

BASIC MCS 8080 GATES/ALLEN/DAVIDOFF F3 MAC 6-SEP-64 03:11

MACRO 47([113]) 03:12 10-SEP-75 PAGE 26-14  
STRING FUNCTIONS

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7194 010647* 000000 010641*      39000   JSURE DOES NOT = 0.
7195 010650* 001000 000005      39020   PUSH B    ;PUT OFFSET ON TO THE STACK
7197 010651* 001000 000036      39040   MVI E,255  ;IF TWO ARG GUY, TRUNCATE,
7198 010652* 000000 000377      39060   CPI "J"
7199 010653* 001000 000376      39080   JZ M102  ;[E] SAYS USE ALL CHARS
7200 010654* 000000 000051      39100   FIF ONE ARGUMENT THIS IS CORRECT
7201 010655* 001000 000312      39120   SYNCHK 44  ;COMMA MUST DELINATE 3RD ARG,
7202 010656* 000000 010665*      39140   CALL GETBYT ;GET ARGUMENT IN [E]
7203 010657* 000000 010646*      39160   MID2: SYNCHK "J"  ;MUST BE FOLLOWED BY )
7211 010666* 000000 000051      39180   PUP PSW  ;GET OFFSET BACK IN A
7213 010667* 001000 000054      39200   XTHL A    ;SAVE TEXT POINTER, GET DESC.,
7214 010668* 001000 000315      39220   LXI B,LEFT2 ;WHERE TO RETURN TO,
7215 010671* 000000 010560*      39240   PUSH B    ;GOES ON STACK
7216 010672* 000000 010653*      39260   DCR A    ;ISUE ONE FROM OFFSET
7217 010673* 001000 000075      39280   CMP M    ;PTR PAST END OF STR?
7218 010674* 000000 000000      39300   MVI B,0  ;ASSUME NULL LENGTH STR
7221 010700* 000000 000000      39320   RNC      ;YES, JUST USE NULL STR
7222 010701* 001000 000320      39340   MOV C,A  ;SAVE OFFSET OF CHARACTER POINTER
7223 010702* 001000 000117      39360   MOV A,M  ;GET PRESENT LEN OF STR
7224 010703* 001000 000176      39380   SUB C    ;SUBTRACT INDEX (2ND ARG)
7225 010704* 001000 000221      39400   CMP E    ;IS IT TRUNCATION
7226 010705* 001000 000273      39420   MOV B,A  ;GET CALCED LENGTH IN B
7227 010706* 001000 000107      39440   RC      ;IF NOT USE PARTIAL STR
7228 010707* 001000 000330      39460   MOV B,E  ;USE TRUNCATED LENGTH
7230 010710* 001000 000105      39480   RET    ;RETURN TO LEFT2
7231 010711* 001000 000311      39500   IFN LENGTH,<
7232 010712* 001000 000315      39520   ;
7233 010713* 000000 011023*      39540   ; THE FOLLOWING FUNCTIONS ALLOW THE
7234 010714* 000000 010672*      39560   ; USER FULL ACCESS TO THE ALTAIR I/O PORTS
7235 010715* 001000 000052      39580   ; INP([CHANNEL#]) RETURNS AN INTEGER WHICH IS THE STATUS
7236 010716* 000000 000000      39600   ; OF THE CHANNEL, OUT CHANNEL#,VALUE PUTS OUT THE INTEGER
7237 010717* 000000 010721*      39620   ; VALUE ON CHANNEL #, IT IS A STATEMENT, NOT A FUNCTION,
7238 010718* 001000 000105      39640   ;
7239 010719* 001000 000315      39660   FNINP: CALL CONINT  ;GET INTEGER CHANNEL #
7240 010713* 000000 011023*      39680   STA INPHRD+1  ;GEN INP INSTR
7241 010714* 000000 010672*      39700   INPWRD: IN 0  ;THE INP INSTR
7242 010715* 001000 000052      39720   JMP SNGFLT  ;SNGFLT RESULT
7243 010716* 000000 010721*      39740   FNDTHAT: CALL SETIO  ;GET READY
7244 010717* 000000 010713*      39760   FNOUT: CALL SETIO  ;GET READY
7245 010720* 000000 000000      39780   OUTWRD: OUT 0  ;DO IT
7246 010721* 001000 000323      39800   FNDTHAT: RET    ;FND THATS ALL
7247 010722* 001000 000000      39820   ;
7248 010723* 001000 011005*      39840   ; THE WAIT CHANNEL#,MASK,MASK2 WAITS UNTIL THE STATUS
7249 010724* 000000 010716*      39860   ; RETURNED BY CHANNEL# IS NON ZERO WHEN XORED WITH MASK2
7250 010725* 001000 000315      39880   ; AND THEN ANDED WITH MASK, IF MASK2 IS NOT PRESENT IT IS ASSUMED
7251 010726* 001000 000000      39900   ; TO BE ZERO,
7252 010727* 001000 000311      39920   ;
7253 010728* 001000 000315      39940   FNWAIT: CALL SETIO  ;SET UP FOR WAIT
7254 010729* 001000 011003*      39960   PUSH PSW  ;SAVE THE MASK
7255 010730* 001000 000365      39980   MVI E,0  ;DEFAULT MASK2 TO ZERO
7256 010731* 001000 000036      40000   DCX H    ;SEE IF THE STATEMENT ENDED
7257 010732* 001000 000036      40020   CHRGET  ;IF NO THIRD ARGUMENT SKIP THIS
7258 010733* 001000 000315      40040   JZ NUTTHR
7259 010734* 000000 011003*      40060   SYNCHK 44  ;MAKE SURE THERE IS A ","
7260 010735* 001000 000311      40080   CALL GETBYT
7261 010736* 001000 000054      40100   NUTTHR: POP B  ;RESET THE "AND" MASK
7262 010737* 001000 000054      40120   STAINP: IN 0  ;THE INPUT INSTR
7263 010738* 001000 000000      40140   XRA E    ;FOR WITH MASK2
7264 010739* 001000 000000      40160   ANA B    ;FND WITH MASK
7265 010740* 001000 000000      40180   JZ STAINP  ;LOOP UNTIL RESULT IS NON-ZERO
7266 010741* 000000 010754*      40200   ;
7267 010742* 000000 010744*      40220   ;
7268 010743* 000000 010753*      40240   ;
7269 010744* 000000 010751*      40260   ;
7270 010745* 000000 010751*      40280   ;NOTE: THIS LOOP CANNOT BE CONTROL-C'ED
7271 010746* 000000 010751*      40300   ;UNLESS THE WAIT IS BEING DONE ON CHANNEL
7272 010747* 000000 010751*      40320   ;ZERO, HOWEVER A RESTART AT 0 IS OK,
7273 010748* 000000 010751*      40340   ;USED BY HEIGHTS AND LEFTS FOR PARAMETER CHECKING AND SETUP
7274 010749* 000000 000651    ;PUT THE TEXT POINTER IN [H,L]
7275 010750* 000000 000651    ;PARAM LIST SHOULD END
7276 010751* 000000 000651    ;USED BY MIDS FOR PARAMETER CHECKING AND SETUP
7277 010752* 000000 000651    ;GET RETURN ADDR OFF STACK
7278 010753* 000000 000651    ;GET LENGTH OF ARG OFF STACK
7279 010754* 000000 000651    ;SAVE RETURN ADDR BACK ON

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STRING FUNCTIONS

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7247 010724* 001000 000303      39720   JMP SNGFLT  ;SNGFLT RESULT
7248 010725* 000000 007400*      39740   FNDTHAT: CALL SETIO  ;GET READY
7249 010726* 000000 010716*      39760   FNOUT: CALL SETIO  ;GET READY
7250 010727* 001000 000315      39780   OUTWRD: OUT 0  ;DO IT
7251 010728* 001000 000000      39800   FNDTHAT: RET    ;FND THATS ALL
7252 010729* 001000 011005*      39820   ;
7253 010730* 001000 000323      39840   ; THE WAIT CHANNEL#,MASK,MASK2 WAITS UNTIL THE STATUS
7254 010731* 001000 000000      39860   ; RETURNED BY CHANNEL# IS NON ZERO WHEN XORED WITH MASK2
7255 010732* 001000 000311      39880   ; AND THEN ANDED WITH MASK, IF MASK2 IS NOT PRESENT IT IS ASSUMED
7256 010733* 001000 000315      39900   ; TO BE ZERO,
7257 010734* 000000 011003*      39920   ;
7258 010735* 001000 000365      39940   FNWAIT: CALL SETIO  ;SET UP FOR WAIT
7259 010736* 001000 000036      39960   PUSH PSW  ;SAVE THE MASK
7260 010737* 001000 000036      39980   MVI E,0  ;DEFAULT MASK2 TO ZERO
7261 010738* 001000 000000      40000   DCX H    ;SEE IF THE STATEMENT ENDED
7262 010739* 001000 000000      40020   CHRGET  ;IF NO THIRD ARGUMENT SKIP THIS
7263 010740* 001000 000000      40040   JZ NUTTHR
7264 010741* 000000 010754*      40060   SYNCHK 44  ;MAKE SURE THERE IS A ","
7265 010742* 000000 010751*      40080   CALL GETBYT
7266 010743* 000000 010751*      40100   NUTTHR: POP B  ;RESET THE "AND" MASK
7267 010744* 000000 010751*      40120   STAINP: IN 0  ;THE INPUT INSTR
7268 010745* 000000 010751*      40140   XRA E    ;FOR WITH MASK2
7269 010746* 000000 010751*      40160   ANA B    ;FND WITH MASK
7270 010747* 000000 010751*      40180   JZ STAINP  ;LOOP UNTIL RESULT IS NON-ZERO
7271 010748* 000000 010751*      40200   ;
7272 010749* 000000 010751*      40220   ;NOTE: THIS LOOP CANNOT BE CONTROL-C'ED
7273 010750* 000000 010751*      40240   ;UNLESS THE WAIT IS BEING DONE ON CHANNEL
7274 010751* 000000 010751*      40260   ;ZERO, HOWEVER A RESTART AT 0 IS OK,
7275 010752* 000000 010751*      40280   ;USED BY HEIGHTS AND LEFTS FOR PARAMETER CHECKING AND SETUP
7276 010753* 000000 000651    ;PUT THE TEXT POINTER IN [H,L]
7277 010754* 000000 000651    ;PARAM LIST SHOULD END
7278 010755* 000000 000651    ;USED BY MIDS FOR PARAMETER CHECKING AND SETUP
7279 010756* 000000 000651    ;GET RETURN ADDR OFF STACK
7280 010757* 000000 000651    ;GET LENGTH OF ARG OFF STACK
7281 010758* 000000 000651    ;SAVE RETURN ADDR BACK ON

