_CMD+1                            ;
               7E          98      AB  9A 001B0      MOVZBL  SET_MODE_CMD, -(SP)                       ;
    00000000G  00                  03  FB 001B4      CALLS   #3, PAT$WRITEFILE                         ;
                                   01  DD 001BB      PUSHL   #1                                        ; 3752
    00000000G  00                  01  FB 001BD      CALLS   #1, PAT$SET_MOD_LST                       ;
                                   22  11 001C4      BRB     36$                                       ; 3741
03             68                  06  E1 001C6 30$: BBC     #6, PAT$GL_FLAGS, 31$                     ; 3756
                         00F3      31 001CA          BRW     48$                                       ;
               0B          02      A7  E9 001CD 31$: BLBC    PAT$GL_CONTEXT+2, 34$                     ; 3764
                                   01  DD 001D1      PUSHL   #1                                        ; 3765
    00000000G  00                  01  FB 001D3 32$: CALLS   #1, PAT$SAVE_SCOPE                        ;
                                   0C  11 001DA 33$: BRB     36$                                       ;
0A        02   A7                  02  E1 001DC 34$: BBC     #2, PAT$GL_CONTEXT+2, 37$                 ; 3767
    00000000G  00                  00  FB 001E1 35$: CALLS   #0, PAT$ECO_CMDS                          ; 3768
                         0135      31 001E8 36$:     BRW     55$                                       ;
03        02   A7                  03  E0 001EB 37$: BBS     #3, PAT$GL_CONTEXT+2, 38$                 ; 3770
```

```
                                00AE  31  001F0          BRW     45$                                     ;
                                  04  AE  9F  001F3 38$:  PUSHAB  ISE_PTR                                 ; 3773
                                      59  DD  001F6          PUSHL   R9                                      ;
                    50 00000000G      00  DO  001F8          MOVL    PAT$GL_HEAD_LST, R0                     ;
                                  04  A0  DD  001FF          PUSHL   4(R0)                                   ;
          00000000G 00                  03  FB  00202          CALLS   #3, PAT$MAP_ADDR                        ;
    7B          02  A7                  01  E1  00209          BBC     #1, PAT$GL_CONTEXT+2, 44$               ; 3799
                    52                  69  DO  0020E          MOVL    PAT$GL_PATAREA, R2                      ; 3801
                    50 00000000G        00  DO  00211          MOVL    PAT$GL_HEAD_LST, R0                     ; 3802
                    56            04    A0  9E  00218          MOVAB   4(R0), R6                               ;
                    55            08    A0  9E  0021C          MOVAB   8(R0), R5                               ; 3803
    50              04  AE              14  C1  00220          ADDL3   #20, ISE_PTR, ISD_PTR                   ; 3809
                    51            02    A0  3C  00225          MOVZWL  2(ISD_PTR), R1                          ; 3810
    51                  51              09  78  00229          ASHL    #9, R1, R1                              ;
    50              04  A0              09  78  0022D          ASHL    #9, 4(ISD_PTR), R0                      ; 3811
                        50              66  C2  00232          SUBL2   (R6), R0                                ;
    53                  51              50  C1  00235          ADDL3   R0, R1, AVAIL_BYTE_CNT                  ;
                        0C              53  D1  00239          CMPL    AVAIL_BYTE_CNT, #12                     ; 3813
                                        14  18  0023C          BGEQ    40$                                     ;
                                        53  DD  0023E          PUSHL   AVAIL_BYTE_CNT                          ; 3815
                                        66  DD  00240          PUSHL   (R6)                                    ;
                                        02  DD  00242          PUSHL   #2                                      ;
                          006D811A      8F  DD  00244          PUSHL   #7176474                                ;
                                    6A      04  FB  0024A          CALLS   #4, LIB$SIGNAL                          ;
                                            54  DD  0024D 39$:    PUSHL   R4                                      ; 3816
                                        00ED  31  0024F          BRW     56$                                     ;
                                            65  D5  00252 40$:    TSTL    (R5)                                    ; 3820
                                            05  15  00254          BLEQ    41$                                     ;
                                        53      65  D1  00256          CMPL    (R5), AVAIL_BYTE_CNT            ;
                                            16  15  00259          BLEQ    42$                                     ;
                                        65      53  DO  0025B 41$:    MOVL    AVAIL_BYTE_CNT, (R5)            ; 3822
                                            62  D5  0025E          TSTL    (R2)                                    ; 3823
                                            0F  14  00260          BGTR    42$                                     ;
                    7E                  65      08  C3  00262          SUBL3   #8, (R5), -(SP)                 ; 3824
                                            01  DD  00266          PUSHL   #1                                      ;
                          006D8053          8F  DD  00268          PUSHL   #7176275                                ;
                                    6A      03  FB  0026E          CALLS   #3, LIB$SIGNAL                          ;
                                            62  D5  00271 42$:    TSTL    (R2)                                    ; 3828
                                            0B  14  00273          BGTR    43$                                     ;
                    62                  65      08  C3  00275          SUBL3   #8, (R5), (R2)                  ; 3830
    04              A2                  66      08  C1  00279          ADDL3   #8, (R6), 4(R2)                 ; 3831
                                            09  11  0027E          BRB     44$                                     ; 3828
                          006D805B          8F  DD  00280 43$:    PUSHL   #7176283                                ; 3834
                                    6A      01  FB  00286          CALLS   #1, LIB$SIGNAL                          ;
                                            7E  D4  00289 44$:    CLRL    -(SP)                                   ; 3838
                                        50      69  DO  0028B          MOVL    PAT$GL_PATAREA, R0              ; 3839
                                        51      60  3C  0028E          MOVZWL  (R0), R1                        ;
                                          04 B041  9F  00291          PUSHAB  @4(R0)[R1]                      ;
                                            04  A0  DD  00295          PUSHL   4(R0)                           ; 3838
                    00000000G           00      03  FB  00298          CALLS   #3, PAT$ADD_PAL                 ;
                                            7F  11  0029F          BRB     55$                                     ; 3761
                                            67  95  002A1 45$:    TSTB    PAT$GL_CONTEXT                          ; 3843
                                            7B  18  002A3          BGEQ    55$                                     ;
                                            7E  D4  002A5          CLRL    -(SP)                                   ; 3844
                    00000000G           00      01  FB  002A7          CALLS   #1, PAT$SET_MODULE              ;
                                            70  11  002AE          BRB     55$                                     ; 3741
                                        09      67  E9  002B0 46$:    BLBC    PAT$GL_CONTEXT, 47$             ; 3849
```

```
                00000000G  00              00 FB 002B3          CALLS   #0, PAT$SHOW_DEFAL                      ; 3851
                                           64 11 002BA          BRB     55$
                        0B          68     06 E1 002BC 47$:     BBC     #6, PAT$GL_FLAGS, 49$                  ; 3854
                                006DBE82   8F DD 002C0 48$:     PUSHL   #7192194                               ; 3856
                                    6A     01 FB 002C6          CALLS   #1, LIB$SIGNAL
                                           55 11 002C9          BRB     55$
                                    09  02 A7 E9 002CB 49$:     BLBC    PAT$GL_CONTEXT+2, 50$                  ; 3862
                00000000G  00              00 FB 002CF          CALLS   #0, PAT$SHOW_SCOPE                     ; 3863
                                           48 11 002D6          BRB     55$
                                           67 95 002D8 50$:     TSTB    PAT$GL_CONTEXT                         ; 3865
                                           09 18 002DA          BGEQ    51$
                00000000G  00              00 FB 002DC          CALLS   #0, PAT$SHOW_MODULE                    ; 3866
                                           3B 11 002E3          BRB     55$
                        36  02  A7         03 E1 002E5 51$:     BBC     #3, PAT$GL_CONTEXT+2, 55$              ; 3868
                                50         69 D0 002EA          MOVL    PAT$GL_PATAREA, R0                     ; 3871
                                7E         60 3C 002ED          MOVZWL  (R0), -(SP)
                                       08  AB 9F 002F0          PUSHAB  P.ABI
                00000000G  00              02 FB 002F3          CALLS   #2, PAT$FAO_OUT
                                50         69 D0 002FA          MOVL    PAT$GL_PATAREA, R0                     ; 3873
                                       04  A0 DD 002FD          PUSHL   4(R0)
                                       25  AB 9F 00300          PUSHAB  P.ABJ
                00000000G  00              02 FB 00303          CALLS   #2, PAT$FAO_OUT
                                           14 11 0030A          BRB     55$                                    ; 3849
                00000000G  00              00 FB 0030C 52$:     CALLS   #0, PAT$WRTIMG                         ; 3878
                                           0B 11 00313          BRB     55$
                            02  A7         20 88 00315 53$:     BISB2   #32, PAT$GL_CONTEXT+2                  ; 3882
                00000000G  00              00 FB 00319 54$:     CALLS   #0, PAT$REPLACE_CMD                    ; 3883
                                       04  AC DD 00320 55$:     PUSHL   SEMSP                                  ; 3904
                00000000V  EF              01 FB 00323          CALLS   #1, WRITE_CMD
                                50         04 AC D0 0032A       MOVL    SEMSP, R0                              ; 3911
                00000063   8F  00000000G00040 D1 0032E          CMPL    PAT$GL_SEMAN1+8[R0], #99
                                           0A 12 0033A          BNEQ    57$
                                       04  AC DD 0033C          PUSHL   SEMSP                                  ; 3914
                            FC72   CF      01 FB 0033F 56$:     CALLS   #1, PAT$END_OF_LINE
                                           0C 11 00344          BRB     58$                                    ; 3915
                                       04  AC DD 00346 57$:     PUSHL   SEMSP                                  ; 3918
                            FADB   CF      01 FB 00349          CALLS   #1, PAT$END_OF_CMD
                                50         01 D0 0034E          MOVL    #1, R0                                 ; 3920
                                           04 00351             RET
                                           50 D4 00352 58$:     CLRL    R0                                     ; 3921
                                              04 00354          RET

