```
LLL              IIIIIIIII    BBBBBBBBBBBB    RRRRRRRRRRRR    TTTTTTTTTTTTTTTT  LLL
LLL              IIIIIIIII    BBBBBBBBBBBB    RRRRRRRRRRRR    TTTTTTTTTTTTTTTT  LLL
LLL              IIIIIIIII    BBBBBBBBBBBB    RRRRRRRRRRRR    TTTTTTTTTTTTTTTT  LLL
LLL                 III       BBB        BBB  RRR        RRR        TTT         LLL
LLL                 III       BBB        BBB  RRR        RRR        TTT         LLL
LLL                 III       BBB        BBB  RRR        RRR        TTT         LLL
LLL                 III       BBB        BBB  RRR        RRR        TTT         LLL
LLL                 III       BBB        BBB  RRR        RRR        TTT         LLL
LLL                 III       BBBBBBBBBBBB    RRRRRRRRRRRR          TTT         LLL
LLL                 III       BBBBBBBBBBBB    RRRRRRRRRRRR          TTT         LLL
LLL                 III       BBB        BBB  RRR    RRR            TTT         LLL
LLL                 III       BBB        BBB  RRR     RRR           TTT         LLL
LLL                 III       BBB        BBB  RRR      RRR          TTT         LLL
LLL                 III       BBB        BBB  RRR        RRR        TTT         LLL
LLL                 III       BBB        BBB  RRR        RRR        TTT         LLL
LLLLLLLLLLLLLLLL    III       BBBBBBBBBBBB    RRR        RRR        TTT         LLLLLLLLLLLLLLLL
LLLLLLLLLLLLLLLL    IIIIIIIII  BBBBBBBBBBBB    RRR        RRR        TTT         LLLLLLLLLLLLLLLL
LLLLLLLLLLLLLLLL    IIIIIIIII  BBBBBBBBBBBB    RRR        RRR        TTT         LLLLLLLLLLLLLLLL
```

```
LL        IIIIII  BBBBBBBB  EEEEEEEEEE  BBBBBBBB   CCCCCCCC   AAAAAA    SSSSSSSS   CCCCCCCC
LL        IIIIII  BBBBBBBB  EEEEEEEEEE  BBBBBBBB   CCCCCCCC   AAAAAA    SSSSSSSS   CCCCCCCC
LL          II    BB    BB  EE          BB    BB  CC        AA    AA   SS         CC
LL          II    BB    BB  EE          BB    BB  CC        AA    AA   SS         CC
LL          II    BB    BB  EE          BB    BB  CC        AA    AA   SS         CC
LL          II    BB    BB  EE          BB    BB  CC        AA    AA   SS         CC
LL          II    BBBBBBBB  EEEEEEE     BBBBBBBB  CC        AA    AA     SSSSSS    CC
LL          II    BBBBBBBB  EEEEEEE     BBBBBBBB  CC        AA    AA     SSSSSS    CC
LL          II    BB    BB  EE          BB    BB  CC        AAAAAAAAAA         SS  CC
LL          II    BB    BB  EE          BB    BB  CC        AAAAAAAAAA         SS  CC
LL          II    BB    BB  EE          BB    BB  CC        AA    AA           SS  CC
LL          II    BB    BB  EE          BB    BB  CC        AA    AA           SS  CC
LLLLLLLLLL  IIIIII  BBBBBBBB  EEEEEEEEEE  BBBBBBBB   CCCCCCCC  AA    AA  SSSSSSSS   CCCCCCCC
LLLLLLLLLL  IIIIII  BBBBBBBB  EEEEEEEEEE  BBBBBBBB   CCCCCCCC  AA    AA  SSSSSSSS   CCCCCCCC

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

LIB$AB_EBC_ASC
1-006

EBCDIC to ASCII Translation Table   B 2   15-SEP-1984 23:58:46   VAX/VMS Macro V04-00   Page 1
                                             6-SEP-1984 11:05:58   [LIBRTL.SRC]LIBEBCASC.MAR;1   (1)