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STRING FUNCTIONS

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7300 010772* 001000 003103 404400 MOV B,E      ;SAVE INIT LENGTH
7301 010773* 001000 000004 404500 INR B
7302 010774* 001000 000005 404600 DCR B      ;SEE IF EQUAL TO ZERO
7303 010775* 001000 000300 405000 IFE LENGTH=2,<
7304 010776* 001000 000036 405300 ILFUNKI
7305 010777* 001000 000005 405400 FCERR: MVI E,ERRFC
7306 011000* 001000 000303 405600 JMP ERROR>
7307 011001* 001000 000202 405800 IFFN: CALL GETBYT
7308 011002* 001000 0010761* 406000 SETIO: CALL GETBYT  ;GET INTEGER CHANNEL NUMBER IN [A]
7309 011003* 001000 000315 406500 IFN LENGTH=2,<
7310 011004* 001000 011129* 406600 JZ FCERR  ;IT MUST NOT BE 0
7311 011005* 001000 000314 406620 RET>
7312 011006* 001000 000054 406640 IFN LENGTH,<
7313 011007* 001000 010755* 406800 STA STAINP+1  ;SETUP "WAIT"
7314 011008* 001000 011408* 407000 STA OUTRD+1  ;SETUP "OUT"
7315 011011* 001000 000062 407200 STA STAINP+1  ;SETUP "WAIT"
7316 011012* 001000 011129* 407400 XND "01000,6>  ;"MVI B," AROUND THE CHRGET
7317 011013* 001000 000063 407600 IFN STRINGLENGTH,<
7318 011014* 001000 000064 407800 GTRYTCI: CHRGET
7319 011015* 001000 011073* 408000 IFE LENGTH=2,<
7320 011016* 001000 000065 408200 GETBYT: CALL FRMEVL
7321 011017* 001000 000066 408400 CONINT: PUSH H
7322 011018* 001000 000067 408600 CALL FRGINT  ;READ FORMULA INTO THE FAC,
7323 011019* 001000 000068 408800 CONINT: PUSH H  ;CONVERT THE FAC TO A SINGLE BYTE INTEGER
7324 011020* 001000 000069 409000 MOV A,0  ;SHOULD BE ,LT, 255
7325 011021* 001000 000536* 409200 GETBYT: CALL FRNUMH  ;SET CC7'S
7326 011022* 001000 011012* 409400 POP H>  ;HASN'T ERROR
7327 011023* 001000 000045 409600 CONINT: CALL FIN  ;FACTULLY FUNCTIONS CAN GET HERE
7328 011024* 001000 000046 409800 MOV A,0  ;WITH BAD [H,L] BUT NOT SERIOUS
7329 011025* 001000 000047 410000 ORA A  ;SET CONDITION CODES ON TERMINATOR
7330 011026* 001000 000048 410200 JNZ FCERR
7331 011027* 001000 000553 410400 DCX H
7332 011030* 001000 000541 410600 J  ;RETURN THE RESULT IN [A] AND [E]
7333 011031* 001000 000542 410800 CHRGET
7334 011032* 001000 000267 411000 MOV A,E
7335 011033* 001000 000502 411200 RET>
7336 011034* 001000 010776* 411400

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STRING FUNCTIONS

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7355 411600 IFN STRING,<
7356 412000 ; THE VAL FUNCTION TAKES A STRING AND TURN IT INTO
7357 412020 ; AN NUMBER BY INTERPRETING THE ASCII DIGITS, ETC.
7358 412040 ; EXCEPT FOR THE PROBLEM THAT A TERMINATOR MUST BE SUPPLIED
7359 412060 ; BY REPLACING THE CHARACTER BEYOND THE STRING, VAL
7360 412080 ; IS MERELY A CALL TO FLOATING INPUT (FIN),
7361 412120 ;
7362 011045* 001000 000115 412200 VAL: CALL LEN1  ;DO SETUP, SET RESULT=REAL
7363 011045* 001000 00059* 412220
7364 011044* 001000 011034* 412240
7365 011045* 001000 000512 412400 JZ ZERO  ;RETURN ZERO IF NULL
7366 011046* 001000 000000* 412420
7367 011047* 001000 011045* 412440
7368 011050* 001000 000137 412600 MOV E,A  ;GET LENGTH OF STR
7369 412700 IFN LENGTH=2,<
7370 011051* 001000 000043 412800 INX H>  ;THIS IS ALL A KLUDGE
7371 011052* 001000 000044 412900 INX H>  ;TRYING TO GET THE LENGTH IF
7372 011052* 001000 006367 413200 PUSHM H  ;THE STRING IS TOO LONG
7373 011053* 001000 000140 413400 MOV H,B  ;ARE STORED NEXT TO EACH OTHER
7374 011054* 001000 000151 413600 MOV L,C  ;AND FIN IS CALLED POINTING TO
7375 011055* 001000 000051 413800 DAD D  ;THE FIRST TWELVE WILL BE RETURNED
7376 011056* 001000 000106 414000 MOV B,M  ;THE IDEA IS TO STOKE @ IN THE
7377 011057* 001000 000162 414200 MOV M,D  ;STRING BEYOND THE ONE VAL
7378 011058* 001000 000345 414400 XTHL  ;IS BEING CALLED ON
7379 011058* 001000 000053 414500 PUSH B  ;THE FIRST CHARACTER OF THE NEXT STRING
7380 011059* 001000 000176 414600 MOV A,M  ;GET FIRST CHARACTER OF ARGUMENT
7381 011063* 001000 000315 415000 CALL FIN  ;TURN IT INTO A NUMBER IN THE FAC
7382 011064* 001000 000103* 415200
7383 011065* 001000 011046* 415400
7384 011066* 001000 000301 415500 POP B  ;GET THE MODIFIED CHARACTER OF THE NEXT
7385 011067* 001000 000541 415600 POP H  ;STRING INTO [B]
7386 011070* 001000 000160 415800 MOV H,B  ;GET THE POINTER TO THE MODIFIED CHARACTER
7387 011071* 001000 000161 416000
7388 011072* 001000 000162 416200
7389 011073* 001000 000163 416400
7390 011074* 001000 000164 416600
7391 011075* 001000 000165 416800
7392 011076* 001000 000166 417000 RET>
7393 011071* 001000 000311 417200
7394 417400 PAGE

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MACRO 47(113) 05:12 10-SEP-75 PAGE 27  
FANCY LIST,DELETE,EDIT,LLIST

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    7506          41760 SUBTL  FANCY LIST,DELETE,EDIT,LLIST
    7507          41760 IFE LENGTH,<
    7508          41760 IFN LPTSN,<
    7509          41829 LLIST: MUL A,B,A1      JGET NON ZERO VALUE
    7510          41840 STA PHTFLG>   JSAVE IN I/O FLAG
    7511          41862 LIST: POP B           JGET RID OF NENSTT RETURN ADDR
    7512          41860 CALL SCNLIN       JSCAN LINE RANGE
    7513          41900 PUSH B            JSAVE POINTER TO 1ST LINE
    7514          41920 LIST4: PUP H           JGET POINTER TO LINE
    7515          41940 POP D             JGET NEXT LINE # OFF STACK
    7516          41960 PUSH D            PUSH LINE #
    7517          41980 MOV A,B          JPUT LINE #
    7518          42000 ORA C            JSEE IF END OF CHAIN
    7519          42020 POP B            JGET LINK OFF STACK FOR ISCNTC
    7520          42040 JZ READY        FLAST LINE, STOP,
    7521          42060 IFN LISTEN,<
    7522          42080 CALL ISCNTC>     JCHECK FOR CONTROL-C
    7523          42100 PUSH B            JSAVE LINK BACK ON
    7524          42120 PUSHM H           PUSH LINE #
    7525          42140 XTHL             JGET LINE # INTO [M,L]
    7526          42160 XCHG             JGET MAX LINE # IN [M,L]
    7527          42180 COMPAR           JTEST LAST LINE IN RANGE?
    7528          42200 POP B            JTEXT POINTER TO [R,C]
    7529          42260 JC STPHDY        JIF PAST, THEN DONE LISTING,
    7530          42280 XTHL             JSAVE MAX ON BOTTOM OF STACK
    7531          42300 PUSH H            JSAVE LINK ON TOP
    7532          42320 PUSH B            JSAVE TEXT POINTER BACK
    7533          42340 XCHG             JGET LINE # IN [M,L]
    7534          42360 CALL CRDO           JDO CRLF TO START OUT
    7535          42380 LINPRT           JAND WE WANT [M,L] ON THE STACK
    7536          42400 CALL LINPRT       JPRINT AS INT WITHOUT LEADING SPACE
    7537          42420 MVI A," "
    7538          42440 POP H             JPRINT A SPACE AFTER THE LINE #
    7539          42460 DUTCHR            JUNPACK THE LINE INTO BUF
    7540          42480 CALL BUFLIN         JPOINT AT THE START OF THE UNPACKED CHARACTERS
    7541          42500 LXI H,BUF-1      JPOINT AT THE START OF THE UNPACKED CHARACTERS
    7542          42520 MVI B,0           JSTOP ON ZERO ONLY
    7543          42540 CALL STRLT3        JLITERALIZE THE LINE STRING
    7544          42560 CALL STRPRT        JPRINT OUT THE CHARACTERS
    7545          42580 JMP LIST4         JPRINT ANOTHER LINE
    7546          42600 CPI ELSETR        JIF ITS "ELSE" DON'T PRINT THE COLON
    7547          42620 CPI ELSETR        JIN FRONT OF IT
    7548          42640 PRIT4: POP H           JRESTORE POINTER TO START OF TEXT
    7549          42660 PLDOP: MOV A,M      JGET A CHARACTER FROM LINE,
    7550          42680 INX B             JADVANCE STUFF COUNT
    7551          42700 DCR B             JDECREMENT STUFF COUNT
    7552          42720 INX H             JINCREMENT POINTER INTO TEXT
    7553          42740 STAX B            JSTORE A ZERO IF THE ENO
    7554          42760 RZ                JZERO, END OF LINE,
    7555          42780 JP PLOUP          JREGULAR CHAR, JUST PRINT IT
    7556          42800 CPI ELSETR        JIF ITS "ELSE" DON'T PRINT THE COLON
    7557          42820 CZ DCXBR#&        JBACKUP STUFF COUNT TO ELIMINATE
    7558          42840 SUI 127          JSET RID OF SIGN BIT AND ADD ONE
    7559          42860 PUSH H            JSAVE CURRENT POSITION
    7560          42880 LXI D,RESLT        JGET RESLT POINTER,
    7561          42900 RESBL: POP D          JNOT AT END OF RESERVED WORD YET
    7562          42920 RESCH1: PUSH D         JSAVE THE RESERVED WORD NUMBER
    7563          42940 PUSH PSW           JGET CHARACTER FROM RESLT
    7564          42960 RESCH1: LDAX D         JPUT START POSITION HERE
    7565          42980 INX D             JINCREMENT POSITION
    7566          43000 ORA A             JTEST BITS
    7567          43020 JP RESCR1        JNOT AT END OF RESERVED WORD YET
    7568          43040 POP PSW           JGET A CHARACTER FROM RESERVED WORD
    7569          43060 DCR A             JDECREMENT CHAR
    7570          43080 POP H             JPOP START POSITION HERE
    7571          43100 JNZ RESRCH        JNOT AT END OF RESLT YET.
    7572          43120 JHERE WHEN FOUND RIGHT RESERVED WORD
    7573          43140 PRIT3: MOV A,M      JGET A CHARACTER FROM RESERVED WORD