; Routine Size:  853 bytes,    Routine Base:  _PAT$CODE + 01D7
```

```
;  883          3922  1 GLOBAL ROUTINE WRITE_CMD (SEMSP) : NOVALUE =
;  884          3923  1
;  885          3924  1 !++
;  886          3925  1 ! FUNCTIONAL DESCRIPTION:
;  887          3926  1 !
;  888          3927  1 !       This routine builds the command lines for the output command file
;  889          3928  1 !       and the appended patch command text.  The command has already been
;  890          3929  1 !       executed successfully, the command verb is on the stack, and the
;  891          3930  1 !       parameters are in the parameter list.  The routine PAT$WRITEFILE does
;  892          3931  1 !       all the output to the command file and to the text buffers.  If a
;  893          3932  1 !       command file is not being created, then the commands are only entered
;  894          3933  1 !       in the text buffers.
;  895          3934  1 !
;  896          3935  1 ! CALLING SEQUENCE:
;  897          3936  1 !
;  898          3937  1 !       WRITE_CMD (SEMSP)
;  899          3938  1 !
;  900          3939  1 ! INPUTS:
;  901          3940  1 !
;  902          3941  1 !       SEMSP - Offset in parse stack which holds current verb token
;  903          3942  1 !
;  904          3943  1 ! IMPLICIT INPUTS:
;  905          3944  1 !
;  906          3945  1 !       none
;  907          3946  1 !
;  908          3947  1 ! OUTPUTS:
;  909          3948  1 !
;  910          3949  1 !       NONE
;  911          3950  1 !
;  912          3951  1 ! IMPLICIT OUTPUTS:
;  913          3952  1 !
;  914          3953  1 !       none
;  915          3954  1 !
;  916          3955  1 ! ROUTINE VALUE:
;  917          3956  1 !
;  918          3957  1 !       NONE
;  919          3958  1 !
;  920          3959  1 ! SIDE EFFECTS:
;  921          3960  1 !
;  922          3961  1 !       A PATCH command is entered into the appended command text buffers
;  923          3962  1 !       and written to the output command file, if one is being created.
;  924          3963  1 !
;  925          3964  1 !--
;  926          3965  1
;  927          3966  2 BEGIN
;  928          3967  2
;  929          3968  2 LITERAL
;  930          3969  2         BLANK_FILL = %X'20';                            ! Ascii value for space
;  931          3970  2
;  932          3971  2 LOCAL
;  933          3972  2         ALIGN_QUAL_OFF,                                 ! Offset into ALIGN qualifier table
;  934          3973  2         COMMAND_BUF : VECTOR[NO_OF_INP_CHARS,BYTE],     ! Buffer for output of command line to file
;  935          3974  2         COUNT;                                          ! Counter for scope name loop
;  936          3975  2
;  937          3976  2 !++
;  938          3977  2 ! Execute the complete command.
;  939          3978  2 !--
```

```
;  940          3979  2 IF .PAT$GB_EXEC_CMD
;  941          3980  2 THEN
;  942          3981  2         CASE .PAT$GL_SEMAN1 [.SEMSP] FROM ALIGN_TOKEN TO VERIFY_TOKEN OF
;  943          3982  2
;  944          3983  2         SET
;  945          3984  2
;  946          3985  2         [ALIGN_TOKEN]:
;  947          3986  3                 BEGIN
;  948          3987  3                 CH$COPY(.ALIGN_CMD[0], ALIGN_CMD[1], BLANK_FILL,
;  949          3988  3                         .ALIGN_CMD[0], CH$PTR(COMMAND_BUF, 0));
;  950          3989  3                 IF .PAT$GL_CONTEXT[ALIGN_BYTE]
;  951          3990  3                 THEN
;  952          3991  3                         ALIGN_QUAL_OFF = 0
;  953          3992  3                 ELSE
;  954          3993  3                         IF .PAT$GL_CONTEXT[ALIGN_WORD]
;  955          3994  3                         THEN
;  956          3995  3                                 ALIGN_QUAL_OFF = ALIGN_QUAL_LNG
;  957          3996  3                         ELSE
;  958          3997  3                                 IF .PAT$GL_CONTEXT[ALIGN_LONG]
;  959          3998  3                                 THEN
;  960          3999  3                                         ALIGN_QUAL_OFF = ALIGN_QUAL_LNG*2
;  961          4000  3                                 ELSE
;  962          4001  3                                         IF .PAT$GL_CONTEXT[ALIGN_QUAD]
;  963          4002  3                                         THEN
;  964          4003  3                                                 ALIGN_QUAL_OFF = ALIGN_QUAL_LNG*3
;  965          4004  3                                         ELSE
;  966          4005  3                                                 ALIGN_QUAL_OFF = ALIGN_QUAL_LNG*4;
;  967          4006  3                 CH$COPY(ALIGN_QUAL_LNG, ALIGN_QUAL_TB[.ALIGN_QUAL_OFF],
;  968          4007  3                         BLANK_FILL, ALIGN_QUAL_LNG,
;  969          4008  3                         CH$PTR(COMMAND_BUF, .ALIGN_CMD[0]));
;  970          4009  3                 PAT$WRITEFILE(.ALIGN_CMD[0]+ALIGN_QUAL_LNG,
;  971          4010  3                                 CH$PTR(COMMAND_BUF, 0), PAT$GL_COMRAB);
;  972          4011  3                 PAT$WRITE_NAME(.SEMSP);
;  973          4012  2                 END;
;  974          4013  2
;  975          4014  2         [CANCEL_TOKEN]:
;  976          4015  2
;  977          4016  2                 SELECTONE TRUE OF
;  978          4017  2                 SET
;  979          4018  2
;  980          4019  2                 [.PAT$GL_CONTEXT[PAT_AREA_BIT]]:
;  981          4020  3                         BEGIN
;  982          4021  3                         PAT$WRITEFILE(.CANCEL_PAT_CMD[0], CANCEL_PAT_CMD[1], PAT$GL_COMRAB);
;  983          4022  2                         END;
;  984          4023  2
;  985          4024  2                 [.PAT$GL_CONTEXT[MODE_BIT]]:
;  986          4025  3                         BEGIN
;  987          4026  3                         PAT$WRITEFILE(.CANCEL_MODE_CMD[0], CANCEL_MODE_CMD[1], PAT$GL_COMRAB);
;  988          4027  2                         END;
;  989          4028  2
;  990          4029  2                 [.PAT$GL_CONTEXT[MODULE_BIT]]:
;  991          4030  3                         BEGIN
;  992          4031  4                         IF (.PAT$GL_HEAD_LST NEQU 0)
;  993          4032  3                         THEN
;  994          4033  4                                 BEGIN
;  995          4034  4                                 PAT$WRITEFILE(.CANCEL_MODU_CMD[0], CANCEL_MODU_CMD[1], PAT$GL_COMRAB);
;  996          4035  4                                 PAT$WRITE_NAME(.SEMSP);
```

