



.....

```

GGGGGGGG  FEEEEEEEE  TTTTTTTTT  LL          IIIIII  NN      NN
GGGGGGGG  FEEEEEEEE  TTTTTTTTT  LL          IIIIII  NN      NN
GG          FE          TT          LL          II          NN      NN
GG          FE          TT          LL          II          NN      NN
GG          FE          TT          LL          II          NNNN     NN
GG          FE          TT          LL          II          NNNN     NN
GG          FEEEEEEEE  TT          LL          II          NN      NN
GG          FEEEEEEEE  TT          LL          II          NN      NN
GG          FE          TT          LL          II          NN      NN
GG          FE          TT          LL          II          NN      NN
GG          FE          TT          LL          II          NN      NN
GG          FE          TT          LL          II          NN      NN
GG          FE          TT          LL          II          NN      NN
GGGGGGGG  FEEEEEEEE  TT          LLLLLLLLLL IIIIII  NN      NN
GGGGGGGG  FEEEEEEEE  TT          LLLLLLLLLL IIIIII  NN      NN

```

```

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

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....  
....  
....  
....

```

1 0001 0 MODULE getlin ( IDENT = 'Y04-000'
2 P 0002 0 %BLISS32[, ADDRFSING_MODE (EXTERNAL = LONG_RELATIVE,
3 0003 0 ) =
4 0004 0
5 0005 1 BEGIN
6 0006 1
7 0007 1
8 0008 1 *****
9 0009 1 *
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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: DSR (Digital Standard RUNOFF) / DSRPLUS
34 0034 1
35 0035 1 ABSTRACT: Picks up a line of text and centers it for output.
36 0036 1
37 0037 1 ENVIRONMENT: Transportable
38 0038 1
39 0039 1 AUTHOR: R.W.Friday CREATION DATE: July, 1978
40 0040 1
41 0041 1

```

Revision History

43	0042	1	%SBTTL 'Revision History'
44	0043	1	
45	0044	1	MODIFIED BY:
46	0045	1	
47	0046	1	005 KFA00005 Ken Alden 16-Mar-1983
48	0047	1	PUSH/POP_SCA now visible to DSR.
49	0048	1	
50	0049	1	004 RER00004 Ron Randall 07-Mar-1983
51	0050	1	Global edit of all modules. Updated module names, idents,
52	0051	1	copyright dates. Changed require files to BLISS library.
53	0052	1	
54	0053	1	--
55	0054	1	

Module Level Declarations

```

57 0055 1 %SBTTL 'Module Level Declarations'
58 0056 1
59 0057 1
60 0058 1 : TABLE OF CONTENTS:
61 0059 1
62 0060 1 : INCLUDE FILES:
63 0061 1
64 0062 1 LIBRARY 'NXPOR:XPORT';           ! XPORT Library
65 0063 1 REQUIRE 'REQ:RNODEF';         ! RUNOFF variant definitions
66 0194 1
67 U 0195 1 %IF DSRPLUS %THEN
68 U 0196 1 LIBRARY 'REQ:DPLLIB';         ! DSRPLUS BLISS Library
69 0197 1 %ELSE
70 0198 1 LIBRARY 'REQ:DSRLIB';         ! DSR BLISS Library
71 0199 1 %FI
72 0200 1
73 0201 1
74 0202 1 : EXTERNAL REFERENCES:
75 0203 1
76 0204 1 EXTERNAL LITERAL
77 0205 1     RINTES : UNSIGNED (8);
78 0206 1
79 0207 1 EXTERNAL
80 0208 1     GCA : GCA_DEFINITION,
81 0209 1     MRA : REF_FIXED_STRING,
82 0210 1     SCA : SCA_DEFINITION,
83 0211 1     TSF : TSF_DEFINITION,
84 0212 1     TTABLE : COUNTED_LIST;
85 0213 1
86 0214 1 EXTERNAL ROUTINE
87 0215 1     ENDCHR,
88 0216 1     ENDWRD,
89 0217 1     ERMA,
90 0218 1     ERML,
91 0219 1     OUTNJ,
92 0220 1     SCANT,
93 0221 1     SETCAS;
94 0222 1
95 0223 1 EXTERNAL LITERAL           !Error messages
96 0224 1     RNFCJL,
97 0225 1     RNFTTL;
98 0226 1
99 0227 1
100 0228 1 : OWN STORAGE:
101 0229 1
102 0230 1 OWN
103 0231 1     PP_SCA : $H_R_SCA_BLOCK;    !Used in PUSH_SCA, POP_SCA macros (defined in SCA.REQ).

```

