```
                .REM _
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IDENTIFICATION

PRODUCT CODE: AC-E661D-MC

PRODUCT NAME: CXXYAD0 XY11 PLOT MOD

PRODUCT DATE: SEPTEMBER 1978

MAINTAINER: DEC/X11 SUPPORT GROUP

1. ABSTRACT:

XYA IS AN IOMOD THAT EXERCISES THE XY11 PLOTTER INTERFACE. A SQUARE WITH CROSSED CENTER LINES IS CONTINUOUSLY DRAWN AS THE PAPER ROLL ADVANCES.

2. REQUIREMENTS:

HARDWARE: XY11 INTERFACE WITH ITS ASSOCIATED PLOTTER.

STORAGE:: XYA REQUIRES:
1. DECIMAL WORDS: 364
2. OCTAL WORDS: 0554
3. OCTAL BYTES: 1330

3. PASS DEFINITION:

EACH COMPLETE FIGURE CONSTITUTES A PASS OF XYA.

4. EXECUTION TIME:

XYA RUNNING ALONE ON A PDP11/05 PROCESSOR TAKES APPROXIMATELY---MINUTES TO COMPLETE ONE PASS.

5. CONFIGURATION REQUIREMENTS:

DEFAULT PARAMETERS:

DEVADR: 172554, VECTOR: 120, BR1: 5

REQUIRED PARAMETERS:

NONE

6. DEVICE/OPTION SETUP:

A. TURN PLOTTER POWER AND DRUM DRIVE ON.
B. MANUALLY POSITION THE PEN TO THE LEFT MARGIN.

7. MODULE OPERATION:

A. SETUP THE XY11 REGISTER ADRESSES
B. RAISE THE PEN AND FIND THE LEFT MARGIN.
C. DRAW A SQUARE.
D. DRAW A CROSS WITHIN THE SQUARE
E. SPACE UP THE PAPER A DISTANCE ONE HALF THE SQUARE SIZE.
F. REPEAT FROM 7.B

8. OPERATION OPTIONS:

MODULE LOCATION STEPS (XYA 1154) MAY BE USED TO CHANGE THE SIZE OF THE FIGURE.

9. NON-STANDARD PRINTOUTS:

NONE

SEQ 0004

```
000000'          IOMOD   <XYAD >,172554,120,5,,10.,,23
000000'          MODULE  140000,XYAD ,172554,120,5,,,10.,,23
                 .TITLE  XYAD DEC/X11 SYSTEM EXERCISER MODULE
                ;        DDXCOM  VERSION   6        23-MAY-78
                                 .LIST    BIN
                                ;*****************************************************************************
000000'                          BEGIN:
000000' 054530  042101      040  MODNAM: .ASCII  /XYAD / ;MODULE NAME.
000005'     000                  XFLAG:  .BYTE   OPEN                ;USED TO KEEP TRACK OF WBUFF USAGE
000006' 172554                   ADDR:   172554+0                    ;1ST DEVICE ADDR.
000010' 000120                   VECTOR: 120+0                       ;1ST DEVICE VECTOR.
000012'     240                  BR1:    .BYTE   PRTY5+0             ;1ST BR LEVEL.
000013'     000                  BR2:    .BYTE   PRTY+0              ;2ND BR LEVEL.
000014' 000001                   DVID1:  +1                          ;DEVICE INDICATOR 1.
000016' 000000                   SR1:    OPEN                        ;SWITCH REGISTER 1
000020' 000000                   SR2:    OPEN                        ;SWITCH REGISTER 2
000022' 000000                   SR3:    OPEN                        ;SWITCH REGISTER 3
000024' 000000                   SR4:    OPEN                        ;SWITCH REGISTER 4
                                ;*****************************************************************************
0000026' 140000                  STAT:   140000                      ;STATUS WORD.
000030' 000224'                  INIT:   START                       ;MODULE START ADDR.
000032' 000224'                  SPOINT: MODSP                       ;MODULE STACK POINTER.
000034' 000000                   PASCNT: 0                           ;PASS COUNTER.
000036' 000012                   ICONT:  10.                         ;# OF ITERATIONS PER PASS=10.