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FANCY LIST,DELETE,EDIT,LLIST

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    7449          42520 MVI B,0           JSTOP ON ZERO ONLY
    7450          42540 CALL STRLT3        JLITERALIZE THE LINE STRING
    7451          42560 CALL STRPRT        JPRINT OUT THE CHARACTERS
    7452          42580 CPI ELSETR        JPRINT ANOTHER LINE
    7453          42600 CPI ELSETR        JIN FRONT OF IT
    7454          42620 CZ DCXBR#&        JBACKUP STUFF COUNT TO ELIMINATE
    7455          42640 SUI 127          JSET RID OF SIGN BIT AND ADD ONE
    7456          42660 PUSH H            JSAVE CURRENT POSITION
    7457          42680 LXI D,RESLT        JGET RESLT POINTER,
    7458          42700 RESBL: POP D          JNOT AT END OF RESERVED WORD YET
    7459          42720 RESCH1: PUSH D         JSAVE THE RESERVED WORD NUMBER
    7460          42740 PUSH PSW           JGET CHARACTER FROM RESLT
    7461          42760 RESCH1: LDAX D         JPUT START POSITION HERE
    7462          42780 INX D             JINCREMENT POSITION
    7463          42800 ORA A             JTEST BITS
    7464          42820 JP RESCR1        JNOT AT END OF RESERVED WORD YET
    7465          42840 POP PSW           JGET A CHARACTER FROM RESERVED WORD
    7466          42860 DCR A             JDECREMENT CHAR
    7467          42880 POP H             JPOP START POSITION HERE
    7468          42900 JNZ RESRCH        JNOT AT END OF RESLT YET.
    7469          42920 JHERE WHEN FOUND RIGHT RESERVED WORD
    7470          42940 PRIT3: MOV A,M      JGET A CHARACTER FROM RESERVED WORD

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BASIC MCS 8080 GATES/ALLEN/DAVIDOFF MACRO 47(113) 03:12 10-SEP-75 PAGE 27-2  
 F3 MAC 6-SEP-64 03:11 FANCY LIST,DELETE,EDIT,LLIST

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    7502 011233* 001000 000567      43160  ORA    A           ;SET CONDITION CODES
    7503 011234* 001000 000568      43160  STAX   B
    7504 011235* 001000 000572      43200  JM     PR1TA
    7505 011236* 001000 011167*    43220  INX   B           ;BUMP RESLT POINTER
    7506 011237* 001000 011230*    43240  INX   H           ;PRINT THE REST
    7507 011240* 001000 000603      43260  JMP   PR1TS
    7508 011241* 001000 000643      43280
    7509 011242* 001000 000305      43280
    7510 011243* 001000 011232*      43320
    7511 011244* 001000 011236*      43340
    7512
    7513
    7514
    7515
    7516
    7517 011245* 001000 000515      43380  DELETE: CALL  SCNLIN   ;SCAN LINE RANGE
    7518 011246* 001000 002333*      43380
    7519 011247* 001000 011245*      43380
    7520 011250* 001000 000521      43400  POP   D           ;POP MAX LINE OFF STACK
    7521 011251* 001000 000305      43420  PUSH  B           ;SAVE POINTER TO START OF 1ST LINE
    7522 011252* 001000 000515      43440  CALL  FNOLIN  ;FIND THE LAST LINE
    7523 011253* 001000 002371*      43460
    7524 011254* 001000 011246*      43460  PUP   B           ;GET POINTER TO FIRST IN [B,C]
    7525 011255* 001000 000501      43480  PUSH  H           ;SAVE THE POINTER TO THE NEXT LINE
    7526 011256* 001000 000345      43480
    7527 011257* 001000 000641      43500  LXI   H,REDDY  ;PRINT "OK" PREMATURELY
    7528 011260* 001000 000525*      43520  CALL  STROUT
    7529
    7530 011262* 001000 000515      43520
    7531 011263* 001000 007745*      43540  LXI   H,FINI  ;GO BACK TO FINI WHEN DONE
    7532 011264* 001000 011260*      43540
    7533 011265* 001000 000641      43540
    7534 011266* 001000 002276*      43560
    7535 011267* 001000 011263*      43580  XTHL
    7536 011268* 001000 000545      43580  DEL:  XCNG  ;[H,L]=POINTER TO THE NEXT LINE
    7537 011271* 001000 006353      43600  JDOE  NOW HAVE THE POINTER TO THE LINE
    7538
    7539 011272* 001000 000656      43600  JBEYOND THIS ONE
    7540 011273* 001000 001621*      43620  LHLD  VARTAB ;COMPACTIFYING TO VARTAB
    7541 011274* 001000 011266*      43640
    7542 011275* 001000 000632      43640  MLOOP: LDAX  D  ;MOVING DOWN TO ELIMINATE A LINE
    7543 011276* 001000 000602      43660  STAX  B
    7544 011277* 001000 000603      43680  INX   B
    7545 011278* 001000 000633      43700  INX   D
    7546 011301* 001000 000347      43720  COMPAR
    7547 011302* 001000 000322      43740  JNC   MLOOP  ;DONE COMPACTIFYING?
    7548 011303* 001000 011275*      43760
    7549 011304* 001000 011273*      43760  MOV   H,B
    7550 011305* 001000 000140      43780  MOV   L,C
    7551 011306* 001000 000151      43780
    7552 011307* 001000 000645      43800  INX   H           ;NEW VARTAB
    7553 011310* 001000 000642      43820  SHLD  VARTAB
    7554 011311* 001000 001621*      43840  RET>
    7555 011312* 000000 011503*      43840
    7556 011313* 001000 000511      43860  PAGE
  
```

BASIC MCS 8080 GATES/ALLEN/DAVIDOFF MACRO 47(113) 03:12 10-SEP-75 PAGE 27-3  
 F3 MAC 6-SEP-64 03:11 FANCY LIST,DELETE,EDIT,LLIST

```

    7555 011312* 000000 011503*      43840  RET>
    7556 011313* 001000 000511      43860  PAGE
  
```

BASIC MCS 8080 GATES/ALLEN/DAVIDUFF  
F3 MAC 6-SEP-64 05:11

MACRO 47(113) 05:12 10-SEP-75 PAGE 28  
DISK CODE