```
;  997          4036  4                          PAT$WRITEFILE(.EXIT_CMD[0], EXIT_CMD[1], PAT$GL_COMRAB);
;  998          4037  4                          END
;  999          4038  3                  ELSE
; 1000          4039  3                          PAT$WRITEFILE(.CAN_MOD_ALL_CMD[0], CAN_MOD_ALL_CMD[1], PAT$GL_COMRAB);
; 1001          4040  2                  END;
; 1002          4041
; 1003          4042  2          [.PAT$GL_CONTEXT[SCOPE_BIT]]:
; 1004          4043  3                  BEGIN
; 1005          4044  3                  PAT$WRITEFILE(.CANCEL_SCO_CMD[0], CANCEL_SCO_CMD[1], PAT$GL_COMRAB);
; 1006          4045  3                  END;
; 1007          4046  2          TES;
; 1008          4047
; 1009          4048  2      [CHECK_TOKEN]:
; 1010          4049  3          BEGIN
; 1011          4050  3          IF .PAT$GL_CONTEXT[SET_NOT_ECO]
; 1012          4051  3          THEN
; 1013          4052  3                  PAT$WRITEFILE(.CHECK_N_ECO_CMD[0], CHECK_N_ECO_CMD[1],
; 1014          4053  3                                  PAT$GL_COMRAB)
; 1015          4054  3          ELSE
; 1016          4055  3                  PAT$WRITEFILE(.CHECK_ECO_CMD[0], CHECK_ECO_CMD[1],
; 1017          4056  3                                  PAT$GL_COMRAB);
; 1018          4057  3          PAT$WRITE_EXP1(.SEMSP);
; 1019          4058  3          PAT$WRITEFILE(.EXIT_CMD[0], EXIT_CMD[1], PAT$GL_COMRAB);
; 1020          4059  2          END;
; 1021          4060
; 1022          4061  2      [CREATE_TOKEN]:
; 1023          4062  2          0;
; 1024          4063  2
; 1025          4064  2      [DEFINE_TOKEN]:
; 1026          4065  3          BEGIN
; 1027          4066  3          PAT$WRITEFILE(.DEFINE_CMD[0], DEFINE_CMD[1], PAT$GL_COMRAB);
; 1028          4067  3          PAT$WRITE_NAME(.SEMSP);
; 1029          4068  3          PAT$WRITEFILE(.EXIT_CMD[0], EXIT_CMD[1], PAT$GL_COMRAB);
; 1030          4069  2          END;
; 1031          4070  2
; 1032          4071  2      [DELETE_TOKEN]:
; 1033          4072  3          BEGIN
; 1034          4073  3          CH$COPY(.DELETE_CMD[0], DELETE_CMD[1], BLANK_FILL,
; 1035          4074  3                  .DELETE_CMD[0], CH$PTR(COMMAND_BUF, 0));
; 1036          4075  3          PAT$GET_COMQUAL( COMMAND_BUF, .DELETE_CMD[0], .SEMSP);
; 1037          4076  3          PAT$WRITE_INS(.SEMSP);
; 1038          4077  3          PAT$WRITEFILE(.EXIT_CMD[0], EXIT_CMD[1], PAT$GL_COMRAB);
; 1039          4078  2          END;
; 1040          4079  2
; 1041          4080  2      [DEPOSIT_TOKEN]:
; 1042          4081  3          BEGIN
; 1043          4082  3          CH$COPY(.DEPOSIT_CMD[0], DEPOSIT_CMD[1], BLANK_FILL,
; 1044          4083  3                  .DEPOSIT_CMD[0], CH$PTR(COMMAND_BUF, 0));
; 1045          4084  3          PAT$GET_COMQUAL( COMMAND_BUF, .DEPOSIT_CMD[0], .SEMSP);
; 1046          4085  3          PAT$WRITE_INS(.SEMSP);
; 1047          4086  3          PAT$WRITEFILE(.EXIT_CMD[0], EXIT_CMD[1], PAT$GL_COMRAB);
; 1048          4087  2          END;
; 1049          4088  2
; 1050          4089  2      [EXAMINE_TOKEN]:
; 1051          4090  2          0;
; 1052          4091  2
; 1053          4092  2      [EVALUATE_TOKEN]:
```

```
;  1054          4093  2                0;
;  1055          4094  2
;  1056          4095  2            [EXIT_TOKEN]:
;  1057          4096  2                PAT$WRITEFILE(.EXIT_CMD[0], EXIT_CMD[1], PAT$GL_COMRAB);
;  1058          4097  2
;  1059          4098  2            [HELP_TOKEN]:
;  1060          4099  2                0;
;  1061          4100  2
;  1062          4101  2            [INSERT_TOKEN]:
;  1063          4102  3                BEGIN
;  1064          4103  3                CH$COPY(.INSERT_CMD[0], INSERT_CMD[1], BLANK_FILL,
;  1065          4104  3                        .INSERT_CMD[0], CH$PTR(COMMAND_BUF, 0));
;  1066          4105  3                PAT$GET_COMQUAL( COMMAND_BUF, .INSERT_CMD[0], .SEMSP);
;  1067          4106  3                PAT$WRITE_INS(.SEMSP);
;  1068          4107  3                PAT$WRITEFILE(.EXIT_CMD[0], EXIT_CMD[1], PAT$GL_COMRAB);
;  1069          4108  3                END;
;  1070          4109  2
;  1071          4110  2            [REPLACE_TOKEN]:
;  1072          4111  3                BEGIN
;  1073          4112  3                CH$COPY(.REPLACE_CMD[0], REPLACE_CMD[1], BLANK_FILL,
;  1074          4113  3                        .REPLACE_CMD[0], CH$PTR(COMMAND_BUF, 0));
;  1075          4114  3                PAT$GET_COMQUAL( COMMAND_BUF, .REPLACE_CMD[0], .SEMSP);
;  1076          4115  3                PAT$WRITE_INS(.SEMSP);
;  1077          4116  3                PAT$WRITEFILE(.EXIT_CMD[0], EXIT_CMD[1], PAT$GL_COMRAB);
;  1078          4117  2                END;
;  1079          4118  2
;  1080          4119  2            [SET_TOKEN]:
;  1081          4120  2
;  1082          4121  2                SELECTONE TRUE OF
;  1083          4122  2                SET
;  1084          4123  2
;  1085          4124  2            [.PAT$GL_CONTEXT[SCOPE_BIT]]:
;  1086          4125  3                    BEGIN
;  1087          4126  3                    PAT$WRITEFILE(.SET_SCO_CMD[0], SET_SCO_CMD[1], PAT$GL_COMRAB);
;  1088          4127  3                    PAT$GL_BUF_SIZ = 0;
;  1089          4128  3                    PAT$CP_OUT_STR = CH$PTR(COMMAND_BUF, 0);
;  1090          4129  3                    COUNT = 0;
;  1091          4130  3                    WHILE .PAT$GL_CSP_PTR[ .COUNT ] NEQA 0
;  1092          4131  3                    DO
;  1093          4132  4                        BEGIN
;  1094          4133  4                        PAT$FAO_PUT(SCO_NAM_CMD, .PAT$GL_CSP_PTR[.COUNT]);
;  1095          4134  4                        COUNT = .COUNT + 1;
;  1096          4135  3                        END;
;  1097          4136  3                    PAT$WRITEFILE(.PAT$GL_BUF_SIZ, COMMAND_BUF, PAT$GL_COMRAB);
;  1098          4137  2                    END;
;  1099          4138  2
;  1100          4139  2            [.PAT$GL_CONTEXT[SET_ECO]]:
;  1101          4140  3                    BEGIN
;  1102          4141  3                    PAT$WRITEFILE(.SET_ECO_CMD[0], SET_ECO_CMD[1], PAT$GL_COMRAB);
;  1103          4142  3                    PAT$WRITE_EXP1(.SEMSP);
;  1104          4143  2                    END;
;  1105          4144  2
;  1106          4145  2            [.PAT$GL_CONTEXT[MODE_BIT]]:
;  1107          4146  3                    BEGIN
;  1108          4147  3                    PAT$WRITEFILE(.EXIT_CMD[0], EXIT_CMD[1], PAT$GL_COMRAB);
;  1109          4148  2                    END;
;  1110          4149  2
```

```
;  1111          4150  2              [.PAT$GL_CONTEXT[PAT_AREA_BIT]]:
;  1112          4151  3                      BEGIN
;  1113          4152  3                      IF (.PAT$GL_CONTEXT[INIT_PAT_BIT]) THEN
;  1114          4153  4                              BEGIN
;  1115          4154  4                              LOCAL
;  1116          4155  4                                      OUTPUT_BUFFER : BLOCK [132, BYTE];
;  1117          4156  4
;  1118          4157  4                              PAT$CP_OUT_STR = CH$PTR (OUTPUT_BUFFER, 0);
;  1119          4158  4                              CH$COPY (.SET_PAT_CMD[0], SET_PAT_CMD[1], BLANK_FILL,
;  1120          4159  4                                       .SET_PAT_CMD[0], CH$PTR (COMMAND_BUF, 0));
;  1121          4160  4                              PAT$GET_COMQUAL (COMMAND_BUF, .SET_PAT_CMD[0], .SEMSP);
;  1122          4161  4                              PAT$GL_BUF_SIZ = 0;
;  1123          4162  4                              PAT$CP_OUT_STR = CH$PTR (OUTPUT_BUFFER, 0);
;  1124          4163  4                              PAT$OUT_PAT_EXP (.LIST_ELEM_EXP2 (.PAT$GL_HEAD_LST), 0);
;  1125          4164  4                              PAT$WRITEFILE (.PAT$GL_BUF_SIZ, OUTPUT_BUFFER, PAT$GL_COMRAB);
;  1126          4165  4                              PAT$GL_BUF_SIZ = 0;
;  1127          4166  4                              PAT$CP_OUT_STR = CH$PTR (OUTPUT_BUFFER, 0);
;  1128          4167  4                              PAT$OUT_PAT_EXP (.LIST_ELEM_EXP1 (.PAT$GL_HEAD_LST), 0);
;  1129          4168  4                              PAT$WRITEFILE (.PAT$GL_BUF_SIZ, OUTPUT_BUFFER, PAT$GL_COMRAB);
;  1130          4169  4                              END
;  1131          4170  3                      ELSE
;  1132          4171  4                              BEGIN
;  1133          4172  4                              PAT$WRITEFILE(.SET_PAT_CMD[0], SET_PAT_CMD[1], PAT$GL_COMRAB);
;  1134          4173  4                              PAT$WRITE_EXP1(.SEMSP);
;  1135          4174  3                              END;
;  1136          4175  2                      END;
;  1137          4176  2
;  1138          4177  2              [.PAT$GL_CONTEXT[MODULE_BIT]]:
;  1139          4178  3                      BEGIN
;  1140          4179  4                      IF (.PAT$GL_HEAD_LST NEQU 0)
;  1141          4180  3                      THEN
;  1142          4181  4                              BEGIN
;  1143          4182  4                              PAT$WRITEFILE(.SET_MODU_CMD[0], SET_MODU_CMD[1], PAT$GL_COMRAB);
;  1144          4183  4                              PAT$WRITE_NAME(.SEMSP);
;  1145          4184  4                              PAT$WRITEFILE(.EXIT_CMD[0], EXIT_CMD[1], PAT$GL_COMRAB),
;  1146          4185  4                              END
;  1147          4186  3                      ELSE
;  1148          4187  3                              PAT$WRITEFILE(.SET_MOD_ALL_CMD[0], SET_MOD_ALL_CMD[1], PAT$GL_COMRAB);
;  1149          4188  2                      END;
;  1150          4189  2                TES;
;  1151          4190  2
;  1152          4191  2              [SHOW_TOKEN]:
;  1153          4192  2                      0;
;  1154          4193  2
;  1155          4194  2              [UPDATE_TOKEN]:
;  1156          4195  2                      PAT$WRITEFILE(.UPDATE_CMD[0], UPDATE_CMD[1], PAT$GL_COMRAB);
;  1157          4196  2
;  1158          4197  2              [VERIFY_TOKEN]:
;  1159          4198  3                      BEGIN
;  1160          4199  3                      CH$COPY(.VERIFY_CMD[0], VERIFY_CMD[1], BLANK_FILL,
;  1161          4200  3                              .VERIFY_CMD[0], CH$PTR(COMMAND_BUF, 0));
;  1162          4201  3                      PAT$GET_COMQUAL( COMMAND_BUF , .VERIFY_CMD[0], .SEMSP);
;  1163          4202  3                      PAT$WRITE_INS(.SEMSP),
;  1164          4203  3                      PAT$WRITEFILE(.EXIT_CMD[0], EXIT_CMD[1], PAT$GL_COMRAB);
;  1165          4204  2                      END;
;  1166          4205  2
;  1167          4206  2              [OUTRANGE]:
```

