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IDENTIFICATION

PSEUDONYMER, MU SYM1
704 Program

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PURPOSE

This program, suggested by R. Christian, provides an attempt to add marco machine instructions to the current list of SAP - 704 operation codes.

USAGE

This is a self-loading program which will read from cards a symbolic deck composed of normal SAP operations and certain macro instructions. All symbolic cards are converted into BCD information and simulated onto logical tape 3 as though it were written by an off-line card- to-tape mechanism. Codes other than normal SAP codes are first replaced by proper sets of SAP code as previously stored in PSEUDONYMER. During assembly time an undefined operation will be indicated by SAP in the normal manner. It is required that sense switch one be up and all other sense switches be set to their usual SAP operations. Upon reaching an END card, control is transferred to SAP. The assembly then continues as if the original symbolic decks were on tape instead of cards.

Certain macro instructions have been defined and integrated with PSEUDONYMER. Any of these may be deleted and others may be added by the user. Appendix A lists the original macro instructions provided, and can be used as a reference in preparing additions.

In addition to the macro instruction replacements, five records are inserted by PSEUDONYMER between the last instruction and the END card. They are required by certain of the built-in macro instructions, and can be referred to by other symbolic instructions if desired.

```
3SPC    HTR    0
        HTR    0
        HTR    0
        OCT    777777000000
        OCT    000000777777
```

The location 3SPC can be used for temporary storage, but the right half of 3SPC + 2 and all of 3SPC + 1, 3SPC + 3, and 3SPC + 4 must not be altered.

PROCEDURE FOR ADDITIONS

PSEUDONYMER has a capacity for 100 macro instructions allowing up to 25 words each. Those listed in Appendix A can be removed to allow for 100 new definitions if necessary. Additions are made by inserting up to three (maximum of 51 words) binary cards for each addition between cards PSEUDO34 and PSEUDO35, in the PSEUDONYMER deck. The first word identifies the macro instructions and must be located at zero. All words must be in 6 bit Hollerith (BCD). See Appendix B for an example of the first three listed in Appendix A.

Note the use of the addresses A, B, and Y as shown in Appendix A. For single addressing, the letter Y must be attached to each SAP instruction that is to receive the address and tag of the parent macro instruction. For double addressing, the letter A is attached to those SAP instructions to receive the left address and tag, B denotes receipt of the right address and tag. The left and right addresses of the parent macro instructions must be separated by a decimal point. For example, the third macro instruction of Appendix B might be assembled as:

entered symbolic card	resulting SAP records
AAA DEP L5,4. M7,1	AAA SLW 3SPC
	CAL M7,1
	COM
	ANS L5,4
	COM
	ANA 3SPC
	ORS L5,4
	CAL 3SPC

SYMBOLIC AND ABSOLUTE ADDRESSING

The symbolic location comments that appear with a macro instruction are recorded with the first instruction of its corresponding block. Care must be exercised in use of the asterisk or absolute addresses in the vicinity of such blocks.

INPUT	BECOMES	NOT
PXD	PXD	PXD
AAA ADL TABLE,1	AAA LDQ TABLE,1	AAA LDQ TABLE,1
TIX *-1,1,1	SLQ 3SPC + 2	SLQ 3SPC + 2
	ADD 3SPC + 2	ADD 3SPC + 2
	TIX *-1,1,1	TIX *-3,1,1

The TIX instruction should have been TIX AAA,1,1

MACHINE REQUIREMENTS

In addition to the PSEUDONYMER program deck, the SAP assembly program on tape drive 1 and erasable tapes 3 and 4 are necessary.

NEW 704 OPERATIONS

The following operations, originally discovered at Livermore, have been tested at this installation and can be assembled by SAP via PSEUDONYMER. For a description of what they do, see SHARE DISTRIBUTION C-1453, SSD-61. Two differences are noted here:

(1) The STW instruction was originally termed SWT, but has been changed to avoid confusion with the "sense switch test" instruction currently in the SAP dictionary.

(2) The STW instruction does not behave on our machines as expected. It does not store $C(AC)_{S,1-17}$ and $C(AC)_{21-35}$. It stores $C(AC)_{S,1-2}$ and $C(AC)_{21-35}$. (All but the tag bits 18-20, and decrement bits, 3-17, of the AC are stored.)

CEX	-0630	COMPLEMENT EFFECTIVE INDEX
RSS	-0603	OR WITH SIGN TO STORAGE
SAD	-0635	STORE ADDRESS AND DECREMENT
SLA	+0632	STORE LEFT ACCUMULATOR
STW	+0631	STORE WITHOUT TAG OR DECREMENT
AEX	+0530	ADDRESS TO EFFECTIVE INDEX
DEX	-0530	DECREMENT TO EFFECTIVE INDEX
TPF	+0163	TRANSFER ON MQ PLUS OR MQ OVERFLOW
LTA	+0514	LOAD AND TAG ACCUMULATOR
LTQ	+0574	LOAD AND TAG QUOTIENT

