

BBBBBBBBBBBB		AAAAAAA		SSSSSSSSSS		RRRRRRRRRR		TTTTTTTTTT		LLL
BBBBBBBBBBBB		AAAAAAA		SSSSSSSSSS		RRRRRRRRRR		TTTTTTTTTT		LLL
BBBBBBBBBBBB		AAAAAAA		SSSSSSSSSS		RRRRRRRRRR		TTTTTTTTTT		LLL
BBB	BBB	AAA	AAA	SSS		RRR	RRR	TTT		LLL
BBB	BBB	AAA	AAA	SSS		RRR	RRR	TTT		LLL
BBB	BBB	AAA	AAA	SSS		RRR	RRR	TTT		LLL
BBB	BBB	AAA	AAA	SSS		RRR	RRR	TTT		LLL
BBB	BBB	AAA	AAA	SSS		RRR	RRR	TTT		LLL
BBB	BBB	AAA	AAA	SSS		RRR	RRR	TTT		LLL
BBBBBBBBBBBB		AAA	AAA	SSSSSSSS		RRRRRRRRRR		TTT		LLL
BBBBBBBBBBBB		AAA	AAA	SSSSSSSS		RRRRRRRRRR		TTT		LLL
BBBBBBBBBBBB		AAA	AAA	SSSSSSSS		RRRRRRRRRR		TTT		LLL
BBB	BBB	AAAAAAAAAAAA			SSS	RRR	RRR	TTT		LLL
BBB	BBB	AAAAAAAAAAAA			SSS	RRR	RRR	TTT		LLL
BBB	BBB	AAAAAAAAAAAA			SSS	RRR	RRR	TTT		LLL
BBB	BBB	AAA	AAA		SSS	RRR	RRR	TTT		LLL
BBB	BBB	AAA	AAA		SSS	RRR	RRR	TTT		LLL
BBB	BBB	AAA	AAA		SSS	RRR	RRR	TTT		LLL
BBB	BBB	AAA	AAA		SSS	RRR	RRR	TTT		LLL
BBBBBBBBBBBB		AAA	AAA	SSSSSSSS		RRR	RRR	TTT		LLLLLLLLLLLL
BBBBBBBBBBBB		AAA	AAA	SSSSSSSS		RRR	RRR	TTT		LLLLLLLLLLLL
BBBBBBBBBBBB		AAA	AAA	SSSSSSSS		RRR	RRR	TTT		LLLLLLLLLLLL

BBBBBBBB	AAAAAA	SSSSSSSS	MM	MM	AAAAAA	GGGGGGGG	TTTTTTTTTT	AAAAAA	PPPPPPPP	
BBBBBBBB	AAAAAA	SSSSSSSS	MM	MM	AAAAAA	GGGGGGGG	TTTTTTTTTT	AAAAAA	PPPPPPPP	
BB	BB	AA	AA	SS	MM	MM	AA	AA	PP	PP
BB	BB	AA	AA	SS	MM	MM	AA	AA	PP	PP
BB	BB	AA	AA	SS	MM	MM	AA	AA	PP	PP
BB	BB	AA	AA	SS	MM	MM	AA	AA	PP	PP
BBBBBBBB	AA	AA	SSSSSS		MM	MM	AA	AA	PPPPPPPP	
BBBBBBBB	AA	AA	SSSSSS		MM	MM	AA	AA	PPPPPPPP	
BB	BB	AAAAAAAAAA	SS		MM	MM	AAAAAAAAAA	PP		
BB	BB	AAAAAAAAAA	SS		MM	MM	AAAAAAAAAA	PP		
BB	BB	AA	AA	SS	MM	MM	AA	AA	PP	
BB	BB	AA	AA	SS	MM	MM	AA	AA	PP	
BBBBBBBB	AA	AA	SSSSSSSS		MM	MM	AA	AA	PP	
BBBBBBBB	AA	AA	SSSSSSSS		MM	MM	AA	AA	PP	
										
										
										
										

