

./TITLE LP15  
./LINE PRINTER SYSTEM EXECISER MODULE,  
./REV, DATE -- 3/17/71 -- (1)

./EBREL

00000 R 600016 A  
00001 R 000000 A  
00002 R 000000 A  
00003 R 000000 A  
00004 R 000072 R  
00005 R 000032 R  
00006 R 142061 A  
00007 R 650340 A  
00010 R 000100 A  
00011 R A

UQDSW 600016  
0  
0  
0  
./DSA LPTSER  
./DSA LPTINT  
./SIXBT "LP15C "

100 /MASK FOR CHAIN MODE  
./BLOCK 7

00020 R 000000 A  
00021 R 000000 A  
00022 R 000000 A  
00023 R A

./SYSERR 0  
./ERWC 0  
./ERCODE 0  
./BLOCK 7

./INITIATION ROUTINE, ENTERED FROM MONITOR,

00032 R 000000 A  
00033 R 707764 A  
00034 R 707702 A  
00035 R 200032 R  
00036 R 040072 R  
00037 R 440602 R  
00040 R 600560 R  
00041 R 777777 A  
00042 R 040602 R  
00043 R 706621 A  
00044 R 706641 A  
00045 R 141316 R  
00046 R 141317 R  
00047 R 140020 R  
00050 R 140021 R  
00051 R 777770 A  
00052 R 041327 R  
00053 R 100551 R  
00054 R 100300 R  
00055 R 100551 R  
00056 R 100322 R  
00057 R 100551 R  
00060 R 100524 R  
00061 R 100551 R  
00062 R 100466 R  
00063 R 100551 R  
00064 R 100405 R  
00065 R 100551 R  
00066 R 100412 R  
00067 R 441327 R  
00070 R 600053 R

./LPTINT 0  
EBA  
EEM  
LAC LPTINT  
DAC LPTSER  
ISZ SWITCH  
JMP OUTEX  
LAW -1  
DAC SWITCH  
CLF  
CLE  
DZM APIFLG#  
DZM BRKFLG#  
DZM SYSERR  
DZM ERWC  
LAW -TSTRUN  
DAC RUNLEN#  
LPTIN1 JMS PRTRFF  
JMS LFWD  
JMS PRTRFF  
JMS RTWD  
JMS PRTRFF  
JMS BUFSNG  
JMS PRTRFF  
JMS PRTRQI  
JMS PRTRFF  
JMS IOPPRT  
JMS PRTRFF  
JMS PLSPRT  
ISZ RUNLEN  
JMP LPTIN1

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00071 R 600111 R

JMP TERMIN  
EJECT

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/SERVICE ENTRANCE FROM THE MONITOR,
00072 R 000000 A LPTSER 0 /SERVICE ENTRANCE,
00073 R 707764 A EBA
00074 R 707702 A EEM
00075 R 100161 R JMS FLAG
00076 R 620077 R JMP* EXIT

/
EXIT 0 /ROUTINE FOR EXIT TO THE MONITOR,
00100 R 201316 R LAC APIFLG
00101 R 741200 A SNA
00102 R 600107 R JMP ,+5
00103 R 141316 R DZM APIFLG
00104 R 201315 R LAC ACSAVE#
00105 R 703344 A DBR
00106 R 620072 R JMP* LPTSER
00107 R 750000 A CLA
00110 R 600105 R JMP ,=3

/
TERMIN LAC SYSERR /TERMINATE ROUTINE,
00111 R 200020 R SNA
00112 R 741200 A DZM ERWC
00113 R 140021 R LAW =4
00114 R 777774 A DAC SYSERR
00115 R 040020 R DZM BRKFLG
00116 R 141317 R JMS EXIT
00117 R 100077 R HLT
00120 R 740040 A

/
/MONITOR EXIT ROUTINE - EXPECTS FLAG DRIVEN RETURN,
/
MONEXT 0
00121 R 000000 A DZM BRKFLG
00122 R 141317 R JMS EXIT
00123 R 100077 R JMP* MONEXT