APPENDIX A

CLL Y

```
CLA  Y
ARS  18
ALS  18
```

CLR Y

```
LDQ  Y
RQL  18
SLQ  3SPC+2
CLA  3SPC+2
```

DEP A.B

```
SLW  3SPC
CAL  B
COM
ANS  A
COM
ANA  3SPC
ORS  A
CAL  3SPC
```

ADL Y

```
LDQ  Y
SLQ  3SPC+2
ADD  3SPC+2
```

SBL Y

```
LDQ  Y
SLQ  3SPC+2
SUB  3SPC+2
```

ADR Y

```
LDQ  Y
RQL  18
SLQ  3SPC+2
ADD  3SPC+2
```

SBR Y

```
LDQ  Y
RQL  18
SLQ  3SPC+2
SUB  3SPC+2
```

LQL Y

```
LDQ  Y
LLS  0
LRS  18
LLS  18
```

LQR Y

```
LDQ  Y
PXD  0, 0
LLS  17
RQL  1
```

SLL Y

```
STO  3SPC+2
LDQ  3SPC+2
SLQ  Y
```

SLR Y

```
LDQ  Y
RQL  18
LRS  17
RQL  18
STQ  Y
ALS  17
```

SRL Y

```
LRS  18
SLQ  Y
```

SRR Y

```
LRS  18
CLA  Y
ARS  18
LGL  1
LRS  18
STQ  Y
```

MYL Y

```
CAL  Y
ANA  3SPC+3
SLW  3SPC
MPY  3SPC
```

MYR Y

```
STQ  3SPC
LDQ  Y
PXD  0, 0
LLS  17
RQL  1
MPY  3SPC
```

SQL Y

```
SLQ  Y
```

SQR Y

```
CLA  Y
ARS  18
LGL  1
LRS  18
STQ  Y
```

DHL Y

```
LDQ  Y
SLQ  3SPC+2
LDQ  3SPC+1
DVH  3SPC+2
```

DHR Y

```
LDQ  Y
RQL  18
SLQ  3SPC+2
LDQ  3SPC+1
DVH  3SPC+2
```

APPENDIX B

```
ORG   O
BCD   1   CLL
BCD   2   CLA   Y
BCD   2   ARS   18
BCD   2   ALS   18
ORG   O
BCD   1   CLR
BCD   2   LDQ   Y
BCD   2   RQL   18
BCD   2   SLQ   3SPC+2
BCD   2   CLA   3SPC+2
ORG   O
BCD   1   DEP
BCD   2   SLW   3SPC
BCD   2   CAL   B
BCD   2   COM
BCD   2   ANS   A
BCD   2   COM
BCD   2   ANA   3SPC
BCD   2   ORS   A
BCD   2   CAL   O
END
```

```
      REM PSEUDONYMER                                          SYM1  0001
      FUL                                                      SYM1  0002
      ORG 0                                                    SYM1  0003
      LXA 0,4                                                  SYM1  0004
      CPY 2,4                                                  SYM1  0005
      TXI 1,4,32767                                            SYM1  0006
      HTR 31                                                   SYM1  0007
      LTM                                                      SYM1  0008
      LXA *+2,1                                                SYM1  0009
      RCD                                                      SYM1  0010
      CPY 2,4                                                  SYM1  0011
      TXI *-1,4,-1                                             SYM1  0012
      HTR 8144                                                 SYM1  0013
      TIX *-4,1,1                                              SYM1  0014
      LXA *-1,4                                                SYM1  0015
      STZ 0,4                                                  SYM1  0016
      TIX *-1,4,1                                              SYM1  0017
      CLA *+2                                                  SYM1  0018
      STO 5                                                    SYM1  0019
      TRA *+1                                                  SYM1  0020
      RCD                                                      SYM1  0021
      CPY 0                                                    SYM1  0022
      LLS 17                                                   SYM1  0023
      ANA 3                                                    SYM1  0024
      CPY 1                                                    SYM1  0025
      TZE BBB                                                  SYM1  0026
AAA   PAX 51,4                                                 SYM1  0027
      ADD 0                                                    SYM1  0028
      STA *+3                                                  SYM1  0029
      STA *+3                                                  SYM1  0030
      CAL 0                                                    SYM1  0031
      CPY **,4                                                 SYM1  0032
      ACL **,4                                                 SYM1  0033
      TIX *-2,4,1                                              SYM1  0034
      SLW 2                                                    SYM1  0035
      CLA 2                                                    SYM1  0036
      SUB 1                                                    SYM1  0037
      TZE 5                                                    SYM1  0038
      HTR 5                                                    SYM1  0039
BBB   CLA *+2                                                  SYM1  0040
      STO 5                                                    SYM1  0041
      TRA *+1                                                  SYM1  0042
      RCD                                                      SYM1  0043
      CPY 0                                                    SYM1  0044
      LLS 17                                                   SYM1  0045
      ANA 3                                                    SYM1  0046
      CPY 1                                                    SYM1  0047
      TZE 0                                                    SYM1  0048
      PAX 63,4                                                 SYM1  0049
      CAL 0                                                    SYM1  0050
      ANA *-2                                                  SYM1  0051
      TNZ CCC                                                  SYM1  0052
      CAL CCC                                                  SYM1  0053
      ADD AAA                                                  SYM1  0054
      STA CCC                                                  SYM1  0055
CCC   PDX 3000,4                                               SYM1  0056
      ARS 18                                                   SYM1  0057
      ADM CCC                                                  SYM1  0058
      ADD 0                                                    SYM1  0059
      STA *+3                                                  SYM1  0060
```

```
        STA *+3                                                 SYM1  0061
        CAL 0                                                   SYM1  0062
        CPY **,4                                                SYM1  0063
        ACL **,4                                                SYM1  0064
        TIX *-2,4,1                                             SYM1  0065
        SLW 2                                                   SYM1  0066
        CLA 2                                                   SYM1  0067
        SUB 1                                                   SYM1  0068
        TZE 5                                                   SYM1  0069
        HTR 5                                                   SYM1  0070
        ABS                                                     SYM1  0071
        ORG 1000                                                SYM1  0072
        SWT 1                                                   SYM1  0073
        TRA *+10                                                SYM1  0074
        WPR                                                     SYM1  0075
        SPR 1                                                   SYM1  0076
        LXA H24,3                                               SYM1  0077
        CPY SENT+24,1                                           SYM1  0078
        TIX *-1,1,1                                             SYM1  0079
        WPR                                                     SYM1  0080
        TIX *-1,2,2                                             SYM1  0081
        HPR                                                     SYM1  0082
        TRA 1000                                                SYM1  0083
        REW 3                 REWIND TAPE                       SYM1  0084
RCD     RCD                                                     SYM1  0085
        TOV *+1                                                 SYM1  0086
        LXA H12,7                                               SYM1  0087
        STZ IMAGE,1                                             SYM1  0088
        STZ EGAM,1                                              SYM1  0089
        TIX *-2,1,1                                             SYM1  0090
CPYN    CPY 0                                                   SYM1  0091
        TRA *+3                                                 SYM1  0092
        HPR                                                     SYM1  0093
        TRA RCD                                                 SYM1  0094
        CPY 1                                                   SYM1  0095
        LXA H6,1                                                SYM1  0096
        TXH PXDR,2,3                                            SYM1  0097
        TXL FIXIT,2,2                                           SYM1  0098
ZPNR    CAL IMAGE,1                                             SYM1  0099
        ALS 5                                                   SYM1  0100
        LGL 1                                                   SYM1  0101
        TOV *+2                                                 SYM1  0102
        ADD H1                                                  SYM1  0103
        ALS 5                                                   SYM1  0104
        LGL 1                                                   SYM1  0105
        TOV *+2                                                 SYM1  0106
        ADD H1                                                  SYM1  0107
