

BBBBBBBBBBBB		AAAAAAA		SSSSSSSSSS		RRRRRRRRRR		TTTTTTTTTTTT		LLL
BBBBBBBBBBBB		AAAAAAA		SSSSSSSSSS		RRRRRRRRRR		TTTTTTTTTTTT		LLL
BBBBBBBBBBBB		AAAAAAA		SSSSSSSSSS		RRRRRRRRRR		TTTTTTTTTTTT		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	SSSSSSSSSS		RRR	RRR	TTT		LLLLLLLLLLLLLLLL
BBBBBBBBBBBB		AAA	AAA	SSSSSSSSSS		RRR	RRR	TTT		LLLLLLLLLLLLLLLL
BBBBBBBBBBBB		AAA	AAA	SSSSSSSSSS		RRR	RRR	TTT		LLLLLLLLLLLLLLLL

BBBBBBBB	AAAAAA	SSSSSSSS	EEEEEEEEEE	CCCCCCCC	HH	HH	000000	
BBBBBBBB	AAAAAA	SSSSSSSS	EEEEEEEEEE	CCCCCCCC	HH	HH	000000	
BB	AA	SS	EE	CC	HH	HH	00	00
BB	AA	SS	EE	CC	HH	HH	00	00
BB	AA	SS	EE	CC	HH	HH	00	00
BB	AA	SS	EE	CC	HH	HH	00	00
BBBBBBBB	AA	SSSSSS	EEEEEEEE	CC	HH	HH	00	00
BBBBBBBB	AA	SSSSSS	EEEEEEEE	CC	HH	HH	00	00
BB	AAAAAAAAA	SS	EE	CC	HH	HH	00	00
BB	AAAAAAAAA	SS	EE	CC	HH	HH	00	00
BB	AA	SS	EE	CC	HH	HH	00	00
BB	AA	SS	EE	CC	HH	HH	00	00
BBBBBBBB	AA	SSSSSSSS	EEEEEEEEEE	CCCCCCCC	HH	HH	000000	
BBBBBBBB	AA	SSSSSSSS	EEEEEEEEEE	CCCCCCCC	HH	HH	000000	

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 BAS$ECHO (
2 0002 0 IDENT = '1-002'
3 0003 0 ) =
4 0004 1 BEGIN
5 0005 1
6 0006 1 *****
7 0007 1 *
8 0008 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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24 0024 1 * SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
25 0025 1 *
26 0026 1 *
27 0027 1 *****
28 0028 1
29 0029 1
30 0030 1 ++
31 0031 1 FACILITY: BASIC-PLUS-2 Miscellaneous I/O
32 0032 1
33 0033 1 ABSTRACT:
34 0034 1
35 0035 1 This module contains the BASIC ECHO and NOECHO functions,
36 0036 1 Which turn on and off echoing on a specified channel.
37 0037 1
38 0038 1 ENVIRONMENT: VAX-11 User Mode
39 0039 1
40 0040 1 AUTHOR: John Sauter, CREATION DATE: 17-APR-1979
41 0041 1
42 0042 1 MODIFIED BY:
43 0043 1
44 0044 1 1-001 - Original.
45 0045 1 1-002 - Set up ISB$A_USER_FP. JBS 25-JUL-1979
46 0046 1 --
47 0047 1
48 0048 1 !<BLF/PAGE>
```

