```
                                IDENT    SALCUZ                                                  ASM 7.1
      0000          ZERO       EQU      *
                                RORG     ZERO+/1FE
01FE 207F           START      HLT
0200 20BF                      INH
0202 87A0 0150                 LDKL     A15,/150          INITIALIZE STACK POINTER A15
0206 0184                      LDK      A1,/84            PUT /84 IN ALL INT. LOCATIONS
0208 0200                      LDK      A2,0
020A 8241 0600 R               ST       A2,PASS           CLEAR PASS COUNTER
020E 8129           INIT       STR      A1,A2
0210 1202                      ADK      A2,2
0212 EA20 0020                 CWK      A2,/20
0216 5C0A                      RB(4)    INIT
0218 8120 207F                 LDKL     A1,/207F          STOP AT LOCATION /84 IN CASE
021C 8141 0084                 ST       A1,/84            OF AN ILLEGAL INTERRUPT
0220 8120 0364 R               LDKL     A1,INPIR
0224 8141 0010                 ST       A1,/10            LOAD SALCUZ INPUT INT.ADDRESS
0228 8120 0390 R               LDKL     A1,OTPIR
022C 8141 0012                 ST       A1,/12            LOAD SALCUZ OUTPUT INT. ADDRESS
0230 8F20 02FE R               ABL(7)   RESTRT
                    *
                    *MAIN PROGRAM STARTS HERE
                    *
                    *RECEIVE MESSAGE FROM THE LINE
                    *
                                RORG     ZERO+/2FE
02FE 207F           RESTRT     HLT
0300 20BF                      INH
0302 0300                      LDK      A3,0              CLEAR "INDEX"REGISTER
0304 0701                      LDK      A7,1              SET I/O FLAG
0306 0104                      LDK      A1,4              EVEN PARITY:NO ECHO
0308 41D2                      CIO      A1,1,/12          START SALCUZ IN INPUT MODE
030A 5002                      RF(0)    *+4
030C 207F                      HLT                        CIO START NOT ACCEPTED
030E 2840                      ENB
0310 871C           RCPT       LDR      A7,A7             INPUT FINISHED?
0312 5C04                      RB(4)    RCPT              NO
0314 20BF                      INH                        YES
0316 8F20 031A R               ABL(7)   COMP
                    *
                    *COMPARE BUFIN WITH BUFOUT
                    *
031A 8120 004E      COMP       LDKL     A1,/4E            OUTPUT BUFFER IS 40 WORDS LONG
031E 824C 0400 R               LD       A2,BUFIN,A3
0322 8444 0500 R               LD       A4,BUFOUT,A1
0326 EA10                      CWR      A2,A4
0328 5002                      RF(0)    OK
032A 207F                      HLT                        NOT EQUAL! , OBSERVE A2 AND A4
032C 1B02           OK         SUK      A3,2
032E 1902                      SUK      A1,2
0330 5E16                      RB(6)    COMP+2
0332 8F20 0336 R               ABL(7)   CLBUF
                    *
                    *CLEAR INPUT BUFFER BUFIN(100 LOCATIONS)
                    *
0336 0100           CLBUF      LDK      A1,0
0338 0200                      LDK      A2,0
```

```
0057 033A 8149 0400 R  CLBUF2   ST      A1,BUFIN,A2
0058 033E 1202                  ADK     A2,2
0059 0340 EA20 00C8             CWK     A2,/C8              ALL DONE ?
0060 0344 5C0C                  RB(4)   CLBUF2             NO
0061 0346 8F20 034A R           ABL(7)  TRSMT               YES
0062                    *
0063                    *TRANSMIT CONTENTS OF BUFOUT TO THE LINE
0064                    *AND UPDATE PASS COUNTER
0065                    *
0066 034A 0300          TRSMT   LDK     A3,0                CLEAR "INDEX" REGISTER
0067 034C 0701                  LDK     A7,1                SET I/O FLAG
0068 034E 0104                  LDK     A1,4                EVEN PARITY
0069 0350 41D3                  CIO     A1,1,/13            START SALCUZ IN OUTPUT MODE
0070 0352 5002                  RF(0)   *+4
0071 0354 207F                  HLT                         CIO START NOT ACCEPTED
0072 0356 2840                  ENB
0073 0358 871C          TRSMT2  LDR     A7,A7               OUTPUT FINISHED?
0074 035A 5C04                  RB(4)   TRSMT2              NO
0075 035C 9041 0600 R           IM      PASS                YES;INCREMENT PASS COUNTER