        ALS 5                                                   SYM1  0108
        LGL 1                                                   SYM1  0109
        TOV *+2                                                 SYM1  0110
        ADD H1                                                  SYM1  0111
        ALS 5                                                   SYM1  0112
        LGL 1                                                   SYM1  0113
        TOV *+2                                                 SYM1  0114
        ADD H1                                                  SYM1  0115
        ALS 5                                                   SYM1  0116
        LGL 1                                                   SYM1  0117
        TOV *+2                                                 SYM1  0118
        ADD H1                                                  SYM1  0119
        ALS 5                                                   SYM1  0120
        LGL 1                                                   SYM1  0121
```

```
        TOV *+2                                                  SYM1  0122
        ADD H1                                                   SYM1  0123
        SLW EGAM,1                                               SYM1  0124
        TIX ZPNR,1,1                                             SYM1  0125
        LXA H6,1                                                 SYM1  0126
        LDQ 0                                                    SYM1  0127
ZPNL    CAL IMAGE-6,1                                            SYM1  0128
        ALS 5                                                    SYM1  0129
        LGL 1                                                    SYM1  0130
        TOV *+2                                                  SYM1  0131
        ADD H1                                                   SYM1  0132
        ALS 5                                                    SYM1  0133
        LGL 1                                                    SYM1  0134
        TOV *+2                                                  SYM1  0135
        ADD H1                                                   SYM1  0136
        ALS 5                                                    SYM1  0137
        LGL 1                                                    SYM1  0138
        TOV *+2                                                  SYM1  0139
        ADD H1                                                   SYM1  0140
        ALS 5                                                    SYM1  0141
        LGL 1                                                    SYM1  0142
        TOV *+2                                                  SYM1  0143
        ADD H1                                                   SYM1  0144
        ALS 5                                                    SYM1  0145
        LGL 1                                                    SYM1  0146
        TOV *+2                                                  SYM1  0147
        ADD H1                                                   SYM1  0148
        ALS 5                                                    SYM1  0149
        LGL 1                                                    SYM1  0150
        TOV *+2                                                  SYM1  0151
        ADD H1                                                   SYM1  0152
        SLW EGAM-6,1                                             SYM1  0153
        TIX ZPNL,1,1                                             SYM1  0154
        TIX CPYN,2,1                                             SYM1  0155
FIXIT   TXL PXDR,2,1                                             SYM1  0156
        CAL EGAM,4                                               SYM1  0157
        ANA ONES                                                 SYM1  0158
        ALS 4                                                    SYM1  0159
        SLW EGAM,4                                               SYM1  0160
        ALS 1                                                    SYM1  0161
        ACL EGAM,4                                               SYM1  0162
        SLW EGAM,4                                               SYM1  0163
        TIX FIXIT+1,4,1                                          SYM1  0164
PXDR    PXD 0,0                                                  SYM1  0165
        LGL 1                                                    SYM1  0166
        ALS 5                                                    SYM1  0167
        LGL 1                                                    SYM1  0168
        ALS 5                                                    SYM1  0169
        LGL 1                                                    SYM1  0170
        ALS 5                                                    SYM1  0171
        LGL 1                                                    SYM1  0172
        ALS 5                                                    SYM1  0173
        LGL 1                                                    SYM1  0174
        ALS 5                                                    SYM1  0175
        LGL 1                                                    SYM1  0176
        TXH *+6,2,3                                              SYM1  0177
        ALS 4                                                    SYM1  0178
        TXL *+2,2,1                                              SYM1  0179
        SLW MROW,1                                               SYM1  0180
        SLW PROW,1                                               SYM1  0181
        TRA *+5                                                  SYM1  0182
```

```
        ACL EGAM,1                                                      SYM1  0183
        SLW EGAM,1                                                      SYM1  0184
        ACL IMAGE,1                                                     SYM1  0185
        SLW IMAGE,1                                                     SYM1  0186
        TIX PXDR,1,1                                                    SYM1  0187
        LXA H6,1                                                        SYM1  0188
        LDQ 0                                                           SYM1  0189
PXDL    PXD 0,0                                                         SYM1  0190
        LGL 1                                                           SYM1  0191
        ALS 5                                                           SYM1  0192
        LGL 1                                                           SYM1  0193
        ALS 5                                                           SYM1  0194
        LGL 1                                                           SYM1  0195
        ALS 5                                                           SYM1  0196
        LGL 1                                                           SYM1  0197
        ALS 5                                                           SYM1  0198
        LGL 1                                                           SYM1  0199
        ALS 5                                                           SYM1  0200
        LGL 1                                                           SYM1  0201
        TXH *+6,2,3                                                     SYM1  0202
        ALS 4                                                           SYM1  0203
        TXL *+2,2,1                                                     SYM1  0204
        SLW MROW-6,1                                                    SYM1  0205
        SLW PROW-6,1                                                    SYM1  0206
        TRA *+5                                                         SYM1  0207
        ACL EGAM-6,1                                                    SYM1  0208
        SLW EGAM-6,1                                                    SYM1  0209
        ACL IMAGE-6,1                                                   SYM1  0210
        SLW IMAGE-6,1                                                   SYM1  0211
        TIX PXDL,1,1                                                    SYM1  0212
        TIX CPYN,2,1                                                    SYM1  0213
        LXA H12,4                                                       SYM1  0214
CAL     CAL MROW,4                                                      SYM1  0215
        ALS 1                                                           SYM1  0216
        SLW TEMP                                                        SYM1  0217
        CAL EGAM,4                                                      SYM1  0218
        ACL MROW,4                                                      SYM1  0219
        ANA FORTS                                                       SYM1  0220
        SLW MROW,4                                                      SYM1  0221
        ARS 1                                                           SYM1  0222
        ACL MROW,4                                                      SYM1  0223
        ACL TEMP                                                        SYM1  0224
        SLW MROW,4                                                      SYM1  0225
        CAL EGAM,4                                                      SYM1  0226