LL	IIIIII	SSSSSSSS	
LL	IIIIII	SSSSSSSS	
LL	II	SS	
LL	II	SS	
LL	II	SS	
LL	II	SS	
LL	II	SS	
LL	II	SS	
LL	II	SS	
LL	II	SS	
LL	II	SS	
LL	II	SS	
LLLLLLLLLL	IIIIII	SSSSSSSS	
LLLLLLLLLL	IIIIII	SSSSSSSS	


```
1 0001 0 MODULE BASSMAGTAPE (
2 0002 0 IDENT = '1-003'
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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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 BASIC MAGTAPE function,
36 0036 1 Which manipulates non file-structured mag tape files.
37 0037 1
38 0038 1 ENVIRONMENT: VAX-11 User Mode
39 0039 1
40 0040 1 AUTHOR: John Sauter, CREATION DATE: 20-APR-1979
41 0041 1
42 0042 1 MODIFIED BY:
43 0043 1
44 0044 1 1-001 - Original.
45 0045 1 1-002 - Add a call to BASS$CB_POP. JBS 10-JUL-1979
46 0046 1 1-003 - Set up ISB$A_USER_FP. JBS 25-JUL-1979
47 0047 1 --
48 0048 1
49 0049 1 !<BLF/PAGE>
```



```
51 0050 1 |
52 0051 1 | SWITCHES:
53 0052 1 |
54 0053 1 |
55 0054 1 | SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);
56 0055 1 |
57 0056 1 |
58 0057 1 | LINKAGES:
59 0058 1 |
60 0059 1 |
61 0060 1 | REQUIRE 'RTLIN:OTSLNK';           ! Define linkages
62 0489 1 |
63 0490 1 |
64 0491 1 | TABLE OF CONTENTS:
65 0492 1 |
66 0493 1 |
67 0494 1 | FORWARD ROUTINE
68 0495 1 |     BASSMAGTAPE;           ! Manipulate a mag tape file
69 0496 1 |
70 0497 1 |
71 0498 1 | INCLUDE FILES:
72 0499 1 |
73 0500 1 |
74 0501 1 | REQUIRE 'RTLML:OTSLUB';       ! Get LUB definitions
75 0641 1 |
76 0642 1 | REQUIRE 'RTLML:OTSYSB';       ! Get ISB definitions
77 0810 1 |
78 0811 1 | REQUIRE 'RTLIN:BASIOERR';     ! I/O error codes
79 0864 1 |
80 0865 1 | REQUIRE 'RTLIN:RTLPSECT';     ! Macros for defining psects
81 0960 1 |
82 0961 1 | LIBRARY 'RTLSTARLE';         ! System symbols
83 0962 1 |
84 0963 1 |
85 0964 1 | MACROS:
86 0965 1 |
87 0966 1 |     NONE
88 0967 1 |
89 0968 1 | EQUATED SYMBOLS:
90 0969 1 |
91 0970 1 |
92 0971 1 | LITERAL
93 0972 1 |     BASSK_REWOFL = 1,         ! Rewind and go off-line
94 0973 1 |     BASSK_WEOF = 2,          ! Write EOF
95 0974 1 |     BASSK_REWIND = 3,        ! Rewind
96 0975 1 |     BASSK_SKIPREC = 4,       ! Skip record
97 0976 1 |     BASSK_BACKREC = 5,       ! Backspace record
98 0977 1 |     BASSK_SETDENPAR = 6,     ! Set density and parity
99 0978 1 |     BASSK_STATUS = 7,        ! Tape status
100 0979 1 |     BASSK_FILECHAR = 8,      ! File characteristics
101 0980 1 |     BASSK_REWCLOSE = 9;      ! Rewind on CLOSE
102 0981 1 |
103 0982 1 |
104 0983 1 | PSECTS:
105 0984 1 |
106 0985 1 | DECLARE_PSECTS (BAS);         ! Declare psects for BASS facility
107 0986 1 |
```

```

: 108      0987 1 : OWN STORAGE:
: 109      0988 1 :
: 110      0989 1 :         NONE
: 111      0990 1 :
: 112      0991 1 : EXTERNAL REFERENCES:
: 113      0992 1 :
: 114      0993 1 :
: 115      0994 1 : EXTERNAL ROUTINE
: 116      0995 1 :     BAS$$CB_PUSH : JSB CB_PUSH NOVALUE,      : Load register CCB
: 117      0996 1 :     BAS$$CB_POP  : JSB CB_POP NOVALUE,        : Done with register CCB
: 118      0997 1 :     BAS$$STOP   : NOVALUE,                    : Signal fatal error
: 119      0998 1 :     BAS$$STOP_IO : NOVALUE;                   : Signal fatal I/O error
: 120      0999 1 :
: 121      1000 1 :
: 122      1001 1 : + The following are the error codes used in this module.
: 123      1002 1 : -
: 124      1003 1 :
: 125      1004 1 : EXTERNAL LITERAL
: 126      1005 1 :     BAS$K_IO_CHANOT : UNSIGNED (8);           : Channel not open.
: 127      1006 1 :     BAS$K_IL[MAGUSA : UNSIGNED (8);           : Illegal MAGTAPE() Usage
: 128      1007 1 :

