FFA1 DISK BOOTSTRAP ONE SECTOR LOADER

```
ERR LOC OBJECT CODE      ADDR STMT SOURCE STATEMENT

                                2         DECK  4
                                3 ********************************************************************************
                                4 *               DOLPHIN DCP BOOTSTRAP LOADER
                                5
                          0832  6         USING LOADB,1
  0000                          7         START 0
  0000 F2 87 04                 8 LOADA   J     LOAD
  0003 C0 37 0007               9         B     *+4
  0007 DC D3 08D3 00E8         10 LOAD    MVC   END(END+1-CLEAR),END-CLEAR+LOADAA
  000D C0 87 0800              11         B     CLEAR                   TO BEGIN LOADING
  0011 A0                0011  12 SWITCH  DC    XL1'A0'                 FIXED/REMOVABLE SWITCH
  0012 C9D7D3            0014  13         DC    CL3'IPL'
                         0015  14 LOADAA  EQU   *
  0800                          15         ORG   X'0800'
  0800 3C 40 1FFF               16 CLEAR   MVI   X'1FFF',C' '
  0804 DC FE 1FFE 1FFF          17         MVC   X'1FFE'(255),X'1FFF'
  080A DC FF 1EFF 1FFF          18 ZRO     MVC   X'1EFF'(256),X'1FFF'
  0810 DF 01 080D 08C9          19         SLC   ZRO+3(2),NUM256
  0816 3D 09 080C               20         CLI   ZRO+2,09
  081A C0 84 080A               21         BH    ZRO
  081E DC FF 07FF 1FFF          22 ZROA    MVC   X'07FF'(256),X'1FFF'
  0824 DF 01 0821 08C9          23         SLC   ZROA+3(2),NUM256
  082A 3D 01 0820               24         CLI   ZROA+2,01
  082E C0 84 081E               25         BH    ZROA
  0832 C2 01 0832               26 LOADB   LA    LOADB,XR1               LOAD BASE VALUE
  0836 75 02 94                 27         L     DFDR(,XR1),XR2          SET XR2 TO POINT TO INPUT AREA
  0839 30 A3 08D3               28         SNS   STATUS,X'A3'            SENSE DEVICE STATUS
  083C 38 01 08D2               29         TBN   STATUS-1,X'01'          TEST SYSTEM BIT
  0841 F2 90 06                 30         JF    *+11                    JUMP IF OFF
  0844 3C 78 08BE               31         MVI   DSKERR+1,X'78'
  0848 3C 3C 08BF               32         MVI   DSKERR+2,X'3C'