```
;  1168          4207  2                    0;
;  1169          4208  2
;  1170          4209  2              TES;
;  1171          4210  2 RETURN
;  1172          4211  1 END;


                                                    0FFC 00000          .ENTRY  WRITE_CMD, Save R2,R3,R4,R5,R6,R7,R8,R9,-      ; 3922
                                                                                R10,R11
                                    5B 00000000G   00   9E 00002        MOVAB   PAT$WRITEFILE, R11                             ;
                                    5A 00000000G   00   9E 00009        MOVAB   PAT$GL_CONTEXT, R10                            ;
                                    59 00000000G   00   9E 00010        MOVAB   PAT$GL_COMRAB, R9                              ;
                                    58 00000000'   EF   9E 00017        MOVAB   SET_PAT_CMD+1, R8                              ;
                                    5E      FEF8   CE   9E 0001E        MOVAB   -264(SP), SP                                   ;
                                    01 00000000G   00   E8 00023        BLBS    PAT$GB_EXEC_CMD, 1$                            ; 3979
                                                   04   04 0002A        RET                                                    ;
                                    57        04   AC   D0 0002B 1$:     MOVL    SEMSP, R7                                      ; 3981
                                    10        01 00000000G0047   CF 0002F        CASEL   PAT$GL_SEMAN1[R7], #1, #16             ;
                            0290            00CB            0078            0023        00038 2$:   .WORD   3$-2$,-                ;
                            0290            010B            00FE            00F2        00040               9$-2$,-                ;
                            0118            0290            0284            0290        00048               16$-2$,-               ;
                            0257            0290            0133            0125        00050               44$-2$,-               ;
                                                                            0262        00058               19$-2$,-               ;
                                                                                                            21$-2$,-               ;
                                                                                                            22$-2$,-               ;
                                                                                                            44$-2$,-               ;
                                                                                                            44$-2$,-               ;
                                                                                                            42$-2$,-               ;
                                                                                                            44$-2$,-               ;
                                                                                                            23$-2$,-               ;
                                                                                                            24$-2$,-               ;
                                                                                                            26$-2$,-               ;
                                                                                                            44$-2$,-               ;
                                                                                                            39$-2$,-               ;
                                                                                                            40$-2$                 ;
                                                   04 0005A             RET                                                    ;
                                    56      FF79   C8   9A 0005B 3$:     MOVZBL  ALIGN_CMD, R6                                  ; 3987
                            FF7C    CD      FF7A   C8        56   28 00060        MOVC3   R6, ALIGN_CMD+1, COMMAND_BUF           ; 3988
                                    04             6A        06   E1 00068        BBC     #6, PAT$GL_CONTEXT, 4$                 ; 3989
                                                             50   D4 0006C        CLRL    ALIGN_QUAL_OFF                         ; 3991
                                                             1E   11 0006E        BRB     8$                                     ;
                                    05             6A        04   E1 00070 4$:     BBC     #4, PAT$GL_CONTEXT, 5$                 ; 3993
                                                   50        04   D0 00074        MOVL    #4, ALIGN_QUAL_OFF                     ; 3995
                                                             15   11 00077        BRB     8$                                     ;
                                    05             6A        02   E1 00079 5$:     BBC     #2, PAT$GL_CONTEXT, 6$                 ; 3997
                                                   50        08   D0 0007D        MOVL    #8, ALIGN_QUAL_OFF                     ; 3999
                                                             0C   11 00080        BRB     8$                                     ;
                                    05             6A        03   E1 00082 6$:     BBC     #3, PAT$GL_CONTEXT, 7$                 ; 4001
                                                   50        0C   D0 00086        MOVL    #12, ALIGN_QUAL_OFF                    ; 4003
                                                             03   11 00089        BRB     8$                                     ;
                                                   50        10   D0 0008B 7$:     MOVL    #16, ALIGN_QUAL_OFF                    ; 4005
                                                       FF7C CD46   9F 0008E 8$:     PUSHAB  COMMAND_BUF[R6]                        ; 4008
                                                         2A A840   9F 00093        PUSHAB  ALIGN_QUAL_TBL[ALIGN_QUAL_OFF]         ;
                                                   9E        9E   D0 00097        MOVL    @(SP)+, @(SP)+                         ;
```

```
                                59  DD 0009A          PUSHL   R9                                      ; 4009
                            FF7C    CD 9F 0009C           PUSHAB  COMMAND_BUF                             ; 4010
                              04    A6 9F 000A0           PUSHAB  4(R6)                                   ; 4009
                        6B          03 FB 000A3           CALLS   #3, PAT$WRITEFILE                       ;
                                57  DD 000A6             PUSHL   R7                                      ; 4011
                00000000G   00      01 FB 000A8           CALLS   #1, PAT$WRITE_NAME                      ;
                                    04 000AF              RET                                             ; 3981
                0B      02  AA      03 E1 000B0 9$:       BBC     #3, PAT$GL_CONTEXT+2, 10$               ; 4019
                                59  DD 000B5             PUSHL   R9                                      ; 4021
                              9E    A8 9F 000B7           PUSHAB  CANCEL_PAT_CMD+1                        ;
                            7E      9D A8 9A 000BA        MOVZBL  CANCEL_PAT_CMD, -(SP)                   ;
                                    40 11 000BE           BRB     15$                                     ;
                            0D          6A E9 000C0 10$:  BLBC    PAT$GL_CONTEXT, 11$                     ; 4024
                                59  DD 000C3             PUSHL   R9                                      ; 4026
                            FF7E    C8 9F 000C5           PUSHAB  CANCEL_MODE_CMD+1                       ;
                            7E  FF7D    C8 9A 000C9       MOVZBL  CANCEL_MODE_CMD, -(SP)                  ;
                                    30 11 000CE           BRB     15$                                     ;
                                    6A 95 000D0 11$:      TSTB    PAT$GL_CONTEXT                          ; 4029
                                    1E 18 000D2           BGEQ    13$                                     ;
                        00000000G   00  D5 000D4          TSTL    PAT$GL_HEAD_LST                         ; 4031
                                    0B 13 000DA           BEQL    12$                                     ;
                                59  DD 000DC             PUSHL   R9                                      ; 4034
                              83    A8 9F 000DE           PUSHAB  CANCEL_MODU_CMD+1                       ;
                            7E      82 A8 9A 000E1        MOVZBL  CANCEL_MODU_CMD, -(SP)                  ;
                                    4C 11 000E5           BRB     20$                                     ;
                                59  DD 000E7 12$:         PUSHL   R9                                      ; 4039
                              8B    A8 9F 000E9           PUSHAB  CAN_MOD_ALL_CMD+1                       ;
                            7E      8A A8 9A 000EC        MOVZBL  CAN_MOD_ALL_CMD, -(SP)                  ;
                                    0E 11 000F0           BRB     15$                                     ;
                            01      02  AA  E8 000F2 13$: BLBS    PAT$GL_CONTEXT+2, 14$                   ; 4042
                                        04 000F6          RET                                             ; 4044
                                59  DD 000F7 14$:         PUSHL   R9                                      ;
                              98    A8 9F 000F9           PUSHAB  CANCEL_SCO_CMD+1                        ;
                            7E      97 A8 9A 000FC        MOVZBL  CANCEL_SCO_CMD, -(SP)                   ;
                                  01C2  31 00100 15$:     BRW     43$                                     ;
                        0B          6A      01 E1 00103 16$:  BBC     #1, PAT$GL_CONTEXT, 17$             ; 4050
                                59  DD 00107             PUSHL   R9                                      ; 4052
                                A5  A8 9F 00109           PUSHAB  CHECK_N_ECO_CMD+1                       ;
                            7E      A4 A8 9A 0010C        MOVZBL  CHECK_N_ECO_CMD, -(SP)                  ;
                                    09 11 00110           BRB     18$                                     ;
                                59  DD 00112 17$:         PUSHL   R9                                      ; 4055
                                AF  A8 9F 00114           PUSHAB  CHECK_ECO_CMD+1                         ;
                            7E      AE A8 9A 00117        MOVZBL  CHECK_ECO_CMD, -(SP)                    ;
                            6B          03 FB 0011B 18$:  CALLS   #3, PAT$WRITEFILE                       ;
                                57  DD 0011E             PUSHL   R7                                      ; 4057
                    00000000G   00      01 FB 00120       CALLS   #1, PAT$WRITE_EXP1                      ;
                                  0192  31 00127          BRW     42$                                     ; 4058
                                59  DD 0012A 19$:         PUSHL   R9                                      ; 4066
                              B5    A8 9F 0012C           PUSHAB  DEFINE_CMD+1                            ;
                            7E      B4 A8 9A 0012F        MOVZBL  DEFINE_CMD, -(SP)                       ;
                                  0140  31 00133 20$:     BRW     37$                                     ;
                            56      B8  A8 9A 00136 21$:  MOVZBL  DELETE_CMD, R6                          ; 4073
                FF7C    CD      B9  A8      56 28 0013A   MOVC3   R6, DELETE_CMD+1, COMMAND_BUF           ; 4074
                                    25 11 00141           BRB     25$                                     ; 4075
                            56      BD  A8 9A 00143 22$:  MOVZBL  DEPOSIT_CMD, R6                         ; 4082
                FF7C    CD      BE  A8      56 28 00147   MOVC3   R6, DEPOSIT_CMD+1, COMMAND_BUF         ; 4083
                                    18 11 0014E           BRB     25$                                     ; 4084
```