```
50 0049 1 |
51 0050 1 | SWITCHES:
52 0051 1 |
53 0052 1 |
54 0053 1 SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);
55 0054 1 |
56 0055 1 |
57 0056 1 | LINKAGES:
58 0057 1 |
59 0058 1 |
60 0059 1 REQUIRE 'RTLIN:OTSLNK'; ! Define linkages
61 0488 1 |
62 0489 1 |
63 0490 1 | TABLE OF CONTENTS:
64 0491 1 |
65 0492 1 |
66 0493 1 FORWARD ROUTINE
67 0494 1 BAS$ECHO, ! Enable echoing
68 0495 1 BAS$NOECHO; ! Disable echoing
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:OTSISB'; ! Get ISB definitions
77 0810 1 |
78 0811 1 REQUIRE 'RTLIN:RTLPSECT'; ! Macros for defining psects
79 0906 1 |
80 0907 1 LIBRARY 'RTLSTARLE'; ! System symbols
81 0908 1 |
82 0909 1 |
83 0910 1 | MACROS:
84 0911 1 |
85 0912 1 | NONE
86 0913 1 |
87 0914 1 | EQUATED SYMBOLS:
88 0915 1 |
89 0916 1 | NONE
90 0917 1 |
91 0918 1 | PSECTS:
92 0919 1 |
93 0920 1 DECLARE_PSECTS (BAS); ! Declare psects for BAS$ facility
94 0921 1 |
95 0922 1 | OWN STORAGE:
96 0923 1 |
97 0924 1 | NONE
98 0925 1 |
99 0926 1 | EXTERNAL REFERENCES:
100 0927 1 |
101 0928 1 |
102 0929 1 EXTERNAL ROUTINE
103 0930 1 BAS$$OPEN_ZERO : NOVALUE, ! Open channel zero
104 0931 1 BAS$$CB_PUSH : JSB CB_PUSH NOVALUE, ! Load register CCB
105 0932 1 BAS$$CB_POP : JSB CB_POP NOVALUE, ! Done with register CCB
106 0933 1 BAS$$STOP_IO : NOVALUE; ! Signal fatal I/O error
```

BAS\$ECHO
1-002

L 16
16-Sep-1984 00:20:08
14-Sep-1984 11:54:52

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

Page 3
(2)

:	107	0934	1	
:	108	0935	1	!+
:	109	0936	1	!-
:	110	0937	1	!-
:	111	0938	1	
:	112	0939	1	EXTERNAL LITERAL
:	113	0940	1	BAS\$K_IO_CHANOT : UNSIGNED (8);
:	114	0941	1	! Channel not open.

```
116 0942 1 GLOBAL ROUTINE BAS$ECHO (           ! Enable echoing
117 0943 1     CHAN                           ! Channel on which to enable echoing
118 0944 1     ) =
119 0945 1
120 0946 1 ++
121 0947 1 FUNCTIONAL DESCRIPTION:
122 0948 1
123 0949 1     Enables echoing on the terminal open on the specified channel.
124 0950 1
125 0951 1 FORMAL PARAMETERS:
126 0952 1
127 0953 1     CHAN.rl.v      The channel whose terminal to enable echoing on
128 0954 1
129 0955 1 IMPLICIT INPUTS:
130 0956 1
131 0957 1     NONE
132 0958 1
133 0959 1 IMPLICIT OUTPUTS:
134 0960 1
135 0961 1     LUB$V_NOECHO which, when set, suppresses terminal echoing.
136 0962 1
137 0963 1 ROUTINE VALUE:
138 0964 1 COMPLETION CODES:
139 0965 1
140 0966 1     SSS$NORMAL
141 0967 1
142 0968 1 SIDE EFFECTS:
143 0969 1
144 0970 1     Signals if an error is encountered.
145 0971 1     BAS$$CB_PUSH will signal if the channel number is invalid.
146 0972 1     We signal BAS$K_IO_CHANOT if the channel is not open.
147 0973 1
148 0974 1 --
149 0975 1
150 0976 2 BEGIN
151 0977 2
152 0978 2 BUILTIN
153 0979 2     FP;
154 0980 2
155 0981 2 GLOBAL REGISTER
156 0982 2     CCB = K_CCB_REG : REF BLOCK [, BYTE];
157 0983 2
158 0984 2 LOCAL
159 0985 2     FMP : REF BLOCK [, BYTE];
160 0986 2
161 0987 2     FMP = .FP;
162 0988 2 ++
163 0989 2 Get the CCB for the channel.
164 0990 2 --
165 0991 2
166 0992 2 IF (.CHAN EQL 0)
167 0993 2 THEN
168 0994 2 BEGIN
169 0995 2 ++
170 0996 2 The user is referencing his controlling terminal.
171 0997 2 --
172 0998 3     BAS$$CB_PUSH (LUB$K_LUN_INPU, LUB$K_ILUN_MIN);
```

