


```

CCCCCCCC 000000 MM MM EEEEEEEEE EEEEEEEEE RRRRRRR RRRRRRR SSSSSSS EEEEEEEEE TTTTTTTTT
CCCCCCCC 000000 MM MM EEEEEEEEE EEEEEEEEE RRRRRRR RRRRRRR SSSSSSS EEEEEEEEE TTTTTTTTT
CC 00 00 MMM MMM EE RR RR SS EEEEEEEEE TT
CC 00 00 MMM MMM EE RR RR SS EEEEEEEEE TT
CC 00 00 MM MM EE RR RR SS EEEEEEEEE TT
CC 00 00 MM MM EE RR RR SS EEEEEEEEE TT
CC 00 00 MM MM EEEEEEE RRRRRRR RRRRRRR SSSSSS EEEEEEEEE TT
CC 00 00 MM MM EEEEEEE RRRRRRR RRRRRRR SSSSSS EEEEEEEEE TT
CC 00 00 MM MM EE RR RR SS EEEEEEEEE TT
CC 00 00 MM MM EE RR RR SS EEEEEEEEE TT
CC 00 00 MM MM EE RR RR SS EEEEEEEEE TT
CC 00 00 MM MM EE RR RR SS EEEEEEEEE TT
CCCCCCCC 000000 MM MM EEEEEEEEE RR RR RR SSSSSSS EEEEEEEEE TT
CCCCCCCC 000000 MM MM EEEEEEEEE RR RR RR SSSSSSS EEEEEEEEE TT

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LL 11111 SSSSSSS
LL 11111 SSSSSSS
LL 11 SS
LL 11 SS
LL 11 SS
LL 11 SS
LL 11 SSSSSS
LL 11 SSSSSS
LL 11 SS
LL 11 SS
LL 11 SS
LL 11 SS
LLLLLLLLLL 11111 SSSSSSS
LLLLLLLLLL 11111 SSSSSSS

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.....

```

1 0001 0 MODULE COMSERSET (XTITLE 'FORTRAN compatibility error set (ERRSET)')
2 0002 0 IDENT = '1-012', ! File: COMERRSET.B32 Edit: SBL1012
3 0003 0 LINKAGE (FORTRAN) ! Call-by-reference
4 0004 0 ) =
5 0005 1 BEGIN
6 0006 1
7 0007 1
8 0008 1 *****
9 0009 1 *
10 0010 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY *
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27 0027 1 *
28 0028 1 *
29 0029 1 *****
30 0030 1
31 0031 1
32 0032 1 **
33 0033 1 FACILITY: FORTRAN compatibility Library
34 0034 1
35 0035 1 ABSTRACT:
36 0036 1
37 0037 1 This module contains routine ERRSET to perform F4P-11 type
38 0038 1 compatible error checking.
39 0039 1
40 0040 1 ENVIRONMENT: User Mode - AST re-entrant
41 0041 1
42 0042 1 AUTHOR: Thomas N. Hastings, CREATION DATE: 14-Dec-1977
43 0043 1
44 0044 1 MODIFIED BY:
45 0045 1
46 0046 1 Thomas N. Hastings, 14-Dec-1977: VERSION 0
47 0047 1 00-01 - original
48 0048 1 00-10 - Call back with indirect. TNH 3-Jan-78.
49 0049 1 00-14 - PSECT F4PCOMPAT$CODE. TNH 5-Jan-78.
50 0050 1 00-15 - Fix MAXLIM. TNH 5-Jan-78.
51 0051 1 00-16 - Down count ERROR_COUNT. TNH 6-Jan-78
52 0052 1 00-17 - Math errors are continue type. TNH 6-Jan-78
53 0053 1 00-21 - remove debugging printing. TNH 9-Jan-78
54 0054 1
55 0055 1 Jonathan M. Taylor, 12-Jan-78: VERSION 1
56 0056 1 1-1 - original; break module COMSERSET_TST into COMSERRTST, COMSERSET,
57 0057 1 and COMSERSET_TST. JMT 12-Jan-78

```

:	58	0058	1	:	1-3	- Bug fix. Call SIG NO LUB, not SIGNAL STOP. JMT 8-Apr-78
:	59	0059	1	:	1-04	- Change to STARLET library. DGP 20-Apr-78
:	60	0060	1	:	0-05	- Change REQUIRE files for VAX system build. DGP 28-Apr-78
:	61	0061	1	:	1-06	- Change STARLET to RTLSTARLE to avoid conflicts. DGP 1-May-78
:	62	0062	1	:	1-07	- Change file name to COMERRSET.BJ2, and change REQUIRE
:	63	0063	1	:		file names similarly. JBS 14-NOV-78
:	64	0064	1	:	1-008	- Update copyright notice. JBS 16-NOV-78
:	65	0065	1	:	1-009	- Declare NULLPARAMETER for new BLISS compiler. JBS 22-NOV-78
:	66	0066	1	:	1-010	- REQUIRE RTLPSECT directly instead of through OTSMAC. JBS 06-dec-78
:	67	0067	1	:	1-011	- Fix bug where alteration of FU actually causes caller's
:	68	0068	1	:		saved PC to be munged! SPR 11-26419 SBL 2-Oct-1979
:	69	0069	1	:	1-012	- Use prologue file. SBL 28-Jul-1983
:	70	0070	1	:	--	