```
                                56       CD    A8  9A 00150 23$:     MOVZBL  INSERT_CMD, R6                          ; 4103
                FF7C    CD        CE     A8        56  28 00154     MOVC3   R6, INSERT_CMD+1, COMMAND_BUF           ; 4104
                                                    0B  11 00158     BRB     25$                                     ; 4105
                                56       D7    A8  9A 0015D 24$:     MOVZBL  REPLACE_CMD, R6                         ; 4112
                FF7C    CD        D8     A8        56  28 00161     MOVC3   R6, REPLACE_CMD+1, COMMAND_BUF          ; 4113
                                                  013A  31 00168 25$:     BRW     41$                                     ; 4114
                                43       02    AA  E9 0016B 26$:     BLBC    PAT$GL_CONTEXT+2, 29$                   ; 4124
                                                    59  DD 0016F     PUSHL   R9                                      ; 4126
                                                    07  A8 9F 00171     PUSHAB  SET_SCO_CMD+1
                                7E       06    A8  9A 00174     MOVZBL  SET_SCO_CMD, -(SP)
                                6B               03  FB 00178     CALLS   #3, PAT$WRITEFILE
                                    00000000G    00  D4 0017B     CLRL    PAT$GL_BUF_SIZ                          ; 4127
                        00000000G   00     FF7C   CD  9E 00181     MOVAB   COMMAND_BUF, PAT$CP_OUT_STR             ; 4128
                                                    52  D4 0018A     CLRL    COUNT                                   ; 4129
                                50 00000000G    00  D0 0018C 27$:     MOVL    PAT$GL_CSP_PTR, R0                      ; 4130
                                              6042  D5 00193     TSTL    (R0)[COUNT]
                                                 11  13 00196     BEQL    28$
                                              6042  DD 00198     PUSHL   (R0)[COUNT]                             ; 4133
                                                 DB   A8 9F 0019B     PUSHAB  SCO_NAM_CMD
                        00000000G   00               02  FB 0019E     CALLS   #2, PAT$FAO_PUT
                                                    52  D6 001A5     INCL    COUNT                                   ; 4134
                                                    E3  11 001A7     BRB     27$                                     ; 4130
                                                    59  DD 001A9 28$:     PUSHL   R9                                      ; 4136
                                              FF7C   CD  9F 001AB     PUSHAB  COMMAND_BUF
                                              0096  31 001AF     BRW     33$
                        0C        02     AA        02  E1 001B2 29$:     BBC     #2, PAT$GL_CONTEXT+2, 30$               ; 4139
                                                    59  DD 001B7     PUSHL   R9                                      ; 4141
                                                 E0   A8 9F 001B9     PUSHAB  SET_ECO_CMD+1
                                7E               DF   A8 9A 001BC     MOVZBL  SET_ECO_CMD, -(SP)
                                              0091  31 001C0     BRW     35$
                                03                 6A  E9 001C3 30$:     BLBC    PAT$GL_CONTEXT, 31$                     ; 4145
                                              00F3  31 001C6     BRW     42$
                        03        02     AA        03  E0 001C9 31$:     BBS     #3, PAT$GL_CONTEXT+2, 32$               ; 4150
                                              0090  31 001CE     BRW     36$
                                56          FF    A8  9A 001D1 32$:     MOVZBL  SET_PAT_CMD, R6                         ; 4158
                        76        02     AA        01  E1 001D5     BBC     #1, PAT$GL_CONTEXT+2, 34$               ; 4152
                            00000000G   00          6E  9E 001DA     MOVAB   OUTPUT_BUFFER, PAT$CP_OUT_STR           ; 4157
                FF7C    CD          68            56  28 001E1     MOVC3   R6, SET_PAT_CMD+1, COMMAND_BUF          ; 4159
                                    7E            56  7D 001E7     MOVQ    R6, -(SP)                               ; 4160
                                              FF7C   CD  9F 001EA     PUSHAB  COMMAND_BUF
                            00000000V   EF          03  FB 001EE     CALLS   #3, PAT$GET_COMQUAL
                                    00000000G   00  D4 001F5     CLRL    PAT$GL_BUF_SIZ                          ; 4161
                            00000000G   00          6E  9E 001FB     MOVAB   OUTPUT_BUFFER, PAT$CP_OUT_STR           ; 4162
                                                    7E  D4 00202     CLRL    -(SP)                                   ; 4163
                                50 00000000G    00  D0 00204     MOVL    PAT$GL_HEAD_LST, R0
                                              08    A0 DD 0020B     PUSHL   8(R0)
                            00000000G   00          02  FB 0020E     CALLS   #2, PAT$OUT_PAL_EXP
                                                    59  DD 00215     PUSHL   R9                                      ; 4164
                                                 04   AE 9F 00217     PUSHAB  OUTPUT_BUFFER
                                    00000000G   00  DD 0021A     PUSHL   PAT$GL_BUF_SIZ
                                6B                  03  FB 00220     CALLS   #3, PAT$WRITEFILE
                                    00000000G   00  D4 00223     CLRL    PAT$GL_BUF_SIZ                          ; 4165
                            00000000G   00          6E  9E 00229     MOVAB   OUTPUT_BUFFER, PAT$CP_OUT_STR           ; 4166
                                                    7E  D4 00230     CLRL    -(SP)                                   ; 4167
                                50 00000000G    00  D0 00232     MOVL    PAT$GL_HEAD_LST, R0
                                              04    A0 DD 00239     PUSHL   4(R0)
                            00000000G   00          02  FB 0023C     CALLS   #2, PAT$OUT_PAL_EXP
```

```
                                        59  DD 00243          PUSHL   R9                                      ; 4168
                                    04  AE 9F 00245          PUSHAB  OUTPUT_BUFFER                           ;
                          00000000G     00  DD 00248 33$:     PUSHL   PAT$GL_BUF_SIZ                          ;
                                        75  11 0024E          BRB     43$                                     ;
                                  0340  8F  BB 00250 34$:     PUSHR   #^M<R6,R8,R9>                           ; 4172
                                68      03  FB 00254 35$:     CALLS   #3, PAT$WRITEFILE                       ;
                                        57  DD 00257          PUSHL   R7                                      ; 4173
                          00000000G  00     01  FB 00259          CALLS   #1, PAT$WRITE_EXP1                      ;
                                        04  00260              RET                                             ; 4121
                                        6A  95 00261 36$:     TSTB    PAT$GL_CONTEXT                          ; 4177
                                        63  18 00263          BGEQ    44$                                     ;
                          00000000G     00  D5 00265          TSTL    PAT$GL_HEAD_LST                         ; 4179
                                        17  13 0026B          BEQL    38$                                     ;
                                        59  DD 0026D          PUSHL   R9                                      ; 4182
                                    EB  A8  9F 0026F          PUSHAB  SET_MODU_CMD+1                          ;
                                7E      EA  A8  9A 00272          MOVZBL  SET_MODU_CMD, -(SP)                     ;
                                6B      03  FB 00276 37$:     CALLS   #3, PAT$WRITEFILE                       ;
                                        57  DD 00279          PUSHL   R7                                      ; 4183
                          00000000G  00     01  FB 0027B          CALLS   #1, PAT$WRITE_NAME                      ;
                                        38  11 00282          BRB     42$                                     ; 4184
                                        59  DD 00284 38$:     PUSHL   R9                                      ; 4187
                                    F3  A8  9F 00286          PUSHAB  SET_MOD_ALL_CMD+1                       ;
                                7E      F2  A8  9A 00289          MOVZBL  SET_MOD_ALL_CMD, -(SP)                  ;
                                        36  11 0028D          BRB     43$                                     ;
                                        59  DD 0028F 39$:     PUSHL   R9                                      ; 4195
                                    20  A8  9F 00291          PUSHAB  UPDATE_CMD+1                            ;
                                7E      1F  A8  9A 00294          MOVZBL  UPDATE_CMD, -(SP)                       ;
                                        2B  11 00298          BRB     43$                                     ;
                                56      27  A8  9A 0029A 40$:     MOVZBL  VERIFY_CMD, R6                          ; 4199
                FF7C    CD      28  A8          56  28 0029E          MOVC3   R6, VERIFY_CMD+1, COMMAND_BUF   ; 4200
                                7E              56  7D 002A5 41$:     MOVQ    R6, -(SP)                       ; 4201
                                        FF7C    CD  9F 002A8          PUSHAB  COMMAND_BUF                     ;
                          00000000V  EF             03  FB 002AC          CALLS   #3, PAT$GET_COMQUAL             ;
                                                    57  DD 002B3          PUSHL   R7                              ; 4202
                          00000000G  00             01  FB 002B5          CALLS   #1, PAT$WRITE_INS               ;
                                                    59  DD 002BC 42$:     PUSHL   R9                              ; 4203
                                            C7  A8  9F 002BE          PUSHAB  EXIT_CMD+1                      ;
                                        7E      C6  A8  9A 002C1          MOVZBL  EXIT_CMD, -(SP)                 ;
                                        6B      03  FB 002C5 43$:     CALLS   #3, PAT$WRITEFILE               ;
                                                    04  002C8 44$:     RET                                     ; 4211