```
173 0999      CCB [ISBSA_USER_FP] = .FMP [SF$$_SAVE_FP];
174 1000
175 1001      + If the controlling terminal is not yet open, open it.
176 1002      -
177 1003
178 1004      IF ( NOT .CCB [LUB$V_OPENED]) THEN BAS$$OPEN_ZERO (.FMP [SF$$_SAVE_FP]);
179 1005
180 1006      END
181 1007      ELSE
182 1008      BEGIN
183 1009      + This is an ordinary channel.
184 1010      -
185 1011      BAS$$CB_PUSH (.CHAN, LUB$K_LUN_MIN);
186 1012      CCB [ISBSA_USER_FP] = .FMP [SF$$_SAVE_FP];
187 1013      END;
188 1014
189 1015
190 1016      + If the channel is not now open, either there is a problem with
191 1017      the OPEN code, or the non-zero channel was not first opened.
192 1018      -
193 1019
194 1020      IF ( NOT .CCB [LUB$V_OPENED]) THEN BAS$$STOP_IO (BAS$K_IO_CHANOT);
195 1021
196 1022
197 1023      + Now clear the NOECHO bit, which will cause the record level code
198 1024      to tell RMS to return to echoing terminal input.
199 1025      -
200 1026      CCB [LUB$V_NOECHO] = 0;
201 1027
202 1028      + We are done with register CCB.
203 1029      -
204 1030
205 1031      BAS$$CB_POP ();
206 1032      RETURN TSS$_NORMAL);
207 1033      END;
```

! end of BAS\$ECHO

```
.TITLE BAS$ECHO
.IDENT \1-002\
```

```
.EXTRN BAS$$OPEN_ZERO, BAS$$CB_PUSH
.EXTRN BAS$$CB_POP, BAS$$STOP_IO
.EXTRN BAS$K_IO_CHANOT
```

```
.PSECT _BAS$CODE, NOWRT, SHR, PIC, 2
```

```
.ENTRY BAS$ECHO, Save R2,R3,R4,R11
MOVAB BAS$$CB_PUSH, R4
MOVL  FP, FMP
TSTL  CHAN
BNEQ  1$
MNEGL #8, R0
MNEGL #7, R2
JSB   BAS$$CB_PUSH
MOVL  12(FMP), -180(CCB)
BLBS  -4(CCB), 3$
PUSHL 12(FMP)
```

```
54 00000000G 00 081C 00000
53          5D D0 00009
          04 AC D5 0000C
          1E 12 0000F
50          08 CE 00011
52          07 CE 00014
          64 16 00017
FF4C CB      0C A3 D0 00019
          29 FC AB E8 0001F
          OC A3 DD 00023
```

```
: 0942
: 0987
: 0992
: 0998
: 0999
: 1004
:
```

BAS\$ECHO
1-002

C 1
16-Sep-1984 00:20:08
14-Sep-1984 11:54:52

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

Page 6
(3)

00000000G	00		01	FB	00026	CALLS	#1, BAS\$\$OPEN_ZERO	:	
			0E	11	0002D	BRB	2\$	:	0992
			50	D4	0002F	CLRL	R0	:	1012
	52	04	AC	D0	00031	MOVL	CHAN, R2	:	
			64	16	00035	JSB	BAS\$\$CB_PUSH	:	
FF4C	CB	0C	A3	D0	00037	MOVL	12(FMP); -180(CCB)	:	1013
	0B	FC	AB	E8	0003D	BLBS	-4(CCB), 3\$	:	1021
	7E	00G	8F	9A	00041	MOVZBL	#BAS\$K_IO_CHANOT, -(SP)	:	
00000000G	00		01	FB	00045	CALLS	#1, BAS\$\$STOP_IO	:	
AO	AB		01	8A	0004C	BICB2	#1, -96(CCB)	:	1027
		00000000G	00	16	00050	JSB	BAS\$\$CB_POP	:	1031
	50		01	D0	00056	MOVL	#1, R0	:	1032
			04	00059	RET			:	1033

; Routine Size: 90 bytes, Routine Base: _BAS\$CODE + 0000

; 208 1034 1

