


```

BBBBBBBBB      AAAAAA      SSSSSSSS  MM      MM      000000  VV      VV      EEEEEEEEEEE
BBBBBBBBB      AAAAAA      SSSSSSSS  MM      MM      000000  VV      VV      EEEEEEEEEEE
BB      BB      AA      AA      SS      MMMM  MMMM  00      00  VV      VV      EE
BB      BB      AA      AA      SS      MMMM  MMMM  00      00  VV      VV      EE
BB      BB      AA      AA      SS      MM  MM  MM  00      00  VV      VV      EE
BB      BB      AA      AA      SS      MM  MM  MM  00      00  VV      VV      EE
BBBBBBBBB      AA      AA      SSSSSS  MM      MM  00      00  VV      VV      EEEEEEEEE
BBBBBBBBB      AA      AA      SSSSSS  MM      MM  00      00  VV      VV      EEEEEEEEE
BB      BB      AAAAAAAAAA      SS      MM      MM  00      00  VV      VV      EE
BB      BB      AAAAAAAAAA      SS      MM      MM  00      00  VV      VV      EE
BB      BB      AA      AA      SS      MM      MM  00      00  VV      VV      EE
BB      BB      AA      AA      SS      MM      MM  00      00  VV      VV      EE
BBBBBBBBB      AA      AA      SSSSSSSS  MM      MM      000000  VV      VV      EEEEEEEEEEE
BBBBBBBBB      AA      AA      SSSSSSSS  MM      MM      000000  VV      VV      EEEEEEEEEEE

```

```

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
LLLLLLLLLLL  IIIIII      SSSSSSSS
LLLLLLLLLLL  IIIIII      SSSSSSSS

```

```

1 0001 0 MODULE BASSMOVE (
2 0002 0 IDENT = '1-006'
3 0003 0 ) =
4 0004 1 BEGIN
5 0005 1
6 0006 1 *****
7 0007 1 *
8 0008 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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25 0025 1 *
26 0026 1 *
27 0027 1 *****
28 0028 1
29 0029 1
30 0030 1 **
31 0031 1 FACILITY: BASIC-PLUS-2 Miscellaneous I/O
32 0032 1
33 0033 1 ABSTRACT:
34 0034 1
35 0035 1 This module contains the routines called by compiled code
36 0036 1 for the MOVE FROM and MOVE TO statements.
37 0037 1
38 0038 1 ENVIRONMENT: VAX-11 User Mode
39 0039 1
40 0040 1 AUTHOR: John Sauter, CREATION DATE: 21-MAY-1979
41 0041 1
42 0042 1 MODIFIED BY:
43 0043 1
44 0044 1 1-001 - Original.
45 0045 1 1-002 - Call BASS$CB GET, so this module does not have to be in the
46 0046 1 sharable library. JBS 22-AUG-1979
47 0047 1 1-003 - Reverse the order of arguments to BASSMOVE BEG. JBS 04-SEP-1979
48 0048 1 1-004 - Add MOVE TO and MOVE_FROM entry points, which we will split later.
49 0049 1 JBS 30-NOV-1979
50 0050 1 1-005 - Channel zero should translate to the appropriate BASIC LUN (BASSK_LUN_INPU).
51 0051 1 Call it an error if user calls with a negative channel, at the same
52 0052 1 time add 2 to lub$sk_ilun_min to force bas$scb push to signal an
53 0053 1 error if LUNs -7 or -8 are being pushed, the later is a temporary
54 0054 1 fix for #0 syntax in BASIC until the standard comm. decides on the
55 0055 1 issue.
56 0056 1 1-006 - Undo 5. We can now do I/O to #0, because BASSPUT will use foreign
57 0057 1 buffer mechanism to do PUTs to #0. FM 9-JUL-81.