```
7558          43880 SUBTBL  DISK CODE
7559          43900 IFN      DSKFUN,<
7560          43920 J
7561          43940 ; THE STATEMENT DISKS STRING,SECTOR WRITES
7562          43950 ; THE STRING UP TO 153 DECIMAL CHARS
7563          43960 ; ON THE SECTOR SPECIFIED,
7564          44000 ; DSK1$ (SECTOR) IS A STRING FUNCTION THAT
7565          44020 ; RETURN THE 153 BYTE STRING STORED ON SECTOR,
7566          44040 ;
7567          44060 DSKUS: CALL    FPREML   ;EVALUATE FORMULA
7568          44080 SYNCH  44        ;FOLLOWED BY COMMA
7569          44100 PUSH   H       ;SAVE TEXT POINTER
7570          44120 CALL    FRESTR  ;FREE UP FOR READ
7571          44140 XTHL
7572          44160 CALL    GETBYT ;EVALUATE 2ND ARG(SECTOR), GET DESC.
7573          44180 XTHL
7574          44200 PUSHM  C       ;[C]=LENGTH [H,L]=POINTER
7575          44220 PUSHM  B       ;[B]=POINTER
7576          44240 PUSHM  A       ;[A]=POINTER
7577          44260 POP    H       ;[H,L] GET STRING POINTER
7578          44280 POP    B       ;[B]=SECTOR NUMBER INTO [B]
7579          44300 MOV    B,A
7580          44320 MVI   A,^U137
7581          44340 SUB   C
7582          44360 JC    FCERR  ;STRING TOO LONG
7583          44380 INR   A
7584          44400 MOV   E,A  ;NUMBER OF ZEROS+1
7585          44420 MVI   D,64  ;SETUP A MASK
7586          44440 INR   C
7587          44460 MVI   A,4  ;LOAD THE HEAD
7588          44480 OUT   9     ;TO DISK STATUS
7589          44500 SEC LP: IN    ^U11  ;GET SECTOR STATUS
7590          44520 RAR
7591          44540 JNC   SEC LP
7592          44560 ANI   63  ;KEEP WAITING
7593          44580 CMP   B
7594          44600 JNZ   SEC LP
7595          44620 MVI   A,128 ;IF NOT
7596          44640 OUT   9     ;WRITE ENABLE DISK
7597          44660 MVI   B,255 ;ALL ONE'S ALWAYS WRITTEN FIRST
7598          44680 WRITOK: IN    8     ;GET STATUS
7599          44700 AND   D
7600          44720 JZ    WRITOK ;WRITE OK
7601          44740 MOV   A,B  ;NO, MORE LOOPING,
7602          44760 OUT   10   ;GET CHARACTER TO WRITE
7603          44780 DCR
7604          44800 JZ    ZKLOP ;TEST FOR NULL
7605          44820 NUTYD: IN    8     ;IPOLL
7606          44840 AND   D
7607          44860 JZ    NUTYD ;MASK TEST
7608          44880 MOV   A,M  ;WAITING
7609          44900 OUT   10   ;GET CHARACTER
7610          44920 DCR   C
7611          44940 INX   H
7612          44960 JNZ   NUTYD
7613          44980 ZRLOP: IN    8     ;UNLOAD THE HEAD
7614          45000 AND   A
7615          45020 JZ    ZRLOP
7616          45040 XRA   A
7617          45060 OUT   10   ;PUT OUT A ZERO
7618          45080 DCR
7619          45100 JNZ   ZKLOP
7620          45120 TRUFIN: MVI   A,8  ;UNLOAD THE HEAD
7621          45140 OUT   9
7622          45160 POP   H
7623          45180 RET
7624          45200
7625          45220 DSKS: MVI   A,137 ;A LOT OF CHARACTERS ARE COMING
7626          45240 CALL   STRIN1 ;MAKE ROOM
7627          45260 CALL   COUNIT ;WHERE ARE THEY?
7628          45280
7629          45300 LHLD  DSC TMP+2 ;SECTOR NOW IN [E]
7630          45320 MVI   A,4  ;PLACE TO STORE THEM
7631          45340 OUT   9
7632          45360 SECLP2: IN    9     ;GET SECTOR INFO
7633          45380 ORKA A
7634          45400 JP    SECLP2 ;SEE IF BEGINNING OF SECTOR(READ)
7635          45420 RAR
7636          45440 ANI   63  ;IF NOT, KEEP WAITING
7637          45460 CMP   E
7638          45480 JZ    SECLP2 ;FFIX UP SECTOR #
7639          45500 MVI   C,137 ;GET SECTOR # FROM IT
7640          45520 READOK: IN    8     ;GET # OF CHARS TO READ
7641          45540 ORKA A
7642          45560 JP    READOK ;READY TO READ BYTE
7643          45580 IN    10   ;READ THE STUFF
7644          45600 MOV   M,A  ;SAVE IN STR
7645          45620 INX   H
7646          45640 DCR   C
7647          45660 JNZ   READOK ;FLUSH CHARS
7648          45680 MVI   A,8  ;UNLOAD HEAD
7649          45700 OUT   9
7650          45720 JMP   FINBK ;USE CHR$ TO FINISH UP
7651          45740
7652          45760 PATCH: BLOCK  20>
7653          45780 PAGE
```

BASIC MCS 8080 GATES/ALLEN/DAVIDUFF  
F3 MAC 6-SEP-64 05:11

MACRO 47(113) 05:12 10-SEP-75 PAGE 28-1  
DISK CODE