```
0000      1                    .TITLE  LIB$AB_EBC_ASC  EBCDIC to ASCII Translation Table
0000      2                    .IDENT  /1-0067         ; File: LIBEBCASC.MAR  EDIT:LB1006
0000      3
0000      4        ;
0000      5        ;***************************************************************************
0000      6        ;*                                                                         *
0000      7        ;*   COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                               *
0000      8        ;*   DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                *
0000      9        ;*   ALL RIGHTS RESERVED.                                                  *
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0000     14        ;*   COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY  *
0000     15        ;*   OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY  *
0000     16        ;*   TRANSFERRED.                                                           *
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0000     19        ;*   AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT  *
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0000     21        ;*                                                                         *
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0000     23        ;*   SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                *
0000     24        ;*                                                                         *
0000     25        ;*                                                                         *
0000     26        ;***************************************************************************
0000     27        ;
0000     28        ;
0000     29        ; FACILITY: GENERAL-PURPOSE UTILITY
0000     30        ;++
0000     31        ; ABSTRACT:
0000     32        ;        This module contains the EBCDIC to ASCII translation table.
0000     33        ;
0000     34        ;
0000     35        ;--
0000     36        ;
0000     37        ; VERSION: 1
0000     38        ;
0000     39        ; HISTORY:
0000     40        ;
0000     41        ; AUTHOR:
0000     42        ;        Marty Jack, 11-Mar-1979
0000     43        ;
0000     44        ; MODIFIED BY:
0000     45        ;
0000     46        ;
0000     47        ;
```

```
0000   49            .SBTTL  HISTORY          ; Detailed Current Edit History
0000   50
0000   51
0000   52  ; Edit History for Version 1 of LIBEBCASC (alias COBEBCASC)
0000   53  ;
0000   54  ; 1-001 - Original.  MLJ 11-Mar-1979
0000   55  ; 1-002 - Changed name to LIB$AB_EBC_ASC to reflect general-
0000   56  ;            purpose nature of translation table.
0000   57  ;            This also involved putting it in PSECT _LIB$CODE.
0000   58  ;            RKR 17-JULY-1979
0000   59  ; 1-003 - Added additonal comments.  RKR 07-AUG-1979
0000   60  ; 1-004 - Cosmetic changes.  RKR 21-OCT-79
0000   61  ; 1-005 - Add comments. RKR 04-DEC-79
0000   62  ; 1-006 - Changed position 256 in the translation table to map
0000   63  ;            to octal 377 (instead of the substitution character)
0000   64  ;            to ensure that the COBOL language construct of
0000   65  ;            HIGH VALUES works correctly.  LB  11-MAY-81.
```

```
          0000      67              .SBTTL  DECLARATIONS
          0000      68
          0000      69  ;
          0000      70  ; INCLUDE FILES:
          0000      71  ;
          0000      72
          0000      73  ;
          0000      74  ; EXTERNAL SYMBOLS:
          0000      75  ;     NONE
          0000      76  ;
          0000      77
          0000      78  ;
          0000      79  ; MACROS:
          0000      80  ;     NONE
          0000      81  ;
          0000      82
          0000      83  ;
          0000      84  ; PSECT DECLARATIONS:
      00000000      85       .PSECT _LIB$CODE  PIC, USR, CON, REL, LCL, SHR, EXE, RD, NOWRT
          0000      86
          0000      87  ;
          0000      88  ; EQUATED SYMBOLS:
          0000      89  ;     NONE
          0000      90  ;
          0000      91
          0000      92
          0000      93  ; OWN STORAGE:
          0000      94  ;     NONE
          0000      95  ;
```

LIB$AB_EBC_ASC
1-006

EBCDIC to ASCII Translation Table   E   2   15-SEP-1984 23:58:46 VAX/VMS Macro V04-00   Page 4
LIB$AB_EBC_ASC   6-SEP-1984 11:05:58 [LIBRTL.SRC]LIBEBCASC.MAR;1   (4)

LI
Ta

```
                0000    97              .SBTTL  LIB$AB_EBC_ASC
                0000    98
                0000    99  ;++
                0000   100  ; FUNCTIONAL DESCRIPTION:
                0000   101  ;
                0000   102  ;       This is the EBCDIC to ASCII translation table based on
                0000   103  ; ANSI X3.26 - 1970
                0000   104  ;
                0000   105  ;       ALL EBCDIC graphics are translated to the identical ASCII
                0000   106  ; graphic except for:
                0000   107  ;
                0000   108  ;       EBCDIC graphic                  ASCII graphic
                0000   109  ;       --------------                  -------------
                0000   110  ;       cents sign                      [ (left square bracket)
                0000   111  ;       short vertical bar              ! (exclamation point)
                0000   112  ;       logical not                     ^ (circumflex)
                0000   113  ;       ! (exclamation point)           ] (right square bracket)
                0000   114  ;
                0000   115  ;
                0000   116  ;       Untranslatable codes map into ^0134 (The ASCII character "\").
                0000   117  ; Mapping them into ^0032 (The ASCII Substitute char.) would be
                0000   118  ; more desireable, but could cause trouble with compatibility with
                0000   119  ; STREAM-ASCII files under RMS-11 which recognizes ^0032 as
                0000   120  ; a CONTROL-Z signifying an End-of-file.
                0000   121  ;
                0000   122  ;--
                0000   123
```