/
/BREAK EXIT TO THE MONITOR,
/
BRKEXT 0
00125 R 000000 A LAC SYSERR
00126 R 200020 R SZA
00127 R 740200 A JMP ,+4
00130 R 600134 R DZM ERWC
00131 R 140021 R LAW =5
00132 R 777773 A SKP
00133 R 741000 A LAW =2
00134 R 777776 A DAC SYSERR
00135 R 040020 R LAW =1
00136 R 777777 A DAC BRKFLG
00137 R 041317 R JMS EXIT
00140 R 100077 R JMP* BRKEXT
00141 R 620125 R ,EJECT

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/HOLD SUBROUTINE, HOLD ON OPTION SWITCH SET,
00142 R 000000 A HOLD 0
00143 R 750004 A LAS
00144 R 500010 R AND UODSW+10
00145 R 741200 A SNA
00146 R 620142 R JMP* HOLD
00147 R 100125 R JMS BRKEXT
00150 R 600143 R JMP ,=5

/PRINT EXIT ROUTINE,
00151 R 000000 A PRT 0
00152 R 201335 R LAC (BUF=1
00153 R 060567 R DAC* SYSCA
00154 R 100142 R JMS HOLD
00155 R 706541 A LPC
00156 R 706544 A PIE
00157 R 100121 R JMS MONEXT
00160 R 620151 R JMP* PRT

/FLAG CHECK ROUTINE USED ON RETURN FROM MONITOR,
/
00161 R 000000 A FLAG 0
00162 R 041315 R DAC ACSAVE
00163 R 201336 R LAC (400000
00164 R 705501 A SPI
00165 R 600203 R JMP APIOFF
00166 R 777777 A LAW =1
00167 R 041316 R DAC APIFLG
00170 R 706501 A LSF
00171 R 600274 R JMP ER1+1

/
FLAG1
00172 R 706561 A PID
00173 R 141317 R DZM BRKFLG
00174 R 750000 A CLA
00175 R 706542 A LSE
00176 R 706621 A CLF
00177 R 706641 A CLE
00200 R 741100 A SPA
00201 R 100220 R JMS ER2
00202 R 620161 R JMP* FLAG

/
APIOFF
00203 R 706501 A LSF
00204 R 741000 A SKP
00205 R 600172 R JMP FLAG1
00206 R 201317 R LAC BRKFLG
00207 R 741200 A SNA
00210 R 600216 R JMP ,+6
00211 R 200020 R LAC SYSERR
00212 R 740200 A SZA
00213 R 600216 R JMP ,+3
00214 R 141317 R DZM BRKFLG
00215 R 620161 R JMP* FLAG
00216 R 750001 A CLC
00217 R 620072 R JMP* LPTSER
,EJECT

```

/ERROR ROUTINES,  
 /ERROR 2, FLAG ERROR FROM PRINTER CONTROL,  
 ER2

```

00220 R 000000 A
00221 R 041321 R DAC ER2TMP#
00222 R 201337 R LAC (2)
00223 R 100233 R JMS RESPUT
00224 R 201321 R LAC ER2TMP
00225 R 100257 R JMS PUT
00226 R 200603 R LAC BUF
00227 R 100257 R JMS PUT
00230 R 100264 R JMS ENDPUT
00231 R 140602 R DZM SWITCH
00232 R 600111 R JMP TERMIN
  
```

/RESET ERROR PUT AWAY ROUTINE,  
 /

```

00233 R 000000 A RESPUT 0
00234 R 041326 R DAC RESTMP#
00235 R 200020 R LAC SYSERR
00236 R 741200 A SNA
00237 R 600243 R JMP RESP,2
00240 R 541340 R SAD (=1)
00241 R 600251 R JMP RESP,1
00242 R 740040 A HLT
  
```

```

RESP,2 LAC RESTMP
DAC ERCODE
LAC (ERCODE+1)
DAC PUT,1
DZM PUT,2
JMP* RESPUT
RESP,1 LAW =2
DAC SYSERR
LAW =1
DAC BRKFLG
JMS EXIT
JMP RESP,2
  
```

/PUTAWAY ROUTINE FOR ERROR PRAMETERS,  
 /

```

00257 R 000000 A PUT 0
00260 R 061324 R DAC* PUT,1#
00261 R 441324 R ISZ PUT,1
00262 R 441325 R ISZ PUT,2#
00263 R 620257 R JMP* PUT
  
```

/END PUT AWAY ROUTINE  
 /