000040' 000000                   ICOUNT: 0                           ;LOC TO COUNT ITERATIONS
000042' 000000                   SOFCNT: 0                           ;LOC TO SAVE TOTAL SOFT ERRORS
000044' 000000                   HRDCNT: 0                           ;LOC TO SAVE TOTAL HARD ERRORS
000046' 000000                   SOFPAS: 0                           ;LOC TO SAVE SOFT ERRORS PER PASS
000050' 000000                   HRDPAS: 0                           ;LOC TO SAVE HARD ERRORS PER PASS
000052' 000000                   SYSCNT: 0                           ;# OF SYS ERRORS ACCUMULATED
000054' 000000                   RANNUM: 0                           ;HOLDS RANDOM # WHEN RAND MACRO IS CALLED
000056'                          CONFIG:                             ;RESERVED FOR MONITOR USE
000056' 000000                   RES1:   0                           ;RESERVED FOR MONITOR USE
000060' 000000                   RES2:   0                           ;RESERVED FOR MONITOR USE
000062' 000000                   SVR0:   OPEN                        ;LOC TO SAVE R0.
000064' 000000                   SVR1:   OPEN                        ;LOC TO SAVE R1.
000066' 000000                   SVR2:   OPEN                        ;LOC TO SAVE R2.
000070' 000000                   SVR3:   OPEN                        ;LOC TO SAVE R3.
000072' 000000                   SVR4:   OPEN                        ;LOC TO SAVE R4.
000074' 000000                   SVR5:   OPEN                        ;LOC TO SAVE R5.
000076' 000000                   SVR6:   OPEN                        ;LOC TO SAVE R6.
000100' 000000                   CSRA:   OPEN                        ;ADDR OF CURRENT CSR.
000102'                          SBADR:                              ;ADDR OF GOOD DATA, OR
000102' 000000                   ACSR:   OPEN                        ;CONTENTS OF CSR.
000104'                          WASADR:                             ;ADDR OF BAD DATA, OR
000104' 000000                   ASTAT:  OPEN                        ;STATUS REG CONTENTS.
000106'                          ERRTYP:                             ;TYPE OF ERROR
000106' 000000                   ASB:    OPEN                        ;EXPECTED DATA.
000110' 000000                   AWAS:   OPEN                        ;ACTUAL DATA.
000112' 000237'                  RSTRT:  RESTRT                      ;RESTART ADDRESS AFTER END OF PASS
000114' 000226                   WDTO:   OPEN                        ;WORDS TO MEMORY PER ITERATION
000116' 000000                   WDFR:   OPEN                        ;WCRDS FROM MEMORY PER ITERATION
000120' 000000                   INTR:   OPEN                        ;# OF INTERRUPTS PER ITERATION
000122' 000023                   IDNUM:  23                          ;MODULE IDENTIFICATION NUMBER=23
        000040                           .REPT   SPSIZ               ;MODULE STACK STARTS HERE.
                                         .NLIST
```


SEQ 0005

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                                 .WORD   0
                                 .LIST
                                 .ENDR
000224'                          MODSP:
                                ;*****************************************************************************
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000224' 012767  000030  177666  START:  MOV     #24.,INTR       ;24 INTERRUPTS/ITERATION
000232' 016767  177550  001064  RESTRT: MOV     ADDR,XYCS       ;LOAD XY11 CSR ADDRESS
000240' 016767  177542  001060          MOV     ADDR,XYDB       ;LOAD XY11 DBR ADDRESS
000246' 062767  000002  001052          ADD     #2,XYDB
000254' 016700  177530                  MOV     VECTOR,R0       ;SETUP TO LOAD XY11 PI INFO
000260' 012720  000306'                 MOV     #STP1,(R0)+     ;LOAD PI VECTOR
000264' 016720  177522                  MOV     BR1,(R0)+       ;LOAD BR LEVEL
000270' 012777  000100  001026          MOV     #100,@XYCS      ;ENABLE PI
000276' 005077  001024                  CLR     @XYDB           ;RAISE DUMMY INTERRUPT
000302' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

000306'                         STP1:
                                ;-------------------------------------------------------------------
000306' 000004  000000' 000314'         PIRQ$,BEGIN,1$          ; QUEUE UP TO CONTINUE AT 1$ AND RTI
                                ;-------------------------------------------------------------------
000314' 012777  000342' 177466  1$:     MOV     #STP2,@VECTOR   ;CHANGE PI VECTOR