```
72 0071 1 !  
73 0072 1 ! PROLOGUE FILE:  
74 0073 1 !  
75 0074 1 !  
76 0075 1 REQUIRE 'RTLIN:FORPROLOG'; ! FOR$ definitions  
77 0141 1 !  
78 0142 1 !  
79 0143 1 ! TABLE OF CONTENTS:  
80 0144 1 !  
81 0145 1 FORWARD ROUTINE  
82 0146 1 ERRSET: NOVALUE; ! FORTRAN compatibility CALL ERRSET  
83 0147 1 !  
84 0148 1 !  
85 0149 1 ! INCLUDE FILES:  
86 0150 1 !  
87 0151 1 !  
88 0152 1 REQUIRE 'RTLIN:COMEST'; ! COM$$ERR_TAB fields  
89 0221 1 !  
90 0222 1 !  
91 0223 1 ! MACROS:  
92 0224 1 !  
93 0225 1 ! None  
94 0226 1 !  
95 0227 1 !  
96 0228 1 ! EQUATED SYMBOLS:  
97 0229 1 !  
98 0230 1 ! None  
99 0231 1 !  
100 0232 1 !  
101 0233 1 ! OWN STORAGE:  
102 0234 1 !  
103 0235 1 ! None  
104 0236 1 !  
105 0237 1 !  
106 0238 1 ! EXTERNAL REFERENCES:  
107 0239 1 !  
108 0240 1 EXTERNAL  
109 0241 1 COM$$ERR_TAB: BLOCKVECTOR [FOR$K_MAX_ERR + 1, 1, BYTE] ADDRESSING_MODE (GENERAL),  
110 0242 1 COM$$ERRORCOUNT: ADDRESSING_MODE (GENERAL); ! Image error count limit.  
111 0243 1 ! Decremented by COM_HANDLER.  
112 0244 1 ! EXIT on continuable error if 0.  
113 0245 1 !  
114 0246 1 EXTERNAL ROUTINE  
115 0247 1 FOR$$SIG_NO_LUB: NOVALUE ADDRESSING_MODE (GENERAL);  
116 0248 1 ! SIGNAL_STOP FORTRAN error with no  
117 0249 1 ! LUB associated.
```

```
119 0250 1 %SBTTL 'ERRSET'
120 0251 1 GLOBAL ROUTINE ERRSET (
121 0252 1   FORT_ERR_NO,  ! Adr. of word containing FORTRAN error number
122 0253 1   CONTIN,      ! Adr. of word containing continue flag
123 0254 1   COUNT,    ! Adr. of word containing count flag
124 0255 1   CONT_TYPE, ! Adr. of word containing continue type
125 0256 1   LOG,       ! Adr. of word containing log flag
126 0257 1   MAXLIM)  ! Adr. of word containing image max error limit
127 0258 1   :NOVALUF = ! No value is returned
128 0259 1
129 0260 1 !++
130 0261 1 !FUNCTIONAL DESCRIPTION:
131 0262 1
132 0263 1 !
133 0264 1 !FORMAL PARAMETERS:
134 0265 1
135 0266 1   FORT_ERR_NO.rw.r  Adr. of word containing FORTRAN error number
136 0267 1   to which the following parameters apply.
137 0268 1   [CONTIN.rw.r      Optional adr. of word specifying whether or not to
138 0269 1   continue after an error. .TRUE. means continue
139 0270 1   after the error is detected. .FALSE. causes
140 0271 1   an EXIT after the error.
141 0272 1   [COUNT.rw.r     Optional adr. of word specifying whether to count
142 0273 1   this error against the image's maximum
143 0274 1   error limit. .TRUE. means count the error;
144 0275 1   .FALSE. means do not count.
145 0276 1   [CONT_TYPE.rw.r   Optional adr. of word specifying the type of continuation
146 0277 1   to be performed after error detection.
147 0278 1   .TRUE. passes control to an ERR= transfer label
148 0279 1   if supplied by the user; .FALSE. causes
149 0280 1   a return to the routine that detected the
150 0281 1   error for default error recovery.
151 0282 1   [LOG.rw.r          Optional adr. of word specifying whether to produce
152 0283 1   an error message for this error. .TRUE. produces
153 0284 1   a message (using signal mechanism);
154 0285 1   .FALSE. suppresses the message.
155 0286 1   [MAXLIM.rw.r]]]] Optional adr. of word containing positive
156 0287 1   integer used to set the image's maximum error limit.
157 0288 1   The default value is set to 15 at image initialization.
158 0289 1
159 0290 1 !IMPLICIT INPUTS:
160 0291 1
161 0292 1   COM$$ERR_TAB byte table indexed by error number
162 0293 1
163 0294 1 !IMPLICIT OUTPUTS:
164 0295 1
165 0296 1   COM$$ERR_TAB byte table indexed by error number.
166 0297 1
167 0298 1 !ROUTINE VALUE.
168 0299 1 !COMPLETION CODES:
169 0300 1
170 0301 1   NONE
171 0302 1
172 0303 1 !SIDE EFFECTS:
173 0304 1
174 0305 1   OWN storage COM$$ERR_TAB is changed as specified.
175 0306 1   SIGNAL_STOPs FOR$_INVARGFOR (48='INVALID ARGUMENT TO FORTRAN I/O LIBRARY')
```