```
210 1035 1 GLOBAL ROUTINE BASSNOECHO (
211 1036 1     CHAN
212 1037 1     ) =
213 1038 1
214 1039 1 ++
215 1040 1 FUNCTIONAL DESCRIPTION:
216 1041 1
217 1042 1     Disables echoing on the terminal open on the specified channel.
218 1043 1
219 1044 1 FORMAL PARAMETERS:
220 1045 1
221 1046 1     CHAN.rl.v     The channel whose terminal to disable echoing on
222 1047 1
223 1048 1 IMPLICIT INPUTS:
224 1049 1
225 1050 1     NONE
226 1051 1
227 1052 1 IMPLICIT OUTPUTS:
228 1053 1
229 1054 1     LUB$V_NOECHO which, when set, suppresses terminal echoing.
230 1055 1
231 1056 1 ROUTINE VALUE:
232 1057 1 COMPLETION CODES:
233 1058 1
234 1059 1     SSS_NORMAL
235 1060 1
236 1061 1 SIDE EFFECTS:
237 1062 1
238 1063 1     Signals if an error is encountered.
239 1064 1     BASS$CB_PUSH will signal if the channel number is invalid.
240 1065 1     We signal BASS$K_IO_CHANOT if the channel is not open.
241 1066 1
242 1067 1 --
243 1068 1
244 1069 2 BEGIN
245 1070 2
246 1071 2 BUILTIN
247 1072 2     FP;
248 1073 2
249 1074 2 GLOBAL REGISTER
250 1075 2     CCB = K_CCB_REG : REF BLOCK [, BYTE];
251 1076 2
252 1077 2 LOCAL
253 1078 2     FMP : REF BLOCK [, BYTE];
254 1079 2
255 1080 2     FMP = .FP;
256 1081 2
257 1082 2 ++ Get the CCB for the channel.
258 1083 2 --
259 1084 2
260 1085 2 IF (.CHAN EQL 0)
261 1086 2 THEN
262 1087 2     BEGIN
263 1088 2 ++
264 1089 2 The user is referencing his controlling terminal.
265 1090 2 --
266 1091 2     BASS$CB_PUSH (LUB$K_LUN_INPU, LUB$K_ILUN_MIN);
```