```



```
130 1008 1 GLOBAL ROUTINE BASSMAGTAPE (
131 1009 1     FUNCTION,
132 1010 1     PARAM,
133 1011 1     CHAN
134 1012 1 ) =
135 1013 1
136 1014 1 ++
137 1015 1 FUNCTIONAL DESCRIPTION:
138 1016 1
139 1017 1     Manipulate a non-file structured mag tape. Nine functions
140 1018 1     are defined, coded as follows:
141 1019 1
142 1020 1     CODE    MEANING
143 1021 1     ----    -
144 1022 1
145 1023 1     1      Rewind and go offline
146 1024 1
147 1025 1     2      Write and end-of-file (EOF) mark.
148 1026 1
149 1027 1     3      Rewind
150 1028 1
151 1029 1     4      Skip record. The additional argument is the number
152 1030 1     of records to skip. The value returned is the number
153 1031 1     of records not skipped.
154 1032 1
155 1033 1     5      Backspace record. The additional argument is the
156 1034 1     number of records to backspace. The value returned
157 1035 1     is the number of records not backspaced.
158 1036 1
159 1037 1     6      Set density and parity. The additional argument encodes
160 1038 1     the desired density and parity, see below.
161 1039 1
162 1040 1     7      Return magtape status. The value returned is the
163 1041 1     status.
164 1042 1
165 1043 1     8      Return file characteristics. The value returned is
166 1044 1     the file characteristics.
167 1045 1
168 1046 1     9      Rewind on close. When the next CLOSE is done on this
169 1047 1     channel, the tape will be rewound.
170 1048 1
171 1049 1 FORMAL PARAMETERS:
172 1050 1
173 1051 1     FUNCTION.rl.v  The function to perform, see above.
174 1052 1     PARAM.rl.v    An additional parameter to some functions,
175 1053 1                 see above.
176 1054 1     CHAN.rl.v     The channel to do this function to.
177 1055 1
178 1056 1 IMPLICIT INPUTS:
179 1057 1
180 1058 1     NONE
181 1059 1
182 1060 1 IMPLICIT OUTPUTS:
183 1061 1
184 1062 1     NONE
185 1063 1
186 1064 1 ROUTINE VALUE:
```

```
187 1065 1 | COMPLETION CODES:
188 1066 1 |
189 1067 1 |     Depends on the function, see above. Where the result is not
190 1068 1 |     specified, 0 is returned.
191 1069 1 |
192 1070 1 | SIDE EFFECTS:
193 1071 1 |
194 1072 1 |     Signals if an error is encountered.
195 1073 1 |     BASS$CB_PUSH will signal if the channel number is invalid.
196 1074 1 |     We signal BASS$K_IO_CHANOT if the channel is not open.
197 1075 1 |
198 1076 1 | --
199 1077 1 |
200 1078 2 | BEGIN
201 1079 2 |
202 1080 2 | BUILTIN
203 1081 2 |     FP;
204 1082 2 |
205 1083 2 | GLOBAL REGISTER
206 1084 2 |     CCB = K_CCB_REG : REF BLOCK [, BYTE];
207 1085 2 |
208 1086 2 | LOCAL
209 1087 2 |     FMP : REF BLOCK [, BYTE],
210 1088 2 |     RESULT;
211 1089 2 |
212 1090 2 |     FMP = .FP;
213 1091 2 | +
214 1092 2 | Note: this function is provided as a transition aid from BASIC-PLUS.
215 1093 2 | It is not intended to be used for new development in BASIC-PLUS-2.
216 1094 2 | Therefore, it has been organized as a separate, self-contained
217 1095 2 | module, which can be omitted in situations where BASIC-PLUS
218 1096 2 | compatability is not a goal.
219 1097 2 | -
220 1098 2 | +
221 1099 2 | Load register CCB from the channel specified. It had better be
222 1100 2 | open. Channel 0 is not permitted.
223 1101 2 | -
224 1102 2 |
225 1103 2 | IF (.CHAN EQL 0) THEN BASS$$STOP (BASS$K_ILLMAGUSA);
226 1104 2 |
227 1105 2 | BASS$CB_PUSH (.CHAN, LUB$K_LUN_MIN);
228 1106 2 | CCB [ISB$A_USER_FP] = .FMP[SF$L_SAVE_FP];
229 1107 2 |
230 1108 2 | IF ( NOT .CCB [LUB$V_OPENED]) THEN BASS$$STOP_IO (BASS$K_IO_CHANOT);
231 1109 2 |
232 1110 2 | +
233 1111 2 | If no result is specified below, return zero.
234 1112 2 | -
235 1113 2 |     RESULT = 0;
236 1114 2 | +
237 1115 2 | Dispatch on the function code.
238 1116 2 | -
239 1117 2 |
240 1118 2 | CASE .FUNCTION FROM BASS$K_REWOFL TO BASS$K_REWCLOSE OF
241 1119 2 |     SET
242 1120 2 |
243 1121 2 |     [BASS$K_REWOFL] :
```



```
244 1122 2 +
245 1123 2 | This function is not implemented. In VMS, unloading a mag tape
246 1124 2 | is the responsibility of the command language interpreter, using