```
176 0307 1 | If error number is floating underflow (74),
177 0308 1 | either enable or diable floating underflow for calling procedure
178 0309 1 | activation depending on final setting of LOG status bit for
179 0310 1 | error 74. This is not quite the same as the PDP-11 where
180 0311 1 | the enable or disable affects all procedure activations not just caller.
181 0312 1 | --
182 0313 1 |
183 0314 2 | BEGIN
184 0315 2 |
185 0316 2 | BUILTIN NULLPARAMETER;
186 0317 2 |
187 0318 2 | MAP
188 0319 2 |     FORT_ERR_NO: REF VECTOR[1,WORD],
189 0320 2 |     CONTIN: REF VECTOR[1,WORD],
190 0321 2 |     COUNT: REF VECTOR[1,WORD],
191 0322 2 |     CONT_TYPE: REF VECTOR[1,WORD],
192 0323 2 |     LOG: REF VECTOR[1,WORD],
193 0324 2 |     MAXLIM: REF VECTOR[1,WORD];
194 0325 2 | LOCAL
195 0326 2 |     N; ! Temporary FORTRAN error number for this error
196 0327 2 |
197 0328 2 | !+
198 0329 2 | ! If no FORT_ERR_NO, SIGNAL_STOP FOR$_INVARGFOR (48='INVALID ARGUMENT TO FORTRAN I/O LIBRARY')
199 0330 2 | !-
200 0331 2 |
201 0332 2 | IF NULLPARAMETER (1) THEN FOR$$SIG_NO_LUB (FOR$_INVARGFOR);
202 0333 2 | N = .FORT_ERR_NO[0];
203 0334 2 |
204 0335 2 | !+
205 0336 2 | ! Check range of FORTRAN error number and whether a defined error number
206 0337 2 | !-
207 0338 2 |
208 0339 2 | IF .N GTRU FOR$_MAX_ERR THEN FOR$$SIG_NO_LUB (FOR$_INVARGFOR);
209 0340 2 | IF .COM$$ERR_TAB[.N, V_EC_ANY] EQL 0 THEN FOR$$SIG_NO_LUB (FOR$_INVARGFOR);
210 0341 2 |
211 0342 2 | !+
212 0343 2 | ! Continuation arg - If TRUE, check if allowed to continue
213 0344 2 | ! by making sure either continue or ERR= is allowed.
214 0345 2 | !-
215 0346 2 |
216 0347 2 | IF NOT NULLPARAMETER (2)
217 0348 2 | THEN
218 0349 3 |     BEGIN
219 0350 3 |     COM$$ERR_TAB[.N, V_EC_CONTINUE] = 0;
220 0351 3 |     IF .CONTIN[0]
221 0352 3 |     THEN
222 0353 4 |         BEGIN
223 0354 4 |         IF NOT .COM$$ERR_TAB[.N, V_EC_CONT_ALLOW] AND NOT .COM$$ERR_TAB[.N, V_EC_EREQ_ALLOW]
224 0355 4 |         THEN
225 0356 4 |             FOR$$SIG_NO_LUB (FOR$_INVARGFOR);
226 0357 4 |             COM$$ERR_TAB[.N, V_EC_CONTINUE] = 1;
227 0358 4 |         END
228 0359 2 |     END;
229 0360 2 |
230 0361 2 | !+
231 0362 2 | ! Count control - if present, copy user arg
232 0363 2 | !-
```