```

00264 R 000000 A ENDPUT 0
00265 R 201325 R LAC PUT,2
00266 R 740001 A CMA
00267 R 040021 R DAC ERWC
00270 R 777777 A LAW =1
00271 R 040020 R DAC SYSERR
00272 R 620264 R JMP* ENDPUT
  
```

.EJECT

/ERROR 1 - ERROR ROUTINE FOR API ERROR,

```

/ER1
00273 R 000000 A ER1 0
00274 R 201342 R LAC (1
00275 R 100233 R JMS RESPUT
00276 R 100264 R JMS ENDPUT
00277 R 600111 R JMP TERMIN

```

/LEFT WEDGE ROUTINE,

```

/LFWD
00300 R 000000 A LFWD 0
00301 R 100350 R JMS BUFCLR
00302 R 201342 R LAC (1)
00303 R 040603 R DAC BUF
00304 R 201343 R LAC (BUF+205
00305 R 041320 R DAC BUFPTR#

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/LFWD,1
00306 R 100151 R LFWD,1 JMS PRT
00307 R 200572 R LAC LF
00310 R 061320 R DAC* BUFPTR
00311 R 201320 R LAC BUFPTR
00312 R 341340 R TAD (-1)
00313 R 041320 R DAC BUFPTR
00314 R 740001 A CMA
00315 R 341342 R TAD (1)
00316 R 341344 R TAD (BUF+1
00317 R 740200 A SZA
00320 R 600306 R JMP LFWD,1
00321 R 620300 R JMP* LFWD

```

/RIGHT WEDGE PRINT ROUTINE,

```

/RTWD
00322 R 000000 A RTWD 0
00323 R 100350 R JMS BUFCLR
00324 R 201342 R LAC (1)
00325 R 040603 R DAC BUF
00326 R 201345 R LAC (BUF+2)
00327 R 041320 R DAC BUFPTR
00330 R 777574 A LAW -204
00331 R 041330 R DAC TEMP

```