```

: 105 0232 1 GLOBAL ROUTINE GETLIN (PRESCAN, DO_CASE, TRANSLATION, DO_OUTPUT) : NOVALUE =
: 106 0233 1
: 107 0234 1 !++
: 108 0235 1 FUNCTIONAL DESCRIPTION:
: 109 0236 1
: 110 0237 1     Starting with the current position, GETLIN parses up to
: 111 0238 1     the first ';' or end-of-line; the resulting line is
: 112 0239 1     centered and output.
: 113 0240 1
: 114 0241 1 FORMAL PARAMETERS:
: 115 0242 1
: 116 0243 1     PRESCAN           - If true, scanning stops when the first '.'
: 117 0244 1                     is found. Otherwise, scanning goes to the
: 118 0245 1                     end of the record.
: 119 0246 1     DO_CASE           - If true, then TRANSLATION indicates which
: 120 0247 1                     case rules are to be applied.
: 121 0248 1     TRANSLATION       -
: 122 0249 1     DO_OUTPUT         - If true, then output the scanned text,
: 123 0250 1                     else, skip output related code.
: 124 0251 1
: 125 0252 1 IMPLICIT INPUTS:      None
: 126 0253 1
: 127 0254 1 IMPLICIT OUTPUTS:     None
: 128 0255 1
: 129 0256 1 ROUTINE VALUE:
: 130 0257 1 COMPLETION CODES:     None
: 131 0258 1
: 132 0259 1 SIDE EFFECTS:         None
: 133 0260 1 --
: 134 0261 1
: 135 0262 2 BEGIN
: 136 0263 2 LOCAL
: 137 0264 2     HOLD_TAB_COUNT,
: 138 0265 2     SCA_HOLD: VECTOR [SCA_SIZE];
: 139 0266 2
: 140 0267 2     !Preserve SCA so flags in text don't cause changes
: 141 0268 2     !to the formatting environment.
: 142 0269 2
: 143 0270 2 PUSH_SCA: !Save the Special SAVED SCA bits.
: 144 0271 2
: 145 0272 2 INCR I FROM 0 TO SCA_SIZE - 1 DO
: 146 0273 2     SCA_HOLD [I] = SCA [I];
: 147 0274 2
: 148 0275 2     !Set up SCA so SCANT preserves white space; lots of room
: 149 0276 2     !is provided so a new line doesn't get started unless
: 150 0277 2     !the user makes an error.
: 151 0278 2 SCA_FILL = FALSE;
: 152 0279 2 SCA_JUSTIFY = FALSE;
: 153 0280 2 SCA_LM = 0;
: 154 0281 2 SCA_RM = 150; !Maximum width line.
: 155 0282 2 SCA_PRESCAN = .PRESCAN; !Indicate when processing stops.
: 156 0283 2
: 157 0284 2 IF .DO_CASE
: 158 0285 2 THEN
: 159 0286 2     SETCAS (.TRANSLATION); !Establish specified case rules.
: 160 0287 2
: 161 0288 2     !Preserve tab count; temporarily set it to zero

```