  084C 48 00 4E 0011            33         MZZ   SEKLIO+1(,XR1),SWITCH
  0851 48 00 51 0011            34         MZZ   SEKSIO+1(,XR1),SWITCH
  0856 48 00 57 0011            35         MZZ   LIOCR+1(,XR1),SWITCH    SET FOR CORRECT SPINDLE
  085B 48 00 5A 0011            36         MZZ   LIODR+1(,XR1),SWITCH    SET FOR CORRECT SPINDLE
  0860 48 00 5D 0011            37         MZZ   SIO+1(,XR1),SWITCH      SET FOR CORRECT SPINDLE
  0865 48 00 60 0011            38         MZZ   TIO+1(,XR1),SWITCH      SET FOR CORRECT SPINDLE
  086A 48 00 63 0011            39         MZZ   TIO1+1(,XR1),SWITCH     SET FOR CORRECT SPINDLE
  086F 38 08 0011               40         TBN   SWITCH,X'08'            TEST FOR RUN ON FIXED DISK
  0873 F2 90 06                 41         JF    TSTERR                  JUMP IF NO
  0876 7A 08 5D                 42         SBN   SIO+1(,XR1),X'08'       SET TO LOAD FROM FIXED DISK
  0879 7A 08 51                 43         SBN   SEKSIO+1(,XR1),X'08'    SET TO LOAD FROM FIXED DISK
  087C D1 A0 8B                 44 TSTERR  TIO   DSKERR(,XR1),NTRDY      TEST FOR IPL ERROR
  087F 71 A6 92                 45 SEKLIO  LIO   DFCR(,XR1),CTLREG       LOAD CONTROL REG FOR SEEK
  0882 F3 00 00                 46 SEKSIO  SIO   0,0
  0885 7C 00 9B                 47 LOADC   MVI   RDDFC+3(,XR1),0          SET TO    D ONE SECTOR
  0888 71 A6 92                 48 LIOCR   LIO   DFCR(,XR1),CTLREG        LOAD COMMAND ADDRESS
  088B 71 A4 94                 49 LIODR   LIO   DFDR(,XR1),X'A4'         LOAD READIN ADDRESS
  088E F3 01 00                 50 SIO     SIO   X'00',X'01'              READ DATA
  0891 D1 A2 5F                 51 TIO     TIO   *(,XR1),BUSY             LOOP WHILE BUSY
  0894 D1 A0 8B                 52 TIO1    TIO   DSKERR(,XR1),NTRDY       BRANCH IF ERROR
                                53
    07 BD C5 00                 54         CLI   0(,XR2),C'E'            HAS THE END CARD BEEN READ?
  089A D0 01 73                 55         BNE   LOADE(,XR1)             BRANCH IF NO
                                56
  089D 6C 01 72 02              57 LOADF   MVC   BR+3(2,XR1),2(,XR2)     PLACE ADDRESS FROM END CARD IN MOVE
  08A1 C0 87 0000               58 BR      B     *-*                     GO TO DCP LOADER
                                59
  08A5 6C 02 82 03              60 LOADE   MVC   MOVE+3(3,XR1),3(,XR2)   SET DESTINATION + COUNT
  08A9 6C 00 83 01              61         MVC   MOVE+4(1,XR1),1(,XR2)   PLACE DATA LENGTH IN TEXT MOVE
  08AD 5E 00 83 95              62         ALC   MOVE+4(1,XR1),ONESEC(,XR1)    INCREASE SOURCE DISPLACE
  08B1 2C 00 0000 00            63 MOVE    MVC   *-*(*-*),*-*(,XR2)      MOVE DATA TO CORE
  08B6 5E 00 9A 95              64 LOADD   ALC   RDDFC+2(1,XR1),ONESEC(,XR1) ADD ONE TO SECTOR COUNT
  08BA D0 87 53                 65         B     LOADC(,XR1)
                                66
  08BD F0 73 03                 67 DSKERR  HPL   X'03',X'73'              LOAD ERROR HALT
  08C0 D0 87 53                 68         B     LOADC(,XR1)             LOAD SAME TEST AGAIN.
                                69
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FFA1 DISK BOOTSTRAP ONE SECTOR LOADER

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ERR LOC OBJECT CODE      ADDR STMT SOURCE STATEMENT

   08C3 08CA             08C4   70 DFCR    DC     AL2(RDDFC)
   08C5 0200             08C6   71 DFDR    DC     AL2(INPUT)
   08C7 04               08C7   72 ONESEC  DC     XL1'04'
   08C8 0100             08C9   73 NUM256  DC     XL2'100'