```

/RTWD,1
00332 R 100151 R RTWD,1 JMS PRT
00333 R 200573 R LAC SPC
00334 R 061320 R DAC* BUFPTR
00335 R 441320 R ISZ BUFPTR
00336 R 441330 R ISZ TEMP
00337 R 600332 R JMP RTWD,1
00340 R 620322 R JMP* RTWD
      .EJECT

```

00341 R 000000 A  
00342 R 777704 A  
00343 R 041330 R  
00344 R 100151 R  
00345 R 441330 R  
00346 R 600344 R  
00347 R 620341 R

PAGPRT 0  
LAW -74  
DAC TEMP  
JMS PRT  
ISZ TEMP  
JMP -2  
JMP# PAGPRT  
/CLEAR BUFFER TO A SINGLE CHARACTER,  
/

00350 R 000000 A  
00351 R 201345 R  
00352 R 041330 R  
00353 R 777574 A  
00354 R 041331 R  
00355 R 200570 R  
00356 R 061330 R  
00357 R 441330 R  
00360 R 441331 R  
00361 R 600356 R  
00362 R 200572 R  
00363 R 061330 R  
00364 R 620350 R

BUFCLR 0  
LAC (BUF+2  
DAC TEMP#  
LAW -204  
DAC TEMP1#  
LAC CHAR  
DAC# TEMP  
ISZ TEMP  
ISZ TEMP1  
JMP -3  
LAC LF  
DAC# TEMP  
JMP# BUFCLR

00365 R 000000 A  
00366 R 201345 R  
00367 R 041330 R  
00370 R 777746 A  
00371 R 041331 R  
00372 R 200574 R  
00373 R 061330 R  
00374 R 441330 R  
00375 R 200575 R  
00376 R 061330 R  
00377 R 441330 R  
00400 R 441331 R  
00401 R 600372 R  
00402 R 200576 R  
00403 R 061330 R  
00404 R 620365 R

BUFESP 0  
LAC (BUF+2  
DAC TEMP  
LAW -32  
DAC TEMP1  
LAC ESP1  
DAC# TEMP  
ISZ TEMP  
LAC ESP2  
DAC# TEMP  
ISZ TEMP  
ISZ TEMP1  
JMP -7  
LAC IOPSLF  
DAC# TEMP  
JMP# BUFESP  
.EJECT

/IOPS MODE PRINT -- PRINT EES AND SPACES,

00405 R 000000 A  
00406 R 140603 R  
00407 R 100365 R  
00410 R 100341 R  
00411 R 620405 R

IOPPRT 0  
DZM BUF  
JMS BUFESP  
JMS PAGPRT  
JMP\* IOPPRT

/EXCLAMATION POINT FOLLOWED BY PLUS SIGN PRINT,  
/THIS PATTERN PRODUCES HIGH SPEED PRINT,

00412 R 000000 A  
00413 R 201342 R  
00414 R 040603 R  
00415 R 100420 R  
00416 R 100341 R  
00417 R 620412 R

PLSPRT 0  
LAC (1)  
DAC BUF  
JMS BUFPLS  
JMS PAGPRT  
JMP\* PLSPRT

/CLEAR BUFFER FOR EXCLAMATION AND PLUS PRINT,

00420 R 000000 A  
00421 R 201345 R  
00422 R 041330 R  
00423 R 777773 A  
00424 R 041332 R  
00425 R 200601 R  
00426 R 041334 R  
00427 R 777750 A  
00430 R 041331 R  
00431 R 201334 R  
00432 R 061330 R  
00433 R 441330 R  
00434 R 441331 R  
00435 R 600432 R  
00436 R 201334 R  
00437 R 341346 R  
00440 R 041334 R  
00441 R 441332 R  
00442 R 600427 R  
00443 R 200572 R  
00444 R 061330 R  
00445 R 620420 R

BUFPLS 0  
LAC (BUF+2  
DAC TEMP  
LAW =5  
DAC TEMP2#  
LAC EXCLM  
DAC TEMP4#  
BUFPL1 LAW =30  
DAC TEMP1  
LAC TEMP4  
BUFPL4 DAC\* TEMP  
ISZ TEMP  
ISZ TEMP1  
JMP BUFPL4  
LAC TEMP4  
TAD (12)  
DAC TEMP4  
ISZ TEMP2  
JMP BUFPL1  
LAC LF  
DAC\* TEMP  
JMP\* BUFPLS  
.EJECT



/PRINT ROTATING PATTERN...

```

00446 R 000000 A   BUFROT 0
00447 R 777773 A   LAW      =5
00450 R 041330 R   DAC      TEMP
00451 R 201345 R   LAC      (BUF+2
00452 R 041331 R   DAC      TEMP1
00453 R 777700 A   LAW      =100
00454 R 041332 R   DAC      TEMP2#
00455 R 200573 R   LAC      SPC
00456 R 061331 R   DAC*     TEMP1
00457 R 341342 R   TAD      (1)
00460 R 441331 R   ISZ      TEMP1
00461 R 441332 R   ISZ      TEMP2
00462 R 600456 R   JMP      ,=4
00463 R 441330 R   ISZ      TEMP
00464 R 600453 R   JMP      ,=11
00465 R 620446 R   JMP*    BUFROT
    
```

/ACTUAL PRINT ROTATING PATTERN ROUTINE,

```

00466 R 000000 A   PRTRT 0
00467 R 100446 R   JMS     BUFROT
00470 R 201347 R   LAC     (BUF
00471 R 041332 R   DAC     TEMP2
00472 R 777574 A   LAW     =204
00473 R 041331 R   DAC     TEMP1
00474 R 201335 R   LAC     (BUF-1
00475 R 041320 R   DAC     BUFPTR
00476 R 201350 R   LAC     (BUF+206
00477 R 041322 R   DAC     LFPTR#
00500 R 221322 R   PRTRT1 LAC*   LFPTR
00501 R 041323 R   DAC     LFSAV#
00502 R 200572 R   LAC     LF
00503 R 061322 R   DAC*   LFPTR
00504 R 201342 R   LAC     (1)
00505 R 061332 R   DAC*   TEMP2
00506 R 201320 R   LAC     BUFPTR
00507 R 060567 R   DAC*   SYSCA
00510 R 100142 R   JMS     HOLD
00511 R 706541 A   LPC
00512 R 706544 A   PIE
00513 R 100121 R   JMS     MONEXT
00514 R 201323 R   LAC     LFSAV
00515 R 061322 R   DAC*   LFPTR
00516 R 441322 R   ISZ     LFPTR
00517 R 441320 R   ISZ     BUFPTR
00520 R 441332 R   ISZ     TEMP2
00521 R 441331 R   ISZ     TEMP1
00522 R 600500 R   JMP     PRTRT1
00523 R 620466 R   JMP*   PRTRT
    ,EJECT
    