        ACL PROW,4                                                      SYM1  0227
        ANA FORTS                                                       SYM1  0228
        SLW EGAM,4                                                      SYM1  0229
        ARS 1                                                           SYM1  0230
        ACL EGAM,4                                                      SYM1  0231
        ACL PROW,4                                                      SYM1  0232
        ANA MROW,4                                                      SYM1  0233
        ORA TEMP                                                        SYM1  0234
        ORA PROW,4                                                      SYM1  0235
        ACL IMAGE,4                                                     SYM1  0236
        SLW IMAGE,4                                                     SYM1  0237
        TIX CAL,4,1                                                     SYM1  0238
LOOK    CAL IMAGE-11          LOOK AT OPERATION                         SYM1  0239
        ANA OPMSK                                                       SYM1  0240
        CAS END                                                         SYM1  0241
        TRA FIND                                                        SYM1  0242
        TRA *+2                                                         SYM1  0243
```

```
      TRA FIND                                                    SYM1  0244
      LXA H20,1          END CARD FOUND                           SYM1  0245
ENDER WTD 3                                                       SYM1  0246
      CPY 3SPC+20,1                                               SYM1  0247
      CPY 3SPC+21,1                                               SYM1  0248
      CPY 3SPC+22,1                                               SYM1  0249
      CPY 3SPC+23,1                                               SYM1  0250
      LXA H8,2                                                    SYM1  0251
      CPY BLNKS                                                   SYM1  0252
      TIX *-1,2,1                                                 SYM1  0253
      TIX ENDER,1,4                                               SYM1  0254
      WTD 3                                                       SYM1  0255
      LXA H12,1                                                   SYM1  0256
      CPY IMAGE,1                                                 SYM1  0257
      TIX *-1,1,1                                                 SYM1  0258
      WEF 3                                                       SYM1  0259
      REW 3                                                       SYM1  0260
      SLF                                                         SYM1  0261
      TRA SAP                                                     SYM1  0262
FIND  LXA H5100,1        FIND PSEUDO OP CODE                      SYM1  0263
      ORA ENBKS                                                   SYM1  0264
      SSM                                                         SYM1  0265
      CAS TABLE,1                                                 SYM1  0266
      TRA *+2                                                     SYM1  0267
      TRA FOUND                                                   SYM1  0268
      TIX *-3,1,51                                                SYM1  0269
      WTD 3              NOT FOUND                                SYM1  0270
      LXA H12,1                                                   SYM1  0271
      CPY IMAGE,1                                                 SYM1  0272
      TIX *-1,1,1                                                 SYM1  0273
      IOD                                                         SYM1  0274
      TRA RCD                                                     SYM1  0275
FOUND LXA H51,2          TABLE TO WORK                            SYM1  0276
      SLF                                                         SYM1  0277
      CLA TABLE,1                                                 SYM1  0278
      STO WORK,2                                                  SYM1  0279
      TIX *+1,1,1                                                 SYM1  0280
      TIX *-3,2,1                                                 SYM1  0281
      CAL IMAGE-12                                                SYM1  0282
      SLW WORKA-12                                                SYM1  0283
      LXA H12,4                                                   SYM1  0284
      CLA IMAGE,4                                                 SYM1  0285
      STO IM,4                                                    SYM1  0286
      TIX *-2,4,1                                                 SYM1  0287
      LXA H52,1                                                   SYM1  0288
      SXD TEMPA,1                                                 SYM1  0289
NEXT  LXD TEMPA,1                                                 SYM1  0290
      TNX RCD,1,2                                                 SYM1  0291
      SXD TEMPA,1                                                 SYM1  0292
      LXA H12,2                                                   SYM1  0293
      LXA H1,4                                                    SYM1  0294
      CAL LDQER                                                   SYM1  0295
      STA LDQA                                                    SYM1  0296
      STA LDQB                                                    SYM1  0297
      STA LDQD                                                    SYM1  0298
      STA LDQN                                                    SYM1  0299
      CAL WORK,1                                                  SYM1  0300
      TZE RCD                                                     SYM1  0301
      ANA H63                                                     SYM1  0302
      CAS BCDA                                                    SYM1  0303
      TRA *+2                                                     SYM1  0304
```

```
        TRA ATYPE                                                SYM1  0305
        CAS BCDB                                                 SYM1  0306
        TRA *+2                                                  SYM1  0307
        TRA BTYPE                                                SYM1  0308
        CAS BCDD                                                 SYM1  0309
        TRA *+2                                                  SYM1  0310
        TRA DTYPE                                                SYM1  0311
        CAS BCDY                                                 SYM1  0312
        TRA *+2                                                  SYM1  0313
        TRA YTYPE                                                SYM1  0314
        CAL LDQER                                                SYM1  0315
        ADD H3                                                   SYM1  0316
        STA LDQN                                                 SYM1  0317
        CAL WORK,1                                               SYM1  0318
        SLW WORKA-11                                             SYM1  0319
        CAL WORK+1,1                                             SYM1  0320
        SLW WORKA-10                                             SYM1  0321
        CAL BLNKS                                                SYM1  0322
        LXA H9,1                                                 SYM1  0323
        TXI LXAN,2,30                                            SYM1  0324
ATYPE   LXA H11,1                                                SYM1  0325
PXDA    PXD 0,0                                                  SYM1  0326
ALSA    ALS 6                                                    SYM1  0327
        SLW TEMP                                                 SYM1  0328
        TIX LDQA,2,6                                             SYM1  0329
        LXA H36,2                                                SYM1  0330
        CAL LDQA                                                 SYM1  0331
        ADD H1                                                   SYM1  0332
        STA LDQA                                                 SYM1  0333
QA      LDQ **                                                   SYM1  0334
        LGL 42,2                                                 SYM1  0335
        ANA H63                                                  SYM1  0336
        CAS BCDP                                                 SYM1  0337
        TRA *+2                                                  SYM1  0338
        TRA AA                                                   SYM1  0339
        CAS BCDBK                                                SYM1  0340
        TRA *+2                                                  SYM1  0341
        TRA ERROR                                                SYM1  0342
        ACL TEMP                                                 SYM1  0343
        TIX ALSA,4,1                                             SYM1  0344
        LXA H6,4                                                 SYM1  0345
        SLW WORKA,1                                              SYM1  0346
        TIX PXDA,1,1                                             SYM1  0347