247 1125 2 | the DISMOUNT command.
248 1126 2 |
249 1127 2 |     BASS$STOP_IO (BASSK_ILLMAGUSA);
250 1128 2 |
251 1129 2 |     [BASSK_WEOF] :
252 1130 2 |
253 1131 2 | + This function is not implemented. To get its effect, CLOSE and
254 1132 2 | then OPEN the channel. Be sure to specify that no rewinding is
255 1133 2 | to be done when you OPEN it.
256 1134 2 |
257 1135 2 |     BASS$STOP_IO (BASSK_ILLMAGUSA);
258 1136 2 |
259 1137 2 |     [BASSK_REWIND] :
260 1138 2 |
261 1139 2 | + This function repositions the file to its first record. It can
262 1140 2 | be used on any file (except unit record and terminal), not just
263 1141 2 | mag tape.
264 1142 2 |
265 1143 2 |     BEGIN
266 1144 2 |
267 1145 2 |     LOCAL
268 1146 2 |         REWIND_STATUS;
269 1147 2 |
270 1148 2 |     REWIND_STATUS = $REWIND (RAB = .CCB);
271 1149 2 |
272 1150 2 |     IF ( NOT .REWIND_STATUS)
273 1151 2 |     THEN
274 1152 2 |         BEGIN
275 1153 2 |             WHILE (.CCB [RAB$L_STS] EQL RMS$_RSA) DO
276 1154 2 |                 BEGIN
277 1155 2 |                     $WAIT (RAB = .CCB);
278 1156 2 |                     $REWIND (RAB = .CCB);
279 1157 2 |                     END;
280 1158 2 |
281 1159 2 |             IF (.CCB [RAB$L_STS] NEQ RMS$_BOF) THEN BASS$STOP_IO (BASSK_IOERR_REC);
282 1160 2 |
283 1161 2 |             END;
284 1162 2 |
285 1163 2 |         END;
286 1164 2 |
287 1165 2 |     [BASSK_SKIPREC] :
288 1166 2 |
289 1167 2 | + This function is not implemented. To get its effect, issue
290 1168 2 | GETs and ignore the data transfered.
291 1169 2 |
292 1170 2 |     BASS$STOP_IO (BASSK_ILLMAGUSA);
293 1171 2 |
294 1172 2 |     [BASSK_BACKREC] :
295 1173 2 |
296 1174 2 | + This function is not implemented. To get its effect, issue the
297 1175 2 | REWIND function and then skip forward until reaching the desired
298 1176 2 | record.
299 1177 2 |
300 1178 2 |
```



```

: 301      1179      2      BASS$STOP_IO (BASS$_ILLMAGUSA);
: 302      1180      2
: 303      1181      2      [BASS$_SETDENPAR] :
: 304      1182      2
: 305      1183      2      + This function is not implemented. The responsibility for setting
: 306      1184      2      density and parity in VMS belongs to the command language, which
: 307      1185      2      provides the MOUNT command for this purpose.
: 308      1186      2      -
: 309      1187      2      BASS$STOP_IO (BASS$_ILLMAGUSA);
: 310      1188      2
: 311      1189      2      [BASS$_STATUS] :
: 312      1190      2
: 313      1191      2      + This function is not implemented, since the SET function is not.
: 314      1192      2      -
: 315      1193      2      BASS$STOP_IO (BASS$_ILLMAGUSA);
: 316      1194      2
: 317      1195      2      [BASS$_FILECHAR] :
: 318      1196      2
: 319      1197      2      + This function is not implemented, since the FSP$ function effectively
: 320      1198      2      replaces it, and, in the absence of most of the other functions
: 321      1199      2      it is not very useful.
: 322      1200      2      -
: 323      1201      2      BASS$STOP_IO (BASS$_ILLMAGUSA);
: 324      1202      2
: 325      1203      2      [BASS$_REWCLOSE] :
: 326      1204      2
: 327      1205      2      + This function is not implemented. To get its effect, after
: 328      1206      2      CLOSEing the channel, OPEN it again for input, do a REWIND, and CLOSE
: 329      1207      2      it. Better, make use of the OPEN options to get this effect.
: 330      1208      2      -
: 331      1209      2      BASS$STOP_IO (BASS$_ILLMAGUSA);
: 332      1210      2      TES;
: 333      1211      2
: 334      1212      2      + We are done with register CCB
: 335      1213      2      -
: 336      1214      2      BASS$CB_POP ();
: 337      1215      2
: 338      1216      2      + We have stored in RESULT any non-zero value to be returned.
: 339      1217      2      -
: 340      1218      2      RETURN (.RESULT);
: 341      1219      2      END;
: 342      1220      1
```