```
7611          44940 INX   H
7612          44960 JNZ   NUTYD
7613          44980 ZRLOP: IN    8     ;UNLOAD THE HEAD
7614          45000 AND   A
7615          45020 JZ    ZRLOP
7616          45040 XRA   A
7617          45060 OUT   10   ;PUT OUT A ZERO
7618          45080 DCR
7619          45100 JNZ   ZKLOP
7620          45120 TRUFIN: MVI   A,8  ;UNLOAD THE HEAD
7621          45140 OUT   9
7622          45160 POP   H
7623          45180 RET
7624          45200
7625          45220 DSKS: MVI   A,137 ;A LOT OF CHARACTERS ARE COMING
7626          45240 CALL   STRIN1 ;MAKE ROOM
7627          45260 CALL   COUNIT ;WHERE ARE THEY?
7628          45280
7629          45300 LHLD  DSC TMP+2 ;SECTOR NOW IN [E]
7630          45320 MVI   A,4  ;PLACE TO STORE THEM
7631          45340 OUT   9
7632          45360 SECLP2: IN    9     ;GET SECTOR INFO
7633          45380 ORKA A
7634          45400 JP    SECLP2 ;SEE IF BEGINNING OF SECTOR(READ)
7635          45420 RAR
7636          45440 ANI   63  ;IF NOT, KEEP WAITING
7637          45460 CMP   E
7638          45480 JZ    SECLP2 ;FFIX UP SECTOR #
7639          45500 MVI   C,137 ;GET SECTOR # FROM IT
7640          45520 READOK: IN    8     ;GET # OF CHARS TO READ
7641          45540 ORKA A
7642          45560 JP    READOK ;READY TO READ BYTE
7643          45580 IN    10   ;READ THE STUFF
7644          45600 MOV   M,A  ;SAVE IN STR
7645          45620 INX   H
7646          45640 DCR   C
7647          45660 JNZ   READOK ;FLUSH CHARS
7648          45680 MVI   A,8  ;UNLOAD HEAD
7649          45700 OUT   9
7650          45720 JMP   FINBK ;USE CHR$ TO FINISH UP
7651          45740
7652          45760 PATCH: BLOCK  20>
7653          45780 PAGE
```

BASIC MCS 8080 GATES/ALLEN/DAVIDUFF  
F3 MAC 6-SEP-64 05:11

MACRO 47(113) 05:12 10-SEP-75 PAGE 29  
CLOAD,CSAVE,CONSULE

7654 45800 SUBTLL CLOAD,CSAVE,CONSULE  
7655 45820 F  
7656 45840 ; THE CONSULE COMMAND ALLOWS THE USER TO CHANGE THE I/O CHANNEL  
7657 45860 ; THAT THE USER TERMINAL IS ON BY GIVING THE COMMAND CONSULE X  
7658 45880 ; WHERE X IS SOME INTEGER THE TERMINAL DEVICE WILL BE PULLED FROM  
7659 45900 ; CHANNELS X AND X+. RESTARTING AT LOCATION ZERO FORCES THE TERMINAL  
7660 45920 ; TO BE ON CHANNEL ZERO AGAIN.  
7661 45940 ;  
7662 45960 IFN CONSSW,<  
7663 45980 INTERNAL CONSUD: XRA A  
7664 46000 CONSUD: CALL CONSUD ; FORCE A CHANNEL ZERO CONSULE  
7665 46020 JMP READY ;DN RESTART AT ZERO  
7666 46040 TYPE "OK" AND ACCEPT INPUT  
7667 46060 CONSUL: CALL GETBYT ;FETCH AN INTEGER INTO [A]  
7668 46080 RNZ ;CHECK FOR A TERMINATOR  
7669 .  
7670 .  
7671 46100 CUNS2:  
7672 46120 IFN REALIO,<  
7673 46140 STA CNLCA1 ;CHANGE ALL THE FLAG INPUT CHANNEL REFERENCES  
7674 46160 STA CNLCA2  
7675 46180 STA CNLCAS>  
7676 .  
7677 46200 IFN LENGTH,<  
7678 46220 STA CNLCA4>  
7679 46240 INR A ;[A]=DATA INPUT CHANNEL  
7680 46260 STA CNLCB1 ;CHANGE ALL THE DATA INPUT CHANNEL REFERENCES  
7681 46280 STA CNLCB2  
7682 46300 RET  
7683 46320 IFN CASSW,<  
7684 .  
7685 46340 ; CASIN READS A CHARACTER FROM THE CASSETTE  
7686 46360 ; INTO [A] WITHOUT MODIFYING ANYTHING BUT [A] AND THE CONDITION  
7687 46380 ; CODES  
7688 46400 ;  
7689 46420 ;  
7690 46440 CASIN: IN 6 ;ROUTINE TO READ A CHARACTER  
7691 46460 ANI IDONE ;FROM THE CASSETTE INTO [A]  
7692 46480 JNZ CASIN  
7693 46500 IN 7 ;READ THE DATA  
7694 46520 RET  
7695 46540 ; CASOUT OUTPUTS THE CHARACTER IN [A] TO THE CASSETTE  
7696 46560 ; WITHOUT MODIFYING ANYTHING  
7697 46580 ;  
7698 46600 THUCSU1 CALL CASOUT ;DOUBLE OUT OF [A]  
7699 46620 CASOUT: PUSH PSW ;ROUTINE TO WRITE A CHARACTER IN [A]  
7700 46640 CASLK: IN 8 ;ONTO THE CASSETTE  
7701 46660 ANI ODONE  
7702 46680 JNZ CASLK ;WAIT TILL CASSETTE IS READY  
7703 46700 PDR PSW ;GET THE CHARACTER BACK  
7704 46720 OUT 7 ;OUTPUT THE CHARACTER  
7705 46740 RET  
7706 46760 ;  
7707 46780 ; THE CSAVE COMMAND WRITES A PROGRAM ONTO CASSETTE BY DUMPING  
7708 46800 ; BASICS CORE, THE HEADER IS THREE 211'S FOLLOWED BY A ONE  
7709 46820 ; CHARACTER FILE NAME, THE END IS THREE ZEROS IN A ROW.  
7710 .

BASIC MCS 8080 GATES/ALLEN/DAVIDUFF  
F3 MAC 6-SEP-64 05:11

MACRO 47(113) 05:12 10-SEP-75 PAGE 29-1  
CLOAD,CSAVE,CONSULE

7707 46860 ;  
7708 46880 CSAVE: PUSH H  
7709 46900 MOV A,211  
7710 46920 CALL CASOUT ;PUT OUT THE START BYTES  
7711 46940 CALL THUCSU ;TWO MORE TIMES  
7712 46960 MOV A,M ;GET FILENAME  
7713 46980 CALL CASOUT ;STORE AFTER 211'S  
7714 47000 LMD0 TXTTAB ;START OF PROGRAM  
7715 47020 XCHG  
7716 47040 LHLD VARTAB ;END OF PROGRAM  
7717 47060 LOPCSU1 LDAX D ;GET A BYTE FROM THE PROGRAM  
7718 47080 K D  
7719 47100 CALL CASOUT ;SEND IT OUT TO THE CASSETTE  
7720 47120 COMPAN ;THE END?  
7721 47140 JNZ LOPCSU0 ;IF NOT, OUTPUT MORE  
7722 47160 CALL THUCSU ;TWO MORE 0's TO MARK THE END  
7723 47180 PUP H ;RESTORE THE TEXT POINTER  
7724 47200 CHRGET ;GO PAST THE FILE NAME  
7725 47220 RET  
7726 .  
7727 47280 ; THE CLLOAD COMMAND CLEARS CORE AND THEN READS A PROGRAM  
7728 47290 ; FROM CASSETTE, SINCE THE LINKS OF THE FILE ON CASSETTE  
7729 47300 ; WILL BE WRONG IF THE FILE WAS SAVED WITH A DIFFERENT VERSION OF  
7730 47320 ; BASIC FINI IS JUMPED TO, A SCRATCH IS DONE AT THE START SO RESTARTS  
7731 47340 ; AT 0 WON'T LEAVE THINGS IN A GARBAGE STATE.  
7732 47360 ;  
7733 47380 CLOAD: STA FACLO ;SAVE THE FILENAME  
7734 47400 CALL SEARCH ;SEEK FOR THE FILENAME  
7735 47420 LOPCLK: MOV B,0 ;NUMBER OF START CHARACTERS  
7736 47440 LOPCLK2: CALL CASIN ;GET A CHARACTER  
7737 47460 CPI 211 ;START CHARACTER?  
7738 47480 JNZ LUPCLK ;NO, RESET COUNT AND LOOK SOME MORE  
7739 47500 DCR B ;DECREMENT THE COUNT  
7740 47520 JNZ LUPCL2 ;SEEN THREE YET?  
7741 47540 LXI H,FACLO ;POINT AT THE FILENAME  
7742 47560 CALL CASIN ;READ THIS FILENAME  
7743 47580 PUP H ;MOVE RIGHT  
7744 47600 JNZ LOPCLK ;IF NOT, START COMPLETELY OVER  
7745 47620 LHLD TXTTAB ;PLACE TO STORE THE PROGRAM  
7746 47640 DUCKS: MVI B,4 ;NUMBER OF ZEROS TO GET  
7747 47660 ;BEFORE STOPPING  
7748 47680 DOCSMH1 CALL CASIN ;GET A CHARACTER  
7749 47700 MOV H,A ;STORE IT  
7750 47720 CALL REASON ;MAKE SURE THERE IS ROOM  
7751 47740 MOV A,M ;REGRET THE CHARACTER  
7752 47760 OUT A ;TA ZERO?  
7753 47780 INX H  
7754 47800 JNZ DUCKS ;RESET # OF ZEROS SEEN  
7755 47820 DCR B ;DECREMENT NUMBER OF ZEROS  
7756 47840 JNZ DOCSMH ;SEEN FOUR?  
7757 47860 SHLD VARTAB ;SETUP END OF PROGRAM  
7758 47880 LXI H,READY ;TYPE "OK" PREMATURELY  
7759 47900 CALL STROUT

BASIC MCS 8080 GATES/ALLEN/DAVIDOFF  
F5 MAC 6=SEP=64 0\$11

MACRO 47(113) 0\$112 10=SEP=75 PAGE 29+2  
CLUAD,CSAVE,CONSOLE

7760 47920 JMP FINI> ;FIX UP THE LINKS AND GO BACK TO MAIN  
7761 47940 PAGE

BASIC MCS 8080 GATES/ALLEN/DAVIDOFF MACRO 47(113) 0\$112 10=SEP=75 PAGE 30  
F5 MAC 6=SEP=64 0\$11 PEAK AND POKE

7762 47950 SUBTTL PEEK AND PUKE  
7763 47980 IFN LENGTH<  
7764 48000 IFE LENGTH2,<  
7765 0\$11314# 0\$01000 0\$00315 48020 PEEK: CALL FNCINT ;GET AN INTEGER IN [M,L]  
0\$11315# 0\$00000 0\$11625#  
7767 0\$11316# 0\$00000 0\$11311#  
7768 0\$11317# 0\$01000 0\$00176 48040 MOV A,M# ;GET THE VALUE TO RETURN  
7769 48060 IFN LENGTH=2,<  
7770 48080 PEEK: CALL POSINT ;GET THE VALUE OF FACD INTO [D,E]  
7771 48100 LDAX D# ;READ THE VALUE  
7772 0\$11320# 0\$01000 0\$00305 48120 JMP SNGFLT ;AND FLOAT IT  
7773 0\$11321# 0\$00000 0\$07400#  
7774 0\$11322# 0\$00000 0\$11315#  
7775 48140 IFE LENGTH=2,<  
7776 0\$11323# 0\$01000 0\$00315 48160 POKE: CALL FMEVL  
0\$11324# 0\$00000 0\$0533#  
7777 0\$11325# 0\$00000 0\$11521#  
7778 0\$11326# 0\$01000 0\$00345 48180 PUSH H ;SAVE THE TEXT POINTER  
7779 0\$11327# 0\$01000 0\$00315 48200 CALL FNCINT ;GET INTEGER VALUE OF FAC IN [M,L]  
7780 0\$11330# 0\$00000 0\$11315#  
7781 0\$11331# 0\$00000 0\$11324#  
7782 0\$11332# 0\$01000 0\$00343 48220 XTHL> ;GET BACK THE TEXT POINTER  
7783 48240 IFN LENGTH=2,<  
7784 48260 POKE: CALL INT102 ;READ LOCATION TO PUKE  
7785 48280 PUSH D# ;SAVE THE LOCATION  
7786 48300 SYNCHK 44 ;CHECK FOR A COMMA  
7787 0\$11333# 0\$01000 0\$00317  
7788 0\$11334# 0\$00000 0\$00054  
7789 0\$11335# 0\$01000 0\$00315  
7790 0\$11336# 0\$00000 0\$11626#  
7791 0\$11337# 0\$00000 0\$11340#  
7792 0\$11340# 0\$01000 0\$00321 48340 POP D ;GET THE ADDRESS BACK  
7793 0\$11341# 0\$01000 0\$00022 48360 STAX D ;STORE IT AWAY  
7794 0\$11342# 0\$01000 0\$00311 48380 RET> ;ISCANNED EVERYTHING  
7795 48400 ;  
7796 48420 ; NOTE: IN THE 8K PEEK ONLY ACCEPTS POSITIVE NUMBERS UP TO 32767  
7797 48440 ; POKE WILL ONLY TAKE AN ADDRESS UP TO 32767 , NO  
7798 48460 ; FUDGING ALLOWED, THE VALUE IS UNSIGNED.  
7799 48480 ;  
7800 0\$11336# 48500 .C1#,P  
7801 48520 END

NO ERRORS DETECTED

PROGRAM BREAK IS 0\$11343

10K CORE USED

			SYMBOL TABLE
F3	MAC	6-SEP-64	03:11
A	000667	CNLCA1	003145' SIN DCOMP 000782' EXT
ABS	000197'	EXT CNLCA2	005127' SIN DCXHRT 011204' EXT
AFF	000184	CNLCA3	003061' SIN DUY 000780' EXT
ALLSLT	002354'	CNLCA4	003503' SIN DEF 007411' EXT
ALLSTH	010570'	CNLCB1	003124' SPD DEFFIN 007521' EXT
ANDURD	005571'	CNLCB2	005136' SPD DEL 011271' EXT
APPLUP	005642'	CNLCCN	003465' DELETE 011245'
ARG	001654'	INT CNTWFL	005154' INT DFACLU 001633' INT
AROL	001818'	CNTWFL	002785' INT D 006500' EXT
ARYSTR	011777'	CNTWRT	004545' INT D1CON 006500' EXT
ARYTAIR	016163'	CUNIA	006405' EXT DIMFLG 001542' EXT
ARYVA2	010153?	CUNINI	011825' INT DIRIS 005524' EXT
ARYVAB	010140'	CUNSIIH	006041' EXT DMULT 000676' EXT
ASC	010515'	CUNSSW	000000' SPD DNTPCPY 004217'
ASPA2	004626'	CUNT	003542' DOASIG 005056'
ASPAC	004627'	CUNTRW	000001' SPD DUCMP 006575'
ATN	000137'	EXT CUNTRW	000017' INT DUOPO 004554'
ATNPFX	000777'	INT CUNUM	000202' INT DUOSP 005756'
ATNPK	000308	SPD CUS	000151' EXT DUVIN 006146'
B	000000	CUSFIX	000151' INT DUNMUL 007326'
BLTLCU	002013'	CR	000015' SPD DURES 001544'
BLTUC	002005'	CRD00E	004525' INT DOSIZT 004621'
HOTCUN	000016	CRFIN	004534' DSCTMP 001576'
HRKITXT	001734'	CRUNCH	002533' DSKFUN 000000' SPD
HSRHR	0007	CSLOOP	000000' INT DSUM 000674' EXT
SUF	001431'	CURLIN	000000' INT DVERR 002075' INT
SUFLEN	000110	SPD CZLOOP	001007' INT DVAN 010143'
SUFLIN	011163'	D	002316' DVARZ 019214'
SUFLIN	001430'	DADD	000002' DVARS 000003
C	000001	DANDON	006437' EATEN 006535'
CASSW	000000	SPD DATA	004872' EDIT 000632' EXT
CAT	010320'	DATAK	000203' SPD ELSE 004074'
CHEAD	002309'	DATBK	005025' INT ELSETK 000228' SPD
CHDCH	000404	DATFN	001510' END 003414'
CHKSCTR	010432'	DATAIN	001577' ENDCON 003581'
CHRSA	010532'	DATLDP	005163' ENDRELK 005415'
CHRCUN	003433'	DATPTK	001627' ENDTK 000208' SPD
CHRGTH	003426'	DATSNE	002664' EQUALTK 000209
CLEAR	003703'	DELDSP	000672' ERRS8 000011' SPD
CLEARC	002443'		000016' SPD ERRCN 000021' SPD
CLMWH		SPD ERROD	000012' SPD ERROD 000004' SPD

			SYMBOL TABLE
ERRUM	000007	SPD FPWR	000000' EXT INCHR 003126'
ERRV	002112'	INT FPHQD	005562' EXT INCLP 008754'
ERRKG	000004	INT FPHRL	005171' EXT INIT 000000' EXT
ERRNS	000003	SPD FRCINT	011530' EXT INIT 002163' EXT
ERRSO	000002	SPD FRCNSG	007506' EXT INLIN 002776'
ERRST	000016	SPD FRCSTK	008000' EXT INLINC 003003'
ERRTAB	000020	SPD FRCCTL	000664' INLINN 002772'
ERRTM	000730'	FRE	007337' INLPNM 007252'
ERRTM	000015	SIN FREFA	010434' INPCKM 004157'
ERRUS	000022	SPD FRESTK	010431' INPCKN 004765'
ERVAL	000000	SPD FRESTM	010435' INPUT 002145' EXT
EXCHGT	004001'	FRETIP	010436' INPUT 004711'
EXIGHT	005142'	FRETOP	010573' INT INPNHD 010729'
EXP	000127'	EXT FRMEVL	005357' INT INRART 000000' EXT
EXPSTK	005553'	FSUB	005336' INT INTDSP 000000' EXT
EXTFNC	000001	SPD FUNCTS	000001' INT INTD2 003623'
FAC	011642'	INT FUNUPS	000103' INT INTDX 003622'
FACTBL	005142	INT GARBA	010442' INT INX 001745' INT
FACTL	000677'	INT GARAG	010000' INT INXHRT 002564' EXT
FACTNG	000634?	INT GATGN	000000' INT ISARY 006765'
FAD0	007004'	EXT GETBCU	007752' EXT ISCNTC 0023460'
FADUS	005260?	EXT GETBYI	011020' ISFUN 006204'
FALSFIF	004363?	GETDEF	007645' ISGOSU 004306'
FBUFUR	001655'	INT GETFNM	007556' ISIGN 000000' EXT
FECKR	010775'	INT GETSPA	007772' ISLET 003612'
FCOMP	005274'	EXT GETSTK	002624' ISSEC 006534'
FD	000000	EXT GETPE	000000' INT ISUB 000000' EXT
FIN	011664?	EXT GIVORL	007372' ISVAR 005168'
FINBUCK	010506?	GIVINT	007402' KLOOP 002544'
FINGU	006276?	GUNE1	003376' L 000005
FINJ	002276?	GUNE2	003376' LABBCK 006162'
FINLNL	004516?	GUNE3	003375' LASNUM 000306' SPD
FINN0W	007331?	GUODCH	003044' LEFT3 010552'
FINPTR	006742?	GOSUD	003770' LEFT2 010560'
FINKEL	005685?	GOSUTK	000214' LEFT3 010556'
FINR	005165?	GUD	004040' LEN 010556'
FLGINP	001692?	GUTOTK	000210' SPD LEN1 010505'
FLD0AT	000000	EXT GRBPS	010254' LENGTH 000002' SPD
FL0ATU	000000	EXT GREATK	000257' LEPSKP 002117'
FMULT	000710?	EXT GTBYTL	010181' M 000004
FND0FR	017147'	H	000004' MATHYP 006574'
FNDLN	002371?	HAVTYP	000000' INT IAUU 000000' EXT
FNDUER	007443'	IADU	000716' EXT ICMP 000726' EXT
FNUVAR	010043?	ICOMP	000726' EXT IDIV 000715' EXT
FNUWP	001525?	IDIV	000715' EXT IF 000000' SPD
FNOUT	010725?	I00NE	000000' SPD IF 000000' SPD
FNTK	000243	SPD IF	004525' IF 000000' SPD
FNWAIT	010733?	IFORDN	003267' IF 000000' SPD
FOR	003154?	IFTK	000212' SPD ILLFUN 010776' INT
FORIK	000201?	SPD ILLFUN	000722' EXT IMULT 000004' SPD
FOUN	002646?	IMULT	000000' INT ERROD 000004' SPD
FOUT	007565?	EXT	000000' INT ERROD 000004' SPD

LESSTK 000251 MUVRM 010154\* EXT OHERR 002057\* INT  
 ● LET 004131\* MUSTR 010417\* ONEFUN 000262\*  
 LINCH 004132\* MUSTRM 000000\* SPD ONEIN 000265\*  
 LINGT 003642\* INT MUSTCR 002617\* ONEON 003265\*  
 LINLEN 002118 SPD NEWCHR 004487\* OPTAB 001544\*  
 ● LINLNU 002764\* NEWSHT 003539\* OPTAB 000163\*  
 LINPNT 011134\* EXT NEXT 005225\* OPTFIN 006463\*  
 LINPNT1 003103 SIN NEXTC 005230\* OUTBEL 003061\*  
 LINPNT2 003574 SIN NFENR 002100\* OUTCON 003065\*  
 ● LINPNT3 004474 SIN NHARY1 007051\* OUTDO 000630\* INT  
 LINPNT4 004475 SIN NHARY2 007052\* OUTDU 001517\*  
 LIST 010702\* NHRCR 008003 SPD PARCM 006136\*  