```

: 162 0289 2      !so tabs get treated like spaces.
: 163 0290 2      HOLD TAB COUNT = .TTABLE [CL_INDEX];
: 164 0291 2      TTABCE [CL_INDEX] = 0;
: 165 0292 2
: 166 0293 2      SCANT ();      !Scan one input line.
: 167 0294 2
: 168 0295 2      ! Drop trailing spaces, unless at least one of them is
: 169 0296 2      ! underlined.  SCA_WRD_CPEND is equal to RINTES if a space/tab
: 170 0297 2      ! was encountered after the last character on the line.
: 171 0298 2
: 172 0299 2      IF .SCA_WRD_CPEND EQL RINTES
: 173 0300 2      THEN
: 174 0301 2
: 175 0302 2      IF .SCA_WRD_LST_UND EQL 0
: 176 0303 2      THEN
: 177 0304 2      !None of the trailing spaces were underlined.
: 178 0305 2      !This means that it is safe to drop them.
: 179 0306 2      SCA_WRD_LST_SP = 0;
: 180 0307 2
: 181 0308 2      !The call on ENDWRD is made here, rather than letting
: 182 0309 2      !OUTNJ do it.  The reason it's done here is so that
: 183 0310 2      !TSF_EXT_HL gets updated, so that the length of the
: 184 0311 2      !text can be obtained.
: 185 0312 2      ENDWRD (FALSE, FALSE, FALSE);
: 186 0313 2
: 187 0314 2      !Check to see that the text retrieved is not too long
: 188 0315 2      IF .TSF_EXT_HL GTR .GCA_LWIDTH
: 189 0316 2      THEN
: 190 0317 2      BEGIN
: 191 0318 2      ERMA (RNFTTL, FALSE);      !Text cannot possibly be centered
: 192 0319 2      TSF_EXT_HL = 0;      !Fix up TSF_EXT_HL. The entire line still gets printed.
: 193 0320 2      END;
: 194 0321 2
: 195 0322 2      !Restore SCA so actual margins can be used.
: 196 0323 2      INCR I FROM SCA_CASE_SIZE TO SCA_SIZE - 1 DO      !NOTE: modified case rules 'play through'.
: 197 0324 2      SCA [I] = .SCA_HOLD [I];
: 198 0325 2
: 199 0326 2      POP_SCA;      !Restore the special SAVED SCA bits.
: 200 0327 2
: 201 0328 2      TTABLE [CL_INDEX] = .HOLD_TAB_COUNT;      !Restore tab count
: 202 0329 2
: 203 0330 2      IF NOT .DO_OUTPUT      ! If output was not wanted,
: 204 0331 2      THEN RETURN;      ! it best we return now.  Otherwise, proceeding
: 205 0332 2      ! beyond here will generate output.
: 206 0333 2
: 207 0334 2      !Compute and validate number of spaces that have to
: 208 0335 2      !be inserted on the left to center the line
: 209 0336 2      TSF_ADJUST = .SCA_LM + (.SCA_RM - .SCA_LM - .TSF_EXT_HL)/2;
: 210 0337 2
: 211 0338 2      IF .TSF_ADJUST LSS 0
: 212 0339 2      THEN
: 213 0340 2      BEGIN
: 214 0341 2      ERML (RNFCJL);      !It's not possible to center the line.
: 215 0342 2      TSF_ADJUST = 0;      !Setting tsf_adjust to zero causes the line
: 216 0343 2      END;      !to go out against the left edge of the page.
: 217 0344 2
: 218 0345 2      !Force out the line of text

```

: 219  
: 220

0346 2 OUTNJ ();  
0347 1 END;

!End of GETLIN

.TITLE GETLIN  
.IDENT \V04-000\  
.PSECT \$OWNS,NOEXE,2  
00000 PP\_SCA: .BLKB 48  
.EXTRN RINTES, GCA, MRA  
.EXTRN SCA, TSF, TTABLE  
.EXTRN ENDCHR, ENDWRD, ERMA  
.EXTRN ERML, OUTNJ, SCANT  
.EXTRN SETCAS, RNFCJL, RNFTTL  
.PSECT \$CODE\$,NOWRT,2

				007C 00000	.ENTRY GETLIN, Save R2,R3,R4,R5,R6	0232
	56	00000000G	EF	9E 00002	MOVAB TTABLE+4, R6	
	55	00000000G	EF	9E 00009	MOVAB TSF, R5	
	54	00000000'	EF	9E 00010	MOVAB PP_SCA, R4	