        TRA ERROR                                                SYM1  0348
AA      CAL LDQA                                                 SYM1  0349
        STA LDQA1                                                SYM1  0350
        TRA AB                                                   SYM1  0351
PXDA1   PXD 0,0                                                  SYM1  0352
ALSA1   ALS 6                                                    SYM1  0353
        SLW TEMP                                                 SYM1  0354
        TIX LDQA1,2,6                                            SYM1  0355
        LXA H36,2                                                SYM1  0356
        CAL LDQA1                                                SYM1  0357
        ADD H1                                                   SYM1  0358
        STA LDQA1                                                SYM1  0359
QA1     LDQ **                                                   SYM1  0360
        LGL 42,2                                                 SYM1  0361
        ANA H63                                                  SYM1  0362
        CAS BCDBK                                                SYM1  0363
        TRA *+2                                                  SYM1  0364
        TRA AC                                                   SYM1  0365
```

```
AB      CAL BCDBK                                   SYM1  0366
        ACL TEMP                                    SYM1  0367
        TIX ALSA1,4,1                               SYM1  0368
        LXA H6,4                                    SYM1  0369
        SLW WORKA,1                                 SYM1  0370
        TIX PXDA1,1,1                               SYM1  0371
        TRA ERROR                                   SYM1  0372
AC      CAL LDQA1                                   SYM1  0373
        STA LDQN                                    SYM1  0374
        TRA LDQN                                    SYM1  0375
BTYPE   LXA H2,1                                    SYM1  0376
TIXB    TIX LDQB,2,6                                SYM1  0377
        LXA H36,2                                   SYM1  0378
        CAL LDQB                                    SYM1  0379
        ADD H1                                      SYM1  0380
        STA LDQB                                    SYM1  0381
LDQB    LDQ **                                      SYM1  0382
        LGL 42,2                                    SYM1  0383
        ANA H63                                     SYM1  0384
        CAS BCDP                                    SYM1  0385
        TRA *+2                                     SYM1  0386
        TRA BA                                      SYM1  0387
        CAS BCDBK                                   SYM1  0388
        TRA *+2                                     SYM1  0389
        TRA ERROR                                   SYM1  0390
        TXI TIXB,1,1                                SYM1  0391
BA      CAL LDQB                                    SYM1  0392
        STA LDQB1                                   SYM1  0393
        SXD TEMPB,1                                 SYM1  0394
        LXA H11,1                                   SYM1  0395
PXDB1   PXD 0,0                                     SYM1  0396
ALSB1   ALS 6                                       SYM1  0397
        SLW TEMP                                    SYM1  0398
        TIX LDQB1,2,6                               SYM1  0399
        LXA H36,2                                   SYM1  0400
        CAL LDQB1                                   SYM1  0401
        ADD H1                                      SYM1  0402
        STA LDQB1                                   SYM1  0403
LDQB1   LDQ **                                      SYM1  0404
        LGL 42,2                                    SYM1  0405
        ANA H63                                     SYM1  0406
        CAS BCDBK                                   SYM1  0407
        TRA *+2                                     SYM1  0408
        TRA BC                                      SYM1  0409
        ACL TEMP                                    SYM1  0410
        TIX ALSB1,4,1                               SYM1  0411
        LXA H6,4                                    SYM1  0412
        SLW WORKA,1                                 SYM1  0413
        TIX PXDB1,1,1                               SYM1  0414
        TRA ERROR                                   SYM1  0415
BC      CAL LDQB1                                   SYM1  0416
        STA LDQN                                    SYM1  0417
        PXD 0,2                                     SYM1  0418
        LXD TEMPB,2                                 SYM1  0419
        STD TEMPB                                   SYM1  0420
        TRA BD                                      SYM1  0421
PXDB2   PXD 0,0                                     SYM1  0422
ALSB2   ALS 6                                       SYM1  0423
        SLW TEMP                                    SYM1  0424
BD      CAL BCDBK                                   SYM1  0425
        TIX *+3,2,1                                 SYM1  0426
```

```
        LXD TEMPB,2                                     SYM1  0427
        TRA LDQN                                        SYM1  0428
        ACL TEMP                                        SYM1  0429
        TIX ALSB2,4,1                                   SYM1  0430
        LXA H6,4                                        SYM1  0431
        SLW WORKA,1                                     SYM1  0432
        TIX PXDB2,1,1                                   SYM1  0433
ERROR   WTD 3                                           SYM1  0434
        LXA H10,3                                       SYM1  0435
        LXA H12,4                                       SYM1  0436
        CPY BLNKS                                       SYM1  0437
        CPY REM                                         SYM1  0438
        CPY BLNKS                                       SYM1  0439
        TIX *-1,1,1                                     SYM1  0440
        WTD 3                                           SYM1  0441
        LXA H10,1                                       SYM1  0442
        CPY BLNKS                                       SYM1  0443
        CPY REM                                         SYM1  0444
        CPY ERR+10,1                                    SYM1  0445
        TIX *-1,1,1                                     SYM1  0446
        WTD 3                                           SYM1  0447
        CPY IM,4                                        SYM1  0448
        TIX *-1,4,1                                     SYM1  0449
        WTD 3                                           SYM1  0450
        CPY BLNKS                                       SYM1  0451
        CPY REM                                         SYM1  0452
        CPY BLNKS                                       SYM1  0453
        TIX *-1,2,1                                     SYM1  0454
        IOD                                             SYM1  0455
        TRA NEXT                                        SYM1  0456
D[illegible]E   LXA H11,1                               SYM1  0457
PXDD    PXD 0,0                                         SYM1  0458
ALSD    ALS 6                                           SYM1  0459
        SLW TEMP                                        SYM1  0460
        TIX LDQD,2,6                                    SYM1  0461
        LXA H36,2                                       SYM1  0462
        CAL LDQD                                        SYM1  0463
        ADD H1                                          SYM1  0464
        STA LDQD                                        SYM1  0465
LDQD    LDQ **                                          SYM1  0466
        LGL 42,2                                        SYM1  0467
        ANA H63                                         SYM1  0468
        CAS BCDCM                                       SYM1  0469
        TRA *+2                                         SYM1  0470
        TRA DA                                          SYM1  0471
        CAS BCDBK                                       SYM1  0472
        TRA *+2                                         SYM1  0473
        TRA DB                                          SYM1  0474
ACLD    ACL TEMP                                        SYM1  0475
        TIX ALSD,4,1                                    SYM1  0476
        LXA H6,4                                        SYM1  0477
        SLW WORKA,1                                     SYM1  0478
        TIX PXDD,1,1                                    SYM1  0479
        TRA ERROR                                       SYM1  0480
DA      SLT 1                                           SYM1  0481
        TRA *+2                                         SYM1  0482
        TRA ERROR                                       SYM1  0483
        SLN 1                                           SYM1  0484
        TRA ACLD                                        SYM1  0485
DB      SXD TEMPB,2                                     SYM1  0486
        SLT 1                                           SYM1  0487
```