```
233 0364 2
234 0365 2 IF NOT NULLPARAMETER (3) THEN COM$ERR_TAB[N, V_EC_COUNT] = .COUNT[0];
235 0366 2
236 0367 2
237 0368 2
238 0369 2
239 0370 2
240 0371 2
241 0372 2
242 0373 2
243 0374 3
244 0375 3
245 0376 3
246 0377 4
247 0378 4
248 0379 4
249 0380 4
250 0381 3
251 0382 4
252 0383 4
253 0384 4
254 0385 4
255 0386 2
256 0387 2
257 0388 2
258 0389 2
259 0390 2
260 0391 2
261 0392 2
262 0393 2
263 0394 2
264 0395 2
265 0396 2
266 0397 2
267 0398 2
268 0399 2
269 0400 2
270 0401 2
271 0402 2
272 0403 2
273 0404 2
274 0405 2
275 0406 2
276 0407 2
277 0408 2
278 0409 2
279 0410 3
280 0411 3
281 0412 3
282 0413 3
283 0414 2
284 0415 2
285 0416 2
286 0417 2
287 0418 2
288 0419 2
289 0420 2

IF NOT NULLPARAMETER (3) THEN COM$ERR_TAB[N, V_EC_COUNT] = .COUNT[0];
!+
! Continuation type - If 1 (ERR=), check if allowed.
! If 0 (continue), check if allowed.
!-

IF NOT NULLPARAMETER (4)
THEN
  BEGIN
  IF .CONT_TYPE[0]
  THEN
    ! User wants ERR=
    BEGIN
    IF NOT .COM$ERR_TAB[N, V_EC_EREQ_ALLOW] THEN FOR$$SIG_NO_LUB (FOR$K_INVARGFOR);
    COM$ERR_TAB[N, V_EC_CONT_TYPE] = 1;
    END
  ELSE
    ! User wants to continue in run-time library
    BEGIN
    IF NOT .COM$ERR_TAB[N, V_EC_CONT_ALLOW] THEN FOR$$SIG_NO_LUB (FOR$K_INVARGFOR);
    COM$ERR_TAB[N, V_EC_CONT_TYPE] = 0;
    END
  END;

!+
! Log control - copy user arg
!-

IF NOT NULLPARAMETER (5) THEN COM$ERR_TAB[N, V_EC_LOG] = .LOG[0];
!+
! Maximum error limit - copy user arg if present
!-

IF NOT NULLPARAMETER (6) THEN COM$ERRORCOUNT = .MAXLIM[0];
!+
! If this error is floating underflow (74)
! Set or clear floating underflow for calling procedure activation,
! depending on whether floating underflow is to be logged or not.
! Note: this is not quite the same as the PDP-11 where the enable
! takes effect for all procedure activations.
!-

IF .N EQL FOR$K_FLOUND
THEN
  BEGIN
  BUILTIN FP: ! Stack frame pointer
  MAP FP: REF BLOCK[, BYTE]; ! Use MDL definitions
  FP [SF$V_FU] = .COM$ERR_TAB [FOR$K_FLOUND, V_EC_LOG];
  END;