```

! File: BASMOVE.B32 EDIT:FM1006

BAS\$MOVE
1-006

I 4
16-Sep-1984 00:46:53
14-Sep-1984 11:55:21

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASMOVE.B32;1

Page 2
(1)

: 58 0058 1 !--
: 59 0059 1
: 60 0060 1 !<BLF/PAGE>

```

62 0061 1 |
63 0062 1 | SWITCHES:
64 0063 1 |
65 0064 1 |
66 0065 1 | SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);
67 0066 1 |
68 0067 1 |
69 0068 1 | LINKAGES:
70 0069 1 |
71 0070 1 |
72 0071 1 | REQUIRE 'RTLIN:OTSLNK';           ! Define Linkages
73 0500 1 |
74 0501 1 |
75 0502 1 | TABLE OF CONTENTS:
76 0503 1 |
77 0504 1 |
78 0505 1 | FORWARD ROUTINE
79 0506 1 |     BASSMOVE_BEG : NOVALUE,       ! Start of MOVE statement
80 0507 1 |     BASSMOVE_END : NOVALUE;      ! End of MOVE statement
81 0508 1 |
82 0509 1 |
83 0510 1 | INCLUDE FILES:
84 0511 1 |
85 0512 1 |
86 0513 1 | REQUIRE 'RTLML:OTSLUB';         ! Get LUB definitions
87 0653 1 |
88 0654 1 | REQUIRE 'RTLML:OTSISB';         ! Get ISB definitions
89 0822 1 |
90 0823 1 | REQUIRE 'RTLIN:RTLPSECT';       ! Macros for defining psects
91 0918 1 |
92 0919 1 | LIBRARY 'RTLSTARLE';           ! System symbols
93 0920 1 |
94 0921 1 |
95 0922 1 | MACROS:
96 0923 1 |
97 0924 1 |     NONE
98 0925 1 |
99 0926 1 | EQUATED SYMBOLS:
100 0927 1 |
101 0928 1 |
102 0929 1 | GLOBAL BIND
103 0930 1 |     ROUTINE
104 0931 1 |     BASSMOVE_TO = BASSMOVE_BEG;
105 0932 1 |
106 0933 1 | GLOBAL BIND
107 0934 1 |     ROUTINE
108 0935 1 |     BASSMOVE_FROM = BASSMOVE_BEG;
109 0936 1 |
110 0937 1 |
111 0938 1 | PSECTS:
112 0939 1 |
113 0940 1 | DECLARE_PSECTS (BAS);          ! Declare psects for BASS facility
114 0941 1 |
115 0942 1 | OWN STORAGE:
116 0943 1 |
117 0944 1 |     NONE
118 0945 1 |