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        TRA *+2                                                 SYM1  0488
        TRA DD                                                  SYM1  0489
        CAL LDQD                                                SYM1  0490
        TIX *+3,2,6                                             SYM1  0491
        LXA H36,2                                               SYM1  0492
        ADD H1                                                  SYM1  0493
        TIX *+3,2,6                                             SYM1  0494
        LXA H36,2                                               SYM1  0495
        ADD H1                                                  SYM1  0496
        STA LDQD                                                SYM1  0497
        SXD TEMPB,2                                             SYM1  0498
        LXA H12,2                                               SYM1  0499
        TRA DC                                                  SYM1  0500
PXDD1   PXD 0,0                                                 SYM1  0501
ALSD1   ALS 6                                                   SYM1  0502
        SLW TEMP                                                SYM1  0503
        TNX DD,2,6                                              SYM1  0504
DC      LDQ COMOB                                               SYM1  0505
        LGL 42,2                                                SYM1  0506
        ANA H63                                                 SYM1  0507
        ACL TEMP                                                SYM1  0508
        TIX ALSD1,4,1                                           SYM1  0509
        LXA H6,4                                                SYM1  0510
        SLW WORKA,1                                             SYM1  0511
        TIX PXDD1,1,1                                           SYM1  0512
        TRA ERROR                                               SYM1  0513
DD      LXD TEMPA,2                                             SYM1  0514
        CAL WORK+1,2                                            SYM1  0515
        SLW TEMPC                                               SYM1  0516
        LXA H36,2                                               SYM1  0517
        TRA DE                                                  SYM1  0518
PXDD2   PXD 0,0                                                 SYM1  0519
ALSD2   ALS 6                                                   SYM1  0520
        SLW TEMP                                                SYM1  0521
        TNX DF,2,6                                              SYM1  0522
DE      LDQ TEMPC                                               SYM1  0523
        LGL 42,2                                                SYM1  0524
        ANA H63                                                 SYM1  0525
        ACL TEMP                                                SYM1  0526
        TIX ALSD2,4,1                                           SYM1  0527
        LXA H6,4                                                SYM1  0528
        SLW WORKA,1                                             SYM1  0529
        TIX PXDD2,1,1                                           SYM1  0530
        TRA ERROR                                               SYM1  0531
DF      LXD TEMPB,2                                             SYM1  0532
        CAL LDQD                                                SYM1  0533
        ADD H1                                                  SYM1  0534
        STA LDQN                                                SYM1  0535
        TRA LDQN                                                SYM1  0536
YTYPE   LXA H11,1                                               SYM1  0537
PXDN    PXD 0,0                                                 SYM1  0538
ALSN    ALS 6                                                   SYM1  0539
        SLW TEMP                                                SYM1  0540
        TIX LDQN,2,6                                            SYM1  0541
        LXA H36,2                                               SYM1  0542
        CAL LDQN                                                SYM1  0543
        ADD H1                                                  SYM1  0544
        STA LDQN                                                SYM1  0545
LDQN    LDQ **                                                  SYM1  0546
        LGL 42,2                                                SYM1  0547
        ANA H63                                                 SYM1  0548
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       ACL TEMP                                                    SYM1  0549
       TIX ALSN,4,1                                                SYM1  0550
LXAN   LXA H6,4                                                    SYM1  0551
       SLW WORKA,1                                                 SYM1  0552
       TIX PXDN,1,1                                                SYM1  0553
       LXD TEMPA,1          WRITE RECORD                           SYM1  0554
       CAL WORK,1                                                  SYM1  0555
       ARS 6                                                       SYM1  0556
       LDQ WORKA-11                                                SYM1  0557
       RQL 30                                                      SYM1  0558
       LGL 6                                                       SYM1  0559
       SLW WORKA-11                                                SYM1  0560
       SLT 1                                                       SYM1  0561
       TRA CALT                                                    SYM1  0562
       CAL BLNKS            CLEAR 1-6 AND COMMENTS                 SYM1  0563
       SLW WORKA-12                                                SYM1  0564
       LXA H10,1                                                   SYM1  0565
LXAT   LXA H6,2                                                    SYM1  0566
       LDQ WORKA,1                                                 SYM1  0567
       PXD 0,0                                                     SYM1  0568
ALST   ALS 6                                                       SYM1  0569
       SLW TEMP                                                    SYM1  0570
       LGL 6                                                       SYM1  0571
       ANA H63                                                     SYM1  0572
       CAS BCDBK                                                   SYM1  0573
       TRA *+2                                                     SYM1  0574
       TRA ACLTT                                                   SYM1  0575
       ACL TEMP                                                    SYM1  0576
       TIX ALST,2,1                                                SYM1  0577
       SLW WORKA,1                                                 SYM1  0578
       TIX LXAT,1,1                                                SYM1  0579
       TRA CALT                                                    SYM1  0580
LXATT  LXA H6,2                                                    SYM1  0581
       PXD 0,0                                                     SYM1  0582
ALSTT  ALS 6                                                       SYM1  0583
       SLW TEMP                                                    SYM1  0584
       CAL BCDBK                                                   SYM1  0585
ACLTT  ACL TEMP                                                    SYM1  0586
       TIX ALSTT,2,1                                               SYM1  0587
       SLW WORKA,1                                                 SYM1  0588
       TIX LXATT,1,1                                               SYM1  0589
CALT   CAL WORK-51          PSEUDO CODE TO LAST WORD               SYM1  0590
       SLW WORKA-1                                                 SYM1  0591
       WTD 3                                                       SYM1  0592
       LXA H12,1                                                   SYM1  0593
       CPY WORKA,1                                                 SYM1  0594
       TIX *-1,1,1                                                 SYM1  0595
       IOD                                                         SYM1  0596
       SLN 1                                                       SYM1  0597
       TRA NEXT                                                    SYM1  0598
SAP    LXA H24,1                                                   SYM1  0599
       CLA LOAD+24,1                                               SYM1  0600
       STO 24,1                                                    SYM1  0601
       TIX *-2,1,1                                                 SYM1  0602
       PXD 0,0                                                     SYM1  0603
       PDX 0,1                                                     SYM1  0604
       PDX 0,2                                                     SYM1  0605
       TRA 4                                                       SYM1  0606
LOAD   LXA 0,4              0                                      SYM1  0607
       CPY 2,4              1                                      SYM1  0608
       TXI 1,4,-1           2                                      SYM1  0609
```

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        HTR 0,0,145          3                                  SYM1  0610
        CLA 3                4                                  SYM1  0611