	53	00000000G	EF	9E 00017	MOVAB SCA+116, R3	
	5E	FE80	CE	9E 0001E	MOVAB -384(SP), SP	
	64	F0	B3	D0 00023	MOVL @SCA+100, PP_SCA	0265
04	A4	F4	B3	D0 00027	MOVL @SCA+104, PP_SCA+4	
08	A4	F8	B3	D0 0002C	MOVL @SCA+108, PP_SCA+8	
0C	A4	FC	B3	D0 00031	MOVL @SCA+112, PP_SCA+12	
10	A4	00	B3	D0 00036	MOVL @SCA+116, PP_SCA+16	
14	A4	04	B3	D0 0003B	MOVL @SCA+120, PP_SCA+20	
18	A4	08	B3	D0 00040	MOVL @SCA+124, PP_SCA+24	
1C	A4	0C	B3	D0 00045	MOVL @SCA+128, PP_SCA+28	
20	A4	10	B3	D0 0004A	MOVL @SCA+132, PP_SCA+32	
24	A4	14	B3	D0 0004F	MOVL @SCA+136, PP_SCA+36	
28	A4	18	B3	D0 00054	MOVL @SCA+140, PP_SCA+40	
2C	A4	1C	B3	D0 00059	MOVL @SCA+144, PP_SCA+44	
			50	D4 0005E	CLRL I	0272
	6E40	8C	A340	D0 00060 1\$:	MOVL SCA[I], SCA_HOLD[I]	0273
F2	50	0000005F	8F	F3 00066	AOBLEQ #95, I, 1\$	
		F4	B3	D4 0006E	CLRL @SCA+104	0278
		F0	B3	D4 00071	CLRL @SCA+100	0279
		00	B3	D4 00074	CLRL @SCA+116	0280
04	B3	96	8F	9A 00077	MOVZBL #150, @SCA+120	0281
38	A3	04	AC	D0 0007C	MOVL PRESCAN, SCA+172	0282
	0A	08	AC	E9 00081	BLBC DO CASE, 2\$	0284
		0C	AC	DD 00085	PUSHL TRANSLATION	0286
	00000000G	EF	01	FB 00088	CALLS #1, SETCAS	
		52	66	D0 0008F 2\$:	MOVL TTABLE+4, HOLD_TAB_COUNT	0290
			66	D4 00092	CLRL TTABLE+4	0291
	00000000G	EF	00	FB 00094	CALLS #0, SCANT	0293
	00000000G	8F	C3	D1 0009B	CMPD SCA+280, #RINTES	0299
		JJA4	0A	12 000A4	BNEQ 3\$	
		00E0	C3	D5 000A6	TSTL SCA+340	0302
		00D8	04	12 000AA	BNEQ 3\$	
			C3	D4 000AC	CLRL SCA+332	0306
			7E	7C 000B0 3\$:	CLRL -(SP)	0312



				7E D4 000B2	CLRL	-(SP)	
	00000000G	EF		03 FB 000B4	CALLS	#3, ENDWRD	
		50		65 D0 000BB	MOVL	TSF, R0	0315
	00000000G	FF	04	A0 D1 000BE	CMP	4(R0), @GCA+140	
				15 15 000C6	BLEQ	4\$	
				7E D4 000C8	CLRL	-(SP)	0318
	00000000G	EF	00000000G	8F DD 000CA	PUSHL	#RNFTTL	
		50		02 FB 000D0	CALLS	#2, ERMA	
				65 D0 000D7	MOVL	TSF, R0	
			04	A0 D4 000DA	CLRL	4(R0)	0319
		50		19 D0 000DD	MOVL	#25, I	0323
	F2	8C A340		6E40 D0 000E0	MOVL	SCA_HOLD[ I ], SCA[ I ]	0324
		50	0000005F	8F F3 000E6	AOBLEQ	#95, I, 5\$	
		F0 B3		64 D0 000EE	MOVL	PP_SCA, @SCA+100	
		F4 B3	04	A4 D0 000F2	MOVL	PP_SCA+4, @SCA+104	
		F8 B3	08	A4 D0 000F7	MOVL	PP_SCA+8, @SCA+108	
		FC B3	0C	A4 D0 000FC	MOVL	PP_SCA+12, @SCA+112	
		00 B3	10	A4 D0 00101	MOVL	PP_SCA+16, @SCA+116	
		04 B3	14	A4 D0 00106	MOVL	PP_SCA+20, @SCA+120	
		08 B3	18	A4 D0 0010B	MOVL	PP_SCA+24, @SCA+124	
		0C B3	1C	A4 D0 00110	MOVL	PP_SCA+28, @SCA+128	
		10 B3	20	A4 D0 00115	MOVL	PP_SCA+32, @SCA+132	
		14 B3	24	A4 D0 0011A	MOVL	PP_SCA+36, @SCA+136	
		18 B3	28	A4 D0 0011F	MOVL	PP_SCA+40, @SCA+140	
		1C B3	2C	A4 D0 00124	MOVL	PP_SCA+44, @SCA+144	
		66		52 D0 00129	MOVL	HOLD TAB COUNT, TTABLE+4	0328
		32	10	AC E9 0012C	BLBC	DO OUTPUT, 7\$	0330
		50		65 D0 00130	MOVL	TSF, R0	0331
	51	04 B3	00	B3 C3 00133	SUBL3	@SCA+116, @SCA+120, R1	0336
		51	04	A0 C2 00139	SUGL2	4(R0), R1	
		51		02 C6 0013D	DIVL2	#2, R1	
	28	A0 B3	00	B3 C1 00140	ADDL3	@SCA+116, R1, 40(R0)	
				13 18 00146	BGEQ	6\$	0338
			00000000G	8F DD 00148	PUSHL	#RNFCJL	0341
	00000000G	EF		01 FB 0014E	CALLS	#1, ERML	
		50		65 D0 00155	MOVL	TSF, R0	
			28	A0 D4 00158	CLRL	40(R0)	0342
	00000000G	EF		00 FB 0015B	CALLS	#0, OUTNJ	0346
				04 00162	RET	7\$:	0347

; Routine Size: 355 bytes, Routine Base: \$CODE\$ + 0000