000322' 012767  000062  000772          MOV     #62,COUNT       ;SET COUNTER
000330' 012777  000040  000770          MOV     #40,@XYDB       ;PEN UP
000336' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

000342'                         STP2:
                                ;-------------------------------------------------------------------
000342' 000004  000000' 000350'         PIRQ$,BEGIN,1$          ; QUEUE UP TO CONTINUE AT 1$ AND RTI
                                ;-------------------------------------------------------------------
000350' 012777  000370' 177432  1$:     MOV     #STP2A,@VECTOR  ;CHANGE PI VECTOR
000356' 012777  000010  000742          MOV     #10,@XYDB       ;PEN RIGHT
000364' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

000370'                         STP2A:
                                ;-------------------------------------------------------------------
000370' 000004  000000' 000376'         PIRQ$,BEGIN,2$          ; QUEUE UP TO CONTINUE AT 2$ AND RTI
                                ;-------------------------------------------------------------------
000376' 005367  000720          2$:     DEC     COUNT           ;DONE?
000402' 001405                          BEQ     STP3            ;SKIP IF YES
000404' 012777  000010  000714          MOV     #10,@XYDB       ;NO- PEN RIGHT
000412' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

000416' 012777  000436' 177364  STP3:   MOV     #STP4,@VECTOR   ;CHANGE PI VECTOR
000424' 012777  000020  000674          MOV     #20,@XYDB       ;PEN DOWN
000432' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

000436'                         STP4:
                                ;-------------------------------------------------------------------
000436' 000004  000000' 000444'         PIRQ$,BEGIN,1$          ; QUEUE UP TO CONTINUE AT 1$ AND RTI
                                ;-------------------------------------------------------------------
000444' 012777  000472' 177336  1$:     MOV     #STP5,@VECTOR   ;CHANGE PI VECTOR
000452' 016767  000640  000642          MOV     #STEP5,COUNT    ;LOAD COUNT
000460' 012777  000010  000640          MOV     #10,@XYDB       ;PEN RIGHT
000466' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.
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000472'                         STP5:
                                ;-------------------------------------------------------------------
000472' 000004  000000' 000500'         PIRQ$,BEGIN,1$          ; QUEUE UP TO CONTINUE AT 1$ AND RTI
                                ;-------------------------------------------------------------------
000500' 005367  000616          1$:     DEC     COUNT           ;DONE?
000504' 001405                          BEQ     STP6            ;SKIP IF YES
000506' 012777  000010  000612          MOV     #10,@XYDB       ;NO- PEN RIGHT
000514' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

000520' 012777  000546' 177262  STP6:   MOV     #STP7,@VECTOR   ;CHANGE PI VECTOR
000526' 016767  000564  000566          MOV     #STEP5,COUNT    ;LOAD COUNT
000534' 012777  000001  000564          MOV     #1,@XYDB        ;DRUM DOWN
000542' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

000546'                         STP7:
                                ;-------------------------------------------------------------------
000546' 000004  000000' 000554'         PIRQ$,BEGIN,1$          ; QUEUE UP TO CONTINUE AT 1$ AND RTI
                                ;-------------------------------------------------------------------
000554' 005367  000542          1$:     DEC     COUNT           ;DONE?
000560' 001405                          BEQ     STP10           ;YES- SKIP
000562' 012777  000001  000536          MOV     #1,@XYDB        ;NO- DRUM DOWN
000570' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

000574' 012777  000622' 177206  STP10:  MOV     #STP11,@VECTOR  ;CHANGE PI VECTOR
000602' 016767  000510  000512          MOV     #STEP5,COUNT    ;LOAD COUNTER
000610' 012777  000004  000510          MOV     #4,@XYDB        ;PEN LEFT
000616' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

000622'                         STP11:
                                ;-------------------------------------------------------------------
000622' 000004  000000' 000630'         PIRQ$,BEGIN,1$          ; QUEUE UP TO CONTINUE AT 1$ AND RTI
                                ;-------------------------------------------------------------------
000630' 005367  000466          1$:     DEC     COUNT           ;DONE?