 LIST4 011077\* NUDATTI 002710\* PEAK 011314\*  
 LISTEN 000001 SPD NUDEL 002227\* PLLOOP 011170\*  
 LOG 000125\* EXT NUPHRIN 003113\* PLUSTA 000250 INT  
 ● LOOP 002374\* NUSECR 006547\* PUKE 011323\*  
 LOOPDN 005328\* NUTABR 004657\* PUPGUF 001774\*  
 LOOPDR 001758\* NOTDIN 007152\* PUPHRT 000005\* EXT  
 ● LOOPDN 004567\* NUTER 007441\* PUS 000495\*  
 LOOPDT 001753\* NUTDOD 007442\* PUSHR 019324\*  
 LOPPDA 007015\* NUTNFS 006671\* PKEAM 019754\*  
 LOPPFD 006623\* NUTRFK 006272\* PKEAM2 010767\*  
 LOPPTA 007135\* NUTITI 006660\* PRINT 004411\*  
 ● LOPPER 005563\* NUTLST 010477\* PRINTC 000231 SPD  
 LPTLEN 000110 SPD NOTDTI 004735\* PRITS 011232\*  
 LPTSK 000008 SPD NOTDTM 005000\* PRJ4 010177\*  
 ● LSTOPK 000007 SPD NOTDTX 010753\* PRTNUL 004537\*  
 M 000006 SPD NOTTX 002246 SPD PSW 000006 SPD  
 MAIN 002165\* NUTTRU 005367\* PTARGET 006595\*  
 MAKINT 007404\* EXT NWGET 005053\* PTGRGT2 006512\*  
 MEMSIZ 001545\* INT NWLWIN 005214\* PUFOOT 000000 EXT  
 MIDS 010643\* NHIS 002736\* PURE 000000 SPD  
 ● MIDE 010665\* NHIS1 002716\* PUSHF 006635\* EXT  
 MINUTK 000251\* INT NUNENT 006500\* PUTMA 000000  
 MLOOP 011755\* NULL 005566\* PUTTEL 007524\*  
 MORCOM 002266\* NUMGFM 000040 PUTVAL 007705\*  
 MORLIN 003646\* NUMINS 005870\* Q 000022  
 MORPK 004418\* NUMLEV 000025 SPD QINLIN 002522\* INT  
 MOVE 000008 EXT NUMREL 005476\* QINT 000000 EXT  
 MOVFM 005253\* EXT NMHTMP 000005 SPD  
 MOVFR 005746\* EXT NUTPOS 000070 SPD  
 MOVFRS 010641\* NXTR 003104\*  
 MOVLP 001642\* NXTRRES 002625\*  
 MOVMF 007476\* EXT OUNNE 002200 SPD  
 MOVRF 006644\* EXT OKGOTU 004536\*  
           OKNORM 005251\*  
           OLDLIN 001611\*  
           OLDTXT 001613\*

RAMBUT 002000 SNGD0 005026\* TABER 004577\*  
 READ 004760\* SNGDSP 000704\* TABTK 000240  
 READY 002145\* INT SNGLTI 007480\* TAI 000135\* EXT  
 RELEDO 000001 SPD SP 000000 TANFIX 000057\* INT  
 ● REASON 004545\* INT SPCTK 000002 SPD TEMP 001603\*  
 REDIMP 001725\* SUR 000121\* EXT TEMP2 001605\* INT  
 REM 004136\* SURTF 000271\* SPD TEMP3 001575\* INT  
 REMER 004074\* SURTK 001754\* TEMP6 007124\* INT  
 REMTK 000183\* STAINP 000200\* TEMPST 001547\* INT  
 ● REPINI 002162\* INT STEPTK 000247 THENTK 000245\*  
 REPUT 004632\* SIKBL 005725\* THENR 005745\* EXT  
 RES1 011215\* SIKINI 000000\* TUFF 003695\*  
 ● RES2 007277\* SIKNS 006621\* TUN 003694\*  
 RESIN 005453\* SIKTOP 001615\* INT TOPCON 000835 SPD  
 RESLST 000172\* STMSP 000564\* TOTK 000241 SPD  
 ● RESRCH 011214\* STOP 003472\* TRCLLG 001631\*  
 RESTOR 003446\* STPEND 003550\* TRMNOK 004667\*  
 RETAUP 005355\* STPRDY 002144\* TRMOK 005111\*  
 RETURN 004044\* SIRS 007564\* TRYAGN 004644\*  
 RHD 001623\* EXT STIR 002617\* TRYD1 007144\*  
 ● RNDFIX 000123\* STIRAD1 007632\* TRYIN 003126\*  
 RUN 003754\* STIRAD2 007627\* TRYOUT 003113\*  
 ● RUNC 004067\* STIRN2 005077\* TSTOP 000000 EXT  
 SCNLIN 002533\* STIRUN 004507\* TTICHN 000001 SPD  
 SCRATH 002421\* STIRENU 001625\* INT TTICHN 000001 SPD  
 ● SCRCK 000223\* STIRPIN 007665\* TTINST 000045\*  
 SCRCK 005229\* INT STIRI 007665\* TTIPUS 000047\*  
 SETBL 007558\* STIRNG 000001 SPD TVAH 019063\*  
 SETIO 011003\* STIRINI 007624\* TXTTAB 001617\* INT  
 SGN 000193\* EXT STIRLI 007637\* INT UMULT 007267\* EXT  
 SIGN 000050\* INT STIRLT2 007643\* USERR 004037\*  
 ● SIGNC 000055\* EXT STIRLT3 007642\* USINTK 000244 SPD  
 SIGNS 000573\* EXT STIRLT1 007640\* USRLOC 000111\*  
 SIN 000133\* EXT STIRNG 002727\* VAR 011042\*  
 ● SIN13X 000133\* INT STIRNL1 007642\* INT VALINT 000000 EXT  
 SAPPHF 000555\* STIROUT 007643\* INT VALNSG 000000 EXT  
 SAPPVAR 010130\* STIRPR2 007755\* VALTYP 001543\* INT  
 ● SMLVAL 007322\* STIRPR3 007746\* VARTAB 001621\*  
 SNEKR 002072\* INT STRSIZ 000003 SPD VINT 000195\* EXT  
 SNGDHL 005743\* STUFFH 002667\* VMOWAF 005777\* EXT  
           SUBFLG 001601\* VMOVE 007724\* EXT  
           SVAR 010122\* VMOWFA 000000 EXT  
           SVARS 010077\* VMOWFM 006200\* EXT  
           TABENU 002653\* VMOWMF 006204\* EXT  
           VNCG 006160\* EXT  
           VPUSHU 005536\* EXT  
           VSIGN 004547\* EXT

ZERITA 007287#  
ZERO 011046# EXT  
ZERDOR 006723#  
SCODE 000000# INT

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	1960	1978	2049	2052	2069	2078	2154	2187	2189	2269	2272	2290	2299	2395
	2312	2320	2321	2322	2330	2335	2368	2373	2378	2417	2418	2419	2519	2522
	2523	2528	2606	2732	2803	2806	2875	2882	2887	2987	2912	2918	2944	2962
	2970	2979	3024	3026	3041	3070	3089	3103	3112	3152	3153	3197	3220	3222
	3223	3225	3397	3399	3400	3401	3428	3527	3534	3554	3558	3561	3587	3588
	3599	3623	3721	3834	3835	3859	3866	3872	3880	3953	3972	3973	3974	4019
	4061	4080	4091	4096	4166	4167	4189	4191	4192	4362	4373	4383	4392	4453
	4535	4665	4856	4957	4971	4983	4987	4993	4997	4973	4983	4987	4991	4992
	4840	4911	4916	4919	5123	5127	5193	5241	5242	5243	5349	5370	5373	5374
	5377	5379	5396	5397	5402	5440	5442	5443	5445	5473	5478	5479	5481	5487
	5480	5498	5529	5540	5541	5559	5594	5622	5628	5643	5664	5675	5695	5696
	5897	5942	5948	5965	6117	6019	6052	6053	6100	6104	6108	6161	6263	6265
	6266	6269	6270	6271	6423	6437	6444	6482	6497	6511	6540	6542	6562	6588
	6612	6659	6671	6694	6746	6759	6769	6782	6825	6871	6929	6976	6981	7052
	7071	7071	7074	7075	7092	7101	7125	7128	7150	7153	7161	7191	7218	7223
	7224	7227	7342	7343	7351	7366	7388	7489	7439	7465	7467	7490	7495	7501
	7502	7502												
ABS	934	934#												
FFFF	986	987#	987	988#	988	989#	989	990#	990	991#	991	992#	992	
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ALLSTR	7133	7137#												
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DATLIN	1624#	1869	4324
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DATPTK	1672#	2990	4093
DATSNE	166#	4021	
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DCDUSP	167#	1153	
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DDIV	165#	1151	
DEF	1114	6307#	
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DFAULD	170	1680#	4708
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DSKFUN	98#	936	995
DSUB	160#	1147	
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	7259	7317	7262
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EDIT	1097	1097#	
ELSE	1091	3388#	
ELSETK	994#	2383	3725
END	1058	3014#	7475
ENDCUN	2694	3019#	
ENDREL	4542#	4548	4566#
ENVRB	985#	2932	2936
EOUTLK	1035#	1459	6330
EKRBS	1370#	5986	
EKRCLN	1540#	3063	
ERRUD	1393#	5987	
ERRUDR	4073	6317	6418#
ERRUV	1413#	1878	

ERRFC	1292#	7307	
ERRFIN	1916#	3050	
ERRID	1431#	6428	
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ERRNF	1212#	1862	
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ERROH	1321#	1858	
ERROR	147	1863	1883#
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ERRUV	136	1394#	
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EXP	1408#	922	
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FRESCON	167#	1138 2790 2822
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FREIMP	3531	5359 6946 7021# 7167
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OUTCON	816	2538#
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SPCTK	1020#	3766	3950
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THERR	1698	4686	4656
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TON	1093	3102#	
TOPCON	5200#	5202	
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2775#	2786	2787#
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3052#	3054	3055#
3097#	3099	3100#
3184#	3187	3188#
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3533#	3542	3543#
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3690#	3703	3704#
3750#	3765	3764#
3797#	3803	3805#
3847#	3849	3850#
3912#	3919	3920#
3966#	3974	3971#
4031#	4033	4034#
4079#	4086	4087#
4141#	4148	4149#
4206#	4210	4211#
4249#	4255	4256#
4306#	4332	4333#
4363#	4403#	4409
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4566#	4570	4571#
4669#	4673	4674#
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4747#	4755	4756#
4797#	4799	4800#
4854#	4884	4885#
4885#	4888	4892
4931#	4934	4935#
4966#	4973	4974#
5002#	5004	5005#
2016	2017#	2019
2054#	2074	2083
2113#	2117	2120#
2167#	2193	2194#
2223#	2225	2226#
2256#	2269	2271#
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3052#	3054	3055#
3097#	3100	3101#
3184#	3187	3188#
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3264#	3265	3266#
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4966#	4973	4974#
5002#	5004	5005#
2016	2017#	2019
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2113#	2117	2120#
2167#	2193	2194#
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2314#	2315	2319#
2359#	2363	2368#
2411#	2417	2422#
2452#	2473	2474#
2504#	2508	2509#
2594#	2598	

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5919#	5104	5195#	5189	5113#	5112	5113#	5133	5134#	5158	5159#	5163	5164#	5167
5168#	5174	5175#	5181	5182#	5184	5185#	5199	5200#	5206	5207#	5211	5212#	5215
5218#	5258	5259#	5347	5348#	5362	5361#	5390	5391#	5394	5395#	5406	5407#	5483
5410#	5835	5456#	5439	5440#	5448	5449#	5455	5456#	5467	5468#	5476	5477#	5484
5489#	5493	5494#	5518	5519#	5532	5533#	5553	5537#	5539	5540#	5551	5552#	5555
5558#	5555	5559#	5584	5565#	5567	5568#	5570	5571#	5575	5576#	5597	5598#	5600
5614#	5620	5621#	5625	5626#	5631	5632#	5656	5657#	5681	5682#	5686	5687#	5693
5654#	5659	5660#	5672	5673#	5708	5674#	5711	5712#	5725	5726#	5730	5731#	5735
5739#	5740	5741#	5746	5747#	5802	5748#	5907	5908#	5911	5912#	5919	5920#	5926
5934#	5932	5935#	5925	5936#	5941	5939#	5947	5948#	5949	5951#	5964	5965#	5970
5971#	5983	5984#	5989	5990#	6031	6032#	6034	6035#	6040	6041#	6051	6052#	6055
6057#	6059	6060#	6070	6071#	6077	6078#	6084	6085#	6087	6088#	6090	6091#	6097
6098#	6103	6104#	6107	6108#	6115	6116#	6124	6125#	6146	6141#	6153	6154#	6157
6158#	6165	6167#	6170	6171#	6182	6181#	6184	6185#	6188	6189#	6201	6202#	6211
6212#	6215	6216#	6221	6222#	6224	6225#	6231	6232#	6235	6236#	6256	6257#	6262
6243#	6274	6275#	6281	6282#	6309	6310#	6313	6314#	6318	6319#	6326	6327#	6336
6339#	6346	6347#	6353	6354#	6357	6355#	6361	6362#	6367	6368#	6371	6372#	6379
6395#	6404	6405#	6414	6406#	6435	6407#	6442	6445#	6451	6452#	6466	6467#	6469
6474#	6475	6476#	6489	6489#	6508	6490#	6508	6501#	6506	6507#	6529	6530#	6541
6517#	6545	6546#	6549	6550#	6553	6554#	6558	6559#	6565	6566#	6570	6571#	6581
6581#	6583	6584#	6586	6587#	6592	6593#	6595	6596#	6607	6608#	6610	6611#	6621
6622#	6627	6628#	6631	6632#	6646	6647#	6650	6651#	6665	6666#	6669	6670#	6679
6680#	6682	6683#	6693	6694#	6698	6699#	6702	6703#	6708	6709#	6711	6712#	6715
6716#	6720	6721#	6724	6725#	6729	6730#	6732	6733#	6736	6737#	6740	6741#	6747
6746#	6755	6756#	6758	6759#	6769	6770#	6774	6776#	6781	6782#	6787	6788#	6796
6797#	6801	6802#	6805	6806#	6821	6822#	6831	6832#	6845	6846#	6847	6848#	6859
6944#	6948	6949#	6952	6953#	6952	6954#	6952	6955#	6959	6960#	6962	6963#	6965
6949#	6947	6948#	6951	6952#	6955	6956#	6959	6960#	6962	6963#	6965	6966#	6970
6971#	6956	6997#	7016	7017#	7019	7020#	7023	7024#	7037	7038#	7045	7047#	7051
7052#	7056	7057#	7065	7066#	7069	7070#	7083	7084#	7066	7087#	7095	7096#	7105
7106#	7109	7109#	7111	7112#	7117	7118#	7125	7126#	7134	7135#	7143	7145#	7161
7161#	7164	7165#	7168	7169#	7171	7172#	7175	7176#	7182	7183#	7194	7195#	7203
7204#	7229	7210#	7215	7217#	7241	7242#	7244	7245#	7249	7250#	7253	7254#	7260
7266#	7273	7274#	7276	7279#	7286	7287#	7291	7292#	7311	7312#	7318	7319#	7321
7334#	7344	7353#	7362	7364#	7371	7372#	7374	7375#	7387	7388#	7395	7396#	7400
7414#	7415	7416#	7419	7420#	7428	7429#	7430	7455#	7438	7439#	7445	7446#	7448
7449#	7453	7454#	7456	7457#	7459	7460#	7462	7463#	7473	7474#	7479	7480#	7485
7486#	7493	7494#	7499	7500#	7506	7507#	7511	7512#	7519	7520#	7524	7525#	7527
7536#	7532	7535#	7535	7536#	7541	7542#	7549	7550#	7555	7556#	7717	7768#	7777

## DEMENTIA EVALUATION



3533	3536	3543	3567	3576	3578	3781	3846	3882	3948	3981	4023	4059	4083	
4201	4245	4266	4318	4410	4415	4423	4424	4527	4756	4821	4868	4885	4889	
4893	4894	4915	4931	4945	4957	4958	4970	4981	4985	5086	5118	5207	5355	
5363	5369	5398	5449	5468	5470	5638	5711	5718	5737	5740	5751	5887	5888	
5908	5977	6028	6060	6072	6073	6142	6158	6160	6194	6358	6361	6381	6392	
6400	6401	6402	6411	6425	6490	6492	6501	6611	6661	6685	6688	6771	6803	
6851	6859	6860	6861	6869	6870	6900	6944	6973	7057	7091	7113	7143	7144	
7165	7176	7212	7279	7297	7298	7338	7384	7386	7401	7406	7487	7411	7424	
7441	7453	7454	7496	7520	7525	7792								
PUPK	579	4893	4957											
PUSH	807	886	1753	1792	1826	1846	1970	1974	1984	1985	1987	1991	2024	2101
	2189	2127	2159	2252	2266	2347	2353	2436	2588	2763	2771	2787	2796	2797
	2819	2829	2830	2831	2833	2841	2911	2928						



SPOOLER RUNTIME 48 SECONDS, 310 KCS, 1637 DISK HEADS, 123 DISK WRITES, 386 PAGES  
\*\*END\*\* USER MITS [16000,6000] JOB F5 SEQ, 42 DATE 10-SEP-75 09:22:31 MONITOR ALBUQUERQUE SCHOOLS 507B \*\*END\*\*

\*\*END\*\* USER MITS [6000,6000] JOB F5 SEQ. 42 DATE 10-SEP-75 09:22:31 MONITOR ALBUQUERQUE SCHOOLS 507B \*\*END\*\*

\*\*END\*\* USER MITS [6000,6000] JOB F3 SEQ. 42 DATE 10-SEP-75 09:22:31 MONITOR ALBUQUERQUE SCHOOLS 507B \*\*END\*\*

\*END\* USER MTS 1620-64001 FOR E3 SEQ 02 DATE 10-SEP-75 09132131 MONITOR ALBUQUERQUE SCHOOLS SUZH \*END\*

\*\*\*END\*\*\* USER MITS [64000:68000] JOB F3 SEQ. 42 DATE 10-SEP-75 09:22:31 MONITOR ALBUQUERQUE SCHOOLS 507B \*\*\*END\*\*\*

\*\*END\*\* USER HITS [6000,6000] JOB F5 SEQ. 42 DATE 10-SEP-75 09:22:31 MONITOR ALBUQUERQUE SCHOOLS 507B \*\*END\*\*

\*\*END\*\* USER MITS [6000,6000] JOB F3 SEQ. 42 DATE 10-SEP-75 09:22:31 MONITOR ALBUQUERQUE SCHOOLS 507B \*\*END\*\*

\*\*END\*\* USER MITS [6000,6000] JOB F3 SEQ. 42 DATE 10-SEP-75 09:22:31 MONITOR ALBUQUERQUE SCHOOLS 507B \*\*END\*\*

\*\*END\*\* USER MITS [6000,6000] JOB F3 SEQ. 42 DATE 10-SEP-75 09:22:31 MONITOR ALBUQUERQUE SCHOOLS 507B \*\*END\*\*

\*\*\*\*\* END \*\*\*\*\*

Digitized by srujanika@gmail.com