```

/PRINT SINGLE LINES OF ALL THE SAME CHARACTERS,

```

00524 R 000000 A   /
00525 R 201342 R   BUFSNG  0
00526 R 040603 R   LAC      (1)
00527 R 777700 A   DAC      BUF
00530 R 041330 R   LAW      =100
00531 R 200573 R   DAC      TEMP
00532 R 041333 R   LAC      SPC
00533 R 201345 R   DAC      TEMP3#
00534 R 041331 R   BUFSN1  LAC      (BUF+2)
00535 R 777574 A   DAC      TEMP1
00536 R 041332 R   LAW      =204
00537 R 201333 R   DAC      TEMP2
00540 R 061331 R   LAC      TEMP3
00541 R 441331 R   DAC*     TEMP1
00542 R 441332 R   ISZ     TEMP1
00543 R 600540 R   ISZ     TEMP2
00544 R 100151 R   JMP      ,=3
00545 R 441333 R   JMS     PRT
00546 R 441330 R   ISZ     TEMP3
00547 R 600533 R   ISZ     TEMP
00550 R 620524 R   JMP     BUFSN1
          JMP*  BUFSNG

```

```

00551 R 000000 A   /
00552 R 200571 R   PRTFF   0
00553 R 040605 R   LAC      FF
00554 R 201342 R   DAC      BUF+2
00555 R 040603 R   LAC      (1)
00556 R 100151 R   DAC      BUF
00557 R 620551 R   JMS     PRT
          JMP*  PRTFF

```

```

00560 R 777700 A   /
00561 R 040602 R   OUTEX  LAW      =100
00562 R 777771 A   DAC      SWITCH
00563 R 040020 R   LAW      =7
00564 R 100077 R   DAC      SYSERR
00565 R 740040 A   JMS     EXIT
          HLT
          ,EJECT

```

/CONSTANTS,,

```

00566 R 000034 A   SYSWC   34
00567 R 000035 A   SYSCA   35
00570 R 000315 A   CHAR    315
00571 R 000214 A   FF      214
00572 R 000212 A   LF      212
00573 R 000240 A   SPC    240
00574 R 424100 A   ESP1   424100
00575 R 402212 A   ESP2   402212
00576 R 050000 A   IOPSLF 50000
00577 R 000000 A           0
00600 R 000253 A   PLUS   253
00601 R 000241 A   EXCLM  241
00602 R 777777 A   SWITCH 777777
000010 A   TSTRUN=10

```

/M CHARACTER,

/LINE FEED CHARACTER,  
/SPACE CHARACTER,

```

00603 R 000001 A   BUF     1
00604 R 000000 A           0
00605 R           A           ,BLOCK 510

```

```

706621 A   CLF=706621
706641 A   CLE=706641
706541 A   LPC=706541
706542 A   LSE=706542
706501 A   LSF=706501
706544 A   PIE=706544
706561 A   PID=706561
707764 A   EBA=707764
707702 A   EEM=707702

```

```

/CLEAR DONE FLAG,
/CLEAR STATUS AND ERROR FLAG,
/PRINT ONE LINE,
/READ STATUS,
/SKIP IF DONE OR ERROR FLAG SET,
/ENABLE INTERRUPT SYSTEM,
/DISABLE INTERRUPT SYSTEM,

```

,END UQDSW

```

01335 R 000602 R #L
01336 R 400000 A #L
01337 R 000002 A #L
01340 R 777777 A #L
01341 R 000023 R #L
01342 R 000001 A #L
01343 R 001010 R #L
01344 R 000604 R #L
01345 R 000605 R #L
01346 R 000012 A #L
01347 R 000603 R #L
01350 R 001011 R #L

```

SIZE=01357

NO ERROR LINES