```

: 221      0348 1
: 222      0349 1 END      !End of module
: 223      0350 0 ELUDOM

```

PSECT SUMMARY

Name	Bytes	Attributes
\$OWNS	48	NOVEC, WRT, RD ,NOEXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)

GETLIN  
V04-000

Module Level Declarations

M 2  
16-Sep-1984 00:39:00  
14-Sep-1984 13:06:31

VAX-11 Bliss-32 V4.0-742  
[RUNOFF.SRC]GETLIN.BLI;1

Page 8  
(4)

: \$CODES 355 NOVEC,NOWRT, RD , EXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)

Library Statistics

File	----- Total	Symbols Loaded	----- Percent	Pages Mapped	Processing Time
_\$255\$DUA28:[SYSLIB]XPORT.L32;1	590	0	0	252	00:00.2
_\$255\$DUA28:[RUNOFF.SRC]DSRLIB.L32;1	1248	47	3	86	00:00.3

COMMAND QUALIFIERS

: BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS\$:GETLIN/OBJ=OBJ\$:GETLIN MSRC\$:GETLIN/UPDATE=(ENHS:GETLIN)

: Size: 355 code + 48 data bytes  
: Run Time: 00:09.6  
: Elapsed Time: 00:28.8  
: Lines/CPU Min: 2185  
: Lexemes/CPU-Min: 18293  
: Memory Used: 95 pages  
: Compilation Complete



GETQC  
LIS

GNAME  
LIS

INDEX  
LIS

GLBDAT  
LIS

GETLIN  
LIS

GETONE  
LIS

LAYOUT  
LIS

GTABS  
LIS

GLNM  
LIS

GETQS  
LIS

IFIFNE  
LIS

GETDD  
LIS

GSLU  
LIS

LIT  
LIS

LIST  
LIS

GETNUM  
LIS

HEADER  
LIS