```
FFFF FFFF FFFF FFFF 444 444  
FFFF FFFF FFFF FFFF 444 444  
FFFF FFFF FFFF FFFF 444 444  
FFF 444 444 444  
FFF 444 444 444  
FFF 444 444 444  
FFF 444 444 444  
FFF FFFF FFFF FFFF 444 444 444 444  
FFF FFFF FFFF FFFF 444 444 444 444  
FFF FFFF FFFF FFFF 444 444 444 444  
FFF 444 444 444
```

Conformation plane reservation on Thu Sept 2 or Wed Sept. 3  
make sure received report is good order

check if more than 1 person (FAMI) calls VS/EN after doing a LDA VAL/TYP

See if a lot of people would save at ING or preferred B,C,E or just B,C

Subr that does GETTYP  
LOG URGENT? CAN 4? (Definitely Yes)  
RETR

a lot of can FINDING loops?

LPTSP1 VERSION 6.044A RUNNING ON LPT0  
\*START\* USER HITS [60000,60000] JOB #4 SEQ. 205 DATE 27=AUG=75 07:23:23 MONITOR ALBUQUERQUE SCHOOLS 507A \*START\*  
REQUEST CREATED: 27=AUG=75 05:11:125  
FILE# DSKB601:F4[60000,60000] CREATED: 27=AUG=75 05:11:0100 PRINTED: 27=AUG=75 07:23:30  
QUEUE SWITCHES: /FILE:ASCII //CUPIES:1 //SPACING:1 //LIMIT:468 //FORMS:NORMAL  
FILE WILL BE DELETED AFTER PRINTING

/MEDIUM/  
/ON MACHINE/  
/CASSETTE 1