! of routine BASSMAGTAPE

```
.TITLE BASSMAGTAPE
.IDENT \1-003\
```

```
.EXTRN BASS$CB_PUSH, BASS$CB_POP
.EXTRN BASS$STOP, BASS$STOP_IO
.EXTRN BASS$_IO_CHANOT
.EXTRN BASS$_ILLMAGUSA
.EXTRN SY$$REWIND, SY$$WAIT
```

```
.PSECT _BASSCODE, NOWRT, SHR, PIC, 2
```

```
.ENTRY BASSMAGTAPE, Save R2,R3,R4,R5,R11
MOVAB SY$$REWIND, R5
```

```
55 00000000G 00 083C 00000
9E 00002
```

: 1008
:

```
! of module BASSMAGTAPE
```


BASSMAGTAPE
1-003

J 13
16-Sep-1984 00:42:13
14-Sep-1984 11:55:14

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

Page 9
(3)

PSECT SUMMARY

```
:
:      Name      Bytes      Attributes
:
:  _BASSCODE      157 NOVEC,NOWRT, RD , EXE, SHR, LCL, REL, CON, PIC,ALIGN(2)
```

Library Statistics

```
:
:      File      ----- Symbols ----- Pages Processing
:                  Total   Loaded   Percent   Mapped   Time
:
:  _$255$DUA28:[SYSLIB]STARLET.L32;1      9776           9           0       581      00:01.2
```

COMMAND QUALIFIERS

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

```
: Size:      157 code + 0 data bytes
: Run Time:   00:10.4
: Elapsed Time: 00:22.6
: Lines/CPU Min: 7088
: Lexemes/CPU-Min: 38814
: Memory Used: 144 pages
: Compilation Complete
```


0024 AH-BT13A-SE
VAX/VMS V4.0

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