; Routine Size:  713 bytes,    Routine Base:  _PAT$CODE + 052C
```

```
;  1174          4212  1 GLOBAL ROUTINE PAT$SET_OVERS (LEVEL, TOKEN) : NOVALUE =
;  1175          4213  1
;  1176          4214  1 !++
;  1177          4215  1 ! FUNCTIONAL DESCRIPTION:
;  1178          4216  1 !
;  1179          4217  1 !       Sets OVERRIDE or LOCAL modes by setting the new mode level, and
;  1180          4218  1 !       then setting the mode itself.
;  1181          4219  1 !
;  1182          4220  1 ! CALLING SEQUENCE:
;  1183          4221  1 !
;  1184          4222  1 !       PAT$SET_OVERS ()
;  1185          4223  1 !
;  1186          4224  1 ! INPUTS:
;  1187          4225  1 !
;  1188          4226  1 !       LEVEL           - Level of modes to set
;  1189          4227  1 !       TOKEN           - Mode token to be set in the mode stack
;  1190          4228  1 !
;  1191          4229  1 ! IMPLICIT INPUTS:
;  1192          4230  1 !
;  1193          4231  1 !       none
;  1194          4232  1 !
;  1195          4233  1 ! OUTPUTS:
;  1196          4234  1 !
;  1197          4235  1 !       none
;  1198          4236  1 !
;  1199          4237  1 ! IMPLICIT OUTPUTS:
;  1200          4238  1 !
;  1201          4239  1 !       none
;  1202          4240  1 !
;  1203          4241  1 ! ROUTINE VALUE:
;  1204          4242  1 !
;  1205          4243  1 !       NOVALUE
;  1206          4244  1 !
;  1207          4245  1 ! SIDE EFFECTS:
;  1208          4246  1 !
;  1209          4247  1 !       The appropriate modes are set.
;  1210          4248  1 !--
;  1211          4249  1
;  1212          4250  2 BEGIN
;  1213          4251  2 PAT$SET_MOD_LVL (.LEVEL);
;  1214          4252  2 PAT$SET_NEW_MOD (.TOKEN);
;  1215          4253  1 END;


                                                0000 00000      .ENTRY  PAT$SET_OVERS, Save nothing                     ; 4212
                                          04    AC   DD 00002   PUSHL   LEVEL                                           ; 4251
                                                01   FB 00005   CALLS   #1, PAT$SET_MOD_LVL                           ;
                        00000000G   00          08    AC   DD 0000C   PUSHI   TOKEN                                   ; 4252
                                                01   FB 0000F   CALLS   #1, PAT$SET_NEW_MOD                         ;
                                                     04 00016   RET                                                     ; 4253

; Routine Size:  23 bytes,    Routine Base:  _PAT$CODE + 07F5
```

```
;  1217          4254  1 GLOBAL ROUTINE PAT$SET_COMQUAL (QUAL_OFFSET) : NOVALUE =
;  1218          4255  1
;  1219          4256  1 !++
;  1220          4257  1 ! FUNCTIONAL DESCRIPTION:
;  1221          4258  1 !
;  1222          4259  1 !       Sets a bit in the command qualifier longword, PAT$GL_COMQUAL,
;  1223          4260  1 !       corresponding to the qualifier specified.  These bits are used to
;  1224          4261  1 !       reconstruct the command line for the output command file and the
;  1225          4262  1 !       appended patch text.
;  1226          4263  1 !
;  1227          4264  1 ! CALLING SEQUENCE:
;  1228          4265  1 !
;  1229          4266  1 !       PAT$SET_COMQUAL( QUAL_OFFSET)
;  1230          4267  1 !
;  1231          4268  1 ! INPUTS:
;  1232          4269  1 !
;  1233          4270  1 !       QUAL_OFFSET     - Offset to position in parse stack which contains
;  1234          4271  1 !                         the qualifier
;  1235          4272  1 !
;  1236          4273  1 ! IMPLICIT INPUTS:
;  1237          4274  1 !
;  1238          4275  1 !       none
;  1239          4276  1 !
;  1240          4277  1 ! OUTPUTS:
;  1241          4278  1 !
;  1242          4279  1 !       none
;  1243          4280  1 !
;  1244          4281  1 ! IMPLICIT OUTPUTS:
;  1245          4282  1 !
;  1246          4283  1 !       none
;  1247          4284  1 !
;  1248          4285  1 ! ROUTINE VALUE:
;  1249          4286  1 !
;  1250          4287  1 !       NOVALUE
;  1251          4288  1 !
;  1252          4289  1 ! SIDE EFFECTS:
;  1253          4290  1 !
;  1254          4291  1 !       The appropriate bit is set.
;  1255          4292  1 !--
;  1256          4293  1
;  1257          4294  2 BEGIN
;  1258          4295  2
;  1259          4296  2 !++
;  1260          4297  2 ! The command qualifier table is a stream of bytes.  Each entry consists of two
;  1261          4298  2 ! bytes.  The first byte is the token value for the qualifier (which is the
;  1262          4299  2 ! value on the parse stack).  The second byte is the corresponding bit number
;  1263          4300  2 ! to be set in the command qualifier longword, PAT$GL_COMQUAL.
;  1264          4301  2 !--
;  1265          4302  2 BIND
;  1266          4303  2         COM_QUAL_TABLE = UPLIT BYTE (
;  1267          4304  2                                         INSTRUCTI_TOKEN, INSTR_QUAL,
;  1268          4305  2                                         DECIMAL_TOKEN, DECIMAL_QUAL,
;  1269          4306  2                                         WORD_TOKEN, WORD_QUAL,
;  1270          4307  2                                         BYTE_TOKEN, BYTE_QUAL,
;  1271          4308  2                                         PATCH_ARE_TOKEN, PATCH_QUAL,
;  1272          4309  2                                         NOINSTRUC_TOKEN, NOINSTR_QUAL,
;  1273          4310  2                                         LONG_TOKEN, LONG_QUAL,
```

```
;  1274          4311  2                                      HEXADECIM_TOKEN, HEX_QUAL,
;  1275          4312  2                                      ASCII_TOKEN, ASCII_QUAL,
;  1276          4313  2                                      NOASCII_TOKEN, NOASCII_QUAL,
;  1277          4314  2                                      OCTAL_TOKEN, OCTAL_QUAL,
;  1278          4315  2                                      LITERAL_TOKEN, LITER_QUAL,
;  1279          4316  2                                      INITIALIZ_TOKEN, INITIALIZE_QUAL
;  1280          4317  2                                                      ) : VECTOR[,BYTE];
;  1281          4318  2
;  1282          4319  2 LOCAL
;  1283          4320  2         TOKEN_INDEX;                                 ! Index into command qualifier table
;  1284          4321  2
;  1285          4322  2 !++
;  1286          4323  2 ! Loop, searching the command table for a token matching the one in the
;  1287          4324  2 ! parse stack.  The corresponding command qualifier bit is set when a match
;  1288          4325  2 ! is found.
;  1289          4326  2 !--
;  1290          4327  2 INCR TOKEN_INDEX FROM MIN_QUAL TO MAX_QUAL*2 BY 2
;  1291          4328  2 DO
;  1292          4329  3         IF (.COM_QUAL_TABLE[.TOKEN_INDEX] EQL .PAT$GL_SEMAN1[.QUAL_OFFSET])
;  1293          4330  2         THEN
;  1294          4331  3                 BEGIN
;  1295          4332  3                 PAT$GL_COMQUAL [ .COM_QUAL_TABLE[.TOKEN_INDEX+1] ] = TRUE;
;  1296          4333  3                 EXITLOOP;
;  1297          4334  2                 END;
;  1298          4335  2 RETURN;
;  1299          4336  2
;  1300          4337  1 END;


                                                                .PSECT  _PAT$PLIT,NOWRT,NOEXE,0

1B 06 1F 05 26 04 2D 03 15 02 31 01 16 00 1C  00119 P.ABK:    .BYTE   28, 0, 22, 1, 49, 2, 21, 3, 45, 4, 38, 5, - ;
               0C 32 0B 1E 0A 2A 09 24 08 14 07  00128                31, 6, 27, 7, 20, 8, 36, 9, 42, 10, 30, - ;
                                                                       11, 50, 12                                ;