```
1          00100  SEARCH MCS808 ;THE UNIVERSAL FILE
2          00200  SUBTL COMMON FILE
3          00300  SALL
4          00400  LENGTH#==1 ; 0 MEANS 4K, 1 MEANS 8K, 2 MEANS 12K
5          00500  REALIO#==1
6          00600  CASSHW#==1 ;CASSETTE SWITCH (CSAVE,CLOAD)
7          00700  LPTSW#==0
8          00800  DSKFUN#==0 ;ON TO READ/WRITE
9          00900  CONSSW#==0
10         01000  CONTRW#==1
11         01100  IFE LENGTH#< ;FOLLOW "0"
12         01200  REALIO#<
13         01300  LPTSW#==0 ;SIMULATOR DEFAULTS
14         01400  CASSHW#==0
15         01500  CONSSW#==0
16         01600  DSKFUN#==0
17         01700  CONTRW#==0>
18
19         01900  IFE LENGTH,< ;ON MEANS EXTENDED FUNCTIONS
20         02000  EXTFNC#==0 ;ON MEANS MULTIPLE DIMENSIONED ARRAYS ALLOWED
21         02100  MULDIM#==0 ;ON MEANS STRINGS ALLOWED
22         02200  STRING#==0
23         02300  EXP D
24         02400  LPTSW#==0
25         02500  DSFFUN#==0
26         02600  CONSSW#==0
27         02700  CONTRW#==0>
28
29         02900  IFE LENGTH#==1 ;ON MEANS EXTENDED FUNCTIONS
30         03000  EXTFNC#==1 ;ON MEANS MULTIPLE DIMENSIONED ARRAYS ALLOWED
31         03100  MULDIM#==1 ;ON MEANS STRINGS ALLOWED
32         03200  STRING#==1>
33
34         03400  IFE LENGTH#==2,<
35         03500  EXTFNC#==1
36         03600  MULDIM#==1
37         03700  STRING#==1>
38
39         03900  DEFINE SYNCCHK(A),<RST 1
40         04000           A>
41         04100  DEFINE CHRGET,<RST 2>
42         04200  DEFINE OUTCHH,<RST 3>
43         04300  DEFINE COMPAR,<RST 4>
44         04400  DEFINE FSIGN,<RST 5>
45         04500  DEFINE PUSHM,<RST 6>
46         04600  DEFINE PUSHM,,<PUSHM
47         04700           PUSHM>
48         04800  DEFINE ACRLF,<
49         04900           "D13
50         05000  IFN STRING,<"U100">
51         05100  DEFINE PUSHR,<
52         05200           PUSH  D
53         05300           PUSH  B>
```

```
54         05400  DEFINE PUPR,<
55         05500  POP  B
56         05600  PUP  D>
57         05700  DEFINE MOVR1(B,C,D,E),<
58         05800           XWD  "U1000,"0001    // "LXI B"
59         05900           EXP  C
60         06000           EXP  B
61         06100           XWD  "U1000,"0021    // "LXI D"
62         06200           EXP  E
63         06300           EXP  D>
64
65         06500  IFI,<
66         06600  IFE LENGTH,<PRINTX /SMALL/>
67         06700  IFE LENGTH#==1,<PRINTX /MEDIUM/>
68         06800  IFE LENGTH#==2,<PRINTX /BIG/>
69         06900  IFE REALIO,<PRINTX /SIMULATE/>
70         07000  IFN REALIO,<PRINTX /ON MACHINE/>
71         07100  IFN CASSHW,<PRINTX /CASSETTE/>
72         07200  IFN LPTSW,<PRINTX /LPT/>
73         07300  IFN DSKFUN,<PRINTX /DISK/>
74         07400  IFN CONSSW,<PRINTX /CONSOLE/>
75         07500  PAGE
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