```

```

: 119      0946 1  ! EXTERNAL REFERENCES:
: 120      0947 1  !
: 121      0948 1  !
: 122      0949 1  EXTERNAL ROUTINE
: 123      0950 1      BAS$$CB_PUSH : JSB_CB_PUSH NOVALUE,      ! Load register CCB
: 124      0951 1      BAS$$CB_POP  : JSB_CB_POP NOVALUE,      ! Done with register CCB
: 125      0952 1      BAS$$CB_GET  : JSB_CB_GET NOVALUE,      ! Load current CCB
: 126      0953 1      BAS$$STOP  : NOVALUE,                  ! Signal fatal error
: 127      0954 1      BAS$$STOP_IO : NOVALUE,                  ! Signal fatal I/O error
: 128      0955 1      BAS$$OPEN_ZERO : NOVALUE;                ! OPEN channel 0
: 129      0956 1
: 130      0957 1  !+
: 131      0958 1  ! The following are the error codes used in this module.
: 132      0959 1  !-
: 133      0960 1
: 134      0961 1  EXTERNAL LITERAL
: 135      0962 1      BAS$$K_PROLOSSOR : UNSIGNED (8),          ! Program lost, sorry
: 136      0963 1      BAS$$K_IO_CHANOT : UNSIGNED (8),          ! I/O channel not open
: 137      0964 1      BAS$$K_ILC_IO_CHA : UNSIGNED (8);          ! Illegal I/O channel
```

```

139 0965 1 GLOBAL ROUTINE BASSMOVE_BEG (           ! Start of MOVE statement
140 0966 1     DESC,                               ! Descriptor of buffer
141 0967 1     UNIT                               ! Channel to start MOVE on
142 0968 1     ) : NOVALUE =
143 0969 1
144 0970 1  +-+
145 0971 1  FUNCTIONAL DESCRIPTION:
146 0972 1
147 0973 1     Start a MOVE statement on the specified channel. We do this
148 0974 1     by returning a descriptor of the buffer, which the compiled
149 0975 1     code will use when accessing the I/O buffer.
150 0976 1
151 0977 1  FORMAL PARAMETERS:
152 0978 1
153 0979 1     DESC.wq.r      Descriptor of the I/O buffer
154 0980 1     UNIT.rl.v     The channel whose buffer descriptor to return.
155 0981 1
156 0982 1  IMPLICIT INPUTS:
157 0983 1
158 0984 1     The LUB$W_RBUF_SIZE field of the LUB of the specified channel.
159 0985 1     Also, LUB$_RBUF_ADR.
160 0986 1
161 0987 1  IMPLICIT OUTPUTS:
162 0988 1
163 0989 1     NONE
164 0990 1
165 0991 1  ROUTINE VALUE:
166 0992 1  COMPLETION CODES:
167 0993 1
168 0994 1     NONE
169 0995 1
170 0996 1  SIDE EFFECTS:
171 0997 1
172 0998 1     Signals if an error is encountered.
173 0999 1     BASS$CB_PUSH will signal if the channel number is invalid.
174 1000 1     Leaves the channel active.
175 1001 1
176 1002 1  --
177 1003 1
178 1004 2  BEGIN
179 1005 2
180 1006 2  BUILTIN FP;
181 1007 2
182 1008 2  GLOBAL REGISTER
183 1009 2     CCB = K_CCB_REG : REF BLOCK [, BYTE];
184 1010 2
185 1011 2  MAP
186 1012 2     DESC : REF BLOCK [8, BYTE];
187 1013 2
188 1014 2  LOCAL
189 1015 2     FMP : REF BLOCK [, BYTE],
190 1016 2     ACTUAL_UNIT;
191 1017 2
192 1018 2  +-+
193 1019 2  Store away FP
194 1020 2  -
195 1021 2     FMP = .FP;

```

```

196 1022 2 !+
197 1023 2 !-
198 1024 2 ! If the unit is zero, use the appropriate unit for input side of channel 0.
199 1025 2 ! Load register CCB with a pointer to the LUB/ISB/RAB for the channel.
200 1026 2 !-
201 1027 2 !-
202 1028 2 ! IF (.UNIT LSS 0) THEN BASS$STOP(BASS$ ILLIO CHA);
203 1029 2 ! ACTUAL_UNIT = (IF .UNIT EQL 0 THEN LUB$K_LUN_INPU ELSE .UNIT);
204 1030 2 !-
205 1031 2 ! BASS$CB_PUSH (.ACTUAL_UNIT, LUB$K_ILUN_MIN);
206 1032 2 ! CCB [ISB$A_USER_FP] = .FMP [SF$L_SAVE_FP];
207 1033 2 !+
208 1034 2 !-
209 1035 2 ! If the channel number is zero, make sure it is open.
210 1036 2 !-
211 1037 2 ! IF ( NOT .CCB[LUB$V_OPENED] )
212 1038 2 ! THEN
213 1039 2 !     IF (.ACTUAL_UNIT EQL LUB$K_LUN_INPU)
214 1040 2 !     THEN
215 1041 2 !         BEGIN
216 1042 2 !             BASS$OPEN_ZERO(.FMP[SF$L_SAVE_FP])
217 1043 2 !         END
218 1044 2 !     ELSE
219 1045 2 !         BEGIN
220 1046 2 !             BASS$STOP_IO(BASS$K_IO_CHANOT);
221 1047 2 !         END;
222 1048 2 !+
223 1049 2 !-
224 1050 2 ! Mark this as a MOVE statement.
225 1051 2 !-
226 1052 2 ! CCB [ISB$B_STTM_TYPE] = ISB$K_ST_TY_MOV;
227 1053 2 !+
228 1054 2 !-
229 1055 2 ! Return the caller a descriptor of the buffer.
230 1056 2 !-
231 1057 2 ! DESC [DSC$W_LENGTH] = .CCB [LUB$W_RBUF_SIZE];
232 1058 2 ! DESC [DSC$B_DTYPE] = DSC$K_DTYPE_Z;
233 1059 2 ! DESC [DSC$B_CLASS] = DSC$K_CLASS_S;
234 1060 2 !-
235 1061 2 !+
236 1062 2 !-
237 1063 2 ! All done.
238 1064 2 ! RETURN
                ! END;