                                                        COM_QUAL_TABLE=     P.ABK


                                                                .PSECT  _PAT$CODE,NOWRT,2

                                                  0004 00000            .ENTRY  PAT$SET_COMQUAL, Save R2                    ; 4254
                                  51      04   AC  D0 00002            MOVL    QUAL_OFFSET, R1                             ; 4329
                                               50  D4 00006            CLRL    TOKEN_INDEX                                 ;
00000000G0041 00000000'EF40       08           00  ED 00008 1$:        CMPZV   #0, #8, COM_QUAL_TABLE[TOKEN_INDEX], -      ;
                                                                       PAT$GL_SEMAN1[R1]                           ;
                                               11  12 00017            BNEQ    2$                                          ;
                                  52 00000000'EF40  9A 00019            MOVZBL  COM_QUAL_TABLE+1[TOKEN_INDEX], R2           ; 4332
                  07 00000000G    00           52  E2 00021            BBSS    R2, PAT$GL_COMQUAL, 3$                      ;
                                               04  00029            RET                                                 ; 4331
        FFD8      50              02           18  F1 0002A 2$:        ACBL    #24, #2, TOKEN_INDEX, 1$                    ; 4329
                                               04  00030 3$:        RET                                                 ; 4337

; Routine Size:  49 bytes,    Routine Base:  _PAT$CODE + 080C
```

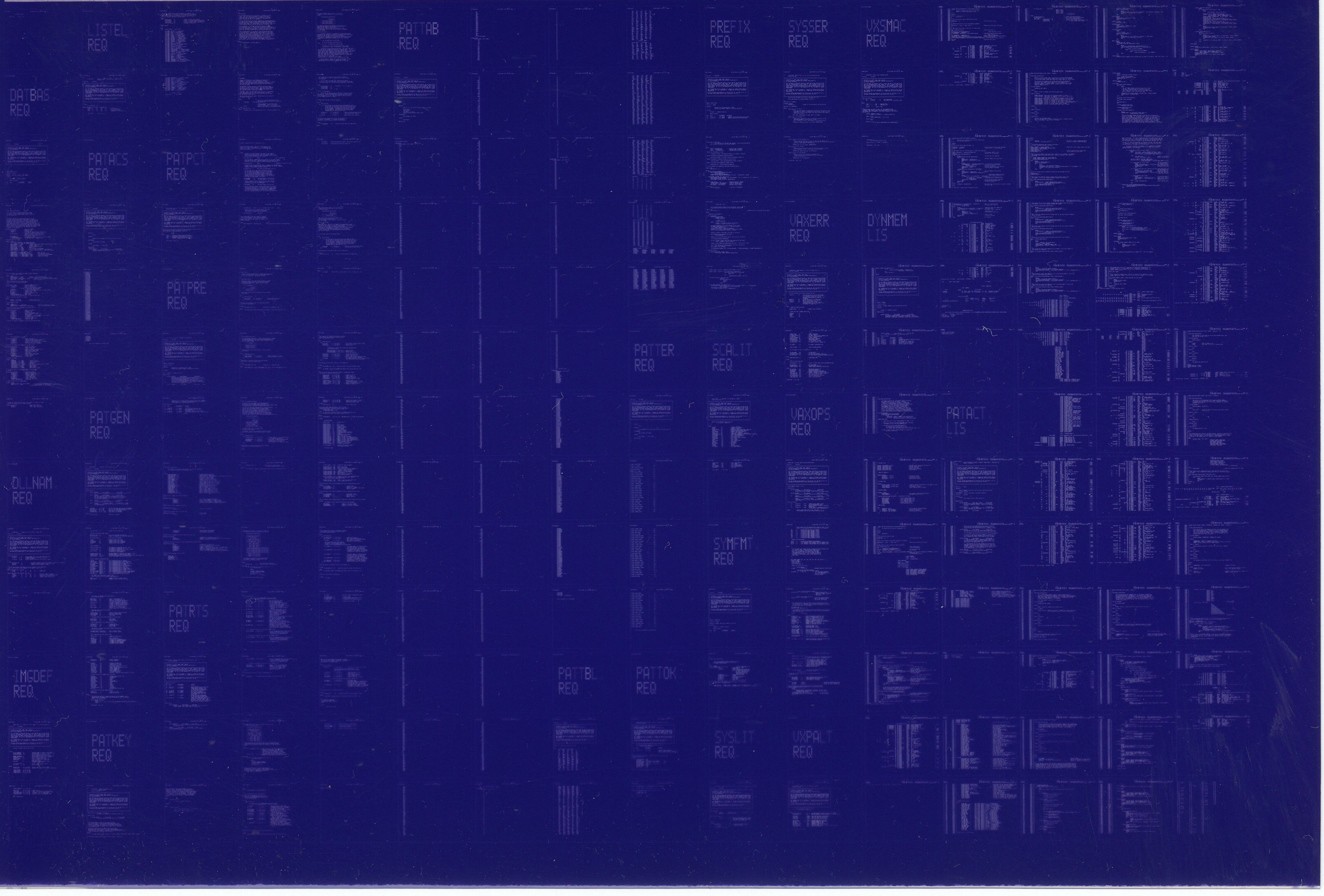
```
;  1302     4338  1 GLOBAL ROUTINE PAT$GET_COMQUAL (COMMAND_BUF, COMMAND_SIZE, SEMSP) : NOVALUE =
;  1303     4339  1
;  1304     4340  1 !++
;  1305     4341  1 ! FUNCTIONAL DESCRIPTION:
;  1306     4342  1 !
;  1307     4343  1 !       This routine enters the command qualifiers into the command line
;  1308     4344  1 !       buffer being constructed.  The qualifiers are indicated by bits
;  1309     4345  1 !       set in the command qualifier indicator longword, PAT$GL_COMQUAL.
;  1310     4346  1 !       The routine writes the command line to the output command file
;  1311     4347  1 !       after it enters the qualifiers.  Note that the command verb has
;  1312     4348  1 !       already been entered into the buffer.
;  1313     4349  1 !
;  1314     4350  1 ! CALLING SEQUENCE:
;  1315     4351  1 !
;  1316     4352  1 !       PAT$GET_COMQUAL (COMMAND_BUF, COMMAND_SIZE, SEMSP)
;  1317     4353  1 !
;  1318     4354  1 ! INPUTS:
;  1319     4355  1 !
;  1320     4356  1 !       COMMAND_BUF - Address of command line buffer
;  1321     4357  1 !       COMMAND_SIZE - Number of command bytes already entered in the buffer
;  1322     4358  1 !       SEMSP - Offset in parse stack to command token
;  1323     4359  1 !
;  1324     4360  1 ! IMPLICIT INPUTS:
;  1325     4361  1 !
;  1326     4362  1 !       PAT$GL_COMQUAL - Indicator for qualifiers specified in command
;  1327     4363  1 !
;  1328     4364  1 ! OUTPUTS:
;  1329     4365  1 !
;  1330     4366  1 !       none
;  1331     4367  1 !
;  1332     4368  1 ! IMPLICIT OUTPUTS:
;  1333     4369  1 !
;  1334     4370  1 !       none
;  1335     4371  1 !
;  1336     4372  1 ! ROUTINE VALUE:
;  1337     4373  1 !
;  1338     4374  1 !       NOVALUE
;  1339     4375  1 !
;  1340     4376  1 ! SIDE EFFECTS:
;  1341     4377  1 !
;  1342     4378  1 !       The command verb and qualifiers are written to the output command file.
;  1343     4379  1 !--
;  1344     4380  1
;  1345     4381  2 BEGIN
;  1346     4382  2
;  1347     4383  2 MAP
;  1348     4384  2         COMMAND_BUF : REF VECTOR[,BYTE];                        ! Command line buffer
;  1349     4385  2
;  1350     4386  2 LITERAL
;  1351     4387  2         HYPHEN = %X'2D',                                        ! Ascii continuation character ( yphen)
;  1352     4388  2         BLANK_FILL = %X'20';                                    ! Ascii fill character (space)
;  1353     4389  2
;  1354     4390  2 LOCAL
;  1355     4391  2         COM_SIZE,                                               ! Number of bytes written into command line
;  1356     4392  2         QUALIFIER_BIT;                                          ! Number of qualifier bit
;  1357     4393  2
;  1358     4394  2 BIND
```