   08CA 00               08CA   74 RDDFC   DC     XL1'00'            FLAG
   08CB 00               08CB   75         DC     XL1'00'            CYLINDER 0
   08CC C4               08CC   76         DC     XL1'C4'            TRACK 1, SECTOR 17
   08CD 00               08CD   77         DC     XL1'00'            1 SECTORS
   08CE 00000000         08D1   78         DC     XL4'00'
   08D2 0000             08D3   79 STATUS  DC     XL2'0'
                         0001   80 XR1     EQU    1
                         0002   81 XR2     EQU    2
                         0200   82 INPUT   EQU    X'200'
                         00A2   83 BUSY    EQU    X'A2'              EQUATE FOR B LEVEL
                         00A6   84 CTLREG  EQU    X'A6'              EQUATE FOR B LEVEL
                         00A0   85 NTRDY   EQU    X'A0'              EQUATE FOR B LEVEL
                         08D3   86 END     EQU    *-1
                         0832   87         END    LOADB
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FFA1 DISK BOOTSTRAP ONE SECTOR LOADER

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
BR	A	004	08A1	0058	0057*
BUSY	C	001	00A2	0083	0051
CLEAR	A	004	0800	0016	0010 0010 0011
CTLREG	C	001	00A6	0084	0045* 0048*
DFCR	A	002	08C4	0070	0045 0048
DFDR	A	002	08C6	0071	0027 0049
DSKERR	A	003	08BD	0067	0031* 0032* 0044 0052
END	A	001	08D3	0086	0010 0010 0010*
INPUT	C	001	0200	0082	0071
LIOCB	A	003	0888	0048	0035*
LIODB	A	003	088B	0049	0036*
LOAD	A	006	0007	0010	0008
LOADA	A	003	0000	0008	
LOADAA	A	001	0015	0014	0010
LOADB	A	004	0832	0026	0006 0026 0087
LOADC	A	003	0885	0047	0065 0068
LOADD	A	004	08B6	0064	
LOADE	A	004	08A5	0060	0055
LOADF	A	004	089D	0057	
MOVE	A	005	08B1	0063	0060* 0061* 0062*
NTRDY	C	001	00A0	0085	0044 0052
NUM256	A	002	08C9	0073	0019 0023
ONESEC	A	001	08C7	0072	0062 0064
RDDFC	A	001	08CA	0074	0047* 0064* 0070
SEKLIO	A	003	087F	0045	0033*
SEKSIO	A	003	0882	0046	0034* 0043*
SIO	A	003	088E	0050	0037* 0042*
STATUS	A	002	08D3	0079	0028* 0029
SWITCH	A	001	0011	0012	0033 0034 0035 0036 0037 0038 0039 0040
TIO	A	003	0891	0051	0038*
TIO1	A	003	0894	0052	0039*
TSTERR	A	003	087C	0044	0041
XR1	C	001	0001	0080	0026* 0027 0033 0034 0035 0036 0037 0038 0039 0042 0043 0044 0045 0047 0048 0049 0051 0052 0055 0057 0060 0061 0062 0062 0064 0064 0065 0068
XR2	C	001	0002	0081	0027* 0054 0057 0060 0061 0063
ZRO	A	006	080A	0018	0019* 0020 0021
ZROA	A	006	081E	0022	0023* 0024 0025

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

FFA1 DISK BOOTSTRAP ONE SECTOR LOADER

OBJECT CARD LISTING

THE CHARACTER ˙ INDICATES A BLANK COLUMN AND THE CHARACTERS D̄ Ē H̄ INDICATE NUMERIC SHIFT.

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CL  1 THROUGH 16  CL 17 THROUGH 32  CL 33 THROUGH 48  CL 49 THROUGH 64  CL 65 THROUGH 80  CL 81 THROUGH 96

TE  M@Y*DOH*  A03  LB(<  :<BGB  B-2)  L                                                    79QFFA10001
T+--:|D  ¬"03=G"8  ¬"03"G?@¬"O@A5 4  H2L4:B  3  /  -H̄C|@  G"1""CODHH&TI|&D  HH<BDBA#B  &-2) &H̄  M<H̄<  J&@FFA10002
T+-/5B(<8  &TK@Z  H|G-H?TO@B.'H  D8  DM-  M&  JK  AP  AE  H  EY  DM-  P&  JK  A  -  AEH  F<  DL-H  AG  2U  Q  $  MFFA10003
T+-S0:-/);-/J4ĒB  .*ĒĒK@O  ¬  B$*ĒĒ  K*ĒKM@OD  4F̄I¬4ĒB  .?*M  4  E3$  E2  %B  G  A%  YHC$  BC  N8  -9M  )T@FFA10004
TH-TL.  A;  ID̄  N4H)L@G<C4H)LB<Y  B  &A  1                                                  P,-FFA10005
E3CI*E7*=¬DC"PH$  ="7M&P|  |  C  F%  ASC  R A  SO  Q  08170501700  72870¬8<FFA10006
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LAST PAGE