0076 0360 8F20 0300 R           ABL(7)  RESTRT+2
0077                    *
0078                    *SALCUZ INPUT INTERRUPT ROUTINE
0079                    *
0080 0364 4DD2          INPIR   SST     A5,/12              INPUT-STATUS WORD IN A5
0081 0366 540E                  RF(4)   INPA
0082 0368 257F                  ANK     A5,/7F              CHECK BITS 9...15
0083 036A ED20 0000             CWK     A5,0
0084 036E 5002                  RF(0)   *+4
0085 0370 207F                  HLT                         INPUT STATUS ERROR! , CHECK A5
0086 0372 0700                  LDK     A7,0                RESET I/O FLAG
0087 0374 5718                  RF(7)   RET
0088 0376 4C0C          INPA    INR     A4,0,12             INPUT A CHARACTER
0089 0378 844D 0400 R           ST      A4,BUFIN,A3         AND STORE IT
0090 037C 1302                  ADK     A3,2
0091 037E EC20 000D             CWK     A4,/0D              WAS IT A "CR"?
0092 0382 540A                  RF(4)   RET                 NO
0093 0384 1802                  SUK     A3,2                YES
0094 0386 0100                  LDK     A1,0
0095 0388 4192                  CIO     A1,0,/12            STOP INPUT
0096 038A 5002                  RF(0)   RET
0097 038C 207F                  HLT                         CIO STOP NOT ACCEPTED
0098 038E F03E          RET     RTN     A15
0099                    *
0100                    *SALCUZ OUTPUT INTERRUPT ROUTINE
0101                    *
0102 0390 4DD3          OTPIR   SST     A5,/13              OUTPUT-STATUS WORD IN A5
0103 0392 540E                  RF(4)   OTPA
0104 0394 25FF                  ANK     A5,/FF              CHECK BITS 8 AND 15
0105 0396 ED20 0000             CWK     A5,0
0106 039A 5002                  RF(0)   *+4
0107 039C 207F                  HLT                         OUTPUT STATUS ERROR!;CHECK A5
0108 039E 0700                  LDK     A7,0                RESET I/O FLAG
0109 03A0 5716                  RF(7)   RTRN
0110 03A2 844C 0500 R   OTPA    LD      A4,BUFOUT,A3
0111 03A6 4413                  OTR     A4,0,/13            OUTPUT A CHARACTER
0112 03A8 1302                  ADK     A3,2
0113 03AA EC20 000D             CWK     A4,/0D              WAS IT A "CR"?
```

```
0114 03AE 5408                    RF(4)    RTRN                 NO
0115 03B0 0100                    LDK      A1,0                 YES
0116 03B2 4193                    CIO      A1,0,/13             STOP OUTPUT
0117 03B4 5002                    RF(0)    RTRN
0118 03B6 207F                    HLT                           CIO STOP NOT ACCEPTED
0119 03B8 F03E           RTRN     RTN      A15
0120                     *
0121                     *RESERVE FOR BUFFERS
0122                     *
0123                              RORG     ZER0+/400            INPUT BUFFER STARTS AT /400
0124 0400                BUFIN    RES      100
0125                              RORG     ZER0+/500            OUTPUT BUFFER STARTS AT /500
0126 0500 0030 0031      BUFOUT   DATA     /30,/31,/32,/33,/34,/35,/36,/37,/38,/39
     0504 0032 0033
     0508 0034 0035
     050C 0036 0037
     0510 0038 0039
0127 0514 0041 0042               DATA     /41,/42,/43,/44,/45,/46,/47,/48,/49,/4A
     0518 0043 0044
     051C 0045 0046
     0520 0047 0048
     0524 0049 004A
0128 0528 004B 004C               DATA     /4B,/4C,/4D,/4E,/4F,/50,/51,/52,/53,/54
     052C 004D 004E
     0530 004F 0050
     0534 0051 0052
     0538 0053 0054
0129 053C 0055 0056               DATA     /55,/56,/57,/58,/59,/5A,/7F,/7F,/7F,/0D
     0540 0057 0058
     0544 0059 005A
     0548 007F 007F
     054C 007F 000D
0130                              RORG     ZER0+/600            LOCATION /600 IS PASS COUNTER
0131 0600                PASS     RES      1
0132                              END      START
```

SYMBOL TABLE

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BUFIN | 0400 | R | BUFOUT | 0500 | R | CLBUF | 0336 | R | CLBUF2 | 033A | R |
| COMP | 031A | R | INIT | 020E | R | INPA | 0376 | R | INPIR | 0364 | R |
| OK | 032C | R | OTPA | 03A2 | R | OTPIR | 0390 | R | PASS | 0600 | R |
| RCPT | 0310 | R | RESTRT | 02FE | R | RET | 038E | R | RTRN | 0388 | R |
| START | 01FE | R | TRSMT | 034A | R | TRSMT2 | 0358 | R | ZERO | 0000 | R |

ASS.ERR. 0000

:EOF

PROG ELAPSED TIME: 00H-00M-54S-620MS-