```
267 1092 CCB [ISB$A_USER_FP] = .FMP [SF$$_SAVE_FP];
268 1093
269 1094 + If the controlling terminal is not yet open, open it.
270 1095 -
271 1096
272 1097 IF ( NOT .CCB [LUB$V_OPENED]) THEN BAS$$OPEN_ZERO (.FMP [SF$$_SAVE_FP]);
273 1098
274 1099 END
275 1100 ELSE
276 1101 BEGIN
277 1102 + This is an ordinary channel.
278 1103 -
279 1104
280 1105 BAS$$CB_PUSH (.CHAN, LUB$K_LUN_MIN);
281 1106 CCB [ISB$A_USER_FP] = .FMP [SF$$_SAVE_FP];
282 1107 END;
283 1108
284 1109 + If the channel is not now open, either there is a problem with
285 1110 the OPEN code, or the non-zero channel was not first opened.
286 1111 -
287 1112
288 1113
289 1114 IF ( NOT .CCB [LUB$V_OPENED]) THEN BAS$$STOP_IO (BAS$K_IO_CHANOT);
290 1115
291 1116 + Now set the NOECHO bit, which will cause the record level code
292 1117 to tell RMS to stop echoing terminal input.
293 1118 -
294 1119
295 1120 CCB [LUB$V_NOECHO] = 1;
296 1121 +
297 1122 We are done with register CCB.
298 1123 -
299 1124 BAS$$CB_POP ();
300 1125 RETURN (SS$_NORMAL);
301 1126 END;
```

! end of BAS\$NOECHO

			081C 00000	.ENTRY	BAS\$NOECHO, Save R2,R3,R4,R11	1035
54	00000000G	00	9E 00002	MOVAB	BAS\$\$CB_PUSH, R4	
53		5D	D0 00009	MOVL	FP, FMP	1080
	04	AC	D5 0000C	TSTL	CHAN	1085
		1E	12 0000F	BNEQ	1\$	
50		08	CE 00011	MNEGL	#8, R0	1091
52		07	CE 00014	MNEGL	#7, R2	
		64	16 00017	JSB	BAS\$\$CB_PUSH	
FF4C	CB	OC	A3 D0 00019	MOVL	12(FMP), -180(CCB)	1092
29		FC	AB E8 0001F	BLEB	-4(CCB), 3\$	1097
		OC	A3 DD 00023	PUSHL	12(FMP)	
00000000G	00	01	FB 00026	CALLS	#1, BAS\$\$OPEN_ZERO	
		0E	11 0002D	BRB	2\$	1085
		50	D4 0002F 1\$:	CLRL	R0	1105
52	04	AC	D0 00031	MOVL	CHAN, R2	
		64	16 00035	JSB	BAS\$\$CB_PUSH	
FF4C	CB	OC	A3 D0 00037	MOVL	12(FMP), -180(CCB)	1106

00000000G	0B	FC	AB	E8	0003D	2\$:	BLBS	-4(CCB), 3\$	: 1114
A0	7E	00G	8F	9A	00041		MOVZBL	#BAS\$K_IO CHANOT, -(SP)	: 1120
	00		01	FB	00045	3\$:	CALLS	#1, BAS\$\$STOP_IO	: 1124
	AB		01	88	0004C		BISB2	#1, -96(CCB)	: 1125
	50	00000000G	00	16	00050		JSB	BAS\$\$CB_POP	: 1126
			01	D0	00056		MOVL	#1, R0	
				04	00059		RET		

; Routine Size: 90 bytes, Routine Base: _BAS\$CODE + 005A

: 302	1127	1	
: 303	1128	1	END
: 304	1129	1	
: 305	1130	0	ELUDOM

! end of module BAS\$ECHO

PSECT SUMMARY

Name	Bytes	Attributes
_BAS\$CODE	180	NOVEC, NOWRT, RD, EXE, SHR, LCL, REL, CON, PIC, ALIGN(2)

Library Statistics

File	----- Total	Symbols Loaded	----- Percent	Pages Mapped	Processing Time
_\$255\$DUA28:[SYSLIB]STARLET.L32;1	9776	2	0	581	00:01.2

COMMAND QUALIFIERS

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

; Size: 180 code + 0 data bytes
; Run Time: 00:10.0
; Elapsed Time: 00:26.8
; Lines/CPU Min: 6759
; Lexemes/CPU-Min: 40301
; Memory Used: 119 pages
; Compilation Complete

0021 AH-BT13A-SE
VAX/VMS V4.0

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0022 AH-BT13A-SE
VAX/VMS V4.0

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BASEDDFS
LIS

BASERROR
LIS

BASEDDDF
LIS

BASEDIT
LIS

BASEND
LIS

BASEDUP
LIS

BASEMULP
LIS

BASEDDGB
LIS

BASERTXT
LIS