000634' 001405                          BEQ     STP12           ;SKIP IF YES
000636' 012777  000004  000462          MOV     #4,@XYDB        ;NO- PEN LEFT
000644' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

000650' 012777  000676' 177132  STP12:  MOV     #STP13,@VECTOR  ;CHANGE PI VECTOR
000656' 016767  000434  000436          MOV     #STEP5,COUNT    ;LOAD COUNTER
000664' 012777  000002  000434          MOV     #2,@XYDB        ;DRUM UP
000672' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

000676'                         STP13:
                                ;-------------------------------------------------------------------
000676' 000004  000000' 000704'         PIRQ$,BEGIN,1$          ; QUEUE UP TO CONTINUE AT 1$ AND RTI
                                ;-------------------------------------------------------------------
000704' 005367  000412          1$:     DEC     COUNT           ;DONE?
000710' 001405                          BEQ     STP14           ;SKIP IF YES
000712' 012777  000002  000406          MOV     #2,@XYDB        ;NO- DRUM UP
000720' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.
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000724' 012777  000752' 177056  STP14:  MOV     #STP15,@VECTOR  ;CHANGE PI VECTOR
000732' 016767  000360  000362          MOV     STEPS,COUNT     ;LOAD COUNT
000740' 012777  000011  000360          MOV     #11,@XYDB       ;DRUM DOWN AND PEN RIGHT
000746' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

000752'                         STP15:
                                ;-------------------------------------------------------------
000752' 000004  000000' 000760'         PIRQ$,BEGIN,1$          ; QUEUE UP TO CONTINUE AT 1$ AND RTI
                                ;-------------------------------------------------------------
000760' 005367  000336          1$:     DEC     COUNT           ;DONE?
000764' 001405                          BEQ     STP16           ;SKIP IF YES
000766' 012777  000011  000332          MOV     #11,@XYDB       ;NO- DRUM DOWN AND PEN RIGHT
000774' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

001000' 012777  001020' 177002  STP16:  MOV     #STP17,@VECTOR  ;CHANGE PI VECTOR
001006' 012777  000040  000312          MOV     #40,@XYDB       ;PEN UP
001014' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

001020'                         STP17:
                                ;-------------------------------------------------------------
001020' 000004  000000' 001026'         PIRQ$,BEGIN,1$          ; QUEUE UP TO CONTINUE AT 1$ AND RTI
                                ;-------------------------------------------------------------
001026' 012777  001054' 176754  1$:     MOV     #STP20,@VECTOR  ;CHANGE PI VECTOR
001034' 016767  000256  000260          MOV     STEPS,COUNT     ;LOAD COUNTER
001042' 012777  000002  000256          MOV     #2,@XYDB        ;DRUM UP
001050' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

001054'                         STP20:
                                ;-------------------------------------------------------------
001054' 000004  000000' 001062'         PIRQ$,BEGIN,1$          ; QUEUE UP TO CONTINUE AT 1$ AND RTI
                                ;-------------------------------------------------------------
001062' 005367  000234          1$:     DEC     COUNT           ;DONE?
001066' 001405                          BEQ     STP21           ;SKIP IF YES
001070' 012777  000002  000230          MOV     #2,@XYDB        ;NO- DRUM UP
001076' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

001102' 012777  001122' 176700  STP21:  MOV     #STP22,@VECTOR  ;CHANGE PI VECTOR
001110' 012777  000020  000210          MOV     #20,@XYDB       ;PEN DOWN
001116' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

001122'                         STP22:
                                ;-------------------------------------------------------------
001122' 000004  000000' 001130'         PIRQ$,BEGIN,1$          ; QUEUE UP TO CONTINUE AT 1$ AND RTI
                                ;-------------------------------------------------------------
001130' 012777  001156' 176652  1$:     MOV     #STP23,@VECTOR  ;CHANGE PI VECTOR
001136' 016767  000154  000156          MOV     STEPS,COUNT     ;LOAD COUNTER
001144' 012777  000005  000154          MOV     #5,@XYDB        ;DRUM DOWN AND PEN LEFT
001152' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.