        ARS 18               5                                  SYM1  0612
        ORS 7                6                                  SYM1  0613
        REW **               7                                  SYM1  0614
        LXA 3,4              8                                  SYM1  0615
        ORS 10               9                                  SYM1  0616
        RTB **               10                                 SYM1  0617
        TXL 15,4,0           11                                 SYM1  0618
        ORS 13               12                                 SYM1  0619
        RTB **               13                                 SYM1  0620
        TIX 13,4,1           14                                 SYM1  0621
        LXD 18,4             15                                 SYM1  0622
        PXD 0,0              16                                 SYM1  0623
        CAD 0                17                                 SYM1  0624
        TXI 0,0,19           18                                 SYM1  0625
        HTR 0                19                                 SYM1  0626
        HTR 0                20                                 SYM1  0627
        HTR 0                21                                 SYM1  0628
        HTR 0                22                                 SYM1  0629
        HTR 0                23                                 SYM1  0630
SENT    OCT 004000001000                                        SYM1  0631
        OCT 000000401000                                        SYM1  0632
        OCT 400000000100                                        SYM1  0633
        OCT 200000000200                                        SYM1  0634
        OCT 002000000000                                        SYM1  0635
        OCT 400001000000                                        SYM1  0636
        OCT 231040002020                                        SYM1  0637
        OCT 022300000000                                        SYM1  0638
        OCT 000004320014                                        SYM1  0639
        OCT 000410200000                                        SYM1  0640
        OCT 100000000001                                        SYM1  0641
        OCT 040004000000                                        SYM1  0642
        OCT 000502000600                                        SYM1  0643
        OCT 200000004600                                        SYM1  0644
        OCT 000010444000                                        SYM1  0645
        OCT 004000150000                                        SYM1  0646
        OCT 000000000000                                        SYM1  0647
        OCT 000020002000                                        SYM1  0648
        OCT 500512446401                                        SYM1  0649
        OCT 004100154400                                        SYM1  0650
        OCT 215040100030                                        SYM1  0651
        OCT 422611401000                                        SYM1  0652
        OCT 022004221304                                        SYM1  0653
        OCT 240024202200                                        SYM1  0654
TEMP    HTR **                                                  SYM1  0655
TEMPA   HTR **                                                  SYM1  0656
TEMPB   HTR **                                                  SYM1  0657
TEMPC   HTR **                                                  SYM1  0658
BLNKS   BCD 1                                                   SYM1  0659
OPMSK   OCT 007777770000                                        SYM1  0660
END     OCT 002545240000                                        SYM1  0661
ENBKS   OCT 200000006060                                        SYM1  0662
BCDA    OCT 000000000021     A                                  SYM1  0663
BCDB    OCT 000000000022     B                                  SYM1  0664
BC      OCT 000000000024     D                                  SYM1  0665
BCDY    OCT 000000000070     Y                                  SYM1  0666
BCDP    OCT 000000000033     .                                  SYM1  0667
BCDCM   OCT 000000000073     ,                                  SYM1  0668
COMOB   OCT 000000007300     ,0                                 SYM1  0669
BCDBK   OCT 000000000060                                        SYM1  0670
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ONES   OCT 010101010101                                          SYM1  0671
FORTS  OCT 404040404040                                          SYM1  0672
LDQER  LDQ IMAGE-11                                              SYM1  0673
REM    OCT 605125446060                                          SYM1  0674
       BCD 9 THE CARD SHOWN ON THE NEXT LINE IS IN ERROR.        SYM1  0675
       BCD 1                                                     SYM1  0676
3SPC   OCT 600362472360     3SPC                                 SYM1  0677
       OCT 603063516000     HTR 0                                SYM1  0678
       BCD 1                B                                    SYM1  0679
       BCD 1                B                                    SYM1  0680
       BCD 1                B                                    SYM1  0681
       OCT 603063516000     HTR 0                                SYM1  0682
       BCD 1                B                                    SYM1  0683
       BCD 1                B                                    SYM1  0684
       BCD 1                B                                    SYM1  0685
       OCT 603063516000     HTR 0                                SYM1  0686
       BCD 1                B                                    SYM1  0687
       BCD 1                B                                    SYM1  0688
       BCD 1                B                                    SYM1  0689
       OCT 604623636007     OCT 7                                SYM1  0690
       OCT 070707070700     777770                               SYM1  0691
       OCT 000000000060     00000B                               SYM1  0692
       BCD 1                B                                    SYM1  0693
       OCT 604623636000     OCT 0                                SYM1  0694
       OCT 000000000007     000007                               SYM1  0695
       OCT 070707070760     777778                               SYM1  0696
H1     HTR 1                                                     SYM1  0697
H2     HTR 2                                                     SYM1  0698
H3     HTR 3                                                     SYM1  0699
H4     HTR 6                                                     SYM1  0700
H7     HTR 7                                                     SYM1  0701
H8     HTR 8                                                     SYM1  0702
H9     HTR 9                                                     SYM1  0703
H10    HTR 10                                                    SYM1  0704
H11    HTR 11                                                    SYM1  0705
H12    HTR 12                                                    SYM1  0706
H16    HTR 16                                                    SYM1  0707
H20    HTR 20                                                    SYM1  0708
H24    HTR 24                                                    SYM1  0709
H36    HTR 36                                                    SYM1  0710
H48    HTR 48                                                    SYM1  0711
H51    HTR 51                                                    SYM1  0712
H52    HTR 52                                                    SYM1  0713
H63    HTR 63                                                    SYM1  0714
H72    HTR 72                                                    SYM1  0715
H5100  HTR 5100                                                  SYM1  0716
IMAGE  SYN 2100                                                  SYM1  0717
IM     SYN IMAGE-12                                              SYM1  0718
WORK   SYN 2200                                                  SYM1  0719
WORKA  SYN WORK-12                                               SYM1  0720
EGAM   SYN 2300                                                  SYM1  0721
MROW   SYN EGAM-12                                               SYM1  0722
PROW   SYN MROW-12                                               SYM1  0723
TABLE  SYN 3000+5100                                             SYM1  0724
       END 1000                                                  SYM1  0725
       ORG 0                                                     SYM1  0726
       BCD 1 RAM                                                 SYM1  0727
       BCD 2 MZE D,24640                                         SYM1  0728
       ORG 0                                                     SYM1  0729
       BCD 1 CEX                                                 SYM1  0730
       BCD 2 MZE D,26112                                         SYM1  0731
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ORG 0                                                    SYM1  0732
BCD 1 RSS                                                SYM1  0733
BCD 2 MZE D,24768                                        SYM1  0734
ORG 0                                                    SYM1  0735
BCD 1 SAD                                                SYM1  0736
BCD 2 MZE D,26432                                        SYM1  0737
ORG 0                                                    SYM1  0738