```

! end of BASSMOVE_BEG

```

.TITLE BASSMOVE
.IDENT \1-006\

.EXTRN BASS$CB_PUSH, BASS$CB_POP
.EXTRN BASS$CB_GET, BASS$STOP
.EXTRN BASS$STOP_IO, BASS$OPEN_ZERO
.EXTRN BASS$K_PROCOSSOR
.EXTRN BASS$K_IO_CHANOT
.EXTRN BASS$K_ILCIO_CHA

.PSECT _BASS$CODE, NOWRT, SHR, PIC, 2

```



```

241 1066 1 GLOBAL ROUTINE BAS$MOVE_END          ' End of MOVE statement
242 1067 1 : NOVALUE =
243 1068 1
244 1069 1 ++
245 1070 1 FUNCTIONAL DESCRIPTION:
246 1071 1
247 1072 1     End a MOVE statement. This is needed so we know when all uses
248 1073 1     of the I/O buffer are done, so we can release the buffer after
249 1074 1     a CLOSE.
250 1075 1
251 1076 1 FORMAL PARAMETERS:
252 1077 1
253 1078 1     NONE
254 1079 1
255 1080 1 IMPLICIT INPUTS:
256 1081 1
257 1082 1     OTS$$A_CUR_LUB, the current logical unit. This had better be
258 1083 1     doing a MOVE statement.
259 1084 1
260 1085 1 IMPLICIT OUTPUTS:
261 1086 1
262 1087 1     NONE
263 1088 1
264 1089 1 ROUTINE VALUE:
265 1090 1 COMPLETION CODES:
266 1091 1
267 1092 1     NONE
268 1093 1
269 1094 1 SIDE EFFECTS:
270 1095 1
271 1096 1     Signals if there is no current I/O, or if the current I/O
272 1097 1     is not a MOVE statement.
273 1098 1
274 1099 1 --
275 1100 1
276 1101 2 BEGIN
277 1102 2
278 1103 2 GLOBAL REGISTER
279 1104 2     CCB = K_CCB_REG : REF BLOCK [, BYTE];
280 1105 2
281 1106 2 BAS$$CB_GET ();
282 1107 2
283 1108 2 IF (.CCB EQL 0) THEN BAS$$STOP (BAS$K_PROLOSSOR);
284 1109 2
285 1110 2 ++
286 1111 2 The channel might not be open due to a CLOSE at AST level. Give
287 1112 2 an error in this case. If we ignored this condition, the following
288 1113 2 GET or PUT would give the error, so we might as well give it as
289 1114 2 soon as possible.
290 1115 2 --
291 1116 2
292 1117 2 IF ( NOT .CCB [LUB$V_OPENED]) THEN BAS$$STOP_IO (BAS$K_IO_CHANOT);
293 1118 2
294 1119 2 ++
295 1120 2 If the channel is not doing a MOVE statement we have a serious
296 1121 2 problem, probably a wild branch into the I/O list.
297 1122 2 --