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001156'                         STP23:
                                ;-------------------------------------------------------------
001156' 000004  000000' 001164'         PIRQ$,BEGIN,1$          ; QUEUE UP TO CONTINUE AT 1$ AND RTI
                                ;-------------------------------------------------------------
001164' 005367  000132          1$:     DEC     COUNT           ;DONE?
001170' 001405                          BEQ     STP24           ;SKIP IF YES
001172' 012777  000005  000126          MOV     #5,@XYDB        ;NO- DRUM DOWN AND PEN LEFT
001200' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

001204' 012777  001224' 176576  STP24:  MOV     #STP25,@VECTOR  ;CHANGE PI VECTOR
001212' 012777  000040  000106          MOV     #40,@XYDB       ;PEN UP
001220' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

001224'                         STP25:
                                ;-------------------------------------------------------------
001224' 000004  000000' 001232'         PIRQ$,BEGIN,1$          ; QUEUE UP TO CONTINUE AT 1$ AND RTI
                                ;-------------------------------------------------------------
001232' 012777  001260' 176550  1$:     MOV     #STP26,@VECTOR  ;CHANGE PI VECTOR
001240' 016767  000054  000054          MOV     HALF,COUNT      ;LOAD COUNTER
001246' 012777  000001  000052          MOV     #1,@XYDB        ;DRUM DOWN
001254' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

001260'                         STP26:
                                ;-------------------------------------------------------------
001260' 000004  000000' 001266'         PIRQ$,BEGIN,1$          ; QUEUE UP TO CONTINUE AT 1$ AND RTI
                                ;-------------------------------------------------------------
001266' 005367  000030          1$:     DEC     COUNT           ;DONE?
001272' 001405                          BEQ     STP27           ;YES- REDRAW PATTERN
001274' 012777  000001  000024          MOV     #1,@XYDB        ;NO- DRUM DOWN
001302' 104400  000000'                 EXIT$,BEGIN                     ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.

001306'                         STP27:
001306' 104413  000000'                 ENDIT$,BEGIN            ;SIGNAL END OF ITERATION.
                                                                ;MONITOR SHALL TEST END OF PASS
001312' 000167  177100                  JMP     STP3            ;NO GO DO IT AGAIN.

001316' 000454                  STEPS:  300.
001320' 000226                  HALF:   150.
001322' 000000                  COUNT:  0
001324' 000000                  XYCS:   0
001326' 000000                  XYDB:   0

        000001                          .END                    ;THAT'S ALL FOLKS!
```

```
ACSR     000102R  157#
ADDR     000006R  123#  176     177
ADDR22=  001000   175#
ASB      000106R  161#
ASTAT    000104R  159#
AWAS     000110R  162#
BEGIN    000000R  120#  184     188     193     197     201     205     210     214     218     223     227     232
                  237     241     246     251     255     260     265     269     274     279     283     288     292
                  296     301     305     310     314     318     323     327     332     336     340     345     349
                  354     357
BIT0   = 000001   175#
BIT1   = 000002   175#
BIT10  = 002000   175#
BIT11  = 004000   175#
BIT12  = 010000   175#
BIT13  = 020000   175#
BIT14  = 040000   175#
BIT15  = 100000   175#
BIT2   = 000004   175#
BIT3   = 000010   175#
BIT4   = 000020   175#
BIT5   = 000040   175#
BIT6   = 000100   175#
BIT7   = 000200   175#
BIT8   = 000400   175#
BIT9   = 001000   175#
BREAK$= 104407    175#
BR1      000012R  125#  181
BR2      000013R  126#
BTOD$  = 104421   175#
CDATA$= 104412    175#
CONFIG   000056R  145#
COUNT    001322R  191#  207*    221*    229*    235*    243*    249*    257*    263*    271*    277*    285*    299*
                  307*    321*    329*    343*    351*    363#