BCD 1 SLA                                                SYM1  0739
BCD 2 PZE D,26240                                        SYM1  0740
ORG 0                                                    SYM1  0741
BCD 1 SIW                                                SYM1  0742
BCD 2 PZE D,26176                                        SYM1  0743
ORG 0                                                    SYM1  0744
BCD 1 XEX                                                SYM1  0745
BCD 2 PZE D,22016                                        SYM1  0746
ORG 0                                                    SYM1  0747
BCD 1 OEX                                                SYM1  0748
BCD 2 MZE D,22016                                        SYM1  0749
ORG 0                                                    SYM1  0750
BCD 1 TPF                                                SYM1  0751
BCD 2 PZE D,7360                                         SYM1  0752
ORG 0                                                    SYM1  0753
BCD 1 LTA                                                SYM1  0754
BCD 2 PZE D,21248                                        SYM1  0755
ORG 0                                                    SYM1  0756
BCD 1 LTQ                                                SYM1  0757
BCD 2 PZE D,24320                                        SYM1  0758
ORG 0                                                    SYM1  0759
BCD 1 CLL                                                SYM1  0760
BCD 2 CLA Y                                              SYM1  0761
BCD 2 ARS 18                                             SYM1  0762
BCD 2 ALS 18                                             SYM1  0763
ORG 0                                                    SYM1  0764
BCD 1 CLR                                                SYM1  0765
BCD 2 LDQ Y                                              SYM1  0766
BCD 2 RQL 18                                             SYM1  0767
BCD 2 SLQ 3SPC+2                                         SYM1  0768
BCD 2 CLA 3SPC+2                                         SYM1  0769
ORG 0                                                    SYM1  0770
BCD 1 DEP                                                SYM1  0771
BCD 2 SLW 3SPC                                           SYM1  0772
BCD 2 CAL B                                              SYM1  0773
BCD 2 COM                                                SYM1  0774
BCD 2 ANS A                                              SYM1  0775
BCD 2 COM                                                SYM1  0776
BCD 2 ANA 3SPC                                           SYM1  0777
BCD 2 ORS A                                              SYM1  0778
BCD 2 CAL 3SPC                                           SYM1  0779
ORG 0                                                    SYM1  0780
BCD 1 ADL                                                SYM1  0781
BCD 2 LDQ Y                                              SYM1  0782
BCD 2 SLQ 3SPC+2                                         SYM1  0783
BCD 2 ADD 3SPC+2                                         SYM1  0784
ORG 0                                                    SYM1  0785
BCD 1 SBL                                                SYM1  0786
BCD 2 LDQ Y                                              SYM1  0787
BCD 2 SLQ 3SPC+2                                         SYM1  0788
BCD 2 SUB 3SPC+2                                         SYM1  0789
ORG 0                                                    SYM1  0790
BCD 1 ADR                                                SYM1  0791
BCD 2 LDQ Y                                              SYM1  0792
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BCD 2 RQL 18                                                    SYM1  0793
BCD 2 SLQ 3SPC+2                                                SYM1  0794
BCD 2 ADD 3SPC+2                                                SYM1  0795
ORG 0                                                           SYM1  0796
BCD 1 SBR                                                       SYM1  0797
BCD 2 LDQ Y                                                     SYM1  0798
BCD 2 RQL 18                                                    SYM1  0799
BCD 2 SLQ 3SPC+2                                                SYM1  0800
BCD 2 SUB 3SPC+2                                                SYM1  0801
ORG 0                                                           SYM1  0802
BCD 1 LQL                                                       SYM1  0803
BCD 2 LDQ Y                                                     SYM1  0804
BCD 2 LLS 0                                                     SYM1  0805
BCD 2 LRS 18                                                    SYM1  0806
BCD 2 LLS 18                                                    SYM1  0807
ORG 0                                                           SYM1  0808
BCD 1 LQR                                                       SYM1  0809
BCD 2 LDQ Y                                                     SYM1  0810
BCD 2 PXD 0,0                                                   SYM1  0811
BCD 2 LLS 17                                                    SYM1  0812
BCD 2 RQL 1                                                     SYM1  0813
ORG 0                                                           SYM1  0814
BCD 1 SLL                                                       SYM1  0815
BCD 2 STO 3SPC                                                  SYM1  0816
BCD 2 LDQ 3SPC                                                  SYM1  0817
BCD 2 SLQ Y                                                     SYM1  0818
ORG 0                                                           SYM1  0819
BCD 1 SLR                                                       SYM1  0820
BCD 2 LDQ Y                                                     SYM1  0821
BCD 2 RQL 18                                                    SYM1  0822
BCD 2 LRS 17                                                    SYM1  0823
BCD 2 RQL 18                                                    SYM1  0824
BCD 2 STQ Y                                                     SYM1  0825
BCD 2 ALS 17                                                    SYM1  0826
ORG 0                                                           SYM1  0827
BCD 1 SRL                                                       SYM1  0828
BCD 2 LRS 18                                                    SYM1  0829
BCD 2 SLQ Y                                                     SYM1  0830
ORG 0                                                           SYM1  0831
BCD 1 SRR                                                       SYM1  0832
BCD 2 LRS 18                                                    SYM1  0833
BCD 2 CLA Y                                                     SYM1  0834
BCD 2 ARS 18                                                    SYM1  0835
BCD 2 LGL 1                                                     SYM1  0836
BCD 2 LRS 18                                                    SYM1  0837
BCD 2 STQ Y                                                     SYM1  0838
ORG 0                                                           SYM1  0839
BCD 1 MYL                                                       SYM1  0840
BCD 2 CAL Y                                                     SYM1  0841
BCD 2 ANA 3SPC+2                                                SYM1  0842
BCD 2 SLW 3SPC                                                  SYM1  0843
BCD 2 MPY 3SPC                                                  SYM1  0844
ORG 0                                                           SYM1  0845
BCD 1 MYR                                                       SYM1  0846
BCD 2 STQ 3SPC                                                  SYM1  0847
BCD 2 LDQ Y                                                     SYM1  0848
BCD 2 PXD 0,0                                                   SYM1  0849
BCD 2 LLS 17                                                    SYM1  0850
BCD 2 RQL 1                                                     SYM1  0851
BCD 2 MPY 3SPC                                                  SYM1  0852
ORG 0                                                           SYM1  0853
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BCD 1 SQL                                   SYM1  0854
BCD 2 SLQ Y                                 SYM1  0855
ORG 0                                       SYM1  0856
BCD 1 SQR                                   SYM1  0857
BCD 2 CLA Y                                 SYM1  0858
BCD 2 ARS 18                                SYM1  0859
BCD 2 LGL 1                                 SYM1  0860
BCD 2 LRS 18                                SYM1  0861
BCD 2 STQ Y                                 SYM1  0862
ORG 0                                       SYM1  0863
BCD 1 DHL                                   SYM1  0864
BCD 2 LDQ Y                                 SYM1  0865
BCD 2 SLQ 3SPC+2                            SYM1  0866
BCD 2 LDQ 3SPC+1                            SYM1  0867
BCD 2 DVH 3SPC+2                            SYM1  0868
ORG 0                                       SYM1  0869
BCD 1 DHR                                   SYM1  0870
BCD 2 LDQ Y                                 SYM1  0871
BCD 2 RQL 18                                SYM1  0872
BCD 2 SLQ 3SPC+2                            SYM1  0873
BCD 2 LDQ 3SPC+1                            SYM1  0874
BCD 2 DVH 3SPC+2                            SYM1  0875
END                                         SYM1  0876
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