```
;  1359     4395  2        CQ_TABLE = UPLIT BYTE (
;  1360     4396  2                                %ASCIC '/I',
;  1361     4397  2                                %ASCIC '/DEC',
;  1362     4398  2                                %ASCIC '/W',
;  1363     4399  2                                %ASCIC '/B',
;  1364     4400  2                                %ASCIC '/PAT',
;  1365     4401  2                                %ASCIC '/NOI',
;  1366     4402  2                                %ASCIC '/LO',
;  1367     4403  2                                %ASCIC '/H',
;  1368     4404  2                                %ASCIC '/AS',
;  1369     4405  2                                %ASCIC '/NOAS',
;  1370     4406  2                                %ASCIC '/OC',
;  1371     4407  2                                %ASCIC '/LI',
;  1372     4408  2                                %ASCIC '/INIT='
;  1373     4409  2                                                        ) : VECTOR[,BYTE],
;  1374     4410  2        CQ_OFFSET_TBL = UPLIT BYTE (
;  1375     4411  2                                0,
;  1376     4412  2                                0+3,
;  1377     4413  2                                0+3+5,
;  1378     4414  2                                0+3+5+3,
;  1379     4415  2                                0+3+5+3+3,
;  1380     4416  2                                0+3+5+3+3+5,
;  1381     4417  2                                0+3+5+3+3+5+5,
;  1382     4418  2                                0+3+5+3+3+5+5+4,
;  1383     4419  2                                0+3+5+3+3+5+5+4+3,
;  1384     4420  2                                0+3+5+3+3+5+5+4+3+4,
;  1385     4421  2                                0+3+5+3+3+5+5+4+3+4+6,
;  1386     4422  2                                0+3+5+3+3+5+5+4+3+4+6+4,
;  1387     4423  2                                0+3+5+3+3+5+5+4+3+4+6+4+4
;  1388     4424  2                                                        ) : VECTOR[,BYTE];
;  1389     4425  2
;  1390     4426  2
;  1391     4427  2 !++
;  1392     4428  2 ! Loop, testing each qualifier bit.  If it is set then write the qualifier
;  1393     4429  2 ! into the command buffer and update the size of the command line.
;  1394     4430  2 !--
;  1395     4431  2 COM_SIZE = .COMMAND_SIZE;
;  1396     4432  2 INCR QUALIFIER_BIT FROM MIN_QUAL TO MAX_QUAL BY 1
;  1397     4433  2 DO
;  1398     4434  2         IF .PAT$GL_COMQUAL [.QUALIFIER_BIT]
;  1399     4435  2         THEN
;  1400     4436  3                 BEGIN
;  1401     4437  3                 CH$COPY(.CQ_TABLE [ .CQ_OFFSET_TBL[.QUALIFIER_BIT] ],
;  1402     4438  3                         CH$PTR(CQ_TABLE[1], .CQ_OFFSET_TBL[.QUALIFIER_BIT]),
;  1403     4439  3                         BLANK_FILL,
;  1404     4440  3                         .CQ_TABLE [ .CQ_OFFSET_TBL[.QUALIFIER_BIT] ],
;  1405     4441  3                         CH$PTR(COMMAND_BUF[0], .COM_SIZE));
;  1406     4442  3                 COM_SIZE = .COM_SIZE + .CQ_TABLE [ .CQ_OFFSET_TBL[.QUALIFIER_BIT] ];
;  1407     4443  2                 END;
;  1408     4444  2
;  1409     4445  2 !++
;  1410     4446  2 ! Check if this is an EXAMINE command.  If so, put a continuation character
;  1411     4447  2 ! on the end of the line.  This is due to the special syntax for the EXAMINE
;  1412     4448  2 ! command enabling one to examine sequential locations without specifying
;  1413     4449  2 ! the address.
;  1414     4450  2 !--
;  1415     4451  3 IF (.PAT$GL_SEMAN1[.SEMSP] EQL EXAMINE_TOKEN)
```

```
;  1416          4452  2 THEN
;  1417          4453  3         BEGIN
;  1418          4454  3 ! ****** THIS CH$PTR IS HERE TO GET AROUND A COMPILER BUG.
;  1419          4455  3 ! ****** IT SHOULD EVENTUALLY BE REMOVED AND BECOME:
;  1420          4456  3 !       COMMAND_BUF[.COM_SIZE] = BLANK_FILL;
;  1421          4457  3 !       COMMAND_BUF[.COM_SIZE + 1] = HYPHEN;
;  1422          4458  3         CH$PTR(COMMAND_BUF[.COM_SIZE], 0) = BLANK_FILL;
;  1423          4459  3         CH$PTR(COMMAND_BUF[.COM_SIZE], 1) = HYPHEN;
;  1424          4460  3         COM_SIZE = .COM_SIZE + 2;
;  1425          4461  2         END;
;  1426          4462  2
;  1427          4463  2 !++
;  1428          4464  2 ! Now write out the command verb and qualifiers to the command file.
;  1429          4465  2 !--
;  1430          4466  2 PAT$WRITEFILE(.COM_SIZE, COMMAND_BUF[0], PAT$GL_COMRAB);
;  1431          4467  2 RETURN;
;  1432          4468  1 END;


                                                        .PSECT  _PAT$PLIT,NOWRT,NOEXE,0

                                        49  2F  02  00133 P.ABL:   .ASCII  <2>\/I\                                 ;
                                    43  45  44  2F  04  00136           .ASCII  <4>\/DEC\                               ;
                                            57  2F  02  0013B           .ASCII  <2>\/W\                                 ;
                                            42  2F  02  0013E           .ASCII  <2>\/B\                                 ;
                                    54  41  50  2F  04  00141           .ASCII  <4>\/PAT\                               ;
                                    49  4F  4E  2F  04  00146           .ASCII  <4>\/NOI\                               ;
                                        4F  4C  2F  03  0014B           .ASCII  <3>\/LO\                                ;
                                            48  2F  02  0014F           .ASCII  <2>\/H\                                 ;
                                        53  41  2F  03  00152           .ASCII  <3>\/AS\                                ;
                                    53  41  4F  4E  2F  05  00156       .ASCII  <5>\/NOAS\                              ;
                                        43  4F  2F  03  0015C           .ASCII  <3>\/OC\                                ;
                                        49  4C  2F  03  00160           .ASCII  <3>\/LI\                                ;
                                3D  54  49  4E  49  2F  06  00164       .ASCII  <6>\/INIT=\                             ;
31  2D  29  23  1F  1C  18  13  0E  0B  08  03  00      0016B P.ABM:   .BYTE   0, 3, 8, 11, 14, 19, 24, 28, 31, 35, 41, -  ;
                                                                            45, 49                                      ;

                                                CQ_TABLE=           P.ABL
                                                CQ_OFFSET_TBL=      P.ABM

                                                        .PSECT  _PAT$CODE,NOWRT,2

                                            03FC 00000          .ENTRY  PAT$GET_COMQUAL, Save R2,R3,R4 R5,R6,R7,R8,-; 4338
                                                                        R9                                              ;
                                59 00000000'    EF  9E  00002           MOVAB   CQ_OFFSET_TBL, R9                       ;
                                58      08      AC  D0  00009           MOVL    COMMAND_SIZE, COM_SIZE                  ; 4431
                                            56  D4  0000D               CLRL    QUALIFIER_BIT                           ; 4432
                    14 00000000G    00          56  E1  0000F 1$:       BBC     QUALIFIER_BIT, PAT$GL_COMQUAL, 2$       ; 4434
                                50          6946    9A  00017           MOVZBL  CQ_OFFSET_TBL[QUALIFIER_BIT], R0        ; 4437
                                57      C8  A940    9A  0001B           MOVZBL  CQ_TABLE[R0], R7                        ;
                04 BC48         C9  A940        57  28  00020           MOVC3   R7, CQ_TABLE+1[R0], @COMMAND_BUF[COM_SIZE]  ; 4441
                                58              57  C0  00028           ADDL2   R7, COM_SIZE                            ; 4442
                    E0          56              0C  F3  0002B 2$:       AOBLEQ  #12, QUALIFIER_BIT, 1$                  ; 4434
                                50      0C      AC  D0  0002F           MOVL    SEMSP, R0                               ; 4451
                                09 00000000G0040    D1  00033           CMPL    PAT$GL_SEMAN1[R0], #9                   ;
```

```
                                   0F  12 0003B         BNEQ    3$                                      ;
     50          58          04    AC  C1 0003D         ADDL3   COMMAND_BUF, COM_SIZE, R0               ; 4458
                 60                20  D0 00042         MOVL    #32, (R0)                               ;
             01  A0                2D  D0 00045         MOVL    #45, 1(R0)                              ; 4459
                 58                02  C0 00049         ADDL2   #2, COM_SIZE                            ; 4460
                          00000000G  00  9F 0004C 3$:   PUSHAB  PAT$GL_COMRAB                           ; 4466
                             04    AC  DD 00052         PUSHL   COMMAND_BUF                             ;
                                   58  DD 00055         PUSHL   COM_SIZE                                ;
      00000000G  00                03  FB 00057         CALLS   #3, PAT$WRITEFILE                       ;
                                       04 0005E         RET                                             ; 4468

; Routine Size:  95 bytes,    Routine Base:  _PAT$CODE + 083D
```

```
; 1434          4469  1 END
; 1435          4470  0 ELUDOM


                                                        .EXTRN  LIB$SIGNAL

;                               PSECT SUMMARY

;       Name                    Bytes                           Attributes

;   _PAT$PLIT                     376  NOVEC,NOWRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(0)
;   _PAT$CODE                    2204  NOVEC,NOWRT,  RD ,  EXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;   .  ABS  .                       0  NOVEC,NOWRT,NORD ,NOEXE,NOSHR,  LCL,  ABS,  CON,NOPIC,ALIGN(0)


;                           Library Statistics

;                                    -------- Symbols --------      Pages       Processing
;       File                         Total    Loaded   Percent      Mapped      Time

;   _$255$DUA28:[SYSLIB]LIB.L32;1     18619        13         0      1000          00:01.8


; Information:  1
; Warnings:     0
; Errors:       0


;                                   COMMAND QUALIFIERS

;       BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/VARIANT:1/LIS=LIS$:PATACT/OBJ=OBJ$:PATACT MSRC$:PATACT/UPDATE=(ENH$:PATACT)

; Size:         2204 code + 376 data bytes
; Ru  Time:       01:03.4
; Elapsed Time:   03:18.5
; Lines/CPU Min:   4230
; Lexemes/CPU-Min: 33840
; Memory Used:  466 pages
; Compilation Complete
```



PATARI
LIS

PATCMD
LIS

PATECO
LIS

PATCON
LIS

PATENC
LIS

PATBAS
LIS

PATBLD
LIS