CSRA     000100R  155#
DATCK$= 104411    175#
DATER$= 104404    175#
DVID1    000014R  127#
ENDIT$= 104413    175#  357
END$   = 104410   175#
ERRTYP   000106R  160#
EXIT$  = 104400   175#  184     193     201     210     214     223     232     237     246     251     260     265
                  274     279     288     292     301     310     314     323     332     336     345     354
GETPA$= 104415    175#
GWBUF$= 104414    175#
HALF     001320R  343   362#
HRDCNT   000044R  140#
HRDER$= 104405    175#
HRDPAS   000050R  142#
ICONT    000036R  137#
ICOUNT   000040R  136#
IDNUM    000122R  167#
INIT     000030R  134#
INTR     000120R  166#  175*
MAP22$= 104416    175#
MODNAM   000000R  121#
```



```
MODSP    000224R  135     173#
MSGN$  = 104403   175#
MSGS$  = 104402   175#
MSG$   = 104401   175#
NULL   = 000000   175#
OPEN   = 000000   122     128     129     130     131     148     149     150     151     152     153     154     155
                  157     159     161     162     164     165     166     175#
OTOA$  = 104420   175#
PASCNT   000034R  133#
PIRQ$  = 000004   175#  188     197     205     218     227     241     255     269     283     296     305     318
                  327     340     349
POPSP  = 005726   175#
POPSP2= 022626    175#
PRTY   = 000000   126     175#
PRTY0  = 000000   175#
PRTY1  = 000040   175#
PRTY2  = 000100   175#
PRTY3  = 000140   175#
PRTY4  = 000200   175#
PRTY5  = 000240   175#  175#
PRTY6  = 000300   175#
PRTY7  = 000340   175#
PS     = 177776   175#
PSW    = 177776   175#
PUSH   = 005746   175#
PUSH2  = 024646   175#
RAND$  = 104417   175#
RANNUM   000054R  144#
RESTRT   000232R  163#  176#
RES1     000056R  146#
RES2     000060R  147#
RSTRT    000112R  163#
SRADR    000102R  156#
SOFCNT   000042R  139#
SOPER$= 104406    175#
SOPAS    000046R  141#
SPOINT   000032R  135#
SPSIZ  = 000040   1#  168
SR1      000016R  128#
SR2      000020R  129#
SR3      000022R  130#
SR4      000024R  131#
START    000224R  134#  175#
STAT     000026R  133#
STEPS    001316R  221#  235     249     263     277     299     321     361#
STP1     000306R  180   186#
STP10    000574R  244   248#
STP11    000622R  248   253#
STP12    000650R  258   262#
STP13    000676R  262   267#
STP14    000724R  272   276#
STP15    000752R  276   281#
STP16    001000R  286   290#
STP17    001020R  290   294#
STP2     000342R  190   195#
STP2A    000370R  199   203#
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STP20   001054R          298     303#
STP21   001102R          308     312#
STP22   001122R          312     316#
STP23   001156R          320     325#
STP24   001204R          330     334#
STP25   001224R          334     338#
STP26   001260R          342     347#
STP27   001306R          352     356#
STP3    000416R          208     212#    359
STP4    000436R          212     216#
STP5    000472R          220     225#
STP6    000520R          230     234#
STP7    000546R          234     239#
SVR0    000062R          146#
SVR1    000064R          149#
SVR2    000066R          150#
SVR3    000070R          151#
SVR4    000072R          152#
SVR5    000074R          153#
SVR6    000076R          154#
SYSCNT  000052R          143#
TRPDFD= 000022           175#
VECTOR  000010R          124#    179     190*    199*    212*    220*    234*    248*    262*    276*    290*    298*    312*
                         320#    334*    342*
WASADR  000104R          158#
WDPR    000116R          165#
WDTO    000114R          164#
XFLAG   000005R          127#
XVCS    001324R          176#
XYDB    001326R          177*    178*    183#    192*    200*    209*    213*    222*    231*    236*    245*    250*    259*
                         264*    273*    278*    287*    291*    300*    309*    313*    322*    331*    335*    344*    353*
                         365#

. ABS.  000000      000
        001330      001

ERRORS DETECTED:  0
DEFAULT GLOBALS GENERATED:  0

XXYADO,XXYADO/SOL/CRF:SYM=DDXCOM,XXYADO
RUN-TIME:  1  1  .3  SECONDS
RUN-TIME RATIO: 11/3=3.6
CORE USED:  7K  (13 PAGES)
```