!+
! Return
!-

RETURN
```


: 290 0421 1 END: ! End of ERRSET

.TITLE COMSERSET FORTTRAN compatibility error set (ERR
SET)

.IDENT \1-012\

.EXTRN COM\$\$ERR_TAB, COM\$\$ERRORCOUNT
.EXTRN FOR\$\$SIG_NO_LUB

.PSECT _FOR\$CODE, NOWRT, SHR, PIC, 2

			001C 00000	.ENTRY	ERRSET, Save R2,R3,R4	: 0251
54	00000000G	00	9E 00002	MOVAB	FOR\$\$SIG_NO_LUB, R4	
		6C	95 00009	TSTB	(AP)	: 0332
		05	13 0000B	BEQL	1\$	
		04	AC D5 0000D	TSTL	4(AP)	
		05	12 00010	BNEQ	2\$	
		30	DD 00012	PUSHL	#48	
64		01	FB 00014	CALLS	#1, FOR\$\$SIG_NO_LUB	
53		04	BC 3C 00017	MOVZWL	@FORT_ERR_NO, N	: 0333
0000005D		8F	53 D1 0001B	CMPL	N, #93	: 0339
		05	1B 00022	BLEQU	3\$	
		30	DD 00024	PUSHL	#48	
64		01	FB 00026	CALLS	#1, FOR\$\$SIG_NO_LUB	
52	00000000G00	43	9E 00029	MOVAB	COM\$\$ERR_TAB[N], R2	: 0340
		62	95 00031	TSTB	(R2)	
		05	12 00033	BNEQ	4\$	
		30	DD 00035	PUSHL	#48	
64		01	FB 00037	CALLS	#1, FOR\$\$SIG_NO_LUB	
02		6C	91 0003A	CMPB	(AP), #2	: 0347
		1C	1F 0003D	BLSSU	6\$	
		08	AC D5 0003F	TSTL	8(AP)	
		17	13 00042	BEQL	6\$	
62		01	8A 00044	BICB2	#1, (R2)	: 0350
10		08	BC E9 00047	BLBC	@CONTIN, 6\$: 0351
09		05	E0 0004B	BBS	#5, (R2), 5\$: 0354
05		62	E0 0004F	BBS	#6, (R2), 5\$	
		30	DD 00053	PUSHL	#48	: 0356
64		01	FB 00055	CALLS	#1, FOR\$\$SIG_NO_LUB	
62		01	88 00058	BISB2	#1, (R2)	: 0357
03		6C	91 0005B	CMPB	(AP), #3	: 0365
		0B	1F 0005E	BLSSU	7\$	
		0C	AC D5 00060	TSTL	12(AP)	
		06	13 00063	BEQL	7\$	
62	01	01	0C BC F0 00065	INSV	@COUNT, #1, #1, (R2)	
		04	6C 91 0006B	CMPB	(AP), #4	: 0372
		23	1F 0006E	BLSSU	11\$	
		10	AC D5 00070	TSTL	16(AP)	
		1E	13 00073	BEQL	11\$	
0E		10	BC E9 00075	BLBC	@CONT TYPE, 9\$: 0375
05		62	06 E0 00079	BBS	#6, (R2), 8\$: 0378
		30	DD 0007D	PUSHL	#48	
64		01	FB 0007F	CALLS	#1, FOR\$\$SIG_NO_LUB	
62		04	88 00082	BISB2	#4, (R2)	: 0379
		0C	11 00085	BRB	11\$: 0374
05		62	05 E0 00087	BBS	#5, (R2), 10\$: 0383

				30	DD	0008B		PUSHL	#48		
	64			01	FB	0008D		CALLS	#1, FOR\$\$SIG_NO_LUB		
	62			04	8A	00090	10\$:	BICB2	#4, (R2)		0384
	05			6C	91	00093	11\$:	CMPB	(AP), #5		0392
				0B	1F	00096		BLSSU	12\$		
			14	AC	D5	00098		TSTL	20(AP)		
				06	13	0009B		BEQL	12\$		
62		01		14	BC	F0	0009D	INSV	@LOG, #3, #1, (R2)		
				03	06			CMPB	(AP), #6		0398
				06	6C	91	000A3	12\$:			
				0D	1F	000A6		BLSSU	13\$		
				18	AC	D5	000A8	TSTL	24(AP)		
				08	13	000AB		BEQL	13\$		
			00000000G	00	18	BC	3C	000AD	@MAXLIM, COM\$\$ERRORCOUNT		
			00000004A	8F	53	D1	000B5	13\$:			0408
				0F	12	000BC		CMPB	N, #74		
				03	EF	000BE		BNEQ	14\$		
04	50	00000000G	00	01	03	EF	000BE	EXTZV	#3, #1, COM\$\$ERR_TAB+74, R0		0413
	AE		01	06	50	F0	000C7	INSV	R0, #6, #1, 4(FP)		
					04	000CD	14\$:	RET			0421

: Routine Size: 206 bytes, Routine Base: _FOR\$CODE + 0000

```

: 291      0422  1
: 292      0423  1
: 293      0424  1 END
: 294      0425  0 ELUDOM

```

PSECT SUMMARY

Name	Bytes	Attributes
_FOR\$CODE	206	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	6	0	581	00:01.0
-\$255\$DUA28:[FORRTL.OBJ]FORLIB.L32;1	711	3	0	52	00:00.6
-\$255\$DUA28:[FORRTL.OBJ]RTLLIB.L32;1	36	0	0	8	00:00.1

COMMAND QUALIFIERS

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

: Size: 206 code + 0 data bytes
: Run Time: 00:07.9
: Elapsed Time: 00:29.0
: Lines/CPU Min: 3244
: Lexemes/CPU-Min: 14511
: Memory Used: 105 pages
: Compilation Complete