```

```

: 298      1123 2      IF (.CCB [ISB$B_STTM_TYPE] NEQ ISB$K_ST_TY_MOV) THEN BAS$$STOP_IO (BAS$K_PROLOSSOR);
: 299      1124 2
: 300      1125 2
: 301      1126 2      +
: 302      1127 2      | If all those tests succeed, pop the I/O system.
: 303      1128 2      |
: 304      1129 2      | BAS$$CB_POP ();
: 305      1130 2      |
: 306      1131 2      | All done.
: 307      1132 2      |
: 308      1133 2      | RETURN
: 309      1134 1      | END;

```

! end of BAS\$MOVE_END

			0804 0000	.ENTRY	BAS\$MOVE_END, Save R2,R11	: 1066
52	00000000G	00	9E 00002	MOVAB	BAS\$\$STOP_IO, R2	
	00000000G	00	16 00009	JSB	BAS\$\$CB_GET	: 1106
		5B	D5 0000F	TSTL	CCB	: 1108
		0B	12 00011	BNEQ	1\$	
	7E	00G	8F 9A 00013	MOVZBL	#BAS\$K_PROLOSSOR, -(SP)	
	00		01 FB 00017	CALLS	#1, BAS\$\$STOP	
	07	FC	AB E8 0001E	BLBS	-4(CCB), 2\$: 1117
	7E	00G	8F 9A 00022	MOVZBL	#BAS\$K_IO_CHANOT, -(SP)	
	62		01 FB 00026	CALLS	#1, BAS\$\$STOP_IO	
	2E	FF71	CB 91 00029	CMPB	-143(CCB), #48	: 1124
			07 13 0002E	BEQL	3\$	
	7E	00G	8F 9A 00030	MOVZBL	#BAS\$K_PROLOSSOR, -(SP)	
	62		01 FB 00034	CALLS	#1, BAS\$\$STOP_IO	
		00000000G	00 16 00037	JSB	BAS\$\$CB_POP	: 1129
			04 0003D	RET		: 1134

: Routine Size: 62 bytes. Routine Base: _BAS\$CODE + 0069

```

: 310      1135 1
: 311      1136 1 END
: 312      1137 1
: 313      1138 0 ELUDOM

```

! end of module BAS\$MOVE

BAS\$MOVE_FROM== BAS\$MOVE_BEG
BAS\$MOVE_TO== BAS\$MOVE_BEG

PSECT SUMMARY

Name	Bytes	Attributes
_BAS\$CODE	167	NOVEC, NOWRT, RD, EXE, SHR, LCL, REL, CON, PIC, ALIGN(2)

BAS\$MOVE
1-006

D 5
16-Sep-1984 00:46:53
14-Sep-1984 11:55:21

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASMOVE.B32;1

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Library Statistics

File	----- Total	Symbols Loaded	----- Percent	Pages Mapped	Processing Time
:_\$255\$DUA28:[SYSLIB]STARLET.L32;1	9776	7	0	581	00:01.2

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LIS\$:BASMOVE/OBJ=OBJ\$:BASMOVE MSRC\$:BASMOVE/UPDATE=(ENH\$:BASMOVE)

: Size: 167 code + 0 data bytes
: Run Time: 00:10.3
: Elapsed Time: 00:26.9
: Lines/CPU Min: 6661
: Lexemes/CPU-Min: 38985
: Memory Used: 127 pages
: Compilation Complete

BASMTD
LIS

BASMLD01
LIS

BASNOTIMP
LIS

BASMOVEAR
LIS

BASMSGDEF
LIS

BASMSGGEN
LIS

BASONECHR
LIS

BASMOVE
LIS

BASNUM
LIS

BASNAMEAS
LIS

BASNUM
LIS