```
                              0000   125 LIB$AB_EBC_ASC::
7F 5C 09 5C 03 02 01 00       0000   126         .BYTE  ^0000,^0001,^0002,^0003,^0134,^0011,^0134,^0177  ;000-007
0F 0E 0D 0C 0B 5C 5C 5C       0008   127         .BYTE  ^0134,^0134,^0134,^0013,^0014,^0015,^0016,^0017  ;010-017
5C 08 5C 5C 13 12 11 10       0010   128         .BYTE  ^0020,^0021,^0022,^0023,^0134,^0134,^0010,^0134  ;020-027
1F 1E 1D 1C 5C 5C 19 18       0018   129         .BYTE  ^0030,^0031,^0134,^0134,^0034,^0035,^0036,^0037  ;030-037
1B 17 0A 5C 5C 5C 5C 5C       0020   130         .BYTE  ^0134,^0134,^0134,^0134,^0134,^0012,^0027,^0033  ;040-047
07 06 05 5C 5C 5C 5C 5C       0028   131         .BYTE  ^0134,^0134,^0134,^0134,^0134,^0005,^0006,^0007  ;050-057
04 5C 5C 5C 5C 16 5C 5C       0030   132         .BYTE  ^0134,^0134,^0026,^0134,^0134,^0134,^0134,^0004  ;060-067
1A 5C 15 14 5C 5C 5C 5C       0038   133         .BYTE  ^0134,^0134,^0134,^0134,^0024,^0025,^0134,^0032  ;070-077
5C 5C 5C 5C 5C 5C 5C 20       0040   134         .BYTE  ^0040,^0134,^0134,^0134,^0134,^0134,^0134,^0134  ;100-107
21 2B 28 3C 2E 5B 5C 5C       0048   135         .BYTE  ^0134,^0134,^0133,^0056,^0074,^0050,^0053,^0041  ;110-117
5C 5C 5C 5C 5C 5C 5C 26       0050   136         .BYTE  ^0046,^0134,^0134,^0134,^0134,^0134,^0134,^0134  ;120-127
5E 3B 29 2A 24 5D 5C 5C       0058   137         .BYTE  ^0134,^0134,^0135,^0044,^0052,^0051,^0073,^0136  ;130-137
5C 5C 5C 5C 5C 5C 2F 2D       0060   138         .BYTE  ^0055,^0057,^0134,^0134,^0134,^0134,^0134,^0134  ;140-147
3F 3E 5F 25 2C 7C 5C 5C       0068   139         .BYTE  ^0134,^0134,^0174,^0054,^0045,^0137,^0076,^0077  ;150-157
5C 5C 5C 5C 5C 5C 5C 5C       0070   140         .BYTE  ^0134,^0134,^0134,^0134,^0134,^0134,^0134,^0134  ;160-167
22 3D 27 40 23 3A 60 5C       0078   141         .BYTE  ^0134,^0140,^0072,^0043,^0100,^0047,^0075,^0042  ;170-177
                              0080   142
67 66 65 64 63 62 61 5C       0080   143         .BYTE  ^0134,^0141,^0142,^0143,^0144,^0145,^0146,^0147  ;200-207
5C 5C 5C 5C 5C 5C 69 68       0088   144         .BYTE  ^0150,^0151,^0134,^0134,^0134,^0134,^0134,^0134  ;210-217
70 6F 6E 6D 6C 6B 6A 5C       0090   145         .BYTE  ^0134,^0152,^0153,^0154,^0155,^0156,^0157,^0160  ;220-227
5C 5C 5C 5C 5C 5C 72 71       0098   146         .BYTE  ^0161,^0162,^0134,^0134,^0134,^0134,^0134,^0134  ;230-237
78 77 76 75 74 73 7E 5C       00A0   147         .BYTE  ^0134,^0176,^0163,^0164,^0165,^0166,^0167,^0170  ;240-247
5C 5C 5C 5C 5C 5C 7A 79       00A8   148         .BYTE  ^0171,^0172,^0134,^0134,^0134,^0134,^0134,^0134  ;250-257
5C 5C 5C 5C 5C 5C 5C 5C       00B0   149         .BYTE  ^0134,^0134,^0134,^0134,^0134,^0134,^0134,^0134  ;260-267
5C 5C 5C 5C 5C 5C 5C 5C       00B8   150         .BYTE  ^0134,^0134,^0134,^0134,^0134,^0134,^0134,^0134  ;270-277
47 46 45 44 43 42 41 7B       00C0   151         .BYTE  ^0173,^0101,^0102,^0103,^0104,^0105,^0106,^0107  ;300-307
5C 5C 5C 5C 5C 5C 49 48       00C8   152         .BYTE  ^0110,^0111,^0134,^0134,^0134,^0134,^0134,^0134  ;310-317
50 4F 4E 4D 4C 4B 4A 7D       00D0   153         .BYTE  ^0175,^0112,^0113,^0114,^0115,^0116,^0117,^0120  ;320-327
5C 5C 5C 5C 5C 5C 52 51       00D8   154         .BYTE  ^0121,^0122,^0134,^0134,^0134,^0134,^0134,^0134  ;330-337
58 57 56 55 54 53 5C 5C       00E0   155         .BYTE  ^0134,^0134,^0123,^0124,^0125,^0126,^0127,^0130  ;340-347
5C 5C 5C 5C 5C 5C 5A 59       00E8   156         .BYTE  ^0131,^0132,^0134,^0134,^0134,^0134,^0134,^0134  ;350-357
37 36 35 34 33 32 31 30       00F0   157         .BYTE  ^0060,^0061,^0062,^0063,^0064,^0065,^0066,^0067  ;360-367
FF 5C 5C 5C 5C 5C 39 38       00F8   158         .BYTE  ^0070,^0071,^0134,^0134,^0134,^0134,^0134,^0377  ;370-377
                              0100   159 ;
                              0100   160         .END
```

LIB$AB_EBC_ASC   00000000 RG   01

```
                                  +------------------+
                                  ! Psect synopsis !
                                  +------------------+
```

PSECT name	Allocation		PSECT No.		Attributes
----------	----------		---------		----------
. ABS .	00000000 (	0.)	00 (	0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
_LIB$CODE	00000100 (	256.)	01 (	1.)	PIC USR CON REL LCL SHR EXE RD NOWRT NOVEC BYTE

```
                              +--------------------------+
                              ! Performance indicators !
                              +--------------------------+
```

Phase	Page faults	CPU Time	Elapsed Time
-----	-----------	--------	------------
Initialization	29	00:00:00.05	00:00:02.42
Command processing	106	00:00:00.31	00:00:02.09
Pass 1	63	00:00:00.47	00:00:04.59
Symbol table sort	0	00:00:00.00	00:00:00.00
Pass 2	45	00:00:00.22	00:00:02.83
Symbol table output	2	00:00:00.01	00:00:00.01
Psect synopsis output	2	00:00:00.01	00:00:00.01
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	249	00:00:01.09	00:00:11.96

The working set limit was 750 pages.
2847 bytes (6 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 1 non-local and 0 local symbols.
160 source lines were read in Pass 1, producing 8 object records in Pass 2.
0 pages of virtual memory were used to define 0 macros.

```
                              +---------------------------+
                              ! Macro library statistics !
                              +---------------------------+
```

Macro library name	Macros defined
------------------	--------------
_255DUA28:[SYSLIB]STARLET.MLB;2	0

0 GETS were required to define 0 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS$:LIBEBCASC/OBJ=OBJ$:LIBEBCASC MSRC$:LIBEBCASC/UPDATE=(ENH$:LIBEBCASC)

LIBEMODH
LIS

LIBEMODD
LIS

LIBESTEMU
LIS

LIBEF
LIS

LIBEMULAT
LIS

LIBFFS
LIS

LIBFINCVT
LIS

LIBE2AREV
LIS

LIBFAO
LIS

LIBEMODG
LIS

LIBEXTV
LIS

LIBEDIV
LIS

LIBESTABL
LIS

LIBFFC
LIS

LIBEMODF
LIS

LIBEMUL
LIS

LIBFILSCA
LIS

LIBEXTZV
LIS

LIBEBCASC
LIS

LIBFAOL
LIS